

ARCHAEOLOGICAL
WATCHING BRIEF
AT THE
DIGLIS HOTEL, WORCESTER

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Illustrated by Carolyn Hunt

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Project 2507
Report 1220
WCM 101221

Archaeological watching brief at the Diglis Hotel, Worcester, Worcestershire

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Background information

<i>Client</i>	Severn Trent Water
<i>Site address</i>	Diglis Hotel, Worcester, Worcestershire
<i>National Grid reference</i>	SO 84878 54244; Figure 1
<i>Sites and Monuments Record reference</i>	WCM 101221
<i>Planning authority</i>	Worcester City Council
<i>Brief</i>	Emergency action- No brief issued
<i>Project design</i>	HEAS 2004
<i>Project parameters</i>	IFA 1999

Previous archaeological work on the site

There has been no previous archaeological work undertaken on this particular site.

Previous archaeological work on associated sites

The closest monuments to the site are a 19th century orphanage at St Albans (WCM 98174) 70m to the east, and Worcester Castle (WCM 96017, 96018, 96022 etc), at a similar distance to the north-east. Previous archaeological work in the vicinity includes a Bronze Age axe (WCM 100957) and Iron Age coins (WCM 100699) from the River Severn. An evaluation (WCM 100384) was undertaken within the Diglis Hotel grounds, with trenches on the river terrace with sands and gravel at depths of between 0.09m (14.9m AOD) to 2.2m (16.37m AOD; Brown 1990, 3). A further trench was excavated towards the base of the terrace slope and an auger hole indicated a fine sandy loam containing tile and charcoal at 11.15m AOD (3.2m below present ground surface) with further layers (including organic material) extending to the maximum depth of the auger hole (10.60m AOD). Other investigations of a Roman cemetery (WCM 100041, 100379), the medieval castle (WCM 100025 etc), and sites associated with the ceramic industry (WCM 100041, 100375 etc) have also been undertaken, but none within the same riverside location of the present project.

Aims

The aim of the archaeological watching brief was to observe and record deposits considered by the archaeologist in attendance to be of archaeological interest. Furthermore through detailed recording of any extant archaeological remains in conjunction with both artefactual and ecofactual sampling the project aimed to determine their extent, state of preservation, date and type, as far as reasonably possible.

Methods

General specification for an Archaeological
Watching Brief

IFA 1999 *Standard and guidance for an
archaeological watching brief*, Institute of
Field Archaeologists

Sources consulted

Worcester City Sites and Monuments Record
Brown, D and Wichbold, D 1991
Jackson, R 1991

Brown 1990

Date(s) of fieldwork	26 th -28 th January 2004
Area of deposits observed; Figure 2	c 130.50m ² .
Dimensions of excavated areas observed	length 46.60m width 2.80m
	Mostly observed in plan

Access to or visibility of structure

Observation of the excavated areas was undertaken during machine excavation (Plates 1 and 2). The exposed surfaces were sufficiently clean to observe well differentiated alluvial deposits, though any less clear may have not been identified. Selected areas totalling 4.00m² were cleaned by hand. Permanent piles along the eastern extent of the remedial works prevented photographing or recording the section of the riverbank.

No artefacts (aside from bricks within extant structures) were observed.

Environmental sampling policy

The environmental sampling policy was as defined in the County Archaeological Service Recording System (1995 as amended). One spot sample was taken for pollen analysis and one bulk sample of 10 litres was taken for plant macrofossil analysis, both from context 103 of unknown date.

Environmental processing and analysis

For the bulk plant macrofossil sample (context 103) a sub-sample of 1 litre was processed by the wash-over technique as follows. The sub-sample was broken up in a bowl of water to separate the light organic remains from the mineral fraction and heavier residue. The water, with the light organic fraction was decanted onto a 300µ sieve and the residue washed through a 1mm sieve. The remainder of the bulk sample was retained for further analysis.

The residues were fully sorted by eye and the abundance of each category of environmental remains estimated. The flots were scanned using a low power EMT stereo light microscope and plant remains identified using modern reference collections maintained by the Service, and seed identification manual (Beijerinck 1947). Nomenclature for the plant remains follows the Flora of the British Isles, 3rd edition (Clapham *et al* 1989).

For the pollen analysis, one sample (context 103) was selected and 3cm³ of sediment was measured volumetrically. The sample was washed in 10% Hydrochloric Acid and then digested by Potassium Hydroxide for 20mins in a boiling water bath to break up the soil matrix and dissolve any humic material. The sample was then sieved through 120 µm mesh. To remove clays, the sample was soaked for 24 hours and then boiled in tetra-Sodium Pyrophosphate for 1 hour, sieved onto a 10 µm mesh and the residue collected. Due to the siliceous character of the sediments, the sample was processed using Hydrofluoric Acid digestion, being placed in a hot water bath for 1 hour. The sample was then sieved onto a 10 µm mesh once more, and the residue collected. Finally the pollen pellet was stained with Safranin, washed in alcohol to dehydrate the sample, and preserved in Silicon Oil.

Due to the relatively low organic content and siliceous nature of the sample, pollen grains were counted to a total of 250 land pollen grains (TLP) on a GS binocular polarising microscope at 400x magnification, and identification was aided by using the pollen reference manual (Moore *et al* 1991). Nomenclature for pollen follows Stace (1997) and Bennett (1994).

The possibility of obtaining a radiocarbon date from the samples was considered but they were not suitable for obtaining such a date.

Statement of confidence

Access to, and visibility of, deposits allowed a high degree of confidence that the aims of the project have been achieved.

Deposit description

The deposits are described below (Table 1).

Table 1: Context descriptions

Context	Type Colour Texture	Description	Interpretation	Depth (AOD) Top of deposit
101	Compact red/brown clay with rare flecks of manganese and charcoal and small sub-rounded stones 10-20mm dia.	Layer	Alluvium	10.02m AOD
102	Compact red brown sandy clay with rare charcoal flecks	Layer	Alluvium	9.49m AOD
103	Compact grey clay with high charcoal and organic content	Layer	Alluvium	9.37m AOD
104	Partially extant 19 th century brick embankment wall, running north south along eastern bank of river Severn. Bricks coursed in English Bond, with bricks measuring 9.5" x 3" x 4.25". Re-enforced by I bar steel joists	Wall at north end of site	Embankment wall	n/a
105	Brick abutment associated with 104	Abutment	Element of embankment wall	n/a
106	Same as 104	Wall at south end of site	Embankment wall	n/a
107	Brick footings, associated with embankment wall (104, 106)	Footings	Footings of embankment wall (104, 106)	n/a
108	Compact red/brown clay with rare flecks of manganese and charcoal and small sub-rounded stones 10-20mm dia	Layer, below and to west of 107	Alluvium	9.37m AOD

Plant macrofossil evidence

This alluvial layer (context 103) comprised compact grey gleyed clay and was characterised by only minimal quantities of waterlogged seeds, charcoal, beetles, and fragments of slag. Abundant coal fragments dominated the deposit however. The assemblage of waterlogged plant macrofossils consisted of orache (*Atriplex* sp), blackberry/bramble (*Rubus fruticosus* agg), dock (*Rumex* sp), common nettle (*Urtica dioica*), black nightshade (*Solanum nigrum*), elder (*Sambucus nigra*), and sedge (*Carex* sp; Table 2). These are all species, which would have colonised waste ground or scrubland, while sedge (*Carex* sp) most probably grew closer to the damp river area.

Pollen evidence

The pollen suite was dominated by Poaceae indet (grasses), making up 60% (TLP) of the assemblage (Table 3). There were a number of other herbs albeit in low numbers, primarily comprising *Taraxacum officinale* (dandelion), which made up 12% (TLP). All other herbs were in percentages of only 1-2% (TLP) and consisted of *Filipendula* (meadow sweet), *Cirsium* type (thistle), *Caltha* type (kingcup/marsh marigold), Cyperaceae (sedges), *Artemisia vulgaris* (mugwort), *Polygonum* (knotgrass), Brassicaceae, and Caryophyllaceae. The herb suite included a number of wetland marsh-type herbs such as *Taraxacum officinale* (dandelion), *Filipendula* (meadow sweet), *Caltha* type (kingcup/marsh marigold), and Cyperaceae (sedges), as well as species more associated with waste ground or dry grassland, such as *Artemisia vulgaris* (mugwort). This combination seems to suggest a mosaic of dry grassland with patches of marshland, the latter most probably seasonally flooded due to its river location. This tends to be supported by the low counts of arboreal pollen, comprising *Betula* (birch), *Pinus* (pine), *Quercus* (oak), *Corylus* (hazel), *Salix* (willow), and *Alnus* (alder), as well as minimal *Calluna vulgaris* (heather). The trees and shrubs that were recorded most probably represent woodland some distance from the site, as values are minimal. Spores were relatively high and included a dominance of *Sphagnum* (moss), followed by *Pteropsida* (mon) indet (ferns), *Pteridium* (bracken), *Lycopodium indundata* (marsh clubmoss), *Selaginella* (lesser clubmoss), and *Polypodium* (polypody fern). These species are primarily indicative of waterlogged conditions, particularly the dominance of *Sphagnum* (moss), although this spore tends to be over represented to some extent. The presence of *Selaginella* (lesser clubmoss) suggests that there were damp grassy or mossy areas on the site, as does *Lycopodium indundata* (marsh clubmoss), which is found colonising wet heathland.

The pollen suite indicates an area of damp grassland, possibly meadow (although due to the low species diversity this inference cannot be supported), combined with waterlogged areas, which were most probably seasonally flooded. Mixed woodland would have colonised locations some distance from the site, as pollen percentages were negligible.

Discussion

All layers observed were revealed at 3.00-3.50m (9.37m AOD) below the present ground surface to the east of the River Severn. The layers all survived as islands of material, which had been truncated by the 19th century embankment wall, its associated abutments and footings (contexts 104, 105, 106 and 107 respectively). All layers observed were alluvial deposits and of these context 103 contained a notably high organic and charcoal content and as such a 10 litre sample and a pollen sample were taken (Plate 3).

As the remains of a late medieval waterfront structure had previously been identified to the north-west (Rouffignac 1991) the potential interest of the deposit initially appeared to be great. Meadowland is often found at urban sites, adjacent to a river. Pollen analysis has been undertaken at medieval sites such as Shrewsbury Abbey (Greig 2002), where hay remains were recorded. In Worcester itself, at the medieval/post-medieval site of Newport Street (Deeks *et al* 2004), meadow-type indicators were also recorded, including taxa such as *Taraxacum officinale* (dandelion), *Centaurea cyanus* (cornflower), and *Potentilla erecta* (tormentil). At Diglis Hotel however, there were only a few meadowland species such as *Taraxacum officinale* (dandelion) and *Filipendula* (meadow sweet), which, without being associated with other herbs, can also be indicators of generally damp conditions.

The abundance of coal fragments within the bulk sample however, may at first tend to suggest that the deposit is of post-medieval (or even modern) date. The possibility of an earlier date should, however, be considered. Coal is exploited at an early date and in the Roman period is usually associated with iron smithing (Hurst 2004), though the use of coal in this period has not been established for Worcester where the major industrial activity was smelting, which utilised charcoal (Hal Dalwood pers comm). The level of the deposits is below the present riverbed (Fig 3) where this meets the river walk wall. The deposits also appear to stratigraphically pre-date the construction of the river walk wall (104). The deposits are therefore very unlikely to post-date the raising of the

river level and the construction of Diglis Weir in 1844 and the construction of the riverside walk wall (104) in the 19th century. There was however a great deal of coal imported to Worcester in the 19th century and spillage may be expected at any riverside location. On balance it appears safest to assume a post-medieval but pre-1844 date for these deposits.

Despite the relatively short period of fieldwork and the conditions under which the observations were made the project augments the results of earlier fieldwork at the Diglis Hotel (Brown 1990). The date of the alluvial silts and layers of archaeological interest within them remains uncertain but they are now known to contain well preserved pollen. In all, the project tends to enhance the potential archaeological importance of this area of Worcester's riverside and demonstrates that the application of modern techniques will be very productive.

Conclusions

The results of the watching brief indicate that well stratified alluvial deposits exist at a depth of 3.55m (9.37m AOD) below the level of Diglis Parade and probably have a post-medieval but pre-1844 date. The deposits sampled were found to contain fragments of coal, making a medieval date less likely, though a Roman date cannot entirely be ruled out. Though plant macrofossils are poorly preserved in the small area examined, the pollen remains were well preserved. They did not, however, have a high abundance, most probably due to the siliceous nature of the sample. The sample represents an open floodplain/river landscape, with only a few meadowland indicators.

Publication summary

The Service has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, the Service 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 undertaken on behalf of Severn Trent Water at Diglis Hotel, Worcester, Worcestershire (NGR ref SO 84878 54244; SMR ref WCM 101221). One context (103) was sampled for both pollen and plant macrofossil remains, the former being the better preserved. The environmental evidence indicated a landscape typical of floodplain/meadowland vegetation dominated by herbs and ferns with little woodland on the immediate site. The deposit is most likely to have a post-medieval but pre-1844 date.

Archive

Context number catalogue AS5	1
Fieldwork progress records AS2	1
Photographic records AS3	1
Sample records AS17	1
Abbreviated context records AS40	2
Flot record AS21	1
Pollen record sheet	1
Pollen slide	1

The project archive is intended to be placed at:

Worcester City Museum

Acknowledgements

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Plate 1: Cofferdam in place during repair works.

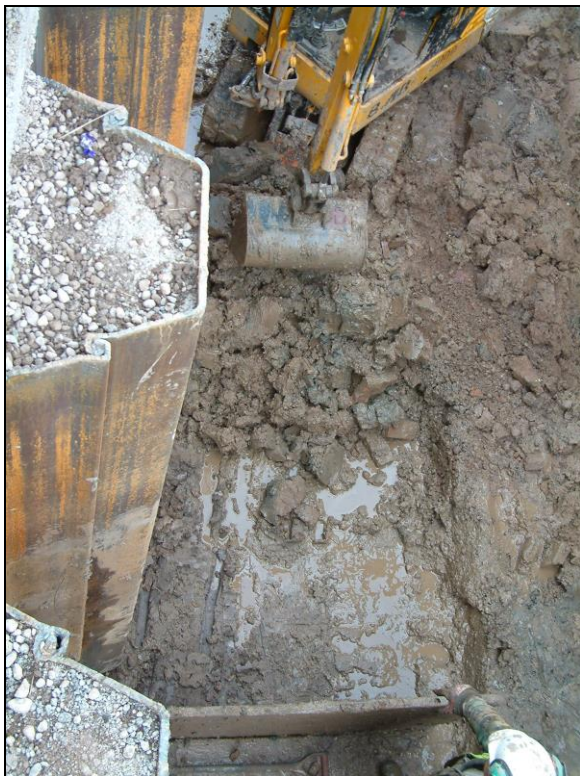


Plate 2: Excavation of deposits before reconstruction of river wall



Plate 3: Detail of alluvial deposits (103) to east of former river wall



Plate 4: The river walk wall (facing west)



Plate 5: The river walk wall and made ground behind



Plate 6: Remains of river walk wall after demolition.

Table 2: Plant remains from selected context

Latin name	Family	Common name	Habitat	103
Waterlogged plant remains				
<i>Atriplex</i> sp	Chenopodiaceae	orache	AB	+
<i>Rubus fruticosus</i> agg	Rosaceae	blackberry/bramble	CD	+
<i>Rumex</i> sp	Polygonaceae	dock	ABCD	+
<i>Urtica dioica</i>	Urticaceae	common nettle	CD	+
<i>Solanum nigrum</i>	Solanaceae	black nightshade	AB	+
<i>Sambucus nigra</i>	Caprifoliaceae	Elder	BC	+
<i>Carex</i> sp	Cyperaceae	sedge	CDE	+
unidentified root fragments	unidentified			+++

A = cultivated ground; B = disturbed ground; C = woodlands, hedgerows, scrub, etc; D = grasslands, meadows, heathland; E = aquatic/wet habitats; F = cultivar

Abundance rating: + = 0-10; ++ = 11-50; +++ = 51-100

Table 3: Pollen counts for selected context

Latin name	Common name	Species counts
Trees		
<i>Betula</i>	Birch	9
<i>Pinus</i>	Pine	4
<i>Quercus</i>	Oak	5
<i>Alnus</i>	Alder	6
Shrubs		
<i>Corylus</i>	Hazel	10
<i>Salix</i>	Willow	15
Heaths		
<i>Calluna vulgaris</i>	Heather	2
Herbs		
Poaceae	Grasses	150
Cyperaceae	Sedges	1
<i>Artemisia vulgaris</i>	Mugwort	2
Brassicaceae	Brassicaceae family	3
Caryophyllaceae	Caryophyllaceae family	1
<i>Filipendula</i>	Meadow sweet	4
<i>Polygonum</i>	Knotgrass	2
<i>Caltha</i> type	Kingcup/marsh marigold	3
<i>Taraxacum officinale</i>	Dandelion	30
<i>Cirsium</i> type	Thistle	4
TOTAL LAND POLLEN		251
Spores		
<i>Lycopodium</i> indund.	Marsh clubmoss	2
<i>Pteridium</i>	Bracken	5
<i>Selaginella</i>	Lesser clubmoss	2
<i>Sphagnum</i>	Moss	48
<i>Polypodium</i>	Polypody fern	1
<i>Pterosida</i> (mon) indet	Ferns	18