

SSBH/01



ELECTRICITY SUB-STATION, BATH STREET, HEREFORD

Archaeological Watching Brief

commissioned by Western Power Distribution Ltd

EHE 80136

June 2015

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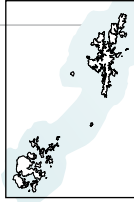
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SUBSTATION BATH STREET (SSBH/01)

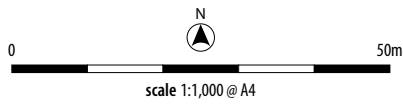
land along Bath Street
Hereford
Herefordshire

0 200km



KEY

- cable trench location
- scheduled area



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ILLUS 1

Site location

ELECTRICITY SUB-STATION, BATH STREET, HEREFORD

Archaeological Watching Brief

Headland Archaeology (UK) Ltd was commissioned by Western Power Distribution Ltd to undertake a watching brief during the disconnection, demolition and removal of an electricity sub-station in Bath Street, Hereford. The works took place within a Scheduled Monument as well as the Hereford Area of Archaeological Importance with consent granted by the appropriate governing bodies. No significant archaeological finds or deposits were identified during the course of the work.

1 INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned to undertake a watching brief during the demolition and removal of the above ground remains of an electricity sub-station and the excavation to locate and disconnect cables associated with the sub-station and supplies to surrounding properties. The sub-station was located on Bath Street in Hereford, adjacent to the Police Station (**Illus 1**). Scheduled Monument Consent (Ref: S000051195) was required for undertaking these works as the site was located within the scheduled area of the city's medieval defensive wall and ditch (HE 124). Western Power Distribution was informed of the need to secure the implementation of a programme of archaeological works in accordance with a Written Scheme of Investigation that had been approved by Historic England.

1.1 ARCHAEOLOGICAL BACKGROUND

Considerable archaeological work has been undertaken in and around the Hereford city defences. The site in question forms part of a Scheduled Ancient Monument which was designed to protect the line of the city wall and associated buried deposits such as the city ditch and bank. To the rear of the sub-station, the city wall survives as stone built structure incorporated into the north-eastern elevation of the twentieth century Police Station.

The defences at this location are believed to form part of a circuit built as a result of a Royal charter dating to AD1189. Radiocarbon

dating of deposits from the base of the ditch about 150m to the east of the site support this, indicating a date for these deposits of c AD1215 (Arthur and Crooks 2004). A study of borehole data indicated that the most significant ditch fill deposits survived below 52.75m OD, a depth of over 2m below the current ground surface.

An archaeological evaluation undertaken in 1997 on the former Godsells Garage site adjacent to the police station identified bank deposits associated with the medieval rampart both behind and in front of the city wall line. The work identified the gravel rampart at a depth of about 0.8m below the ground surface towards the road frontage and in front of the wall line (Hoverd 1997).

An evaluation undertaken on the Bastion Mews site to the north-west of the sub-station failed to identify any deposits of archaeological significance, despite the fact that the trenches were excavated near the wall line (Crooks 2007). As part of the same project, further work was undertaken on the standing structures. An assessment of the city wall determined that 'The above ground portion is of 19th century date, probably reconstructed around 1848 when the Bastion was demolished and this part of the city redeveloped' (Boucher 2008).

Adjacent to the electricity sub-station, archaeological observations were made during the excavation of service trenches along the Bath Street frontage of Hereford Police Station (Craddock-Bennett 2007). Within a trench excavated adjacent to the city wall to a depth



ILLUS 2

S facing view of cable trench in front of substation

ILLUS 3

NE facing section through road into post-medieval deposit (1003) with void

ILLUS 4

N facing plan of cable trench in roadway



of 1m, deposits were found relating to a turf and gravel rampart approximately 0.5m below the present ground level. A relationship between the rampart and the city wall could not be established due to the effects of later truncation. The city wall is unlikely to be a reconstruction at the lower levels although the presence of a red brick mortared into the wall at approximately 0.3m below the present ground level may relate to post-medieval patching.

2 AIMS AND OBJECTIVES

The objectives of the archaeological work were to record any remains of archaeological significance encountered in the course

of the works, produce a record of the observations and order and deposit the archive.

3 METHOD

All works were undertaken in accordance with a Written Scheme of Investigation (Boucher 2013) prepared by Headland Archaeology and agreed in advance of works with Historic England. Scheduled Monument Consent (Ref: S000051195) was granted by the Inspector of Ancient Monuments and works were undertaken in accordance with the terms of this document.



A visual assessment was made of the site in May 2013 by Headland Archaeology. Digital photographs were taken of the site including the physical connection between the sub-station and the city wall.

The demolition of the sub-station and the excavation of associated service trenches was undertaken in March and April 2015. The main contractor mechanically excavated deposits as necessary for the redirection of the electricity supply. These works were monitored by an archaeologist who was permitted sufficient time to record the stratigraphic sequence once deposits had been removed to the depth sufficient for the electricity cables.

All recording was undertaken using pro-forma trench record sheets. 35mm black-and-white prints were taken with a graduated metric scale clearly visible. Digital photographs on a 7.2MP camera were taken for illustrative purposes but will not form a part of the site archive.

A trench excavated to the east of the sub-station measured the full width of the existing pavement (1.75m) and was excavated to a depth of 0.86m (Illus 2). The trench was subsequently extended to the north-east beneath the road surface. The extension measured 1.5m x 2m in plan and was originally excavated to a depth of 0.86m. A 0.6m wide sondage was subsequently excavated into the base of the trench to a depth of 1.46m. To the south-east of the extension, the cable trench continued along the north-bound carriageway of Bath Street for approximately 45m until it terminated opposite the junction with Kyrle Street. Over this distance, the trench measured 0.6m in width and was excavated to a depth of between 0.75m and 1.27m depending on the existing cables and pipes present.

ILLUS 5

SW facing section of cable trench with modern pipe at base

ILLUS 6

NW facing view of metal supporting pins for substation wall

ILLUS 7

W facing view of void at base of stone wall

Following the excavation of all cable trenches, the existing sub-station building was demolished.

During the demolition of the sub-station, the brickwork connecting the sub-station to the face of the stone wall was carefully removed using a sledge hammer and by hand to minimise any possible damage.

In June 2015, the concrete base of the substation was broken up and removed from site under watching brief conditions.

4 RESULTS

4.1 EXCAVATION OF SERVICE TRENCH

The ground where the new cable run was excavated crossed the path of several pre-existing cable trenches along the whole length of the excavated trench with very little visible space between or



underneath these for previously unexcavated material. At its north-western extent (adjacent to the sub-station building) the cable trench was excavated through the block pavement with the blocks removed by hand prior to machine excavation.

The excavations beneath the pavement were confined to existing cable trenches backfilled with a dark black-brown clay (1002) approximately 0.3m in depth, the cables themselves having red sand around them for identification. Within the 1.5m x 2m trench extension which extended into the carriageway a deposit of dark red-brown clay (1003) with frequent small angular stones and rare charcoal flecking was identified at a depth of 0.76m below ground level. Occasional post-medieval and modern pottery as well as modern glass was present within the deposit. It was difficult to ascertain the true nature of the fill (1003) as no edges were visible due to the limits of excavation but it may relate to the backfilling of the city ditch in the nineteenth century. A machine dug sondage measuring 0.6m x 0.6m in plan was excavated through deposit (1003) to investigate any possible deeper cables though none were found. It was in this sondage that a small void was identified at a depth of 1.14m below the road surface (**Illus 3**), suggesting loose consolidation of deposits within this area.

The excavation of the trench continued in a south-easterly direction, terminating at the junction of Bath Street and Kyrle Street (**Illus 4**). Deposit (1003) was identified along the full length of the trench at a depth of between 0.76m and 1.28m, no earlier deposits were identified (**Illus 5**).

4.2 DEMOLITION OF SUB-STATION

Where the sub-station structure abutted the city wall, demolition was undertaken with a sledge hammer and by hand to reduce any damage to the stone wall (**Illus 6**). The southern sub-station wall was loosely mortared to the existing stone wall and was easily removed. The northern wall had two metal pins cut into the stone wall between three modern red bricks, likely for extra stability. These pins were removed with care to prevent damage to the stone wall (**Illus 7**).

Beneath the city wall and adjacent to the southern wall of the sub-station a small void containing modern rubbish was identified. The void is likely to relate to a former power supply to the Police Station.

In June 2015 it was decided to remove the concrete base of the sub-station. The works were monitored but no archaeologically significant deposits were identified.

5 CONCLUSION

The earliest deposit identified during the course of the work was a dark red clay containing post-medieval and modern pottery and glass. The deposit was present along the course of the defensive ditch and may represent the final backfilling of the feature. The 1854 Hereford Improvement Act resulted in the culverting of the polluted city ditch which suggests that the ditch was present in some form at this date and may have contained an accumulation of post-medieval and modern waste (Baker 2011).

The void identified at a depth of 1.14m within deposit (1003) may relate to a lack of consolidation of materials during the backfilling of the city ditch in the 19th century.

During the demolition of the sub-station the city wall was not damaged and the connecting brick walls were successfully removed. The removal of the concrete base did not impact upon deposits of archaeological significance.

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7 APPENDICES

APPENDIX 1 SITE REGISTER

Appendix 1.1 Context register

Context	Description	Dimensions	Deposit depth (BGL)
1000	Tarmac road surface	46.14m x 0.6m	0.00 – 0.26m
1001	Modern concrete		0.26 – 0.36m
1002	Modern back fill around electric cables. Dark black-brown clay, frequent small stones.		0.36 – 0.76m
1003	Dark red brown clay, mouldable, damp. Frequent very small angular stones. Rare charcoal flecking, Occasional post-med/modern pottery, rare glass. Possible upper fill of city wall ditch. Post-medieval/modern.		0.76m+

Summary: No evidence of edges of feature (1004) due to limits of excavation.

Appendix 1.2 Photographic register

Photo	B&W	Digital	Facing	Description
001	37	178	N	ID shot
002	–	179	NW	General shot of excavation in front of substation.
003	–	180	SW	General shot of excavation in front of substation.
004	–	181	NW	General shot of excavation in front of substation.
005	–	182	N	General shot of excavation in front of substation.
006	–	183	N	General shot of excavation in front of substation.
007	36	184	NE	SWFS through road surface into top of post-medieval ditch.
008	35	185	NE	SWFS through road surface into top of post-medieval ditch.
009	–	186	–	Misfire
010	34	187	NE	SWFS through road surface, modern pipe at base.
011	–	188	N	Working shot
012	–	189	N	Working shot
013	33	190	NW	Working shot
014	32	191	SE	General shot in front of substation.
015	31	192	S	General shot in front of sub-station.
016	30	193	S	General shot in front of sub-station.
017	29	194	SE	General shot in front of sub-station.
018	–	262	NW	Demolition of sub-station walls.

Photo	B&W	Digital	Facing	Description
019	–	263	W	Demolition of sub-station walls showing possible cable hole at base of stone wall.
020	–	264	W	Modern cable hole at base of stone wall.
021	–	265	W	Modern cable hole at base of stone wall.
022	–	266	W	Modern cable hole at base of stone wall.
023	–	267	W	Modern cable hole at base of stone wall.
024	–	268	W	Stone wall after demolition of sub-station wall.
025	–	269	NW	Demolition of northern sub-station wall.
026	–	270	W	Modern metal struts in stone wall.
027	–	271	W	Modern metal struts in stone wall.
028	–	272	W	Modern metal struts in stone wall.
029	–	273	NW	Modern metal struts in stone wall.
030	–	274	W	Base of northern sub-station wall after removal.
031	–	275	NW	Base of northern sub-station wall after removal.
032	–	276	NW	General shot after demolition of sub-station walls
033	–	277	NW	General shot of demolition of substation
034	–	278	NW	General shot of demolition
035	–	279	NW	General shot of demolition of sub-station
036	–	280	W	Shot inside of hole at base of southern sub-station wall. Modern rubbish within.
037	–	281	W	Shot inside of hole at base of southern sub-station wall. Modern rubbish within.
038	–	282	W	General shot after demolition of substation



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