

# Programme of Archaeological Works

## Archaeological Observation & Re-excavation of engineering Access Pits AP8 and AP9 Stretton Grandison Herefordshire

*NGR: SO 635 432  
SITE CODE: LORSG2  
SMR No: EHE1884*

# BORDER ARCHAEOLOGY

PO Box 36  
Leominster  
Herefordshire HR6 0YQ  
E-mail: [neil@borderarchaeology.com](mailto:neil@borderarchaeology.com)  
[www.borderarchaeology.com](http://www.borderarchaeology.com)

**Technical Services**  
Chapel Walk  
Burgess Street  
Leominster  
Herefordshire HR6 8DE  
Tel: 01568 610101  
E-mail: [neil@borderarchaeology.com](mailto:neil@borderarchaeology.com)

**Southern Office**  
Unit 25  
Basepoint Business Centre  
Winnall Valley Road  
Winchester  
Hampshire SO23 0LD  
Tel: 01962 832720  
E-mail: [neil@borderarchaeology.com](mailto:neil@borderarchaeology.com)



## Contents

1.	Non-Technical Summary .....	3
2.	Introduction.....	4
3.	Aim .....	6
4.	Site description .....	6
5.	Brief Historical & Archaeological Background .....	6
6.	Scheme of Works .....	7
7.	Results .....	9
8.	Discussion of Results .....	14
9.	Copyright.....	14
10.	References .....	15
11.	Appendix 1: Plan of AP8.....	16
12.	Appendix 2: Context Register .....	17
13.	Appendix 3: Palaeoenvironmental assessment.....	19
14.	Appendix 4: Ceramic assessments .....	22
15.	Appendix 4: X-Radiography and metal object conservation assessment .....	28
16.	Appendix 5: Coin Assessment .....	30
17.	Appendix 6: Animal Bone.....	30
18.	Appendix 7: NMR OASIS archaeological report form.....	35
19.	Appendix 8: Site Summary .....	39
20.	Appendix 7: Harris Matrices.....	40

### Report specification

*Field evaluation:* Sarah Ritchie MA AlfA, William Logan BA PgDip, Ross Shurety BA, Nadine Ross BEng MA

*Report compilation:* Sarah Ritchie MA AlfA, Nadine Ross BEng MA

*Artwork:* Will Logan BA PgDip, Sarah Ritchie MA AlfA

*Report Editing:* George Children MA MlfA

*Final Edit and Approval:* Neil Shurety Dip.M. G.M.Inst.M

# 1. Non-Technical Summary

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*This report presents the results of a programme of archaeological observation and re-excavation undertaken by Border Archaeology on the site of Access Pits 8 and 9 of the Welsh Water/Laing O'Rourke Ledbury Trunk Main, situated to the south of Stretton Grandison, Herefordshire. The report was commissioned by Welsh Water/Laing O'Rourke. The excavation ran from 21<sup>st</sup> February 2011 to 1<sup>st</sup> March 2011.*

*The excavations at AP8 by Border Archaeology in 2007 revealed evidence of Roman occupation spanning from the 1<sup>st</sup> – 4<sup>th</sup> centuries AD, including a well, grain drying kiln and metalled surface. AP9 also revealed evidence of domestic occupation and a metalled surface, although the pottery suggests a date range of 1<sup>st</sup> – late 2<sup>nd</sup> century AD, suggesting perhaps this area of the settlement was not inhabited for as long as that found in AP8. This might be due to the areas propensity to flood, as at least two episodes of alluvium laid down by flooding were identified (Border Archaeology, 2009, 152-156).*

*This programme of archaeological fieldwork undertaken at AP8 revealed further evidence of the Roman settlement (SAM Herefordshire 330). In addition to the well, kiln and occupation deposits excavated in 2007, Border Archaeology has observed two possible building platforms with an associated trackway or courtyard, as well as various occupation layers, a rubbish pit/organic dump and a dump of waste slag. This additional information suggests an area of the settlement being utilised for industrial activity.*

*The investigation of AP9 revealed no new archaeological deposits, as the original AP was located exactly and no additional area was opened.*

## 2. Introduction

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Following the Company's pre-excavation of two engineering access pits located to the south of Stretton Grandison (SO 63183 43262) in 2007, Border Archaeology undertook a further programme of archaeological work on behalf of Dŵr Cymru Welsh Water/Laing O'Rourke (DCWW/LOR) in advance of engineering works to replace pipe couplers deemed to be at risk of potential leak and as part of a comprehensive replacement programme along the whole 2007/8 installation.

The archaeological work was carried out in approximately the same locations previously excavated, namely those indicated (*Fig 1*) as Access Pits (APs) 8 and 9, the aim being to ascertain the presence/absence of any further archaeological deposits, to ensure their preservation by record and to recover and process all materials considered to be of archaeological significance or having the potential to contribute to archaeological knowledge. As was anticipated in the WSI (Border Archaeology, 2010, 3), the locations of AP8 and AP9 were not immediately evident, and some minor variation to the original trench location occurred which resulted in further significant deposits being revealed.

Fieldwork was undertaken between the 21<sup>st</sup> February 2011 and 1<sup>st</sup> March 2011.

Prior to the commencement of fieldwork, a Written Scheme of Investigation was prepared by Border Archaeology for submission to AJ Fleming Esq. Inspector of Ancient Monuments (English Heritage – West Midlands Region), Julian Cotton (Archaeological Advisor - Herefordshire Archaeology) and Lisa Moffett (English Heritage - Regional Science Advisor, West Midlands) and approved as a methodology for the proposed programme of work.

A copy of the Report will be sent to DCWW/LOR, Mr Fleming and Julian Cotton. A copy of the archive report and digital data relating to the archaeological remains investigated (.dxf or shapefile format) will be deposited with the Herefordshire Sites and Monuments Record.

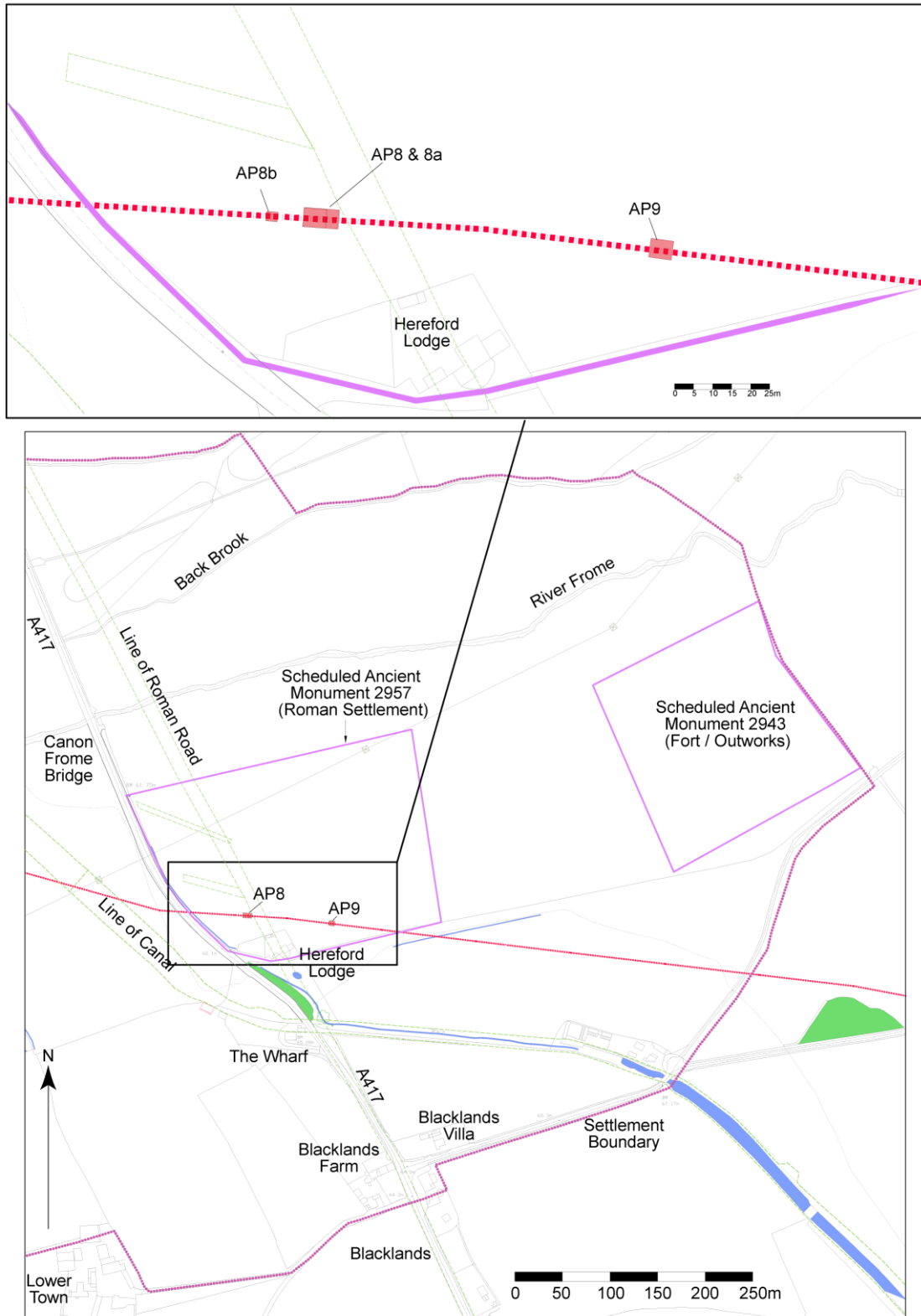


Fig 1: Site and trench location plan

### 3. Aim

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The project aim was to locate the original Access Pits AP8 and AP9 and re-excavate them to locate the pipe and couplers, and, in the event of further archaeological evidence being uncovered, assess as fully as possible, by means of a detailed archaeological assessment and archaeological field evaluation, the location, extent, date, state of preservation and significance of the archaeological resource on the site.

### 4. Site description

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The site extends for approximately 80m from NGR SO 63530 43160 to SO 63710 43150 through the extreme southwest corner of the scheduled area of a defended settlement enclosure of Roman date (SAM Herefordshire 330), located to the south of Stretton Grandison and bounded to the west by the A417; field boundaries to the south and east; and the River Frome to the north (*Fig 1*). The underlying geology in the vicinity of the study area comprises of typical brown alluvial soils of the LUGWARDINE series (561d). These soils overlie reddish river alluvium and consist of deep stoneless permeable reddish fine silty soils, with similar coarse silty soils locally, and are associated with fine silty soils variably affected by groundwater.

### 5. Brief Historical & Archaeological Background

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The origins, topography and historical development of the Roman urban settlement of Stretton Grandison remain extremely obscure. This area has been identified in the *Central Marches Historic Towns Survey* as containing buried archaeological deposits of 'high potential'.

Although a certain amount of archaeological work has been carried out since the late 1960s, in terms of aerial reconnaissance, auguring and fieldwalking surveys and archaeological observation of limited trenching, no detailed archaeological investigations have been carried out on the site to date.

The origins of the settlement appear to be connected with its location at the junction of two roads, one running N from Gloucester via Dymock (mostly following the line of the present A417 road) and the other running W towards the major Roman town of Kenchester. A small Roman fort was constructed some 250m to the E of this road junction, at NGR SO 641 434, probably in the mid 1<sup>st</sup> century AD. The layout of the fort, a bivallate rectangular enclosure covering an area of 4.8 acres, has been identified from aerial photography.

Aerial photography has also identified the outline of a rectangular ditched enclosure lying immediately E of the modern A417 road. The Roman road junction falls within the boundaries of this enclosure and within the area to the north framed by the intersection of the two roads an oblong shaped cropmark has been identified, which may well represent the outline of a structure, possibly a *mansio* or staging post commonly built at the intersection of two important Roman roads. Both the fort and the defended settlement are designated as Scheduled Ancient Monuments.

Several cropmark features comprising a series of pits and one unenclosed hut circle have been identified from aerial photography within the field immediately southeast of the enclosure at NGR SO 639 431 (SMR Ref. 7534), which may represent an outlying part of the Roman settlement or possibly traces of earlier prehistoric occupation. To the south of this field, several linear features have been identified from field observation in a plot immediately north of Blacklands (SMR Ref. 1751) but it is unclear whether they are associated with prehistoric or Roman occupation or if they are of a considerably later date

Place-name evidence clearly points to the existence of Roman settlement in this area. The place-name element *Stretton* denotes 'a settlement on a Roman road', while the name 'Blacklands' is indicative of blackened earth and burnt deposits in the vicinity, suggestive of intensive occupation or a destruction event presumably associated with the Roman settlement. 'Budbury', the name of the large field immediately to the west of the A417 opposite the scheduled area of the defended settlement, may also recognize the presence of a settlement or defensive feature of Roman or perhaps earlier date in this area.

The limited archaeological evidence to date appears to indicate that the settlement was a small town and local market centre, with evidence of possible industrial activity.

The location of the Roman urban settlement within the floodplain of the River Frome means that there is a considerable degree of alluvial deposition across the area, particularly close to the river, where exceptionally well preserved archaeological deposits of Roman date appear to have survived in a waterlogged state, covered by up to 3m of alluvium in places. Further to the south of the Frome, the alluvial deposits are of a shallower depth and have been further reduced by modern intensive ploughing and land drainage.

## 6. Scheme of Works

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### 6.1 Summary Description of Works

This programme of archaeological works was carried out in accordance with *Standard and Guidance for archaeological excavation* (IfA 2008) and *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide* (English Heritage 2006) and with other relevant published sources of technical, professional and ethical guidance. Border Archaeology adheres to the *IfA Code of conduct* (2010) and *Code of approved practice for the regulation of contractual arrangements in field archaeology* (2008).

### 6.2 Methodology

Two Access Pits were excavated within the site (*Fig 1*).

AP 8 and AP 9, each measuring 6m x 5m were re-excavated by Border Archaeology in advance of engineering works to determine the presence/absence of further buried deposits and to record any materials, features, artefacts, ecofacts and associated archaeological strata within the pits. The Pits were made safe for access by implementing a 1m step for every 1m in depth of the trench, as approved by Laing O'Rourke. As was anticipated in the WSI (Border Archaeology, 2010, 3), the exact location of AP8 was not immediately obvious and as a result an additional area of 2.9m x 9.8m was opened to the north of the original AP8 creating an overall area of 8.9m x 14.8m (*Fig 2*).

The plough soil was carefully removed by contractors under Border Archaeology supervision. As a re-excavation, a machine was used to dig where it was evident the ground had already been excavated and examined for archaeology previously. This re-excavation was monitored by Border Archaeology. Where new, unexcavated, archaeology was revealed machine excavation ceased and the archaeology was investigated and recorded by hand by Border Archaeology. This was deemed sufficient to characterise the revealed archaeological deposits with the extent, colour, texture, boundary characteristics etc of each archaeological context being defined by trowelling.

The locations of the evaluation trenches were recorded by Border Archaeology by measuring from the field boundaries and using a hand held GPS. A temporary benchmark (TBM) was established between AP8 and AP9, with a value of 63.02m OD.

### 6.3 Recording

A detailed written, drawn and photographic record was produced in accordance with archaeological practices set out by the Institute for Archaeologists and Border Archaeology's *Field Recording Manual* (2008). A detailed stratigraphic record using a sequential context numbering system was compiled and a Harris matrix was produced for the entire site.

Written records were compiled using separate numbered *pro-forma* record sheets to create a detailed stratigraphic record of the site. Plans, sections and elevations were produced at scales of 1:50, 1:20 or 1:10, as appropriate, on *pro-forma* gridded archivally stable polyester film; while artefact details were recorded at an appropriate scale. All plans, elevations and sections contain grid and level information relative to OS data. All drawings have been numbered and listed in a drawing register; these drawing numbers being cross-referenced to written site records.

A high resolution digital photographic record (12MPX) was compiled of all stratigraphic units, comprising record views of contexts, samples or artefacts, together with a representative photographic record of the progress of the evaluation. All photographic records were indexed by frame number and cross-referenced to written site records. Details concerning subject and direction of view were maintained in a photographic register, indexed by film and frame number.

The progress of the evaluation was recorded & assessed by the Company's General Manager George Children MA MIfA using the Company's ISO 9001 procedures.

The site has produced 19 context records; one section drawing at 1:20; six trench plans at 1:20 and 29 photographs.

The site records can be found under the site code LORSG2 in the Hereford archive.

### 6.4 Recovery, processing and curation of artefactual data

All associated artefacts recovered were retained, cleaned, labelled and stored according to *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (IfA 2008) and *First Aid for Finds* (Watkinson & Neal 2001).

All artefacts were bagged and labelled with the site code and context number before being removed off-site and each assemblage has been examined by an approved specialist according to typological or chronological criteria and conservation needs identified.



Conservation is undertaken by approved conservators as listed by the *Conservation Register* and in accordance with United Kingdom Institute for Conservation (UKIC) (now ICON: The Institute of Conservation) guidelines and in the case of electronic data storage media the British Library Preservation Advisory Centre.

## 6.5 Environmental Strategy

Context (416) was considered suitable for environmental sampling and a 1 × 10litre sample was taken, and allocated sample number <1>. Context (409) was also sampled and allocated sample number <2>.

# 7. Results

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## 7.1 Evaluation Trench

For trench locations see Fig 1.

Access Pit 8	
Location	SO 63570 43177
Dimensions	8.9m × 14.8m
Modern ground level	62.55m OD
Base of plough soil	62.25m OD
Depth of archaeological deposits seen	0.37m
Level at base of trench extension	61.88m OD
Natural observed at base of original AP8	60.55m OD

AP8 was located approximately 27m from the southern field boundary and 20m from the western field boundary at SO 63570 43177 (*Fig 1*). The ground level in the area measured 62.55m OD. The ploughsoil (400) consisted of 0.3m of dark brown, loose, silty clay with frequent pot inclusions, which overlay the whole AP8 area. Underlying (400) were stone features (407) and (417). (407) was a rough single course of rag stone, 0.15m deep. This may potentially have been the platform or foundation layer for a structure or building (*Plate 1*). The pottery from within (407) mainly consists of bowls and jugs, made of Dorset and South-west Black Burnished Ware (BB1) and local Grey Wares (GY) and date the disuse of the platform to the 2<sup>nd</sup> century AD. (417) was a layer of medium sized angular rag stone 0.15m thick, also interpreted as a building platform or foundation (*Plate 4*). Also underlying (400) was dump/deposit (409), a firm dark brown-black sandy silt with frequent slag and charcoal inclusions which was sampled as <2> (*Plate 2*). The deposit measured 1.1m x 1.2m x 0.06m and is attributed to a single event of waste disposal relating to metal working. Pottery from this deposit is predominantly comprised of local Grey ware and has a date range of 2<sup>nd</sup> – 3<sup>rd</sup> century AD.



*Plate 1: Platform (407), facing south*



*Plate 2: dump deposit (409), south facing*

Beneath (409), and abutting (407) and (417) was context (401), a friable, mid brown to red sandy silt with frequent charcoal flecks, occasional pottery, animal bone and some metal, including a

Roman As, minted in Rome by Hadrian and dating to 119–38 AD. (401) has been identified as multiple thin layers of occupation and make-up recorded as one depositional phase of activity. The fact it abuts (407) and (417) suggests occupation layer (401) is associated with these possible structures, a hypothesis supported by the pottery which dates it to the 1<sup>st</sup> – 2<sup>nd</sup> century AD. This was identified and recorded in the 2007 excavation as (8002) (Border Archaeology, 2009, 140-2).

Underlying (401) was a hard, pinkish-red silt and gravel metallated surface (408), measuring 3.04m x 2.20m x 0.15m (*Plate 3*). It is believed this surface represents the remains of either a gravel road/trackway running southeast to northwest through the trench, or the remains of a hardened floor surface bounded, potentially, by foundations (407) and (417) and their associated structures. Surface (408) was identified within AP8 during the 2007 excavation and recorded as (8003) (Border Archaeology, 2009, 140-2).



*Plate 3: Gravel surface (408), looking south-east*

Context (411), a firm mid-light brown sandy silt, underlay (408), (407) and (417), and contained occasional pot, again dating to the 1<sup>st</sup> – 2<sup>nd</sup> centuries AD, and charcoal flecks. It ran to a depth of 0.14m and corresponds to (8004) in the 2007 excavation (Border Archaeology, 2009, 140-2). Cut into (411) was pit [405] and its three fills: (404), (403) and (402). The primary fill (404) was a friable light brown silt, 0.15m thick, and appears to be natural silting within the pit. Fill (403) was a dark brown sandy silt with occasional charcoal flecks, 0.26m thick, and (402) was a firm brownish-red silty clay which appears to form a seal on the pit. [405] was observed and recorded in section, but not excavated.

A sondage was placed through (411) abutting (407) in order to establish the depth and function of (407). This revealed a square shallow cut feature [413] underlying (411), the fill of which (412) was a loose brown silty clay with frequent pot, consisting predominantly of Malvernian rock-tempered wares (MAL RE A), and charcoal. [413] was interpreted as the base of a possible post hole with dimensions of 0.40m x 0.45m x 0.10m. The pottery dates the post hole to the later 1<sup>st</sup> or 2<sup>nd</sup> century AD, which suggests it predates platform (407) which overlies it. The base of [413] was cut into (414), a hard reddish pink clay with degraded sandstone inclusions at least 0.10m deep. (414) was similar to the natural bedrock (8021) recorded in 2007 (Border Archaeology, 2009, 142), however, (8021) was observed at a height of 60.44m OD, significantly lower than (414) at a height of 62.05m OD. Therefore (414) may have been a redeposited layer of natural clay and sandstone to provide a sturdy base for the post hole. As the deposit was only observed within a sondage it is impossible to conclude its full extent and purpose.

The foundation layer (417) overlay (418) which has been identified as being the same deposit as (411). Cut into (418) was a poorly defined amorphous pit [415] (*Plate 4*), 1.45m x 0.80 x 0.18m, the fill of which (416) was a firm blackish brown silty clay containing an abundance of burnt organic material which was sampled as <1>. This deposit included corroded metal fragments, hammerscale, fuel ash, charcoal and charred wheat grain, which is consistent with an interpretation of a mixed dump deposit of both domestic and industrial waste (O'Brien, 2011, 4-5, Appendix 3). As with the rest of the features found, the pottery has dated it to the 1<sup>st</sup> – 2<sup>nd</sup> century AD.



*Plate 4: East-facing, showing foundation layer (417) and organic dump (416) within [415]*

Access Pit 9	
Location	SO 63657 43181
Dimensions	5m x 5m x 2.3m
Modern ground level	63.01m OD
Base of ploughsoil	62.71m OD
Depth of archaeological deposits	N/A
Level at base of trench	60.49m OD
Natural observed at base of original AP8	60.49m OD

AP9 was located approximately 25m from the southern field boundary and 48.85m from the western field boundary at SO 63657 43181 (*fig. 1*). The ground level in the area sloped from 63.01m OD in the north to 62.60m OD to the south of the trench.

The ploughsoil (300) consisted of a loose mid brown clayey silt 0.3m that spanned the whole trench. Underlying this was subsoil (301), a light brown firm silty clay 0.10m deep which again spanned the entire trench. Beneath this the trench came straight down onto the original AP9, which was filled with backfill (302), a loose reddish-brown silty clay 1.9m deep which surrounded the pipe and coupler. At the base of the trench a well-compacted mid red-brown sandy clay natural (303) was observed. The excavation ended at 60.49m OD and no new archaeology was observed.



Plate 5: AP9 showing plough soil (300), subsoil (301), backfill (302) and natural (303)

## 8. Discussion of Results

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The deposits and features revealed during the re-excavation of AP8 have a date of 1<sup>st</sup> – 2<sup>nd</sup> century AD.

The earliest conclusive phase of occupation uncovered is represented by possible posthole [413] which tentatively suggests a wooden structure of unknown use on the site. Pottery from within the fill (412) dates the disuse and backfill of the posthole to the later 1<sup>st</sup> or 2<sup>nd</sup> century AD.

Because the pottery has dated all the features in AP8 to the 1<sup>st</sup> – 2<sup>nd</sup> century AD it has proved difficult to phase the site more accurately. It is likely that the masonry foundation platforms (407) and (417); hearth/organic dump [415] and occupation deposit (401) all represent one phase of occupation, all of which are built onto, or cut into deposit (411)=(418).

The remains within hearth/dump [415] included hammerscale, possibly derived from nearby metalworking activity, charred cereal remains and bone, which suggest the incorporation of domestic waste. The charcoal was from oak stemwood, with the presence of tyloses indicating the use of heartwood. This may derive from burnt structural timbers, or fuel from processes requiring the high temperatures provided by oak, such as metal-working (O'Brien, 2011, *appendix 3*). The domestic nature of the pottery assemblage suggest these features represent the foundations of domestic buildings, and the associated dump of burnt domestic rubbish indicates that the inhabitants were eating spelt wheat and were involved in small scale metalworking.

Deposit (401) has been identified as build up from multiple occupation layers or deposits associated with the use of structures [407] and [417]. (401) overlies metal surface (408), which is believed to be either the remains of a road/trackway or metal courtyard. The interpretation of surface (408) directly affects the interpretation of deposit (401), as if (408) is a courtyard then (401) represents build up of occupation debris within the courtyard during its period of use. If (408) is interpreted as a road, then (401) can be interpreted as debris overlying the road, suggesting either it is not being maintained, or has fallen out of use. Unfortunately the limited extent of the trench and the wide date range from the features makes it difficult to come to a definite conclusion. If (408) is indeed a courtyard, it is likely that platforms [407] and [417] are part of the same building complex, and may also be linked to the masonry structures found in AP8b, and to well [8013] (Border Archaeology, 2009, 148).

Further excavation of this area of the site would allow for greater clarity and could help establish whether features [407] and [417] are part of a larger complex of buildings surrounding a metal courtyard (408) within which was well [8013] and over which occupational debris (401) were deposited over years of use, or whether features [407] and [417] represent two distinct structures either side of a metal road (408). Aerial photography has identified that the Roman settlement at Stretton Grandison is located at the junction of two roads, one running north from Gloucester via Dymock, and the other running west towards the major Roman town of Kenchester (Margary, 1973, 328 & 341; Baker, 1970, 45-8). If (408) is the remains of a road or trackway, then it is likely to be either a part of, or a side road off these.

## 9. Copyright

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Border Archaeology shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs & Patents Act 1988 with all rights

reserved; excepting that it hereby provides an exclusive licence to the client for the use of the report by the client in all matters directly relating to the project as described in the Project Specification.

## 10. References

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## 11. Appendix 1: Plan of AP8

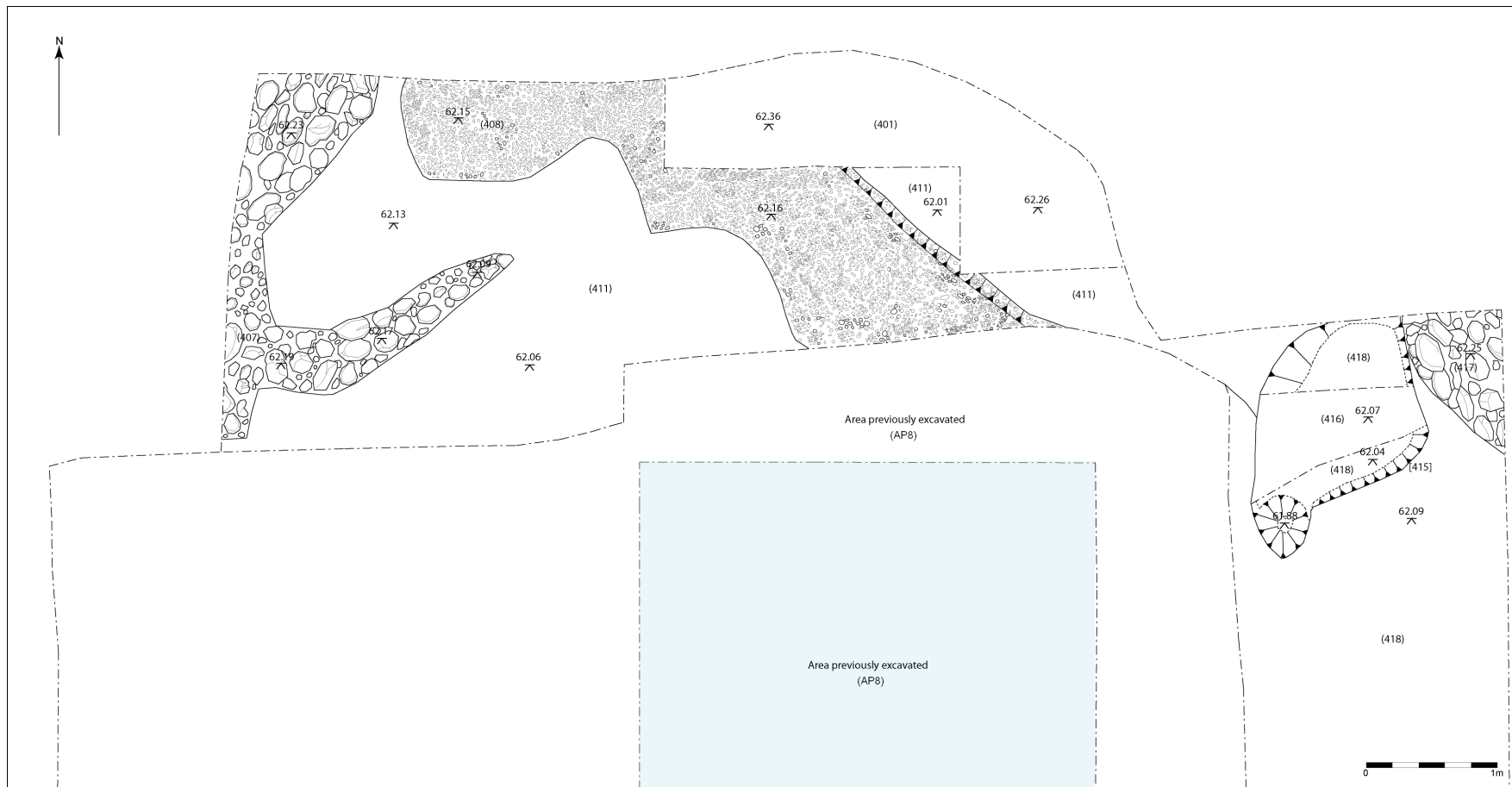


Fig 2: Multi-context plan of AP8, including possible structural platforms [407] and [417], metalled surface (408) and pit [418] with burnt deposit (416)



## 12. Appendix 2: Context Register

### 13.1 AP8

Context	Description
(400)	Topsoil
<i>INTERPRETATION:</i>	<i>Plough soil</i>
(401)	mid brown-red sandy silt
<i>INTERPRETATION:</i>	<i>occupation layer</i>
(402))	Fill
<i>INTERPRETATION:</i>	<i>3<sup>rd</sup> fill of [405]</i>
(403)	Fill
<i>INTERPRETATION:</i>	<i>2<sup>nd</sup> fill of [405]</i>
(404)	Fill
<i>INTERPRETATION:</i>	<i>1<sup>st</sup> fill of [205]</i>
[405]	Cut
<i>INTERPRETATION:</i>	<i>Cut of pit</i>
(406)	light brown deposit
<i>INTERPRETATION:</i>	<i>alluvial deposit</i>
(407)	masonry
<i>INTERPRETATION:</i>	<i>foundation layer</i>
(408)	gravel deposit
<i>INTERPRETATION:</i>	<i>ether a hardened floor surface or a trackway</i>
(409)	deposit
<i>INTERPRETATION:</i>	<i>slag deposit/dump</i>
(410)	VOID
<i>INTERPRETATION:</i>	-
(411)	mid light brown sandy silt
<i>INTERPRETATION</i>	<i>mottled occupation surface</i>
(412)	fill
<i>INTERPRETATION</i>	<i>fill of [413]</i>
[413]	cut
<i>INTERPRETATION</i>	<i>cut of pit/posthole</i>
(414)	hard, reddish-pink clay
<i>INTERPRETATION</i>	<i>layer</i>
[415]	cut
<i>INTERPRETATION</i>	<i>cut of domestic dump</i>
(416)	fill
<i>INTERPRETATION</i>	<i>fill of [415]</i>
(417)	masonry
<i>INTERPRETATION</i>	<i>foundation layer</i>
(418)	red mottled grey silty clay
<i>INTERPRETATION</i>	<i>occupation layer, =(411)</i>
(419)	mottled red and brown silty clay
<i>INTERPRETATION</i>	<i>backfill of original AP8</i>
[420]	cut
<i>INTERPRETATION</i>	<i>cut of original AP8</i>

### 13.2 AP9

<b>Context</b>	<b>Description</b>
(300)	topsoil
<i>INTERPRETATION:</i>	<i>ploughsoil</i>
(301)	light brown silty clay
<i>INTERPRETATION:</i>	<i>subsoil</i>
(302)	loose reddish-brown silty-clay
<i>INTERPRETATION:</i>	<i>backfill of original AP9</i>
(303)	mid red-brown sandy clay
<i>INTERPRETATION:</i>	<i>natural deposit</i>

## 13. Appendix 3: Palaeoenvironmental assessment

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*Charlotte O'Brien*

### 13.1 Summary

#### 13.1.1 The project

1.1 This report presents the results of palaeoenvironmental assessment of a bulk sample taken during a second phase of archaeological works at Stretton Grandison, Herefordshire.

1.2 The works were commissioned by Border Archaeology, and conducted by Archaeological Services Durham University.

#### 13.1.2 Results

1.3 Pit fill (416) comprised waste material including bone, pottery, metal fragments, hammerscale, fuel ash, charcoal and a few charred cereal remains. The cereal remains reflect the use of spelt wheat at the site.

#### 13.1.3 Recommendations

1.4 No further analysis is required due to the low number of plant remains. The results of this assessment should be added to any further environmental data produced from the site. The flot should be retained as part of the physical archive of the site. The residue was discarded following examination.

### 13.2 Project background

#### 13.2.1 Location and background

2.1 A second phase of archaeological works was conducted by Border Archaeology at Stretton Grandison, Herefordshire. This report presents the results of palaeoenvironmental assessment of context (416), the fill of pit [415], which comprised waste material, and has been provisionally dated as Roman.

#### 13.2.2 Objective

2.2 The objective of the scheme of works was to assess the palaeoenvironmental potential of the sample, establish the presence of suitable radiocarbon dating material, and provide the client with appropriate recommendations.

#### 13.2.3 Dates

2.3 Samples were received by Archaeological Services on 16th March 2011. Assessment and report preparation was conducted between 25th March and 5th April 2011.

#### 13.2.4 Personnel

2.4 Sample processing was undertaken by Janet Beveridge. Assessment and report preparation was by Charlotte O'Brien.

#### 13.2.5 Archive

2.5 The site code is **LORSG2**. The flot and small finds are currently held in the Environmental Laboratory at Archaeological Services Durham University awaiting collection.

### 13.3 Methods

The bulk sample was manually floated and sieved through a 500 $\mu$ m mesh. The residue was examined for shells, fruitstones, nutshells, charcoal, small bones, pottery sherds, flint and industrial residues, and was scanned using a magnet for ferrous fragments. The flot was examined at up to x60 magnification for charred and waterlogged botanical remains using a Leica MZ7.5 stereomicroscope. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classifications follow Preston *et al* (2002).

### 13.3 Results

Ferrous material was common in the sample, in the form of corroded metal fragments and spherical/flake hammscale. Fuel ash, pottery fragments and calcined and unburnt bone were present in small amounts. Limerich material was noted, which did not have the consistency for mortar, and may have a geological origin. The flot was dominated by charcoal, with the only charred plant macrofossils being an indeterminate wheat grain, two spelt wheat glume bases and an indeterminate weed seed. The sample was not waterlogged, and therefore the few earthworm egg cases and snail shells may represent later intrusive material. The wheat grain would be suitable for radiocarbon dating. The results are presented in Appendix 1.

### 13.4 Discussion

The few cereal remains suggest the use of spelt wheat, which was one of the main field crops cultivated throughout Britain during the late Iron Age and Roman periods (Grieg 1991). Spelt wheat was also the main cereal identified from the Roman contexts analysed during the previous phase of works on the site (Archaeological Services 2008).

The results are consistent with the excavator's interpretation of the pit as comprising a dump of waste material from various sources. The hammscale may derive from nearby metalworking activity, while the charred cereal remains and bone suggest the incorporation of domestic waste. All of the charcoal was from oak stemwood, with the presence of tyloses indicating the use of heartwood. This may derive from burnt structural timbers, or fuel from processes requiring the high temperatures provided by oak, such as metal-working.

### 13.5 Recommendations

No further analysis is required due to the low number of plant remains. The results of this assessment should be added to any further environmental data produced from the site. The flot should be retained as part of the physical archive of the site. The residue was discarded following examination.

### 13.6 Sources

Archaeological Services 2008 *Ledbury Trunk Main, Stretton Grandison, Frome Valley, Herefordshire: plant macrofossil analysis, human bone analysis and radiocarbon date*. Unpublished report **2081**, Archaeological Services Durham University

Grieg, J R A, 1991 The British Isles, in W Van Zeist, K Wasylikowa & K-E Behre (eds) *Progress in Old World Palaeoethnobotany*. Rotterdam

Preston, C D, Pearman, D A, & Dines, T D, 2002 *New Atlas of the British and Irish Flora*. Oxford

Stace, C, 1997 *New Flora of the British Isles*, 2nd Edition. Cambridge

**Data from palaeoenvironmental assessment**

<b>Sample</b>			<b>1</b>
<b>Context</b>			<b>416</b>
<b>Feature</b>			<b>Pit 415</b>
<i>Material available for radiocarbon dating</i>			☒☒
<i>Volume processed (l)</i>			9
<i>Volume of flot assessed (ml)</i>			200
<i>Residue contents</i>			
Bone (calcined)	indet. frags		(+)
Bone (unburnt)	indet. frags		++
Charcoal			+
Corroded metal fragments			++
Fuel ash			+
Hammerscale	spherical / flake		+++
Lime-rich material			+
Pot (number of fragments)			4
<i>Flot matrix</i>			
Bone (unburnt)	indet. frags		+
Charcoal			+++
Earthworm egg case			+
Fuel ash			+
Snail (freshwater / terrestrial)			+
<i>Charred remains (total count)</i>			
(c) <i>Triticum spelta</i> (Spelt Wheat)	glume base		2
(c) <i>Triticum</i> sp (Wheat species)	grain		1
(x) Indeterminate	seed fragment		1

[c-cultivated; x-wide niche. (+): trace; +: rare; ++: occasional; +++: common; ++++: abundant]

## 14. Appendix 4: Ceramic assessments

*Note: For completeness, the full results of the ceramic assessment (including APs 1 - 5) have been reproduced here and will be similarly reprinted in the report on the excavations in APs 1 -5.*

### 14.1 Pottery and CBM assessment (excluding Samian Ware)

Jane Timby

#### 14.1.1 Introduction

The archaeological work carried out at Stretton Grandison resulted in the recovery of 845 sherds of pottery weighing 10.6kg dating to the Roman period. In addition four small fragments of daub / fired clay and 36 fragments (751g) of largely degraded ceramic building material (CBM) were present with the pottery.

In general terms the assemblage is in moderately good condition, reflected in the overall average sherd weight of 12.6 g. Surface preservation of the sherds is good and surface finishes such as colour-coats have survived.

Pottery was recovered from 14 contexts, individual assemblages ranging from single sherds up to a maximum of 519 sherds from AP8 topsoil (400).

At this stage no detailed research work has been carried out to specifically compare the assemblage with other material published from the immediate locality or to link the fabrics in with any pre-existing local fabric or form series.

Following a comment on the methodology used, the assemblage is briefly described. A section follows this on the potential of the group and further work required.

#### 14.1.2 Methodology

The assemblage was sorted into broad fabric groups based on inclusions present, the frequency and grade of the inclusions and the firing colour. For the Roman sherds known regional or traded wares were coded following the system advocated for the National Roman reference collection (Tomber and Dore 1998).

The sorted assemblage was quantified by sherd count and weight for each recorded context and the data entered onto an MS Excel spreadsheet. A summary of this is presented in Table 1 with spot dates.

#### 14.1.3 Roman: composition

The assemblage comprises a mixture of handmade wares and wheel made Roman wares. The latter mainly comprise local wares but there are a few imported continental and regional vessels represented.

The earliest fabrics present include Palaeozoic limestone (MAL RE B), and Malvernian rock-tempered (MAL RE A). These wares originated in the mid-later Iron Age but continue to feature in assemblages up to the end of the 1<sup>st</sup> century AD/early 2<sup>nd</sup> century, and in the case of MAL RE A well into the 2<sup>nd</sup> century and later basically using the same technology. Fabric MAL RE A is the

dominant ware present in this group with tubby jars, rolled rim jars and bowls most of which are likely to be later 1<sup>st</sup> or 2<sup>nd</sup> century AD here. Overall Malvernian wares account for 9.8% by count of the total assemblage.

Continental imports include fine table wares, mortaria and amphorae. Samian is surprisingly poorly represented compared with previous assemblages from Stretton Grandison. There are just four sherds with vessels from both South Gaul and Central Gaul.

Three sherds of amphorae are present, all from Baetican globular (Dressel 20) olive-oil amphorae imported from Southern Spain. This is the commonest amphorae to be found in British sites and was imported in quantity between the 1<sup>st</sup> and 3<sup>rd</sup> centuries.

Four sherds from an imported North Gaulish mortarium in slightly worn condition came from context (419).

Regional imports are dominated by products of the Dorset and South-west black burnished ware industry but these only account for 3% of the assemblage. Most of the sherds appear to belong to the early phases of the industry dating to the 2nd century with a range of bowls and jars. There were no obvious later Roman sherds.

Other regional imports present include a sherd from a barbotine decorated Lower Nene Valley colour-coated beaker and five sherds of *mortaria*. The latter include three from Mancetter Hartshill; one possibly from Wroxeter or the West Midlands and one small fragment possibly from Gloucester.

Of unknown source but probably not local, is a sherd of Romano-British glazed ware, possibly from Holt.

The Roman wares are dominated by local grey wares at 44.9% followed by Severn Valley wares at 27%. The former mainly comprise jars, including some with rouletted or rusticated decoration, accompanied by a few bowls and dishes and single examples of a tankard and a single-handled flagon. The Severn Valley wares included wide-mouthed jars, tankards, bowls, dishes and a lid.

A few sherds of fine oxidised ware are probably also of local origin and are mainly from jars and a dish.

#### **14.1.4 Chronology and distribution**

The entire assemblage dates to the Roman period, specifically it spans the 1<sup>st</sup> to later 2<sup>nd</sup>/3<sup>rd</sup> centuries. There are no obvious later Roman wares present.

The earliest contexts appear to be from AP8 which also coincidentally produced the largest amount of pottery, just over 95% of the total recovered assemblage. The topsoil alone produced 519 sherds.

AP4 yielded just 23 sherds which appear to span the 1<sup>st</sup>-3<sup>rd</sup> century whilst AP5 produced just 16 sherds from four contexts. Ten of these were body sherds of Severn Valley ware and not closely datable. No pottery was submitted from AP9.

#### 14.1.5 Fired clay and ceramic building material (CBM)

A small assemblage of 36 fragments of CBM is present most of which, 28 fragments, came from the topsoil in AP8. The remaining pieces also came from this area with no examples from AP4 and AP5.

Most of this comprised very small, abraded fragments with few diagnostic features to suggest original form. At least one *tegula* (roofing tile) could be discerned and all the pieces are likely to be of Roman date.

Four very small fragments of fired clay or daub also came from AP8 contexts.

#### 14.1.6 Potential and further work

This is a further useful assemblage from the Stretton Grandison area to add to that previously recorded. In broad terms it shows many similarities in terms of chronology and composition to other groups from the immediate area. The assemblage is very typical for the region and largely dominated by local grey wares and Severn Valley wares accompanied by a range of non-local material. The only surprise in view of other assemblages from the locality is the lower incidence of samian which might be a reflection of the location of the trenches away from the postulated fort area.

If publication is envisaged a moderately brief report could be prepared and a selection of vessels illustrated. The fabrics should be tied in to the Worcestershire County Council system to facilitate subsequent comparative work.

#### 14.1.7 Reference

Tomber, R, and Dore, J, 1998 *The National Roman fabric reference collection: a handbook*, Museum of London / English Heritage/ British Museum

Context	Description	Malv	sam	amp	SVW	GY	Other	BB1	Tot No	Tot Wt	Date	CBM
102	deposit	0	1	0	11	2	1	0	15	156	C1+ late C2-	
104	fill of ditch [105]	0	0	0	0	0	7	1	8	32.5	C3	
202	layer	0	0	0	2	0	0	0	2	19	C2-C4	
203	fill of [204]	0	0	0	1	0	0	0	1	0.5	C2-C4	
205	deposit	0	0	0	6	5	2	0	13	511	C2+	
206	alluvium	0	0	0	1	0	0	0	1	16	C2+	
400	topsoil	34	2	2	159	235	73	14	519	5628	C2	x28
401	layer	2	0	0	13	63	16	0	94	1214	C1-C2	
407	foundation layer	2	0	0	1	3	1	6	13	332	C2	x3
409	slag deposit	1	1	0	4	11	0	2	19	152	C2-C3	x5
411	occup surface	20	0	1	17	15	6	2	61	929	C1/C2	x1
412	fill of posthole [413]	13	0	0	2	0	7	0	22	216	C1/C2	
416	fill pit 415	5	0	0	1	11	16	0	33	413	C1/C2	x2; daub
419		6	0	0	8	25	5	0	44	996	C1/C2	x1
<b>TOTAL</b>		<b>83</b>	<b>4</b>	<b>3</b>	<b>226</b>	<b>370</b>	<b>134</b>	<b>25</b>	<b>845</b>	<b>10615</b>		

Table 1: Pottery and CBM list



## 14.2 Samian Ware Report

Felicity Wild

The excavation produced a further 45 sherds of samian ware from about 29 vessels (*table 1*). The material was largely similar in nature to that from the previous excavations, confirming the previous findings. Forms and vessel numbers are listed below, by origin.

Form	SG	MdeV	CG	Total
30	1			1
37	4	5	3	12
27	1			1
33		1		1
18	2			2
18 or 18/31	1			1
18/31		3		3
18/31 or 31		1	1	2
36 variant		1		1
Bowl			2	2
Uncertain		1	2	3
<b>Total</b>	<b>9</b>	<b>12</b>	<b>8</b>	<b>29</b>

Table 1: Samian pottery list

31% of the material was South Gaulish and 69% Central Gaulish, with as much as 41% probably from Les Martres-de-Veyre, a surprisingly high proportion. With the exception of one sherd of Central Gaulish ware, all the material was from the area of Access Pit 8, to which area, specifically, the discussion below applies.

### 14.2.1 Access Pit 8

Like the samian ware previously excavated from Access Pit 8, the material ranged in date from the later Flavian-Trajanic period to the middle of the second century AD, with the bulk likely to date to the period before c.AD 140. The proportion of decorated ware, c.45%, is high, though it should be noted that most of the decorated ware from the previous excavations also came from this area.

In the following descriptions of the decorated ware, figure types are quoted from Oswald 1936-37 (O.), Central Gaulish decorative details from Rogers 1974 (Rogers) and parallels from Stanfield and Simpson 1958 (S&S). Lower case numerals after a potter's name denote homonyms in the system used by Hartley and Dickinson (2008-12).

1. Form 37, South Gaulish. Five joining sherds of a small bowl with zonal decoration. A band of triple festoons containing a goat (O. 1823), a hare (?) and part of a bird, separated by a distinctive pendent motif (Hermet 1934, pl. 12, 69) lies above a straight wreath of triple poppy-heads, over a basal wreath of trifid buds. The ovolo occurs on bowls stamped by Crucuro i (e.g. Mees 1995, Taf. 52, 2), though there is no evidence that he used the various types and motifs. However, on small bowls, potters often used a different style of decoration from usual. Although this cannot be ascribed to a potter with certainty, the connection with Crucuro suggests a date c.AD 75-110. (400)

2. Form 37, South Gaulish. Two sherds, one burnt, from the same bowl, showing a lion (O1419) seated on conventional grass tufts above a trifid basal wreath. The trident tongue of the ovolo is

just visible on one sherd. The style and motifs are typical of the Flavian-Trajanic period. The lion was used by potters such as Germanus, M. Crestio and Crucuro, while the basal wreath is perhaps most characteristic of the work of Mercator. Insufficient survives of the ovolo for more accurate identification. c.AD 80-110. (400, 401)

3. Form 37, South Gaulish. Small sherd with a thick, single festoon and part of a trifold bud. The bud was used by potters such as Biragillus, who also used a similar single festoon (Mees 1995, Taf. 11, 1). c.AD 85-110. (400)

4. Form 37, Central Gaulish, in the style of Drusus i of Les Martres-de-Veyre, showing the sphinx (O.855) and beaded circle (Rogers C294) over a wreath of bifid leaves (Rogers G284). The type and motifs are all attested on his style (S&S, pl. 12, 154; 14, 178). c.AD 100-120. (401)

5. Form 37, Central Gaulish, with the ovolo (Rogers B28) and beaded border of Drusus i. c.AD 100-120. (419)

6. Form 37, Central Gaulish, showing the ovolo (Rogers B38) with wavy line border, as used by X9 and X10 of Les Martres-de-Veyre. This is probably the style of X10, Stanfield's Ranto-Silvio style, with the upper edge of its characteristic scroll (S&S, pl. 33, 387). c.AD 110-135. (411)

7. Form 37, Central Gaulish. Small bowl, with the ovolo (Rogers B14) used by X13 and Sacer and a beaded border. The fabric, similar to no. 6 above, is probably that of Les Martres-de-Veyre, suggesting X13. c.AD 100-120. (411)

8. Form 37, Central Gaulish, showing the ovolo (Rogers B24) used by Docilis, and possibly part of his bear (O.1588?), cf. S&S, pl. 91, 6. c.AD 130-155. (400)

9. Form 37, Central Gaulish. Two joining sherds in the style of Divixtus i, showing panels containing medallions with Abundance (O.802) and Bacchus (O.571), both used by him (S&S, pl. 115, 3). The circular motif at the end of the bead row is also characteristic of his style. c.AD 145-175. (400)

10. Form 18/31, Central Gaulish, showing the end of the potter's stamp, ]IV.SF or perhaps ]LV.SF, not yet identifiable. Possibly in the fabric of Les Martres-de-Veyre, suggesting a Trajanic-Hadrianic date. (411)

#### 14.2.2 Access Pit 4

The fill of ditch [105] produced a sherd of form 18/31 or 31, Central Gaulish, Hadrianic or Antonine.

#### 14.2.3 Bibliography

Hartley, B.R. and Dickinson, B.M. 2008-12, *Names on Terra Sigillata: an Index of Makers' Stamps and Signatures on Gallo-Roman Terra Sigillata (Samian Ware)*, Institute of Classical Studies, University of London.

Hermet, F. 1934, *La Graufesenque (Condatomago)*, Paris.

Mees, A.W. 1995, *Modellsignierte Dekorationen auf südgallischer Terra Sigillata*, Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg, Band 54, Stuttgart.

Oswald, F. 1936-37, *Index of Figure Types on Terra Sigillata*, University of Liverpool Annals of Archaeology and Anthropology, Supplement.

Rogers, G.B. 1974, *Poteries Sigillées de la Gaule Centrale I: les motifs non figurés*, Gallia Supplement 28.

Stanfield, J.A. and Simpson, G. 1958, *Central Gaulish Potters*, London.

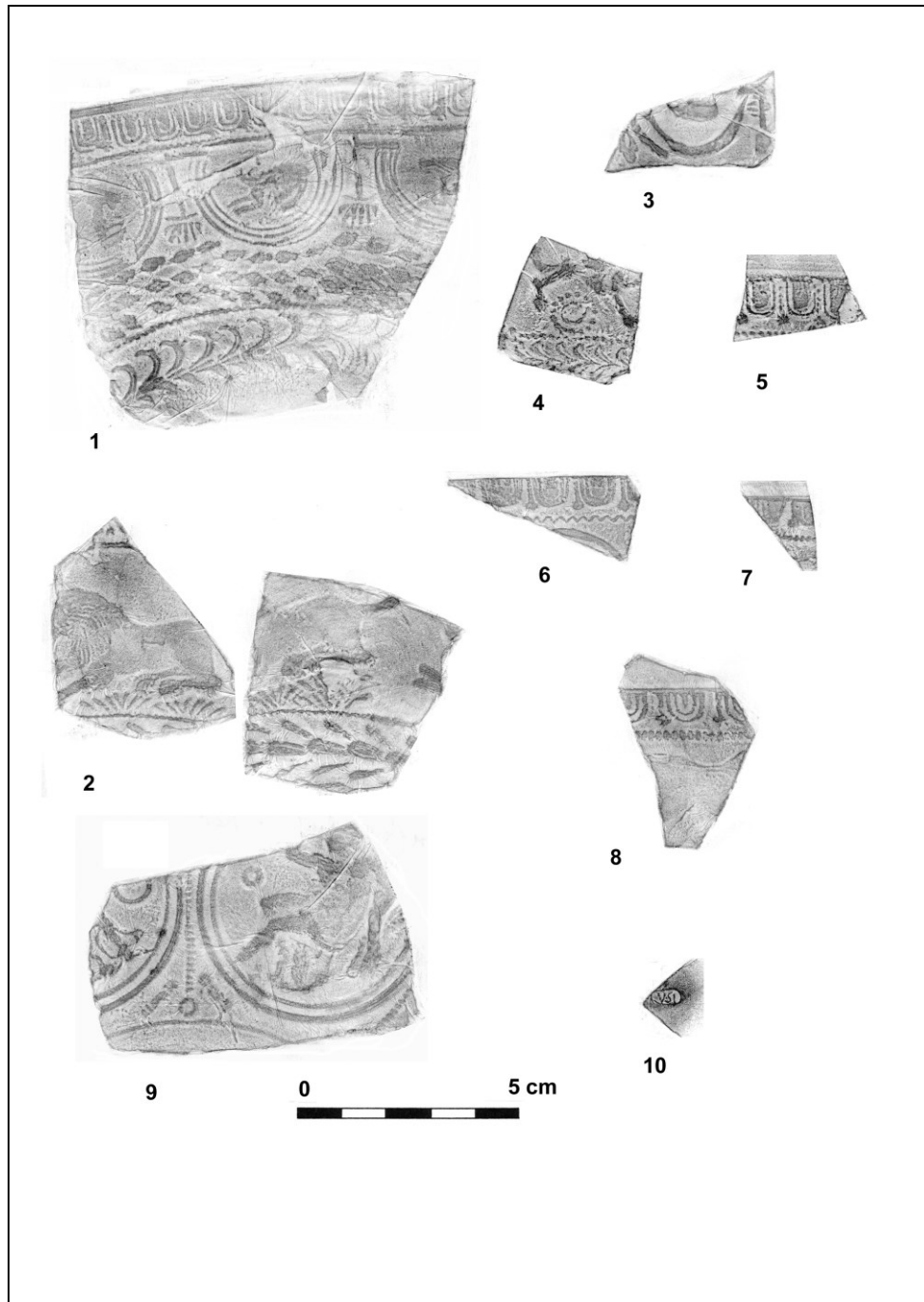


Figure 3: Decorated Samian ware from Stretton Grandison

## 15. Appendix 4: X-Radiography and metal object conservation assessment

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*Note: For completeness, the full results of the ceramic assessment (including APs 1 - 5) have been reproduced here and will be similarly reprinted in the report on the excavations in APs 1 -5.*

*Jennifer Jones Conservation Services Dept of Archaeology Durham University*

### 15.1 Quantification and condition

Thirty objects were received for examination, X-radiography and conservation assessment. These comprised 1 copper alloy and 29 iron objects. The copper alloy object from context [411] was found to be highly corroded but stable when examined. The ironwork was found to be moderately to highly corroded and mainly stable, though some pieces showed evidence of cracking and spalling of the corrosion surface.

Moderately corroded metallic material is defined as having the surface detail, but not usually the general form of the object, obscured by corrosion products, and has some metal remaining below the corrosion. Highly corroded metallic material is defined as either having both the form and the surface detail of the object obscured by corrosion, and/or having little or no metal remaining in its core.

### 15.2 X-Radiography

The objects were briefly visually examined to assess their condition and stability, to determine the material from which they were made, and to look for surface and technological detail. The objects were sorted into groups of a similar density, which were X-rayed together.

**When viewing the XR plates, they should be orientated with the bright spot (a lead marker) in the top left hand corner, to correspond to the annotated XR sleeve.**

### 15.3 Results and recommendations

X-radiography revealed or confirmed 23 of the iron artefacts as nails or nail fragments, and the large, sub-circular object on XR6233 from context [411] as a piece of ironworking slag. Six objects (listed below) would benefit from further investigative conservation, to assist specialist reporting of the assemblage, if their contexts are considered to be archaeologically significant. **The listed objects are indicated by stars on the XR envelopes.**

**XR6233 [411] 2 CuA ?joining curved fragments** : Selective removal of obscuring surface soil and corrosion to define surface detail.

**XR6233 [416] Fe strip with possible notched end** : Selective removal of obscuring surface soil and corrosion using air abrasion, to define the ends.

**XR6233 [416] Fe ?decorative fragment** : Selective removal of obscuring surface soil and corrosion using air abrasion, to define the object.



**XR6234 [400] Fe pierced fragment** : Selective removal of obscuring surface soil and corrosion using air abrasion, to reveal the perforation and the intact object edge.

**XR6234 [400] Fe object** : Selective removal of obscuring surface soil and corrosion using air abrasion, to reveal possible scoop-shaped end.

**XR6235 [400] Fe object** : Selective removal of obscuring surface soil and corrosion using air abrasion, to define object and reveal surface detail.

#### **15.4 Storage**

The objects have been packed for medium to long term storage. They should continue to be stored in pierced polythene bags in an airtight container at a stable temperature and below 20% relative humidity (RH), to inhibit further corrosion. RH should be controlled by active silica gel, which is regularly monitored and regenerated as necessary.

## 16. Appendix 5: Coin Assessment

Adrian Popescu

Context	Quantity	
401	1	<b>Hadrian</b>
		Coin: As, Minted: Rome, Date: 119-138 AD
		Period 15 (294-317)
		Reference: BMC III, p. 438, no 1341 or p. 448, no 1380.
101	1	<b>Licinius I</b>
		Coin: Nummus, Minted: London, Date: 316-317 AD
		Reference: RIC VII, p. 102, no 97.

## 17. Appendix 6: Animal Bone

*Note: For completeness, the full results of the animal bone assessment (including APs 1 - 5) have been reproduced here and will be similarly reprinted in the report on the excavations of AP1 - 5.*

Alison Foster

### **Assessment of vertebrate remains recovered during further excavations at Stretton Grandison, Herefordshire (site code: LORSG2)**

#### **Summary**

*An archaeological excavation was carried out by Border Archaeology in 2007, to the south of Stretton Grandison, Herefordshire, in advance of water pipeline works. Subsequently, four of the access pits (APs) were re-excavated (in 2011) as part of a maintenance programme and, as it was not possible to determine the exact location of the original pits, further archaeological deposits were encountered. The small assemblage of vertebrate remains recovered during this re-excavation was submitted for an assessment of its bioarchaeological potential.*

*Bone was present in three of the re-excavated pits (APs 4, 5 and 8), with the bulk recovered from AP8. Much of this material was, however, derived from a layer of topsoil interpreted as ploughsoil. Preservation was generally good but as a result of considerable fragmentation (including frequent fresh breakage) approximately a quarter of the assemblage remained unidentified. Butchery marks were present on bone from AP4 and AP8, with most of the evidence being for secondary carcass preparation, including split metapodials and long bones, and scapula trimming.*

*The potential value of this small additional quantity of vertebrate remains depends upon establishing the date of the deposits and identifying any corresponding contexts from this and the previous phase of excavation, in order to supplement the data from the original, more substantial, bone assemblage.*

**KEYWORDS:** STRETTON GRANDISON; HEREFORDSHIRE; ASSESSMENT; ROMAN; VERTEBRATE REMAINS

## 17.1 Methods

One small box of hand-collected bone from the excavations (approximately 10 litres in total) was submitted to Palaeoecology Research Services Limited (PRS), Kingston upon Hull, for an assessment of its bioarchaeological potential.

Subjective records were made of the state of preservation, colour of the bone fragments, and the appearance of broken surfaces ('angularity'). Other information, such as fragment size, dog gnawing, burning, butchery and fresh breaks, was noted, where applicable.

Where possible, fragments were identified to species or species group using the PRS modern comparative reference collection and published works (Hillson 1990; Schmid 1972; Cohen and Serjeantson 1996). Those which could not be identified to species were described as the 'unidentified' fraction. Within this fraction, fragments were grouped into a number of categories: large mammal (assumed to be cattle, horse or large cervid), medium-sized mammal 1 (assumed to be caprine (sheep/goat), pig or small cervid), medium-sized mammal 2, (from a cat or hare-sized animal), and totally unidentifiable.

Nomenclature for mammal species follows Corbet and Southern (1977) and birds follow Walters (1980).

## 17.2 Results

Of the four engineering access pits re-excavated, all bar one (AP9) yielded animal bone. Hand-collected remains amounted to 215 fragments from 12 deposits (Table 1), with approximately three-quarters of these being derived from a layer of topsoil interpreted as ploughsoil encountered in AP8. Preservation of the vertebrate material was generally good but fresh breakage was extensive throughout the assemblage. Seven of the fragments were measurable and there were two mandibles with teeth *in situ* of use for providing biometrical and age-at-death data.

### 17.2.1 AP4

A relatively large amount of bone was recovered from this access pit during the original excavations in 2007 (Jaques and Carrott 2008). Re-excavation, however, produced only 11 fragments from two contexts, most of which were unidentifiable or could only be categorised by size. Preservation was good, but with frequent fresh breaks. There was no evidence for scavenging by dogs or other carnivores. Butchery marks were apparent on some of the bones from Context 104 (the fill of ditch 105), including a cattle scapula with chops around the glenoid cavity and another scapula fragment from which the spine had been sliced off.

Amongst the other remains submitted from this access pit the only one that could be identified to species was a piece of pig tooth enamel; the remaining material consisted of rib and long bone fragments from large and medium-sized mammals, together with some totally unidentifiable fragments.

### 17.2.2 AP5

Just five small bone fragments were recovered from this access pit, all but one of them from a layer (Context 202) dated to the Roman period. All were of good preservation but there was some fresh breakage. With the exception of a broken pig premolar from Context 202, none of the material could be identified more closely than large or medium-sized mammal.

### 17.2.3 AP8

This pit produced the majority of the bone in the assemblage, with a total of 199 fragments submitted, although most (over 75%) of these were derived from a layer of ploughsoil. The remaining material was recovered from deposits (as yet undated) related to occupation and industrial activity.

Although preservation was generally good, the material was heavily fragmented, which resulted in a quarter of the bones from this access pit being recorded as 'unidentified'. The damage included a significant degree of fresh breakage, especially among those bones recovered from the ploughsoil (Context 400). This context also produced all but six of the bones that showed signs of dog gnawing. Evidence for butchery was noted on approximately 10% of the assemblage, mostly splitting of long bones and metapodials (possibly for marrow extraction), together with a few examples of chop marks to pelves and the ends of long bones (indicating division of the carcass into smaller joints). A cattle scapula with the spine chopped off was also present. These butchery techniques were also noted on material from this access pit recovered by the first phase of excavations.

Species represented were almost entirely restricted to the main domesticates, predominantly caprines (sheep/goat) and cattle, with identified elements for these species numbering 23 and 18, respectively. For the purposes of this assessment, no attempt has been made to distinguish between post-cranial sheep and goat remains. Evidence for goat was present in the form of a single horncore (with no associated butchery marks); however, the majority of the caprine bones are likely to be sheep. Bones that, due to fragmentation, could only be identified as 'medium-sized mammal 1' were also relatively numerous; these are also assumed to be mainly caprines or pigs. Positively identified pig remains were restricted to just three bones. Bird bones were scarce and comprised a fragment of pelvis from a domestic fowl and a distal radius of similar size and morphology to that of a lapwing (*Vanellus vanellus* L.).

Mandibles were the most commonly occurring skeletal element for caprines in the material previously recovered from this pit and it was noted that seven mandible fragments were among the identified caprine elements from this phase of excavation, including two with tooth rows.

## 17.3 Discussion and statement of potential

Vertebrate remains totalling 215 fragments were recovered from three of the re-excavated engineering access pits (*table 1*). Pits AP4 and AP5 produced small quantities of material but the bulk of the remains were concentrated in pit AP8. Of these, over three-quarters were recovered from a layer identified as topsoil/ploughsoil. Preservation of the vertebrate material was generally good but fragmentation, including numerous fresh breaks, resulted in a large proportion (over 25%) of the material remaining unidentified and only seven of the bones being measurable. There were also two sheep/goat mandibles with teeth *in situ* of use for providing age-at-death data.



A narrow range of species was present; much of the material was identified as cattle or caprine (sheep/goat), with the bulk of the remainder being categorised as large or medium-sized mammal. It is very likely that most of the fragments grouped by size were also of cattle and sheep. In addition, a few pig bones were noted, together with a fragment of domestic fowl pelvis and a distal radius which showed morphological similarities to that of a lapwing.

Evidence for primary carcass preparation was sparse, and most of the butchered bone comprised split metapodials and long bone fragments, which have been associated with marrow extraction. Trimming of the glenoid and spine was also noted on a few cattle scapulae, which is typical of assemblages from the Roman period and has been noted in Winchester (Maltby 2010) and in 4<sup>th</sup> century deposits from Lincoln (Dobney *et al.* 1996). These butchery techniques were also noted on material recovered during the first phase of excavation.

The value of this additional material is dependant upon equating the contexts from this phase with those of the previous excavation, if possible, and establishing the dates of the deposits.

#### **17.4 Recommendations**

The re-excavations of the access pits produced only relatively small amounts of vertebrate remains. However, provided that corresponding contexts from the two phases of excavation can be identified and issues of dating resolved, a basic archive of securely-dated material, including the collection of biometrical and age-at-death data, should be undertaken to supplement the data from the original excavation.

#### **17.5 Retention and disposal**

The recovered remains should be retained as part of the physical archive for the site.

#### **17.6 Archive**

All material is currently stored by Palaeoecology Research Services (Unit 4, National Industrial Estate, Bontoft Avenue, Kingston upon Hull), pending return to the excavator, along with paper and electronic records pertaining to the work described here.

#### **17.7 Acknowledgements**

The author is grateful to Neil Shurety and Sarah Ritchie, of Border Archaeology, for providing the material and the archaeological information.

#### **17.8 References**

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Species		AP4	AP5	AP8	Total
<i>Sus f. domestic</i>	pig	1	1	3	5
<i>Bos f. domestic</i>	cow	2	-	18	20
<i>Capra hircus</i> L.	goat	-	-	1	1
Caprovid	sheep/goat	-	-	23	23
Large mammal		4	2	40	46
Medium-sized mammal 1		1	1	54	56
Medium-sized mammal 2		-	-	4	4
<i>Gallus f. domestic</i>	chicken	-	-	1	1
cf. <i>Vanellus vanellus</i> L.	?lapwing	-	-	1	1
Unidentified		3	1	54	58
<b>Total</b>		<b>11</b>	<b>5</b>	<b>199</b>	<b>215</b>

Table 1: Hand-collected vertebrate remains recovered from re-excavations at Stretton Grandison Herefordshire by access pit

## 18. Appendix 7: NMR OASIS archaeological report form

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OASIS ID: borderar1-95707

### Project details

Project name	Re-excavation of engineering access pits, AP8 and AP9, Stretton Grandison, Herefordshire
Short description of the project	Following the pre-excavation of two engineering access pits located to the south of Stretton Grandison (SO 63183 43262) in 2007, Border Archaeology undertook a further programme of excavation on behalf of Dŵr Cymru Welsh Water/Laing O'Rourke (DCWW/LOR) in advance of engineering works to replace pipe couplers deemed to be at risk of potential leak and as part of a comprehensive replacement programme along the whole 2007/8 installation. The archaeological work was carried out in approximately the same locations previously excavated, namely those indicated as Access Pits (APs) 8 and 9, the aim being to ascertain the presence/absence of any further archaeological deposits, to ensure their preservation by record and to recover and process all materials considered to be of archaeological significance or having the potential to contribute to archaeological knowledge. As was anticipated in the WSI (Border Archaeology, 2010, 3), the locations of AP8 and AP9 were not immediately evident, and some minor variation to the original trench location occurred which resulted in further significant deposits being revealed. AP8 revealed further evidence of the Roman settlement (SAM Herefordshire 330). In addition to the well, kiln and occupation deposits excavated in 2007 Border Archaeology have observed two possible building platforms with an associated trackway or courtyard, as well as various occupation layers, a rubbish pit/organic dump and a dump of waste slag. This additional information suggests an area of the settlement being utilised as an area of industrial enterprise. Pottery dated these features to the 1 <sup>st</sup> – 2 <sup>nd</sup> centuries AD. The investigation of AP9 revealed no new archaeological deposits, as the original AP was located exactly and no additional area was opened. A well-compacted mid red-brown sandy clay natural was observed in this area at 60.49m OD
Project dates	Start: 21-02-2011 End: 01-03-2011
Previous/future work	Yes / Not known
Any associated project reference codes	LORSG2 - Sitecode
Type of project	Archaeological Excavation
Site status	Scheduled Monument (SM)

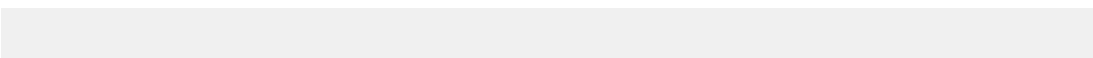
Current Land use	Cultivated Land 1 - Minimal cultivation
Monument type	BUILDING PLATFORM Roman
Monument type	OCCUPATION LAYER Roman
Significant Finds	POT Roman
Significant Finds	COIN Roman
Significant Finds	SLAG Roman
Methods & techniques	'Targeted Trenches'
Development type	Pipelines/cables (e.g. gas, electric, telephone, TV cable, water, sewage, drainage etc.)
Prompt	Scheduled Monument Consent
Position in the planning process	Not known / Not recorded

#### Project location

Country	England
Site location	HEREFORDSHIRE HEREFORDSHIRE STRETTON GRANDISON Scheduled Ancient Monument (Herefordshire 330)
Postcode	HR8 2TN
Study area	27.80 Hectares
Site coordinates	SO 63570 43177 52.0853300556 -2.531723033360 52 05 07 N 002 31 54 W Point
Height OD / Depth	Min: 60.49m Max: 60.60m

#### Project creators

Name of Organisation	Border Archaeology
Project brief originator	English Heritage/Department of Environment
Project design originator	Border Archaeology
Project director/manager	Border Archaeology
Project supervisor	Sarah Ritchie MA
Type of sponsor/funding body	Water Authority/Company
Name of sponsor/funding body	Dwr Cymru Welsh Water/Laing O'Rourke



**Project archives**

Physical Archive recipient	Hereford City Museum
Physical Contents	'Animal Bones','Ceramics','Industrial','Metal'
Digital Archive recipient	Hereford City Museum
Digital Media available	'Images raster / digital photography'
Paper Archive recipient	Hereford City Museum
Paper Contents	'Stratigraphic','Ceramics'
Paper Media available	'Context sheet','Drawing','Map','Matrices','Photograph','Plan','Report','Section','Unpublished Text'

**Project  
bibliography 1**

Publication type Grey literature (unpublished document/manuscript)

Title Programme of Archaeological Works - Re-excavation of engineering access pits,  
AP8 and AP9, Stretton Grandison, Herefordshire

Author(s)/Editor(s) Ritchie, S. and Ross, N.

Date 2011

Issuer or publisher Border Archaeology

Place of issue or  
publication Leominster

Entered by Sarah Ritchie (s.ritchie55@gmail.com)

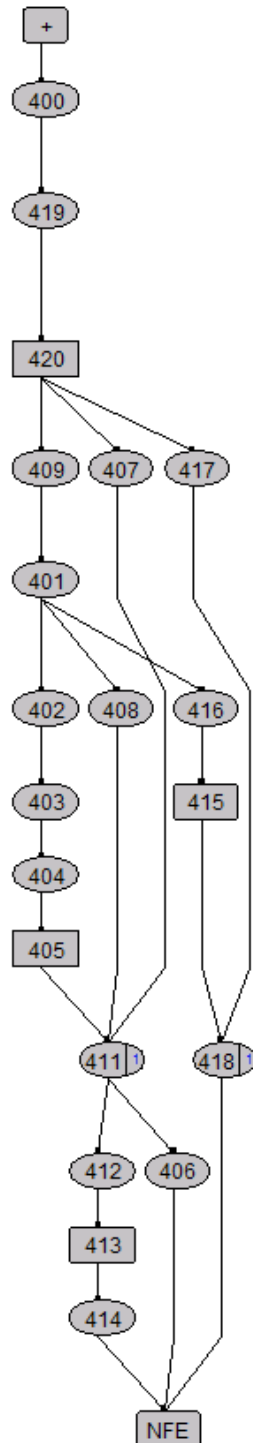
Entered on 10 June 2011

## 19. Appendix 8: Site Summary

<i>Report Title</i>	Programme of Archaeological Works: Re-excavation of engineering access pits AP8 and AP9, Stretton Grandison, Herefordshire
<i>Contractor's Name and Address</i>	Border Archaeology PO Box 36 Leominster Herefordshire HR6 8DE
<i>Site Name</i>	AP8, and Ap9, Ledbury Trunk Main, Stretton Grandison, Herefordshire
<i>Grid Reference</i>	NGR SO 635 432 Planning Application No: N/A
<i>SMR number</i>	EHE1884
<i>Date of Field Work</i>	February 2011
<i>Date of Report</i>	May2011
	<b>NUMBER AND TYPE OF FINDS</b>
<i>Pottery</i>	<i>Period:</i> Roman <i>Quantity:</i> 849 sherds
<i>Slag</i>	<i>Period:</i> Roman
<i>Animal Bone</i>	<i>Period:</i> Roman <i>Quantity:</i> 199 pieces
<i>Coin</i>	<i>Period:</i> Roman <i>Quantity:</i> 1
<i>Metalwork</i>	<i>Period:</i> Roman <i>Quantity:</i> 30 objects
	<b>NUMBER AND TYPE OF SAMPLES COLLECTED</b>
<i>Sieving for charred plant remains</i>	<i>No of features sampled:</i> 1 <i>No of buckets:</i> 1
<i>C14/scientific dates</i>	<i>No and Type:</i> N/A <i>Result:</i> N/A
<i>Pollen</i>	<i>No of columns/spot samples:</i> N/A <i>Name of pollen specialist:</i> N/A
<i>Bone</i>	<i>Number of buckets sieved for bone:</i> 1 <i>Quantity Recovered:</i> rare <i>Period:</i> Roman
<i>Summary of the report</i>	<p>Following the pre-excavation of two engineering access pits located to the S of Stretton Grandison (SO 63183 43262) in 2007, Border Archaeology undertook a further programme of excavation on behalf of Dŵr Cymru Welsh Water/Laing O'Rourke (DCWW/LOR) in advance of engineering works to replace pipe couplers deemed to be at risk of potential leak and as part of a comprehensive replacement programme along the whole 2007/8 installation. The archaeological work was carried out in approximately the same locations previously excavated, namely those indicated as Access Pits (APs) 8 and 9, the aim being to ascertain the presence/absence of any further archaeological deposits, to ensure their preservation by record and to recover and process all materials considered to be of archaeological significance or having the potential to contribute to archaeological knowledge. As was anticipated in the WSI (Border Archaeology, 2010, 3), the locations of AP8 and AP9 were not immediately evident, and some minor variation to the original trench location occurred which resulted in further significant deposits being revealed. AP8 revealed further evidence of the Roman settlement (SAM Herefordshire 330). In addition to the well, kiln and occupation deposits excavated in 2007 Border Archaeology have observed two possible building platforms with an associated trackway or courtyard, as well as various occupation layers, a rubbish pit/organic dump and a dump of waste slag. This additional information suggests an area of the settlement being utilised as an area of industrial enterprise. Pottery dated these features to the 1<sup>st</sup> – 2<sup>nd</sup> centuries AD. The investigation of AP9 revealed no new archaeological deposits, as the original AP was located exactly and no additional area was opened. A well-compacted mid red-brown sandy clay natural was observed in this area at 60.49m OD</p>

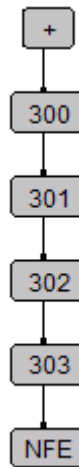
## 20. Appendix 7: Harris Matrices

### 20.1 Harris Matrix for AP8





## 20.2 Harris Matrix for AP9





## Document Control

<b>Job title</b>	Archaeological Evaluation: Re-excavation of engineering access pits, AP8 and AP9, Stretton Grandison, Herefordshire	<b>Job No</b>	BA1031LORSG2
<b>Report written by</b>	<i>Sarah Ritchie MA Alfa &amp; Nadine Ross MA BEng</i>		
<b>Report edited by</b>	<i>George Children MA MIFA</i>		
<b>Issue No</b>	<b>Status</b>	<b>Date</b>	<b>Approved for issue</b>
1	Final		
<i>Neil Shurety Dip M.GM Inst. M</i>			