

Archaeological Watching Brief at New Road, Worcester, Worcestershire



© Worcestershire County Council

Worcestershire Archaeology
Archive and Archaeology Service
The Hive, Sawmill Walk,
The Butts, Worcester
WR1 3PD

Status: Version 1
Date: 11 November 2018
Author: Morgan Murphy, mmurphy@worcestershire.gov.uk
Contributors: Laura Griffin
Illustrator: Carolyn Hunt
Project reference: P5243
Report reference: 2583
HER reference: WCM102295
Oasis id: Fieldsec1-323366

Contents
Summary

1

Report

1 Background.....	2
1.1 Reasons for the project	2
2 Aims.....	2
3 Methods.....	2
3.1 Personnel.....	2
3.2 Documentary research	2
3.3 List of sources consulted	2
3.4 Fieldwork strategy	3
3.5 Structural analysis	3
3.6 Artefact methodology, by Laura Griffin	3
3.7 Environmental archaeology methodology.....	4
3.8 Statement of confidence in the methods and results	4
4 The application site	4
4.1 Topography, geology and archaeological context.....	4
4.2 Current land-use	5
5 Structural analysis.....	5
5.2 Artefact analysis, by Laura Griffin.....	5
6 Synthesis	7
7 Publication summary	7
8 Acknowledgements	7
9 Bibliography.....	8

Archaeological Watching Brief at New Road, Worcester, Worcestershire.

Morgan Murphy

With a contribution by Laura Griffin

Summary

An archaeological watching brief was completed at New Road, Worcester, Worcestershire (NGR SO845546). It was undertaken on behalf of Worcestershire County Council during raising of the road level and installation of a buried box culvert as part of a flood alleviation scheme for the A44 (New Road). The works were required as a condition attached to planning permission granted by Worcester City Council (17/000027/REG3).

Deposits encountered were associated with late post-medieval and modern activity on the site. These included alluvial accumulations and made ground horizons as well as two late post-medieval ditches. These probably relate to late post-medieval to modern periods of flooding, activity associated with the Worcester Power Station and phases of improvement and maintenance of the A44.

Report

1 Background

1.1 Reasons for the project

An archaeological watching brief was completed by Worcestershire Archaeology (WA) at New Road, Worcester, Worcestershire (NGR SO845546). It was commissioned by Worcestershire County Council, during works undertaken to raise the road and install a buried box culvert as part of a flood alleviation scheme for which a planning application has been granted by Worcester City Council (reference 17/000027/REG3).

No brief was prepared by the Archaeological Officer for Worcester City Council (the Curator) but the project conformed to a Written Scheme of Investigation (WSI) prepared by CH2M (CH2M 2018) and a Project Design prepared by WA (WA 2018), both of which have been approved by the Curator.

The project conforms to the *Standard and guidance: Archaeological watching brief* (ClfA 2014a) and *Statement of standards and practices appropriate for archaeological fieldwork in Worcester* (Worcester City Council 1999).

The event reference for this project, given by the HER is WCM102295.

2 Aims

The aims of the watching brief were to:

- Mitigate the potential impact of the excavation of the culvert and its inlet and outlet structures on any archaeological deposits present;
- Identify, investigate and record any such archaeological remains to the extent possible by the methods put forward in the Written Scheme of Investigation;
- Determine the stratigraphic sequence and dating of features identified; and
- Disseminate the results through deposition of an ordered archive and detailed report.

3 Methods

3.1 Personnel

The project was led by Graham Arnold (BA (hons.); MSc) who joined Worcestershire Archaeology in 2009 and has been practicing archaeology since 2002. He was assisted by Andrew Mann (BA (hons.); MSc; MCIFA) and Elspeth Iliff (BA (hons.); MSc). The project manager responsible for the quality of the project was Robin Jackson (BA (hons.); ACIfA). Illustrations were prepared by Carolyn Hunt (BSc (hons.); PG Cert; MCIfA). Laura Griffin (BA (hons.); PG Cert; ACIfA), contributed the finds report.

3.2 Documentary research

The archaeological background to the site is given in the WSI (CH2M 2018) and an Environmental Statement (ES) prepared by CH2M (2017).

List of sources consulted

Cartographic sources

OS six inch Worcestershire XXXIII.NE 1886

OS six inch Worcestershire XXXIII.NE 1905

OS six inch Worcestershire XXXIII.NE 1930

OS six inch Worcestershire XXXIII.NE 1947

Aerial photographs

Google Earth accessed 19-07-2018. Years 1945, 1999, 2006, 2007, 2008, 2010, 2013, 2017

Documentary sources

Published and grey literature sources are listed in the bibliography.

3.3 Fieldwork strategy

A detailed specification (WSI) was been prepared by CH2M (C2HM 2018).

Fieldwork was undertaken between 13/03/18 and 11/05/18.

The site reference number and site event code is WCM 102295.

A single culvert trench was excavated across New Road measuring 57 metres in length and 1.75 metres wide, and amounting to an area of c 100m². Approximately 70% of the cutting for insertion of the culvert was observed with the two sections not monitored being omitted due to weekend and night-working and the fact that observations in adjacent areas indicated a continuation of comparable (non-significant) deposits across these sections (Fig 2).

Deposits were removed using a 360° tracked excavator, employing a toothless bucket where appropriate and under observation by an archaeologist. Clean surfaces were inspected and photographed, surveyed and recorded with samples of deposits taken if deemed necessary.

Access was limited due to health and safety. Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012). On completion of excavation, trenches were shuttered for safety, filled with preformed concrete box sections over a bed of gravel and sealed by road stone.

3.4 Structural analysis

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural, artefactual and ecofactual evidence, allied to the information derived from other sources.

3.5 Artefact methodology, by Laura Griffin

The finds work reported here conforms to the following guidance: for finds work by ClfA (2014b), for pottery analysis by PCRG/SGRP/MPRG (2016), for archive creation by AAF (2011), and for museum deposition by SMA (1993).

3.5.1 Artefact recovery policy

The artefact recovery policy conformed to standard Worcestershire Archaeology practice (WA 2012; appendix 2).

3.5.2 Method of analysis

All hand-retrieved finds were examined. They were identified, quantified and dated to period. A *terminus post quem* date was produced for each stratified context. This date was used for determining the broad date of phases defined for the site. All information was recorded on a Microsoft Access 2007 database.

For the purposes of this report, pottery has not been quantified according to specific fabric type. However, where mentioned, fabric types are classified according to the fabric reference series maintained by Worcestershire Archaeology (Hurst and Rees 1992 and www.worcestershireceramics.org).

3.6 Environmental archaeology methodology

3.6.1 Sampling policy

Sampling was undertaken according to standard Worcestershire Archaeology practice (WA 2012). Samples were taken by the excavator from deposits considered to be high potential for the recovery of environmental remains. A single sample of 40 litres was taken from an organic layer sealing natural; however, as the layer appeared to have been reworked and had become mixed with other soil layers it was decided there was no archaeological value in processing this material.

3.6.2 Discard policy

The single sample taken will be discarded after a period of 6 months after the submission of this report, unless there is a specific request to retain it:

- <1> (102)

3.7 Statement of confidence in the methods and results

The methods adopted allow a high degree of confidence that the aims of the project have been achieved.

4 The application site

4.1 Topography, geology and archaeological context

The culvert cutting crosses New Road on the western bank of the River Severn and runs in a north-east to south-west direction at between 14.90m and 15.03m AOD.

Where the trench crosses New Road, it is bounded to the south-east by Kings School playing fields and by Cripplegate Park to the north-west. The River Severn runs approximately 220m to the east and forms the parish boundary between Worcester and St Johns.

The site lies on alluvial river terrace soils comprising of a mix of gravels, clays, silts and sands formed by the River Severn during overbank flooding which formed a floodplain alluvium. The underlying geology of the site is composed of the Sidmouth mudstone formation, part of the Mercian Mudstone Group, and formed approximately 250-228 million years ago. The British Geological Service mapping (BGS 2106) also illustrates that the area west of the River Severn between New Road and Tybridge Street c 200m to the north is covered by made ground of undetermined thickness. This is also visible on site as an artificial terrace on the southern side of New Road where there is a drop of between 1.00m and 2.00m down to the playing fields and County Cricket Ground and the Kings School playing fields (Plate 1).

An archaeological assessment was carried out by CH2M in order to assess the archaeological and historical background of the site. The assessment stated the following:

There are no World Heritage Sites, Registered Parks and Gardens or Registered Battlefields within the site or 200m study area. There are several scheduled monuments within the wider study area, described collectively as Worcester City Centre. This is considered too far removed to be affected by the scheme and discounted from the assessment. The site and its wider 200m study area fall within the Riverside Conservation Area.

There is one Listed Building within the site area: Worcester Bridge (Grade II). The bridge was built during 1771-80 and designed by architect John Gwynn of Shrewsbury. The bridge was widened in 1931 and further elevations are modern. The Bridge is a significant landmark within Worcester and forms part of the visual framework of the Cathedral. The bridge is of medium value.

There are 43 listed buildings within the study area, however there are only two listed buildings on the same side of the river as the scheme. These are a Grade II listed Fountain

in Cripplegate Park and Tybridge House, a Grade II red brick house built in 1820 (now used as offices). Both features are of medium value.

The Historic Environment Record contains reference to 13 archaeological or heritage surveys to have taken place within the study area. These include surveys of the Severn River corridor, building recording and evaluations. Investigations have revealed palaeoenvironmental potential, therefore there is the possibility for previously unknown archaeological remains being present within the site and wider study area'.

In 1903 a power station was constructed adjoining the new road approximately 50m northwest of the current site. This power station was demolished in 1942 and replaced with a bigger power station which was also demolished in 1979. A sawmill called Bridge Mills can be seen on the 1886, 1905, 1930 and 1947 OS mapping and has since been demolished. On the 1886 OS mapping a tramway can be seen running alongside what is now called New Road, therefore there was a possibility that some of these remains could have been found.

4.2 Current land-use

Currently landuse is as a public highway (the A44 - New Road) and adjacent footpath areas.

5 Structural analysis

The culvert trench and features recorded are shown in Figure 3 with Plates 1-5 providing general views of the works and specific features.

5.1.1 Phase 1: Natural deposits

Natural deposits were observed at a number of locations across the cutting and consisted of layers of orange alluvial sands and clayey sand and gravels. These were located at around 1.80m below current ground surface at approximately 13.0m AOD.

5.1.2 Phase 2: 18th to 20th century

The earliest features identified were two linear features, probably ditches, aligned in an east to west direction towards the northern end of the cutting (479 and 476; Fig 3). As these ditches were located at the impact level of the cutting at around 13m AOD they were not excavated, although finds were recovered from their upper fills. Both cut into the natural (475) which consisted of pinkish orange clayey sands and gravels.

Ditch [476] was approximately 1.30m wide and contained at least two fills (Plate 4). The lower fill consisted of a firm greenish-grey silty clay (478) and an upper black silty sand containing frequent clinker and ash fragments (477).

Ditch [479] was approximately 0.90-1.0m wide and was filled by (480) consisting of a light yellowish brown firm and cohesive silty clay (Plate: 5). A single piece of 18th century brick was recovered from fill (480).

These ditches were sealed by a sequence of layers including alluvial silty clay layers (470 and 473), both of which were probably deposited during extended periods of flooding (Plate 3). Further layers in the sequence included (471) and (472); (471) contained charcoal and (472) contained charcoal, Ceramic Building Material (CBM) and ash clinker. These layers (471 and 472) are interpreted as made ground deposited to raise the road level and potentially represent industrial waste deriving from the former power station in the vicinity.

5.2 Artefact analysis, by Laura Griffin

The artefactual assemblage recovered is summarised in Tables 1 and 2.

The assemblage recovered from the site totalled 20 finds weighing 1,694g (see Tables 1 and 2). Material came from four contexts (472, 477, 480 and 538) and all was of late post-medieval or modern date. Level of preservation was good with finds displaying low levels of surface abrasion.

5.3 Summary of artefactual evidence

All material could be dated from the 18th century onwards. The assemblage included just three sherds of pottery from levelling layers, all porcelain (fabric 83, contexts 472 and 538). All were small and undecorated and therefore could only be broadly dated late 18th - 20th century. In addition, two fragments of sagger relating to production at Royal Worcester were also identified within layer 472.

period	material class	material subtype	object specific type	count	weight (g)
undated	metal	slag(Pb)		1	62
undated			coal	6	46
late post-medieval	ceramic		floor tile	1	213
late post-medieval	ceramic		roof tile(flat)	1	51
modern	ceramic		brick	1	615
modern	ceramic		pot	3	8
modern	ceramic		roof tile(flat)	2	129
modern	ceramic		sagger	2	90
modern	ceramic		tile	1	86
modern	metal	iron	objects	2	394

Table 1: Quantification of the assemblage

context	material class	material subtype	object specific type	count	weight (g)	start date	end date	finds tpq
472	ceramic		pot	1	2	L18C	20C	L18C-20C
472	ceramic		sagger	2	90	L18C	20C	
472	slag			1	62			
477			coal	6	46			undated
480	ceramic		brick	1	615	18C		18C
538	ceramic		floor tile	1	213	18C		19C-20C
538	ceramic		pot	2	6	L18C	20C	
538	ceramic		roof tile(flat)	2	129	19C	20C	
538	ceramic		roof tile(flat)	1	51	18C		
538	ceramic		tile	1	86	19C	20C	
538	metal	iron	objects	2	394	19C	20C	

Table 2: Summary of context dating based on artefacts

Six fragments of ceramic building material were retrieved. These included three pieces of roof tile (context 538); two highly fired to a purplish grey and dated 19th-20th century and one with rounded slag inclusions typical of 18th century assemblages. Two fragments of floor/paving tile were also retrieved from this context, one in red earthenware and the other in the same highly fired fabric as the 19th-20th century roof tile above. A piece of brick was identified from

the upper surface of a ditch fill (context 480). It was of a well-fired red, sandy fabric with slag-like inclusions similar to the aforementioned roof tile and measured 2 3/4 inches thick.

Remaining finds of note were fragments of coal (context 477) and a black glassy, slag-like object (context 538). Dumps of mixed ashy material were noted across the site and are thought to be related to the early 20th century power station which was located nearby.

6 Synthesis

The close proximity of the River Severn and depth of the trench meant there was significant potential for the presence of archaeological features; however, no deposits, structures or finds relating to anything pre-18th century were observed during the investigations.

Features on the site consisted of two linear features [479] and [476], both of which were unexcavated as they occurred at or close to the impact level of the culvert. Both followed the alignment of a modern hedge row suggesting that this boundary is long established.

The site has clearly been subject to extensive flooding in the past as evidenced through the deep deposits of alluvium present. Layers of material dumped in order to raise the area above the flood plain were also observed and along with the alluvium these indicate that any pre 18th century archaeological remains in the vicinity are liable to be located at least 1.80m below ground surface.

The majority of finds and deposits recovered appear to relate to the construction, use and demolition of the power station previously housed on part of the affected area. Made ground layers probably relate to previous attempts to raise the level of the road or to the construction of the power station in order to lessen the risk of flooding with finds of coal, lead slag, and roof tile potentially relating to use and demolition respectively.

7 Publication summary

Worcestershire Archaeology has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, Worcestershire Archaeology intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

An archaeological watching brief was completed on behalf of Worcestershire County Council at New Road (A44), Worcester, Worcestershire (NGR SO845546; HER ref: WCM 102295). The works were undertaken during construction of a new drainage culvert crossing the road and extending a short distance either side of it.

Deposits were observed that may have been associated with the 18th to 20th century use of the area, in particular the construction, use and demolition of the power station and the saw mill (Bridge Mills). Several layers of made ground were recorded and were probably deposited in order to raise the ground level of the road and general vicinity and thus lessen flooding. Two ditches were also observed.

Evidence of repeated flooding was present in the form of alluvial layers formed in the last few hundred years. Together with the made ground these have resulted in the deep burial of any deposits of pre 18th century date and thus levels of potential archaeological significance were not reached during this investigation. Any deposits of archaeological significance seem likely to be located at least 1.80m below ground surface in the west bank side along this area of the River Severn.

8 Acknowledgements

Worcestershire Archaeology would like to thank the following for their kind assistance in the successful conclusion of this project, Keith Andrews (Worcestershire County Council: Project Manager, Transport, Infrastructure and Commissioning), Isabelle Ford (CH2M: Environmental

Consultant), Tim Slingsby (Ringway: Graduate Trainee) and James Dinn (Worcester City Council: Archaeological Officer).

9 Bibliography

AAF, 2011 *Archaeological archives: a guide to the best practice in the creation, compilation, transfer and curation*, Archaeological Archives Forum, <http://www.archaeologyuk.org/archives/>

BGS, 2016 *Geology of Britain Viewer*, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>, British Geological Survey, accessed July 2018

CH2M, 2017 *New Road Environmental Statement*, CH2M, unpublished document dated 2017

CH2M, 2018 *Written Scheme of Investigation. Archaeological Watching Brief – New Road Flood Alleviation Scheme, Worcester*, CH2M, unpublished document dated January 2018

ClfA, 2014a *Standard and guidance: Archaeological watching brief*, Chartered Institute for Archaeologists, <http://www.archaeologists.net/codes/ifa>

ClfA, 2014b *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*, Chartered Institute for Archaeologists, <http://www.archaeologists.net/codes/ifa>

Hurst, J D, and Rees, H, 1992 Pottery fabrics; a multi-period series for the County of Hereford and Worcester, in S G Woodiwiss (ed), *Iron Age and Roman salt production and the medieval town of Droitwich*, CBA Res Rep, 81, 200–9

PCRG/SGRP/MPRG, 2016 *A standard for pottery studies in archaeology*

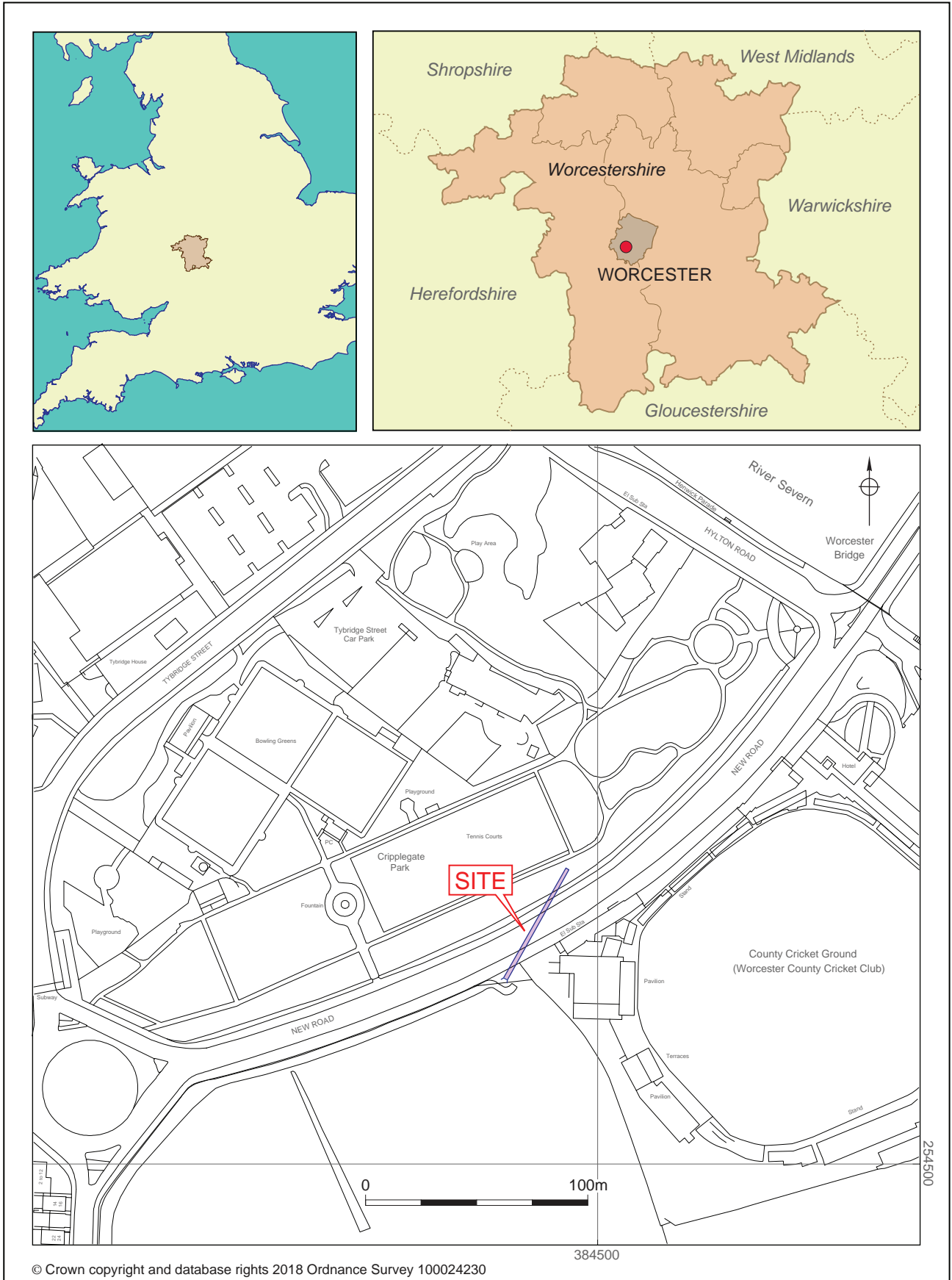
SMA 1993 *Selection, retention and dispersal of archaeological collections*, Society for Museum Archaeology, <http://www.socmusarch.org.uk/publica.htm>

WA 2012 *Manual of service practice, recording manual*, Worcestershire Archaeology, Worcestershire County Council, report **1842**

WA 2018 *Proposal for an archaeological watching brief at New Road Flood Alleviation Scheme, Worcester*, Worcestershire Archaeology, Worcestershire County Council, unpublished document dated 16 March 2018, **P5423**

Worcester City Council 1999 *Statement of standards and practices appropriate for archaeological fieldwork in Worcester*, Appendix 3 in Supplementary Planning Guidance Number 8: Archaeology and Development, Worcester City Council, document revised June 1999

Figures



Location of the site

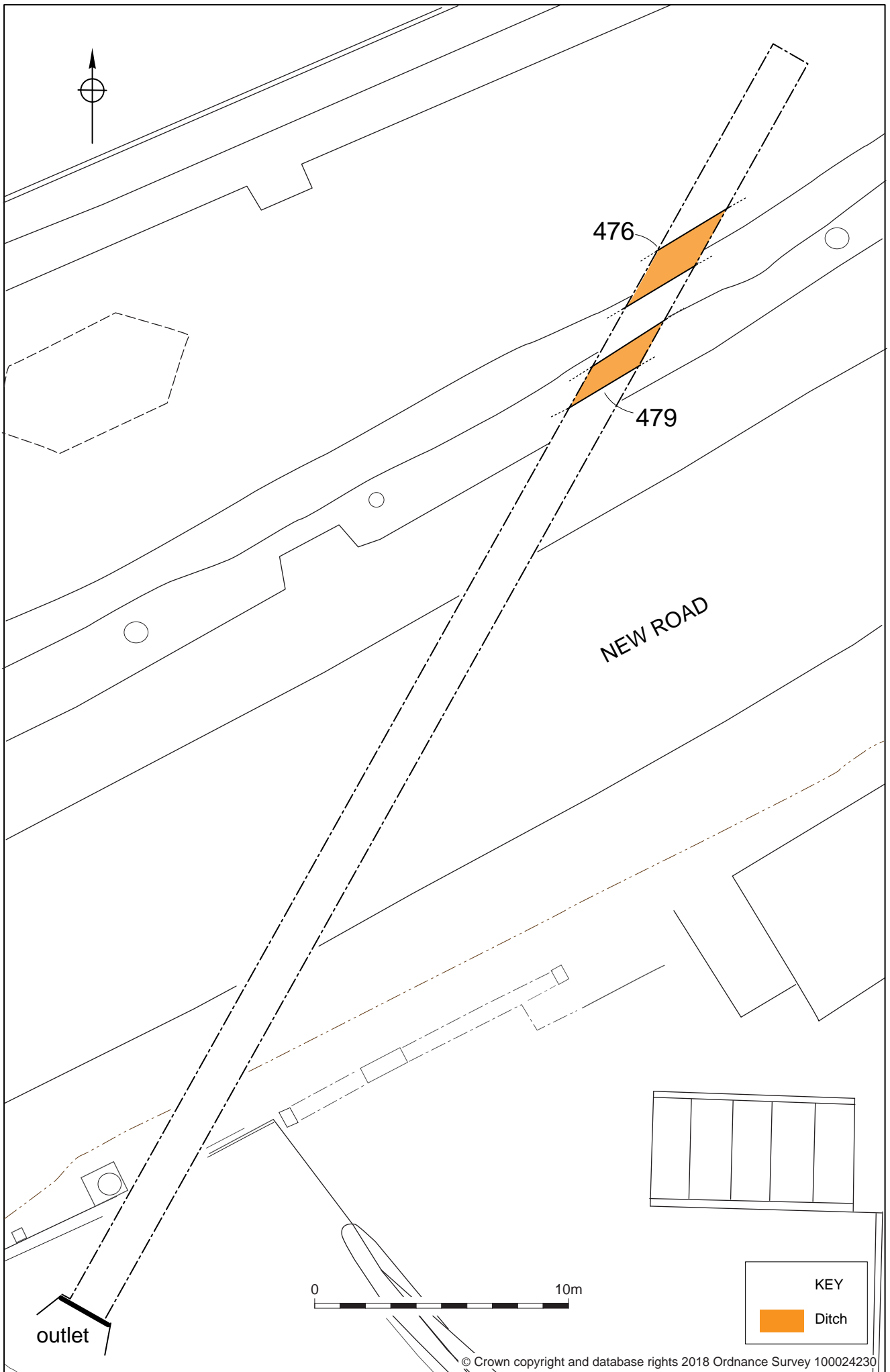
Figure 1



© Crown copyright and database rights 2018 Ordnance Survey 100024230

Areas monitored

Figure 2



Plan of trench showing location of ditches 476 and 479

Figure 3

Plates



Plate 1: Shot showing the drop from made ground under New Road to adjacent playing fields (facing east)



Plate 2: General shot showing working conditions



Plate 3: Section of trench showing made ground (upper) and alluvial layers (lower)



Plate 4: Cut of ditch [476] as revealed in plan at culvert base



Plate 5: Cut of ditch [479] as revealed in plan at culvert base

Appendix 1 Technical information

The archive (site code: WCM102295)

The archive consists of:

- 2 Field progress reports AS2
- 2 Photographic records AS3
- 64 Digital photographs
- 1 Sample number catalogues AS18
- 3 Trench record sheets AS41
- 1 Box of finds
- 1 CD-Rom/DVDs
- 1 Copy of this report (bound hard copy)

The project archive is intended to be placed at:

Worcestershire County Museum
Museums Worcestershire
Hartlebury Castle
Hartlebury
Near Kidderminster
Worcestershire DY11 7XZ
Tel Hartlebury (01299) 250416

Summary of data for Worcestershire HER

period	material class	material subtype	object specific type	count	weight (g)
undated	metal	slag(Pb)		1	62
undated			coal	6	46
late post-medieval	ceramic		floor tile	1	213
late post-medieval	ceramic		roof tile(flat)	1	51
modern	ceramic		brick	1	615
modern	ceramic		pot	3	8
modern	ceramic		roof tile(flat)	2	129
modern	ceramic		sagger	2	90
modern	ceramic		tile	1	86
modern	metal	iron	objects	2	394

Table 1: Quantification of the assemblage

context	material class	material subtype	object specific type	count	weight (g)	start date	end date	finds tpq
472	ceramic		pot	1	2	L18C	20C	L18C-20C
472	ceramic		sagger	2	90	L18C	20C	
472	slag			1	62			
477			coal	6	46			undated
480	ceramic		brick	1	615	18C		18C
538	ceramic		floor tile	1	213	18C		19C-20C
538	ceramic		pot	2	6	L18C	20C	
538	ceramic		roof tile(flat)	2	129	19C	20C	
538	ceramic		roof tile(flat)	1	51	18C		
538	ceramic		tile	1	86	19C	20C	
538	metal	iron	objects	2	394	19C	20C	

Table 2: Summary of context dating based on artefacts