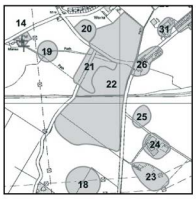
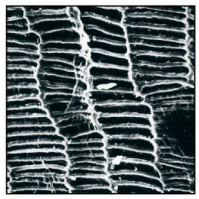
CSEH/01








HEREFORD CROSS-CITY ELECTRICITY CABLE INSTALLATION

Archaeological Watching Brief

commissioned by Western Power Distribution

January 2015

HEADLAND ARCHAEOLOGY

REGISTERED ORGANISATION CIfA

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project info

HA JOB NO.	CSEH/01
HAS NO.	1020
NGR	SO 51015 40380 to SO 51502 40107
SMR EVENT NO.	EHE2127
LOCAL AUTHORITY	Herefordshire Council
OASIS REF.	headland3-167930

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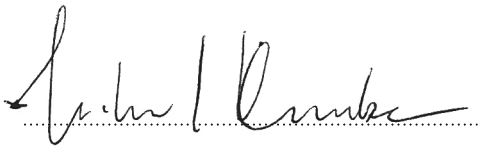

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REGISTERED ORGANISATION CIfA

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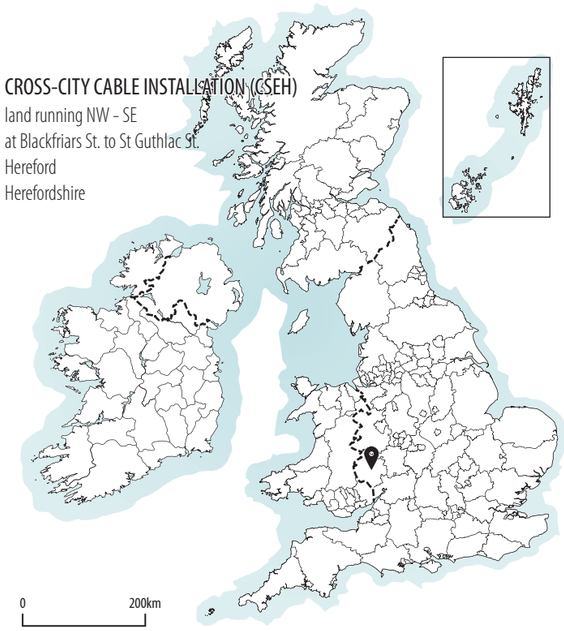
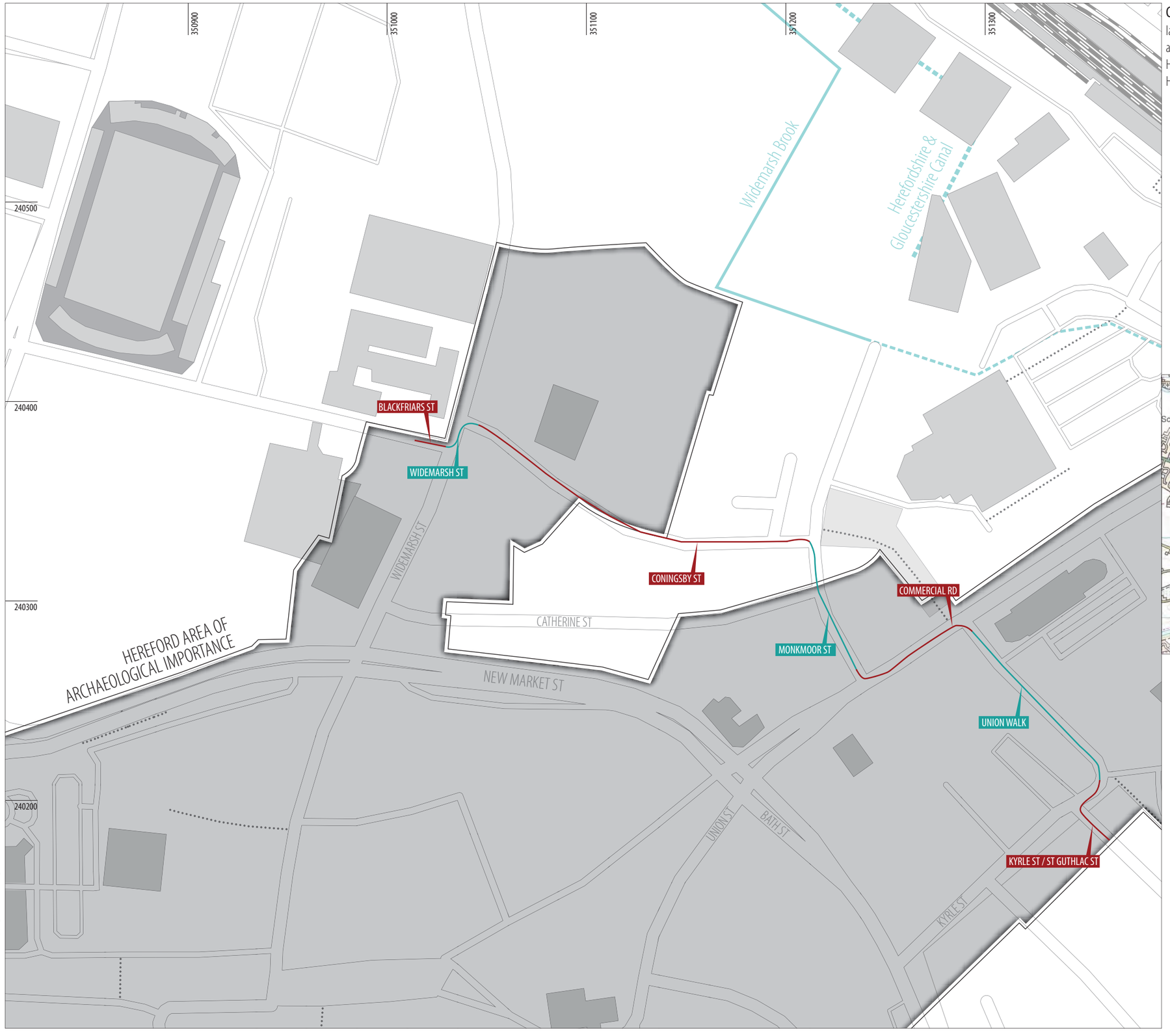
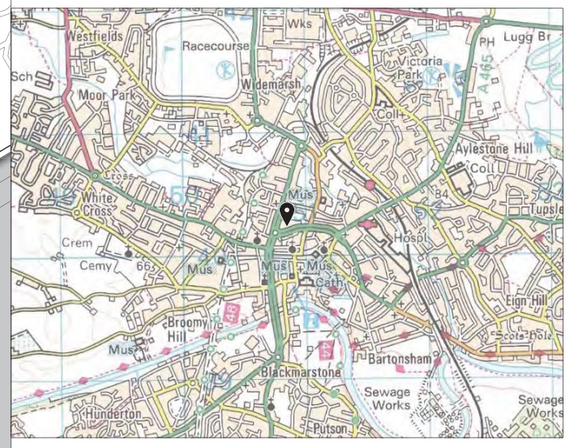
CROSS-CITY CABLE INSTALLATION (CSEH)

land running NW - SE
at Blackfriars St. to St Guthlac St.
Hereford
Herefordshire







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KEY

cable run

N

0 100m

scale 1:2,000 @ A3

ILLUS 1
Site location

HEREFORD CROSS-CITY ELECTRICITY CABLE INSTALLATION

Archaeological Watching Brief

Headland Archaeology undertook a watching brief during the installation of a new electricity supply to a mixed development on the site of the former cattle market in Hereford. The trench passed through, or close to, the Hereford Area of Archaeological Importance between Blackfriar's Street and St Guthlac Street. The majority of the cable route was heavily disturbed by modern road deposits and services, however, medieval activity dating between the late 11th and 15th centuries was identified on Coningsby Street.

1 INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned by Western Power Distribution to undertake a watching brief during the installation of a new electricity supply to the former cattle market in Hereford. The service trench was excavated through existing road surfaces between Blackfriars Street in the west and Ledbury Road in the east of the city.

The trench passed through, or close to, the Hereford Area of Archaeological Importance (Ancient Monuments and Archaeological Areas Act 1979) between Blackfriar's Street and St Guthlac Street (**Illus 1**), and as such Herefordshire Council's archaeological planning advisor requested that the scheme be monitored in these locations. In accordance with the above legislation appropriate documentation was submitted for the works. In addition a project design (Craddock-Bennett 2013) was submitted to and accepted by the archaeological advisor to Herefordshire Council.

The underlying geology of the site is of a sedimentary Raglan mudstone overlain by Devensian sands and gravel.

Excavation of the cable trench was undertaken intermittently between July 2013 and July 2014.

2 ARCHAEOLOGICAL BACKGROUND

The Hereford Area of Archaeological Importance (AAI) encompasses the whole zone within the medieval walls of the city, together with some of the early suburbs, of medieval and post-medieval date, as well as monastic precincts outside the formal bounds of the city.

At the western edge of the scheme the trench passed immediately to the south of Blackfriars Friary, founded before AD1246 and dissolved in AD1538. The 14th century west range survives and there is potential for remains of the Friary to be present below the ground surface.

To the east the trench passed through the former site of St Guthlac's Priory, founded in the 12th century. Burials have been revealed on the County Hospital site and some evidence relating to the location of the monastic church and precinct buildings was recently uncovered to the south of Stonebow Road and west of the pathology laboratory.

3 AIMS AND OBJECTIVES

The objectives of the excavation were as follows:

- to ensure that excavation and recording was undertaken of any archaeological remains disturbed by the excavation of the service trench;
- to produce and deposit a satisfactory archive and disseminate the results of the work via grey-literature reporting and publication as appropriate.

4 METHOD

The main contractor mechanically excavated deposits as necessary for the installation of the electricity supply. The site archaeologist was afforded sufficient time (up to 1 hour) to record and excavate any archaeological deposits revealed by the excavation. It was also agreed that depending on the significance and extent of the remains additional time (beyond 1 hour) was to be made available to record and excavate the archaeological resource.

All recording followed IfA Standards and Guidance. All contexts, small finds and environmental samples were given unique numbers. All recording was undertaken on pro forma record cards. 35mm colour transparencies and black-and-white prints were taken alongside digital photographs on a 7.2mp camera for illustrative purposes only (not forming part of the site archive). Plans of the areas disturbed during the watching brief were drawn on pro-forma record sheets at 1:50, with individual features planned at 1:20 and sections drawn at 1:10.

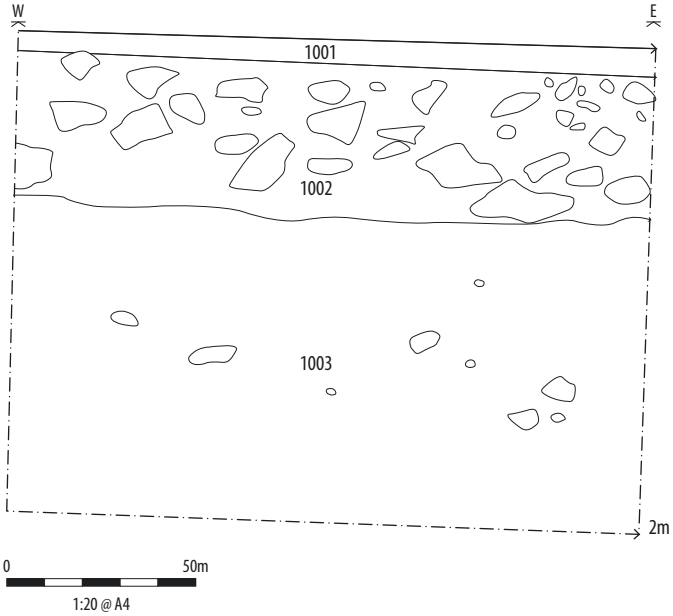
5 RESULTS

A full description of contexts is included in Appendix 1.

5.1 BLACKFRIARS STREET

SO 51015 40380 to SO 51074 40367

A 57m length of trench was excavated at the eastern end of Blackfriars Street. The trench measured 1m in width and was excavated to an average depth of 1.28m. Beneath the modern road surface and hardcore base, a deposit of made ground [1003] containing post-medieval and modern pottery extended to a depth of 1.26m below the road surface (**Illus 2**). This overlay a geological deposit [1004] consisting of a red/brown sandy clay which was only exposed in a few places as the required depth was reached for the electricity cable. No deposits of archaeological significance were identified.



ILLUS 2

Blackfriars Street – S facing section through deposits

ILLUS 3

Widemarsh Street – existing services at junction with Coningsby Street

5.2 WIDEMARSH STREET

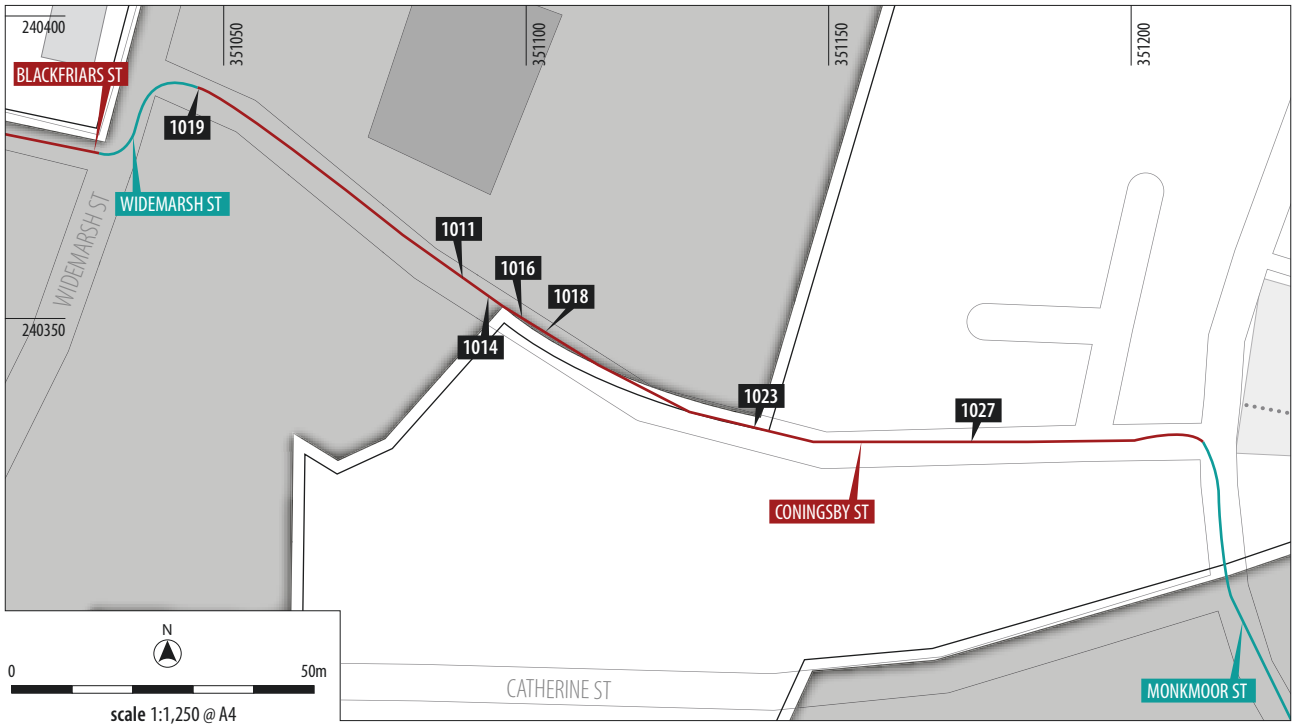
SO 51074 40367 to SO 51093 40377

Excavations across Widemarsh Street revealed a brown clayey sand deposit [1006] extending to a depth of 1.12m below the road surface. No archaeologically significant deposits were identified. Excavations were hampered by the predominance of existing service trenches beneath Widemarsh Street (**Illus 3**). Any archaeological deposits within this area are likely to have been severely truncated or entirely removed.

5.3 CONINGSBY STREET

SO 51093 40377 to SO 51300 40306

Deposit [1006] continued into the western end of Coningsby Street (**Illus 4**) and in parts overlay a further deposit of brown clayey sand [1008] present between 0.50m and 1.12m below the road surface. The deposit appears to represent a buried topsoil horizon and contained pottery dated to the 14th to 17th centuries. A pit feature [1023] (**Illus 5**) located opposite No. 23a Conningsby Street cut through deposit [1006] and contained pottery dated to the 12th to 14th centuries. Considering the stratigraphic sequence this pottery is likely to be residual.



ILLUS 4

Coningsby Street – location of archaeological features

Deposits [1006] and [1008] sealed a number of large features cut into the underlying geological deposits [1012]. Interpretation of the features proved difficult due to the limited excavation area and the fact that the required excavation level for the service trench often coincided with the tops of the features. Where possible artefactual and ecofactual material was recovered.

The features are discussed from west to east as they occurred along Coningsby Street.

Feature [1019] was located beneath deposit [1006] at the junction of Coningsby Street and Widemarsh Street. As the feature occupied the full width of the excavated trench it was not possible to determine whether it represented a linear feature on a north-south alignment or a discrete pit feature. The feature was filled with a mixed deposit of mid brown silt and gravel [1020]. Charcoal flecks were present within the fill along with a small amount of industrial waste an iron nail and some fragments of fish bone. No dateable artefacts were present.

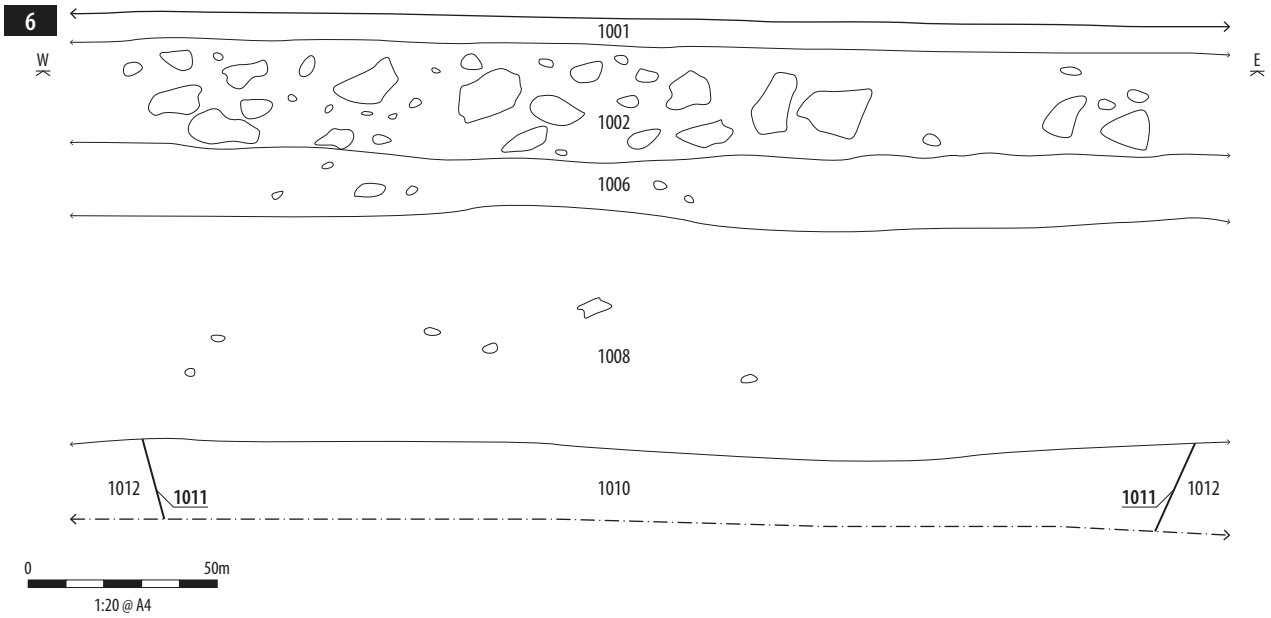
Feature [1011] (**Illus 6**) appears to represent a north-south aligned ditch measuring 2.65m in width. Indeterminate cereal grain, fragments of animal bone and pottery believed to date between the 14th and early 15th centuries were recovered from its fill [1010].

Feature [1014] (**Illus 7**) measured 1.5m in width and was located at of depth of 0.83m below the existing road surface. The feature was filled by a dark brown clayey sand [1013] containing green glazed pottery of the 14th-15th centuries and roof tile dating between the mid 13th and early 15th centuries. A relatively rich environmental assemblage including abraded barley seeds, pig bone and oyster shell was recovered from the feature indicating domestic activity.

Located to the east of No. 15 Coningsby Street, feature [1016] represented a possible ditch or large pit measuring 2.00m in width. The compact, clayey sand fill [1015] contained wheat seeds and pottery dated to the 12th to 13th centuries. Approximately 5.00m to the south-east of [1016] a further linear feature with adjoining pit [1018] was identified (**Illus 8**). The fill of the feature [1017] contained pottery dated to the late 11th to 12th centuries, suggesting activity of an earlier date on this part of Coningsby Street to that identified further to the west. Abraded wheat seeds, pig bone, and a dog-chewed horses hoof bone were also recovered from the deposit.

ILLUS 5

Coningsby Street – pit [1023]



ILLUS 6

Coningsby Street – pit [1011], SW facing section

ILLUS 7

Coningsby Street – pit [1014]

ILLUS 8

Coningsby Street – pit [1018]

ILLUS 9

Coningsby Street – evidence for possible industrial activity [1027]

Adjacent to the western corner of Conningsby Court an L-shaped feature [1027] was identified at a depth of 0.78m below ground level (**Illus 9**). The fill of the feature [1028] comprised a hard baked clayey sand with frequent charcoal and burnt clay deposits. Although difficult to determine due to the limited excavation area, the feature had been clearly subjected to high temperatures and may represent a hearth or possibly a corn drier.

5.4 MONKMOOR STREET

SO 51300 40306 to SO 51334 40224

Excavations on Monkmoor Street (**Illus 10**) identified a mixed deposit of brick and rubble [2003] underlying the existing road surface. This overlay a 0.40m thick layer of grey gravel [2004] which in turn overlay undisturbed river terrace gravels [2005]. A small rubbish pit [2006] containing brick and pottery of post medieval and modern date was identified at the base of the excavation at a depth of 1.12m below the existing road level.

5.5 COMMERCIAL ROAD

SO 51334 40224 to SO 51401 40248

Due to the density of existing services beneath the road surface it proved impossible to reach the full excavation depth. In places the cable ducts were cast in concrete at a higher level in order to avoid disturbance to existing services. No deposits of archaeological significance were observed.

5.6 UNION WALK

SO 51401 40248 to SO 51483 40165

Excavations along Union Street were not subject to archaeological monitoring. A section of trench at the eastern end of Union Walk was however recorded following excavation. A stone wall on an east-west alignment was present at a depth of c.1.00m below the road surface (**Illus 11**). At the junction with Kyrle Street a section of red brick cement bonded wall was built off the stone wall beneath. A black silty clay deposit overlying the wall features appears to represent a deposit of made ground.

5.7 KYRLE STREET / ST GUTHLAC STREET

SO 51483 40165 to SO 51492 40116

Excavations at the junction of Kyrle Street and Union Walk identified a deposit [3006] of red brick bonded with cement extending to a depth of 0.90m below street level (**Illus 12**). The deposit appeared to be formed from a demolished structure that had been imported to the site and used as a levelling deposit. A mid-brown silt deposit [3005] that may represent a former topsoil horizon was present beneath deposit [3006] to a depth of 1.30m below street level, at which point the geological horizon [3004] was observed. No archaeological deposits were identified.

Excavations on St Guthlac Street followed the course of an existing sewer pipe. The backfill of the sewer trench [3001] comprised a mid-brown silt with lenses of re-deposited natural distributed throughout. Excavation ceased at a depth of 1.30m, at which point the base of the sewer trench had not been reached.

10


11

ILLUS 10

Monkmoor Street – excavation in progress

ILLUS 11

Union Walk – wall at junction with Kyrle Street

ILLUS 12

Kyrle Street – demolition deposit at junction with Union Walk

6 DISCUSSION

Although the route of the high voltage cable passed through areas both within and adjacent to the Area of Archaeological Importance, a limited number of archaeologically significant features were encountered.

Previous excavations associated with the formation of modern roadways and laying of services have caused a significant amount of disturbance along the route of the cable.

Assessment of historic mapping suggests that the buried wall identified on Union Walk relates to a boundary wall present on the 1885 Ordnance Survey map. Union Walk has subsequently been widened accounting for the presence of the wall beneath the road surface.

6.1 CONINGSBY STREET

Surviving features of archaeological significance were predominantly located along Coningsby Street. Interpreting the features, however, is problematic due to the limited area of excavation.

The features excavated along Coningsby Street appear to relate to domestic and possible industrial activity dating to between the late 11th and early 15th centuries. The limited excavation width and depth makes interpretation of the function and even the form of the features difficult. The majority of features occupied the full width of the trench, and therefore it is not possible to determine whether the features were linear or discrete in form.

Features of comparable date have previously been excavated within the vicinity of Coningsby Street. Excavations undertaken at 88-90 Widemarsh Street in 1992 (c.65m to the west of the current works) identified a 0.20m thick clean soil accumulation above the natural gravels, at a depth of 0.60m below the existing ground level. This deposit was subsequently cut by a large pit believed to have been dug for gravel extraction. The pit appeared to have been left open for a considerable time, before being finally infilled in the late 14th or early 15th century (Stone 1997, 91). It seems likely that the feature related to a property formerly fronting onto Widemarsh Street.

How the features identified during the current works relate to medieval occupation within Hereford is less clear. The origins of Widemarsh Street are uncertain but potentially relate to the forded crossing of the Wye to the south and therefore predate the Saxon enclosure of the city (Watkins 1920). The road would have formed the main route into the city from the north, and ribbon development in the extra-mural area outside the city defences is possible from the medieval period onwards. Added importance and impetus for development was attached to Widemarsh Street by the Norman development of High Town as a market place in 1071. As a result of this development, Widemarsh Street would have led directly into the commercial heart of the city and encouraged growth along the roadside and potentially the development of side roads.

The first reference to Coningsby Street (Hospetalestrete) and the adjacent Catherine Street dates to the 13th century (Tonkin 1966, 243) and suggests a reasonably well-established occupation along Widemarsh Street and its side roads by this period (Stone 1997, 87). Further impetus to the development of the area came in the early 14th century with the arrival of Blackfriars Dominican friary. The southern extent of the Blackfriars precinct was defined by the course of Coningsby Street. Documentary and archaeological evidence suggests that the area was not virgin ground when the friars were granted the land in c.1319–21. Within a few years there was a dispute concerning Frog Lane, which gave access to Smallpors Brook and which the friars blocked around 1350/51. The location of Frog Lane is unknown, but the fact that the friars blocked it suggests that it passed through their precinct. The existence of Frog Lane suggests the potential for occupation within and adjacent to the site prior to the construction of the friary. Excavations in the vicinity of the friary buildings in 1958 identified an accumulation of soil containing abundant late-13th and early 14th century pottery (Butler 1960) reaffirming the likelihood of pre-friary occupation of the area.

Although the exact nature of the features identified during the current archaeological works is unclear, they suggest domestic occupation of an extra-mural area of the city in the 13th and 14th centuries and possibly dating back to the late 11th century. The position of the features beneath the road make-up of the modern course of Coningsby Street suggests that the road has changed course or more likely been widened from its medieval predecessor. Features that previously related to properties on the northern frontage have now been enveloped by the road itself. Alternatively, the features could indicate a more complex street morphology in this area of the city, with the possibility that the activity identified relates to the as yet undiscovered Frog Lane.

7 CONCLUSION

The program of archaeological work relating to the cross city cable installation has succeeded in identifying medieval activity along the course of Coningsby Street. The activity appears to be predominantly domestic in nature and indicates settlement within this part of the city in the 13th–15th century. A limited amount of pottery dated to the late 11th and 12th centuries was identified which may suggest earlier occupation.

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9 APPENDICES

APPENDIX 1 CONTEXT REGISTER

Context	Description	Depth below ground surface
1001	Tarmac road surface. Modern.	0.00 – 0.10m
1002	Hardcore layer under tarmac surface [1001]. Small-large angular stones with some modern CBM inclusions. Modern.	0.10 – 0.45m
1003	Made up ground. Medium brown clay sand with post-medieval CBM and pottery. Post-medieval.	0.45 –1.26m
1004	Natural deposit. Reddish brown clay sand. Exposed only in occasional spots.	1.25m+
1005	Lens within [1006]. Medium sized angular stones within built up layer [1006]. No associated finds. L:5.20m, W:1.00m+, Post-medieval.	0.58 – 0.73m
1006	Built up layer containing [1005]. Medium brown clay sand with occasional CBM. W:1.00m+ Post-medieval; continuation of [1003].	0.32 – 1.12m
1007	Layer opposite Number 11 Coningsby Street. Very dark brown clay sand with burnt coal and CBM inclusions. W:1.00m+ Modern.	0.40 – 0.70m
1008	Layer. Brown clay sand with animal bone and fragment of stone. Seals [1004] and [1012]. W:1.00m+	0.50 – 1.12m
1009	VOID	–
1010	Fill of [1011]. Brown clay sand, very similar to [1008] but with less stones. Animal bone fragments and pottery recovered from within. L1.00m+, W:2.65m.	1.12 – 1.32m+
1011	Cut for ditch running north-south. Linear in plan with moderately steep sides. Filled by [1010]. L:1.00m+, W:2.65m+	1.12 – 1.32m+
1012	Natural deposit. Pinkish-greyish-green clay sand and fine gravel. Features cut into it. Sealed by [1008].	1.12 – 1.32m+
1013	Fill of linear [1014]. Dark brown clay sand with green glazed pot sherds and animal bone. L:1.00m, W:1.50m.	0.83 – 0.94m+
1014	Cut of linear running north-south. Filled by [1013]. Cut into [1012].	0.83 – 0.94m+
1015	Fill of linear [1016]. Brown, compact and firm with occasional sub-rounded stones. Homogenous. Contains pot sherds and animal bone fragments. L:1.00m, W:2.00m. Only partially excavated.	1.28 – 1.35m+
1016	Cut for linear, filled by [1015]. L:1.00m, W:2.00m. Only partially excavated with the rest being covered by [1008]. Possible ditch, unknown date.	1.28 – 1.35m+
1017	Fill for cut [1018]. Medium brown silt sand with occasional small pieces of charcoal and small to medium sized stones. Possibly two features but the stratigraphy is not very clear. L:1.00m+, W:2.45m. Exposed by machine, not excavated.	0.86 – 1.20m+
1018	Filled by [1017], cut into [1012]. Eastern edge appears to be a linear with a possible pit cutting the western side. L:1.00m+, W:2.45m+ Exposed by machine, not excavated.	0.86 – 1.20m+
1019	Cut of linear feature running north-south, filled by [1020]. Only partially exposed in the trench, not excavated. Cut into natural [1004]. L:1.00m+, W:1.95m. Possible ditch.	0.88 – 1.24m+
1020	Fill of ditch [1019]. Patchy medium and light brown silt sand and gravel with sub rounded small-medium sized stones and some charcoal. Lenses of redeposited material occur in the fill. L:1.00m+, W:1.95m. Not fully excavated. Possible ditch.	0.88 – 1.24m+
1021	Filled by [1022], cuts [1006] and [1004]. Linear feature running north-south. Steep, symmetrical sides, not fully excavated. Excavated by machine. L:1.00m+, W:2.10m. Post medieval/ modern ditch.	0.46 – 1.30m+
1022	Fill of cut [1021]. Dark brown silt sand, firm, with rare stone inclusions and pieces of CBM. L:1.00m, W:2.10m. Post medieval/modern ditch.	0.46 – 1.30m+
1023	Cut for linear feature running north-south, filled by [1024]. Steep, symmetrical side. Excavated by machine, not excavated to full depth. L:1.00m+, W:1.44m.	0.56 – 1.46m+
1024	Fill of cut [1023]. Medium brown clay sand, firm, with occasional small-medium sized stones and charcoal. Green glazed pottery and animal bone fragments also present. Excavated by machine, not excavated to full depth. L:1.00m, W:1.44m.	0.56 – 1.46m+
1025	Cut of sub-rectangular feature, filled by [1026]. Steep sides (almost vertical), excavated by machine, not fully excavated. L:0.42m+, W:1.05m. Large post-hole.	0.36 – 1.26m+
1026	Fill of [1025]. Grey brown sand gravel, firm and compact with CBM and the remains of a timber post (0.40x0.70m). L:0.42m+, W:1.05m. Probably post-medieval in date.	0.36 – 1.26m+
1027	Cut for L-shaped feature, filled by [1028]. Steep, symmetrical sides. Only partially exposed. Clear burning marks on the edges. L:1.00m+, W:1.30m. Possible kiln.	0.78 – 1.22m+
1028	Fill of [1027]. Dark brown clay sand, firm, with frequent charcoal (around 20%) and burnt clay (around 20%) inclusions. The edges appear to be made of a carbonised clay sand material. L:1.00m+, W:1.30m. Possible kiln.	0.78 – 1.22m+
2001	Tarmac road surface.	0.00 – 0.10m
2002	Hardcore deposit.	0.10 – 0.20m
2003	Deposit of building rubble. Levelling of surface prior to road construction.	0.20 – 0.70m
2004	Dark grey gravel. Frequent medium to large sub-rounded gravels, pebbles and cobbles.	0.70 – 1.10m
2005	Pink gravels – Natural geology	1.10 – 1.40m+
2006	Cut for post-medieval/modern rubbish pit L:0.6m+, W:0.6m.	1.12m – 1.62m+
2007	Fill of [2006]. Grey/black silty sand containing domestic rubbish, coal and charcoal.	1.12 – 1.62m+
2008	Fill of [2013]. Building rubble within a light brown sandy clay.	0.32 – 1.12m

Context	Description	Depth below ground surface
2009	Cut for drainage pipe trench.	0.28 – 1.14m
2010	Fill of [2009]. Backfill of drainage pipe trench.	0.28 – 1.14m
2011	Cut for service trench.	0.22 – 1.14m
2012	Fill of [2011]. Backfill of service trench.	0.22 – 1.14m
2013	Cut for service trench	0.32 – 1.12m
3000	Tarmac road surface and hardcore base.	0.00 – 0.28m
3001	Mixed lenses of re-deposited natural gravel and mid-brown silt. Contains fragments of modern brick and 19th/20th century pottery. Backfill of sewer pipe trench running on same alignment as current excavation.	0.28 – 1.30m+
3002	Fine red gravel/sand. Geological natural.	1.00 – 1.32m+
3003	Green and red degraded bedrock/clay mixed deposit.	0.60 – 1.00m
3004	Red/yellow clay/gravel geological natural	1.30m+
3005	Brown silty clay	0.40 – 1.30m
3006	Deposit of red brick bonded with concrete. Deposit was 0.2m deep across northern edge of Kyrle Street. Opposite hospital entrance way the deposit extends to a greater depth and takes the form of a re-deposited 'wall', It appears that buildings have been demolished and subsequently used as a hardcore deposit.	0.06 – 0.90m

APPENDIX 2 FINDS ASSESSMENT

BY JULIE FRANKLIN, PAUL BLINKHORN

The assemblage is small, amounting to only 20 sherds of pottery, with a handful of tile sherds and metalwork. All the finds appear to be of medieval date. A complete catalogue of all the finds is given at the end.

Pottery

The pottery assemblage comprised 20 sherds with a total weight of 130g. It was recorded using the conventions of the Hereford type-series (eg Vince 1985), with six different fabric types noted (see **Table A2.1**).

TABLE A2.1

Pottery fabric types with dating and quantification

Code	Name	Dating	Sherds	Weight
A7b	Hereford Medieval Glazed Ware	mid 13th-early 15th century	5	18g
B1	Malvernian cooking pots	12th–14th century	8	48g
B2	Malvernian tripod pitchers	12th century	1	2g
B4	Malvernian oxidized glazed wares	14th–17th century	2	33g
C1	Worcester Sandy Ware Cooking pots	late 11th–early 13th century	3	26g
D2	Cotswolds cooking pots and pitchers	late 11th–12th century	1	3g

All the fabrics are common finds at medieval sites in Hereford (ibid). Most of the assemblage is in fairly good condition, and appears reliably stratified.

CBM

Seven sherds of roof tile weighing 203g were also noted (Context 1013). They include flat tile and ridge tile sherds. All the fragments of roof-tile were in Hereford fabric A7b, dating between the mid 13th and early 15th century. Five of the fragments were glazed.

Metalwork and Metalworking Waste

There were 10 iron finds, one piece of copper alloy and 48g of metalworking waste. The iron finds were pieces of nails, or small unidentifiable fragments. Nails are typically the most common type of iron find on medieval sites but they do not give any clues as to dating. The copper alloy find is a short length of wire, probably part of a pin. Wire pins can date back as far as the 12th century but the huge increase in the frequency of these finds in the later medieval period, mean that it is more likely to post-date the 14th century (Egan & Pritchard 1991, 297). The metalworking waste amounts to two small lumps of iron slag and some magnetic residue retrieved from sample retents. This suggests metalworking in the vicinity, but again, this is common on medieval sites.

TABLE A2.2

Finds distribution and spot dating by context

Context	Pottery	CBM	Iron	Copper Alloy	Industrial Waste	Spot Date
1008	1	–	–	–	–	14th–17th
1010	4	–	4	–	7g	14th–E15th
1013	7	7	4	1	7g	14th–E15th
1015	6	–	–	–	2g	12th–13th
1017	1	–	–	–	21g	L11th–12th
1020	–	–	2	–	9g	?
1024	1	–	–	–	2g	12th–14th
Total	20	7	10	1	48g	–

Discussion

The small size of the assemblage and particularly the small size of the context assemblages, means that context spot dates should be used with a degree of caution. Context (1013) appears to date between the 14th and early 15th century, while context (1015) appears to be earlier. Other contexts could be contemporary with one or other but their dating typically rests on a single pot sherd which could easily be residual or intrusive. A summary of the dating evidence is given in **Table A2.2**. The assemblage is made up of common pottery and finds types for a medieval assemblage from Hereford.

References

Egan, G & Pritchard, F 1991 ***Medieval Finds from Excavations in London 3: Dress Accessories c1150-c1450,*** HMSO, London.

Vince, A G 1985 'The Ceramic Finds' in Shoesmith, R, ***Hereford City Excavations. Volume 3: The Finds*** CBA Research Report 56, pp34–82.

Finds catalogue

Context	Sample	Qty	Weight (g)	Material	Object	Fabric Code	Fabric Name	Description	Spot Date	Period
1008	–	1	28	Pottery (Medi)	–	B4	Oxidized Malvernian Ware	–	14th - 17thC	Medi/PM
1010	1	–	7	Industrial Waste	Mag Res	–	–	–	–	–
1010	1	4	–	Iron	Nails	–	–	shafts	–	–
1010		1	5	Pottery (Medi)	–	B4	Oxidized Malvernian Ware	–	14th - 17thC	Medi/PM
1010	1	3	6	Pottery (Medi)	–	A7b	Hereford Medieval Glazed Ware	–	M13th - E15thC	Medi
1013		3	87	CBM	Tile	A7b	Hereford Medieval Glazed Ware	Glazed ridge tile	M13th - E15thC	Medi
1013		1	48	CBM	Tile	A7b	Hereford Medieval Glazed Ware	Glazed flat tile	M13th - E15thC	Medi
1013	2	1	16	CBM	Tile	A7b	Hereford Medieval Glazed Ware	Glazed flat tile	M13th - E15thC	Medi
1013	2	2	52	CBM	Tile	A7b	Hereford Medieval Glazed Ware	Unglazed	M13th - E15thC	Medi
1013	2	1		Copper Alloy	Wire Pin	–	–	pin shaft, broken both ends	15th–19th	Medi/PM
1013	2		7	Industrial Waste	Mag Res	–	–	–	–	–
1013	2	4	–	Iron	Fragments	–	–	small pieces, possible nail shaft and other fragments	–	–
1013	2	2	12	Pottery (Medi)	–	A7b	Hereford Medieval Glazed Ware	–	M13th - E15thC	Medi
1013	2	4	16	Pottery (Medi)	–	B1	Malvernian Ware	–	12th - 14thC	Medi
1013	2	1	1	Pottery (Medi)	–	C1	Worcester Sandy Ware	–	L11th - 13thC	Medi
1015	3	–	2	Industrial Waste	Mag Res	–	–	–	–	–
1015	3	3	16	Pottery (Medi)	–	B1	Malvernian Ware	–	12th - 14thC	Medi
1015	3	1	2	Pottery (Medi)	–	B2	Malvernian Ware	–	12thC	Medi
1015	3	2	25	Pottery (Medi)	–	C1	Worcester Sandy Ware	–	L11th - 13thC	Medi
1017	4	–	3	Industrial Waste	Mag Res	–	–	–	–	–
1017	4	2	18	Industrial Waste	Iron Slag	–	–	small lumps	–	–
1017	–	1	3	Pottery (Medi)	–	D2	Cotswolds Ware	–	L11th - 12thC	Medi
1020	5	–	9	Industrial Waste	Mag Res	–	–	–	–	–
1020	5	2	–	Iron	Nail	–	–	head and shaft	–	–
1024	6	–	2	Industrial Waste	Mag Res	–	–	–	–	–
1024	6	1	16	Pottery (Medi)	–	B1	Malvernian Ware	Jar rim	12th – 14thC	Medi

APPENDIX 3 ENVIRONMENTAL ASSESSMENT

LAURA BAILEY AND TIM HOLDEN

Introduction

Six 10 litre samples recovered during a watching brief along the route of a cross city cable installation in Hereford, were received for palaeoenvironmental assessment. The samples were taken from the fills of ditches, linear features and a pit. The aims of the assessment were to assess the presence, preservation and abundance of any environmental remains in the samples. The environmental remains are quantified in **Tables A3.1** and **A3.2**.

The animal bone assemblage comprises 13 bags in total, 4 containing hand collected material, with the remainder recovered from environmental retents. Results of the animal bone assessment are provided in **Table A3.3**.

Method

The samples were subjected to flotation and wet sieving in a Siraf-style flotation machine. The floating debris (the flot) was collected in a 250 µm sieve and, once dry, scanned using a binocular microscope. Any material remaining in the flotation tank (retent) was wet-sieved through a 1mm mesh and air-dried. This was then sorted and any material of archaeological significance removed. All plant macrofossil samples were analysed using a stereomicroscope at magnifications of x10 and up to x100 where necessary to aid identification. Identifications, where provided, were confirmed using modern reference material and seed atlases including Cappers et al. (2006).

The aims of the animal bone assessment were to provide a basic quantification of the available data and to characterize the assemblage as far as possible. Identifiable fragments were recorded, together with the preservation and any signs of modification of the bone in order to assess the quality, quantity and potential of the assemblage. Where possible fragments were identified to species level using Schmid 1972.

Results

Results of the assessment are presented in Tables 1 (Retent samples) and 2 (Flot samples). Material suitable for AMS (Accelerated Mass Spectrometry) radiocarbon dating is shown in the tables.

Wood charcoal

A small amount of non-oak wood charcoal, ranging in size from 1mm to 10mm was recovered from the flots and retents of all samples.

Cereal grain

Charred cereal grain was recovered, in varying quantities, from all samples. The fill (1013) of ditch [1014], which dates to the 14th and early 15th century, contained the largest amount of cereal grain and included heavily abraded barley (Hordeum Vulgare), oat (Avena sp) and indeterminate cereal grain (Cereal indet). The fill (1024) of linear feature [1023] also contained heavily abraded barley, together with wheat (Triticum sp) and indeterminate cereal grain. A small amount of wheat was recovered from the fill (1015) of ditch [1016], pottery recovered from deposit (1015) tentatively suggests that it predates context (1013). Heavily abraded, indeterminate cereal grain was recovered from the fills (1010 and 1017) of ditches [1011] and [1018] respectively.

Other charred plant remains

A small number of legumes were present in the fills (1013, 1015) of ditches [1014, 1016] and fill (1017) of Pit [1018] indicating that the ground was nitrogen rich. A small charred grass seed was present in the fill (1013) of ditch [1014] and may have been incidentally collected with the cereal.

Shell

A small amount of Oyster shell (Ostrea edulis) was recovered from the fill (1013) of Ditch [1014].

A small number of terrestrial snail shells were also present in the flots from the fills (1017 and 1024) of Pit [1018] and linear feature [1023] respectively. However, given the number of modern roots and seeds present, they are likely to be modern also.

Animal bone

Animal bone was recovered from 7 contexts and is catalogued in **Table A3.3.**

Condition

A brief description of the bone condition is given in **Table A3.3**.

Generally the hand collected bone was in poor condition, whole bones were rare and few complete articular ends or ageabelements were present. Bone recovered from the retents was generally heavily fragmented. The surface condition was good and butchery marks (knife cuts and chop marks) are visible on some of the bones. Some of the bones were medially and longitudinally split. Possibly for marrow extraction.

Species present

Elements of the main domestic species including cattle, sheep/goat, horse and pig were present in the assemblage. A small amount of fish bone was recovered from the fills (1010, 1020 and 1024) of Ditch 1011, 1019 and linear feature 1023 respectively. Elements of pig were the most frequently encountered and were present in contexts 1010, 1013, 1017 and 1024. Bone positively identified as horse was only present in deposit (1017) and comprised a dog-chewed hoof, 3rd phalanx.

Other remains

Finds including pottery, metal objects and magnetic residue recovered from the retents are discussed within the finds report.

Discussion

Although a relatively small quantity of plant macrofossils were recovered, the assemblage, together with the animal bone, provides an insight into foods consumed and site economy. Wheat, barley and oats were all common cultivars in the medieval period. The presence of oyster shell, albeit in small quantities, suggests that shellfish may also have been consumed, which may be significant, given the distance of Hereford from the coast.

The animal bone assemblage indicates that domestic species including, cattle, horse and sheep/goat were present, and that fish was also consumed on site. Given the small amount of material recovered, it is unlikely that any meaningful statistical analyses could be undertaken and little more could be said regarding the relative abundance of species due to the limited size of the assemblage.

The plant remains, oyster shell and animal bone all point to a domestic origin. There is no evidence to suggest that these materials have any functional relationship with the features in which they were found. It would seem most likely that domestic refuse has inadvertently accumulated in the backfill of the negative features because of its proximity to occupation/midden contexts or following the use of domestic midden material as manure on garden plots or nearby fields.

References

Cappers R T J, Bekker R M and Jans J E A 2006 ***Digital seed atlas of the Netherlands,*** Barkhuis Publishing and Groningen University Library, Groningen.

Clapham, A R, Tutin, T G and Warberg, E E 1962 ***Flora of the British Isles.***

Schmid, E 1972 ***Atlas of animal bones for prehistorians, archaeologists and Quaternary geologists,*** Amsterdam.

TABLE A3.1

Retent sample results

Context	Sample	Sample Vol (l)	Pottery	Lithics	Metal	Shell	Mag res	Burnt bone	Unburnt bone	Charcoal		Material available for AMS Dating	Comments
								Mammal	Mammal	Qty	Max Size (mm)		
1010	1	10	+	–	+	–	++++	+	+++	+	10	Charcoal	Charcoal non-oak
1013	2	10	++	+	+	–	++++	+	+++	+	5	–	–
1015	3	10	++	–	–	–	+++	–	++	+	10	Charcoal	Charcoal non-oak
1017	4	10	–	–	+	–	++++	–	++	–	–	–	–
1020	5	10	–	–	+	–	++++	–	++	+	10	Charcoal	Charcoal non-oak
1024	6	10	+	–	–	–	++++	++	++	–	–	–	–

TABLE A3.2

Flotation sample results

Context	Sample	Total flot Vol (ml)	Hordeum Vulgare (barley)	Triticumsp. (wheat)	Avena sp. (oat)	Cereal indet.	Other charred plant remains	Charcoal		Material available for AMS	Comments
								Qty	Max size (mm)		
1010	1	30	–	–	–	+	Vicia/Lathyrus +	+++	1	No	Cereal grains heavily abraded
1013	2	20	+	–	++	++	Legume +, small grass seed + Indet bud +	+++	10	Yes	Cereal grains heavily abraded. Charcoal oak and non-oak
1015	3	20	–	+	–	–	Legume +	+++	10	Yes	Charcoal oak and non-oak
1017	4	10	–	–	–	+	Legume +	++	5	–	Also contains terrestrial snail shell. Cereal heavily abraded.
1020	5	15	+	+	–	+	–	++	10	Yes	–
1024	6	15	+	–	+	–	–	+	–	No	Contains terrestrial snail shell, modern roots and seeds.

Key: + = rare (0–5), ++ = occasional (6–15), +++ = common (15–50) and ++++ = abundant (>50)

NB charcoal over 1cm is suitable for identification and AMS dating

TABLE A3.3

Animal bone catalogue
IM = indeterminate mammal; + = species present

Context	Sample	Weight (g)	Cattle	sheep/ goat	Horse	Pig	Fish	Condition	Comments
1008	–	39	+	–	–	–	–	Fair	Long bone fragment vertically split. Cattle, ulna fragment
1010	1	46	–	–	–	+	+	Fair	(2 bags) IM-small mammal burnt bone fragments. Pig phalanges. IM- heavily fragmented longbone and skull fragments. IM- small mammal bone.
1013	2	76	+	–	–	+	–	Fair	IM- small mammal, burnt bone fragments, heavily fragmented. Pig teeth. Pig proximal metatarsal. Cow vertebra fragment. Heavily fragmented bone- IM. Also contains burnt bone fragments.
1013	–	70	+	–	–	–	–	Fair	Hand collected- distal metacarpal- Cow
1015	3	8	–	–	–	–	–	Fair	IM- Small and large mammal, heavily fragmented bone.
1017	4	24				+		Poor	IM- small mammal heavily fragmented bone.
1017		26			+			Fair	3rd Phalanx- horse- Dog chewed.
1020	5	23					+	Poor	IM- small mammal, heavily fragmented bone and fish bone fragments.
1024	6	17						Fair	IM- small and large mammal, heavily fragmented, burnt bone.
1024		72				+		Fair	Pig metapodial. IM- large mammal- heavily fragmented- cut marks visible.
1024	6	17					+	Poor	Pig metapodial. IM- large mammal-Heavily fragmented bone. Also contains fish vertebrae.

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