

October 2011

Archaeological Investigations at New Weir, Herefordshire, 2004-2005



**Report prepared by
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Herefordshire Archaeology Report No. 188

Herefordshire Archaeology
Conservation and Environmental Planning
Planning Services
Regeneration Directorate
Herefordshire Council

Archaeological Investigations at New Weir, Herefordshire

NGR: SO 440 418
EHE42254

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Herefordshire Archaeology is Herefordshire Council's county archaeology service. It advises upon the conservation of archaeological and historic landscapes, maintains the county Sites and Monument Record, and carries out conservation and investigative field projects. The County Archaeologist is Dr. Keith Ray.

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Summary:

In July 2005, the Roman road crossing of the river Wye at Kenchester west of Hereford was the subject of a field investigation by Herefordshire Archaeology in association with Wildfire TV (for Channel 4 Television) and The National Trust. This was one of nine key sites nation-wide featured in the week-long Time Team 'Big Roman Dig' broadcasts, and was the only site so featured in the West Midlands. The Roman road in question was that which began at Chester, and linked this legionary centre with that which existed at Caerleon on Usk in the south.

The excavations revealed that beyond the first 100m out from the edge of the floodplain, the character of the road changes considerably. In effect, from this point the road is constructed as a causeway, (rather than being built on top of a prepared causeway), and its foundations were simply consolidated over the alluvium. In other words the road was simply 'floated' over the soft deposits, with the concrete used to bond the road substrate and its surfaces together forming the very foundation of the whole structure

Two distinct types of road were encountered laid next to one-another. A 'high/fast' element to the east and a 'low/slow' element to the west. A section cut through the road revealed that it had been completely re-surfaced on the separate occasions.

Excavations over the presumed bridging point were inconclusive. The lack of a solid, masonry bridgehead was demonstrated. However, a pair of large pits associated with one of three successive road surfaces recorded may suggest that a timber bridge or superstructure for a ferry existed for at least a short period of time.

Three test-pits were excavated to the west of the road. These revealed a simple alluviation sequence. At 0.5m-0.6m depth in all three trenches there was a discernible horizon featuring charcoal enrichment of the alluvium. In the northern-most of the test-pits was found a small assemblage of Neolithic worked flints, mostly derived from the enriched horizon. No trace of Romano-British activity was found in any of the test pits.

Disclaimer: It should not be assumed that land referred to in this document is accessible to the public. Location plans are indicative only. NGR's are accurate to approximately 10m. Measured dimensions are accurate to within 1m at a scale of 1:500, 0.1m at 1:50, and 0.02m at 1:20.

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Introduction

This report (EHE42254), provides an account of detailed landscape survey, excavations and geophysical survey undertaken by Herefordshire Archaeology. These works were commissioned by The National Trust and Wildfire TV (for Channel 4 Television) during the summer of 2005. This was one of nine key sites nation-wide featured in the week-long Time Team 'Big Roman Dig' broadcasts. Additional geophysical survey was carried out by GSB Prospection.

Aims and Objectives

The works contained within this report follow on from the assessment report (Hoverd 2002, HAR 61) produced by Herefordshire Archaeology. The 2002 fieldwork was designed to test the hypothesis of there being Roman structural remains immediately above the river terrace. Whilst both the geophysics and excavations proved negative within the area investigated, it became apparent during this work that features existed within the parkland landscape which related to medieval and earlier settlement and land-use.

In 2003, a rapid walk-over survey was undertaken in order to assess the survival and condition of earthwork features over the entire holding. This recognised the need for a more detailed survey in order to accurately locate and quantify these earthworks and how they may relate to one-another. This comprised a walk-over survey which identified earthworks and located them using a hand held GPS unit. An area of geophysics was also surveyed over a section of the Roman road which appeared show differences between the land to the west of the road and land to the east. It also suggested that there was a drain, or some other feature running up the centre of the road at this point.

The results of the walk-over survey led to the detailed survey of part of the parkland in 2004 using modern survey equipment. This suggested that a series of earthworks relating to the Roman road had survived with remarkable clarity and that further archaeological work could answer a number of questions regarding the extent, condition and type of the buried archaeology and how it related to the visible remains recorded in the detailed survey.

In 2005 a Project Design was prepared for Wildfire TV and The National Trust that set out the research aims of the project, the specific aims of the excavation, and its objectives. Although the aims and objectives related explicitly to the role of the project as a planned and logical extension of the surveys already undertaken at the site, they were also designed to satisfy the requirements of the 'Big Roman Dig' televised multi-focus event itself. The programme series was designed to explore and promote public understanding of Roman Britain through a series of linked themes. These explorations were centred upon the excavation of a massive villa-complex in the south Somerset hills at Dinington near Ilminster. As well as 'poster-sessions' linking to myriad local projects, the main themes were picked up in a carefully planned series of

overlapping field projects, mostly (like The Weir project) building upon previous work in the vicinity. The Weir project work in July 2005 was designed to contribute to the themes of 'infrastructure and communication' on the one hand, and 'towns' on the other.

The archaeological aims of the project included to learn more about the road and the crossing, but also to critically examine the possibility that a riverside settlement may have existed here. As well as more geophysical survey, a series of excavation areas was also planned.

Location

The Weir Estate is located within the parish of Kenchester approximately six miles to the west of Hereford City, (NGR SO 440 418). The site comprises part of the floodplain on the northern bank of the river Wye together with its river terrace.



The underlying solid geology of the area consists of Lower Red Sandstone of the Devonian period (Institute of Geological Sciences 1979). This is overlain by soft beds of red and grey marl with more compacted sandstone at regular intervals (Rowley 1986).

Figure 1: Map indicating the location of the study area within the county

Archaeological background

The Romano-British site at The Weir Garden, Kenchester (also known as New Weir) was first described at length in articles that appeared in the Transactions of the Woolhope Naturalists' Field Club (TWNFC) from the late nineteenth century into the 1930s. These articles were mostly concerned with documenting the Roman remains of Herefordshire as a whole. Summaries of the Roman period in the county also appeared in Volume 1 of the Victoria County History (1908), and in the Royal Commission on Historic Monuments Inventories (1934: Mortimer Wheeler). In particular, the remains comprising a surviving buttress supporting a riverside terrace and the stepped base of a presumed ornamental pool were described in such accounts.

A modern era of archaeological exploration of this site was marked by the conduct of two weekends of work in 1977 and a geophysical survey in 1978 by the former Director of the City of Hereford Archaeological Unit, Ron Shoesmith. This work was published in the TWNFC in 1980. Further more detailed work was carried out by Cotswold Archaeological Trust on behalf of The National Trust in 1994, in advance of works to secure the main buttress from riverine erosion. This work cumulatively demonstrated the existence of a multi-roomed residence built upon a 4m high artificial terrace overlooking the Wye. The terrace was supported by four or more buttresses that in at least one case actually contained a carefully floored room. The structure also featured further suites of rooms, mosaic floors, and stonework imported from the Cotswolds including columns.

Meanwhile, aerial survey by Chris Musson and others in the 1980s and 1990s had revealed the existence of further sites at Old Weir, further downstream and in the vicinity of the former crossing point of the River Wye of the Roman road from Caerleon to Wroxeter. This point is 1.2km from the east gate of the walled Roman settlement at Kenchester. In particular, parchmarks appeared to indicate the presence of buildings located beside the Roman road immediately north of the former Wye crossing.

It was this latter work, as well as the ongoing threat of riverbank erosion to the continued existence of the terrace building complex in The Weir Garden, that provided the immediate context for the Herefordshire Archaeology site investigations. These latter took place with the support and co-operation of David Hughes (Property Manager for the National Trust), and National Trust archaeology staff, Caroline Thackray, Rob Woodside and Jeremy Milln.

No brief for this work was ever formally established. The general aim was to assist The National Trust in developing a management strategy for the historic environment of the property. Until 2004, the basis of this partnership was a small grant sum and help in kind (for instance for machine hire costs for the field evaluation). In 2004, a slightly more substantial sum was provided in grant aid towards the cost of the detailed survey.

Previous fieldwork by Herefordshire Archaeology

The Weir Garden: site inspection

Several visits have been made to this site, at various times of the year. This has included study of the slopes above the site whence came the material (including tesserae, mortar, tile and pottery fragments) derived from animal burrowing. Especially close inspection of the 'shrubby' area downstream from the main surviving buttress was carried out early in 2004.

Archaeological field evaluation north of The Weir Garden

This followed up the reported discovery of Roman material apparently eroding out of the bank actually above the terrace site within The Weir Garden. The fieldwork took place in January 2002 (Hoverd 2003, HAR 61). Following geophysical survey of this area, a series of trenches was excavated by machine across the parkland directly to the east of The Weir Nursing Home. No traces of structures and no finds of any kind were retrieved, natural soil profiles being found in all eight trenches.

Assessment survey of the Estate

A full walkover survey was carried out in January 2003. This involved the noting of all features of archaeological interest and the pin-pointing of their location using a hand-held Global Positioning by Satellite (GPS) instrument. The rapid survey resulted in the location of over 60 features of archaeological interest. These features were concentrated in the parkland to the north and east of The Weir Nursing Home, and in the environs of Old Weir farm. Finds of Romano-British material were made among debris at the base of the riverbank immediately downstream from the Roman river crossing. It is presumed that although physically this debris attaches to the left (north) bank of the Wye, the material derives from erosion of the Romano-British 'farmstead' site (see below) immediately west of the Roman road on the southern bank.

Features were recorded (see Figure 2 and Table 1), relating to land-use prior to the construction of the parkland. These included four distinct areas of ridge and furrow, (HSM 42284, HSM 42289, HSM 42290 and HSM 42297) of both medieval and post-medieval date. These appeared to overlay a series of lynchets, (HSM 42275, HSM 42277, HSM 42278, HSM 42267, HSM 42269, HSM 42270 and HSM 42285). These are constructed diagonally across the river terrace and appear to either be cut by or directly associated with the earthwork remains of the Roman road (HSM 6883), as it runs over the river terrace from the floodplain. Due to the complexity of these features and the importance of understanding their relationships with one another, particularly to the south and west of Old Weir Farm, it was suggested that this area was surveyed in more detail.

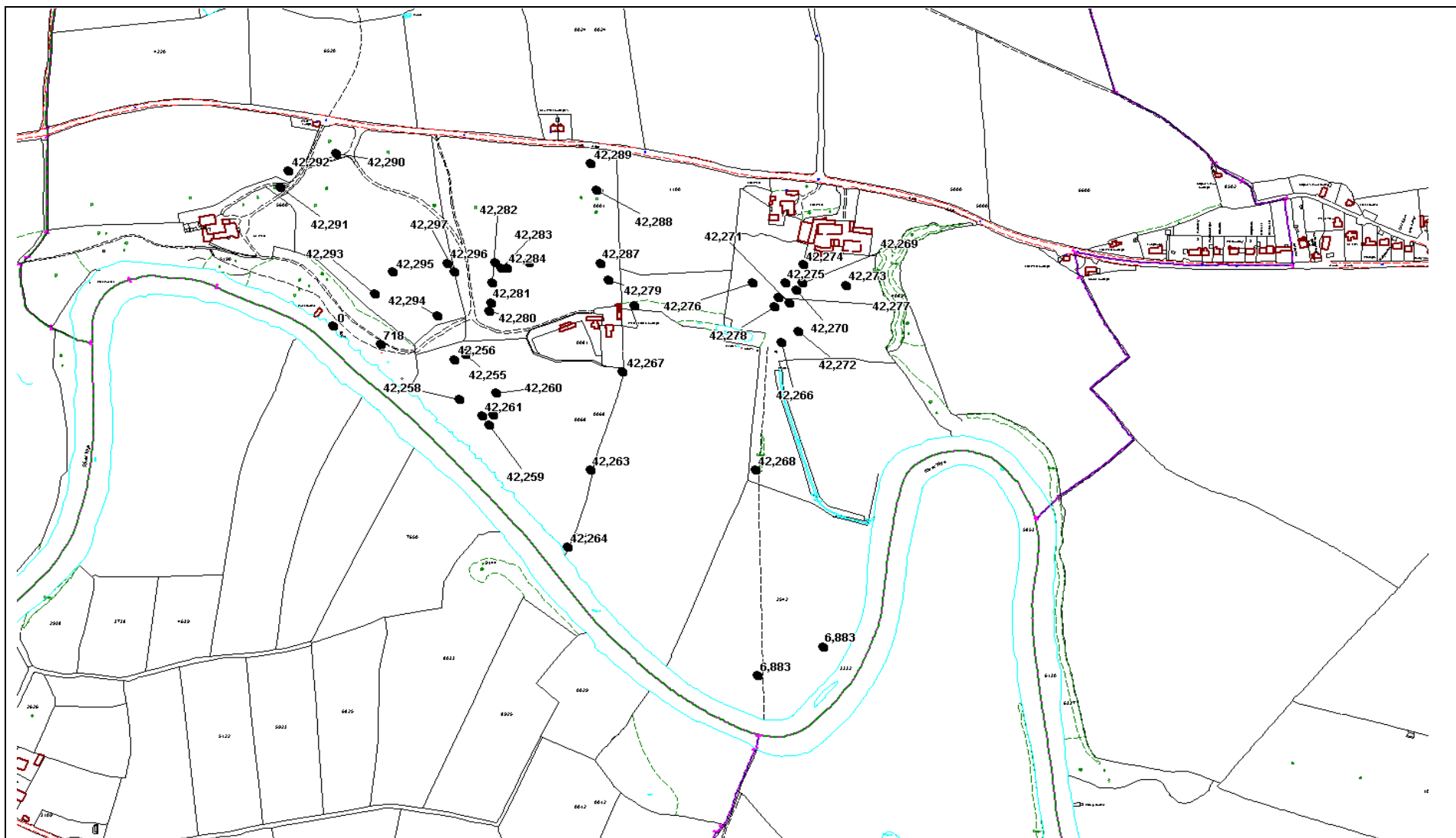


Table 1: Features recorded during the 2003 walk-over survey.

SMR No.	Easting	Northing	Period	Site Type	Description
SAM335	343659	241821	Roman	Structure	Large masonry structure bonded with Op.Sig
718	343723	241795	Roman	Structure	Nine sided stone cistern
42255	343835	241780	Post-Medieval	Ditch	Boundary ditch, 2m wide and 0.35m deep
42256	343820	241772	Post-Medieval	Pool	Rectangular Pool 25m long and 12m wide
42257	343836	241786	Post-Medieval	Platform	Platform, 15m long and 6m wide
42258	343827	241715	Post-Medieval	Lynchet	Lynchet, facing east, runs onto floodplain
42259	343867	241678	Post-Medieval	Ditch	Ditch, continues after lynchet turns
42260	343876	241725	Post-Medieval	Ditch	Ditch, meets ditch above runs SE for 15m
42261	343857	241692	Post-Medieval	Lynchet	Small lynchet at an angle to main lynchet
42262	343872	241693	Post-Medieval	Bank and Ditch	Runs along base of lynchet
42263	344001	241614	Post-Medieval	Bank	Followed by modern fence
42264	343971	241503	Post-Medieval	Ditch	8m wide, follows bank above
42265	344060	241850	Post-Medieval	Bank	Southern bank for pond, c. 1.8m high, 6m wide
42266	344256	241797	Victorian?	Pump House	Small brick pump house and E end of pool
42267	344044	241755	Post-Medieval	Platform	Level area, 20m by 40m
6883	344223	241318	Roman	Road	Runs north from Roman shoreline
6883	344311	241358	Roman	Road	Runs west to meet road above, 8m wide, 0.5m high
42268	344221	241614	Post-Medieval	Ditch	Cuts road
42269	344283	241883	Medieval?	Quarry / Delve	12m in diameter
42270	344275	241873	Medieval?	Ditch	3m wide and 0.3m deep
42271	344266	241855	Medieval?	Terrace/Bank	upto 0.75m high and 3.5m wide
42272	344278	241813	Medieval?	Terrace	runs west for 50m
42273	344341	241880	Post-Medieval	Platform	Semicircular platform c. 6m in diameter
42274	344284	241910	Post-Medieval	Quarry / Delve	15m long and 12m wide
42275	344260	241884	Roman	Lynchet	Top lynchet runs west
42276	344217	241883	Medieval?	Lynchet	runs over top lynchet
42277	344251	241862	Roman	Lynchet	middle lynchet runs west
42278	344246	241849	Roman	Lynchet	bottom lynchet, curves to the SW.
42279	344025	241888	Post-Medieval	Quarry / Delve	Small quarry scoop
42280	343867	241842	Roman	Lynchet	runs north and cut by drive
42281	343869	241854	Roman	Lynchet	runs north
42282	343870	241884	Roman	Lynchet	runs north to 343852 241965
42283	343883	241904	Medieval	Headland	5m wide, western boundary of ridge & furrow
42284	343890	241905	Medieval	Ridge and furrow	area of R&F aligned north / south
42285	343875	241913	Roman	Lynchet	eroded by later ridge and furrow
42286	343920	241913	Medieval	Headland	Runs south from this point
42287	344015	241911	Post-Medieval	Track	4m wide with a bank on either side
42288	344009	242017	Medieval	Headland	4m wide and 0.2m high
42289	344002	242056	Medieval	Ridge and furrow	area of R&F aligned north / south
42290	343663	242070	Medieval	Ridge and furrow	area of R&F aligned NE/SW
42291	343589	242021	18th/19th C.	Ha Ha	remains of infilled Ha Ha
42292	343600	242045	18th/19th C.	Carriage ride	runs to the SE to the edge of scarp
42293	343715	241868	Post-Medieval	Holloway	4m wide runs to SE
42294	343798	241836	18th/19th C.	Carriage ride	runs west with ditch on its down slope side
42295	343738	241899	Medieval	Lynchet	runs east
42296	343811	241911	Medieval	Lynchet	runs west
42297	343820	241900	Medieval	Ridge and furrow	small area of ridge and furrow

Geophysical survey

This was carried out as a test exercise at the same time as the field evaluation early in 2002. Two areas were surveyed using a Geoscan RM15 resistivity meter. One area was surveyed in the parkland to the north of the Garden and east of the Nursing Home. It confirmed the presence of features such as a carriage-way that were partially visible from surface inspection. The second was a localised area straddling the line of the Roman road actually on the floodplain north of the former river crossing at Old Weir. (Hoverd 2003, HAR 61).

The resistivity data, (see figure 3 and figure 4), indicates that the survey area comprises two distinct areas, east and west of the road. The geophysics sample identifies distinct differences between the area to the east of the road from that of the west possibly suggesting the presence of features here that include high resistance anomalies on the western side of the road. This may represent the location of buried foundations and / or disturbed ground.

This evidence may be supported by parch-marks recorded on aerial photographs taken some while ago which appear to indicate that there are foundations of former structures arranged along the course of the Roman road in the field within the loop of the Wye here.

Within the field concerned, an area of c.250m north to south and up to 150m east to west is contained between the Roman road causeway and the river Wye. Both the geophysics and the surface topography tentatively point to a very different configuration here. Firstly, there are no clear indications of structural foundations to the east of the road causeway here. Secondly, a further causeway appears to extend to the east at right-angles from the road causeway. Thirdly, broadly rectangular areas (at least two) appear to exist on either side of this further causeway. Whilst the surface features are less sharp than the road causeway, they survive to a height in excess of 0.5m suggesting the presence of significant and long used structures.

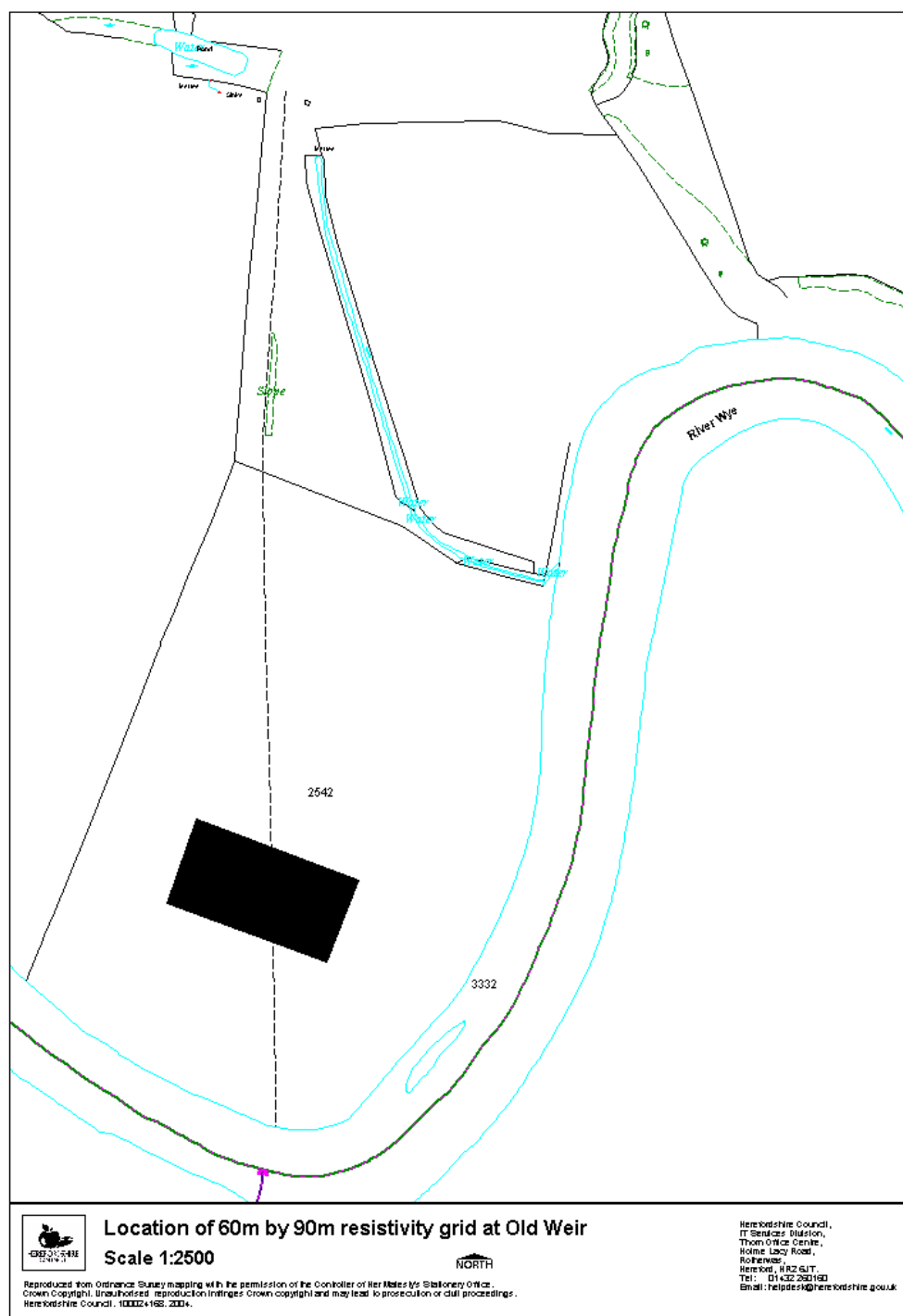


Figure 3: Location of resistivity survey. (dotted line shows centre of Roman Road)

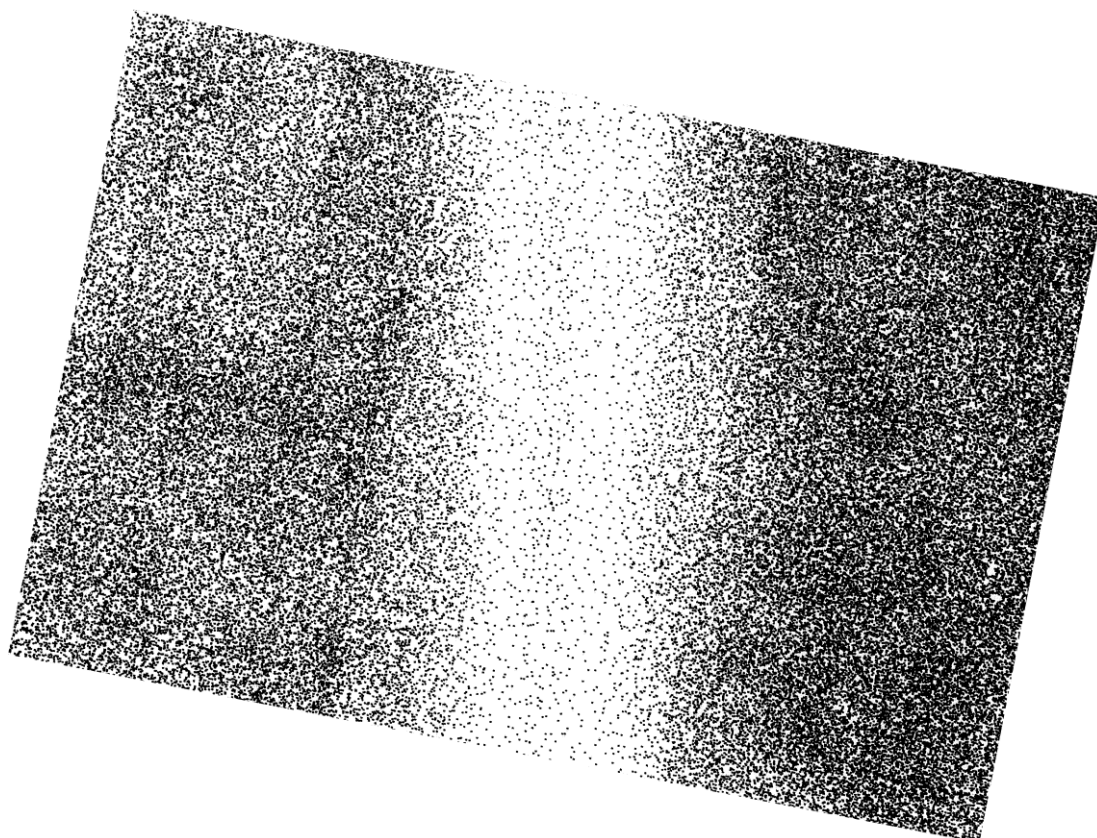


Figure 4: Resistivity survey plot over Roman road (plot size 90 by 60m)

Measured earthwork survey

This was commissioned early in 2004, to follow up the results of the 2003 walkover survey. The aim was to establish exactly the relationship of the Roman road to the presumed contemporary or earlier field system, and to provide accurate documentation of both sets of features together with traces of the medieval field system present (if in patches) across the parkland. The survey extended from The Weir Garden car park in the west, to the earthworks on the floodplain scarp to the south-east of Old Weir (a distance of 0.5km). The survey was undertaken using an Electronic Distance Measurement (EDM) device with laser reflector.



Plate 1: View north from the floodplain of the river terrace and associated features. The buildings on the horizon are part of Old Weir Farm.

Features identified during the detailed survey.

The Roman road

There are two distinct lengths of this for consideration. The first is the incised course of the road as it descends the scarp from the north and reaches the floodplain. The second section is a remarkably well-preserved section of road from the foot of the scarp to the field actually within the south-east trending loop of the river Wye locally.

The upper section is partly confused by later re-working of the slope as an access to the former mill and the floodplain from Old Weir farm. It does nonetheless appear that the road either cuts through or is aligned at a diagonal to avoid, the farming terraces, (strip lynchets). However, these terraces do not (at least any longer) extend eastwards of the road in the immediate vicinity, and they do seem to turn to accommodate the road (although this could represent a later re-working).

The lower section represents one of the best if short stretches of a Roman road anywhere in the Welsh Marches. Not only is the camber very evident surmounting the causeway, but the ditches are present on either side. Along the eastern side of the road, the roadside ditch even appears to be bordered by a counter-scarp bank.

In the field within the loop of the Wye and fully on the floodplain, the causeway is very evident, but has been affected by ploughing. The character of the road here has been tested by the geophysical survey. It clearly features a central drain. While this may have assisted with diverting flood-water from the causeway, it is nonetheless also a feature of the course of such roads through settlements.

Early field systems

The earliest field system present occupies most of the south-facing natural scarp above the floodplain of the Wye locally. It comprises a series of carefully set terraces, (strip lynchets), that slope slightly from end to end. These terraces contain a number of subtle features, including careful variation in width according to the opportunities afforded by topography. At some locations, two such terraces successively climb the scarp. It is very evident that presumed medieval ridge and furrow field systems featuring furlongs and headlands in former parkland overlie these terraces. The early terraces also continued as more subtle features on the generally more level ground above (to the north of) the scarp. Westwards towards The Weir Garden and the Nursing Home, further such terraces ascend a small (dry) side valley which now frame the approach to the Garden and its car park. Some of these features are particularly well preserved.

As noted above one interpretation is that, as the Roman road descended the scarp, it simply cut through and truncated these field terraces. This was potentially a very significant discovery, because it would mean that not only were the terraces likely to be pre-Medieval, they should also be pre-Roman. However, the surveyors recording the earthworks in detail were of the opinion that the road and the terraces could have been created at the same time. This is a stratigraphic relationship that therefore requires further careful assessment (see below).

Later field systems

Two distinct areas of ridge and furrow were recorded during the detailed survey. The western-most comprises an area of 5m wide ridge and furrow on a north-east / south-west alignment, covering an area of approximately 150m by 100m. This area appears to run over the river terrace and in doing so has destroyed the south-eastern portion of the strip lynchets in this area. The width of the ridges and furrows would suggest a medieval date. A second, more fragmented area of ridge and furrow was recorded to the south and east of Old Weir Farm. This comprised roughly north / south aligned ridge and furrow approximately 2m wide. And has been dated to the late-medieval or early post-medieval period.

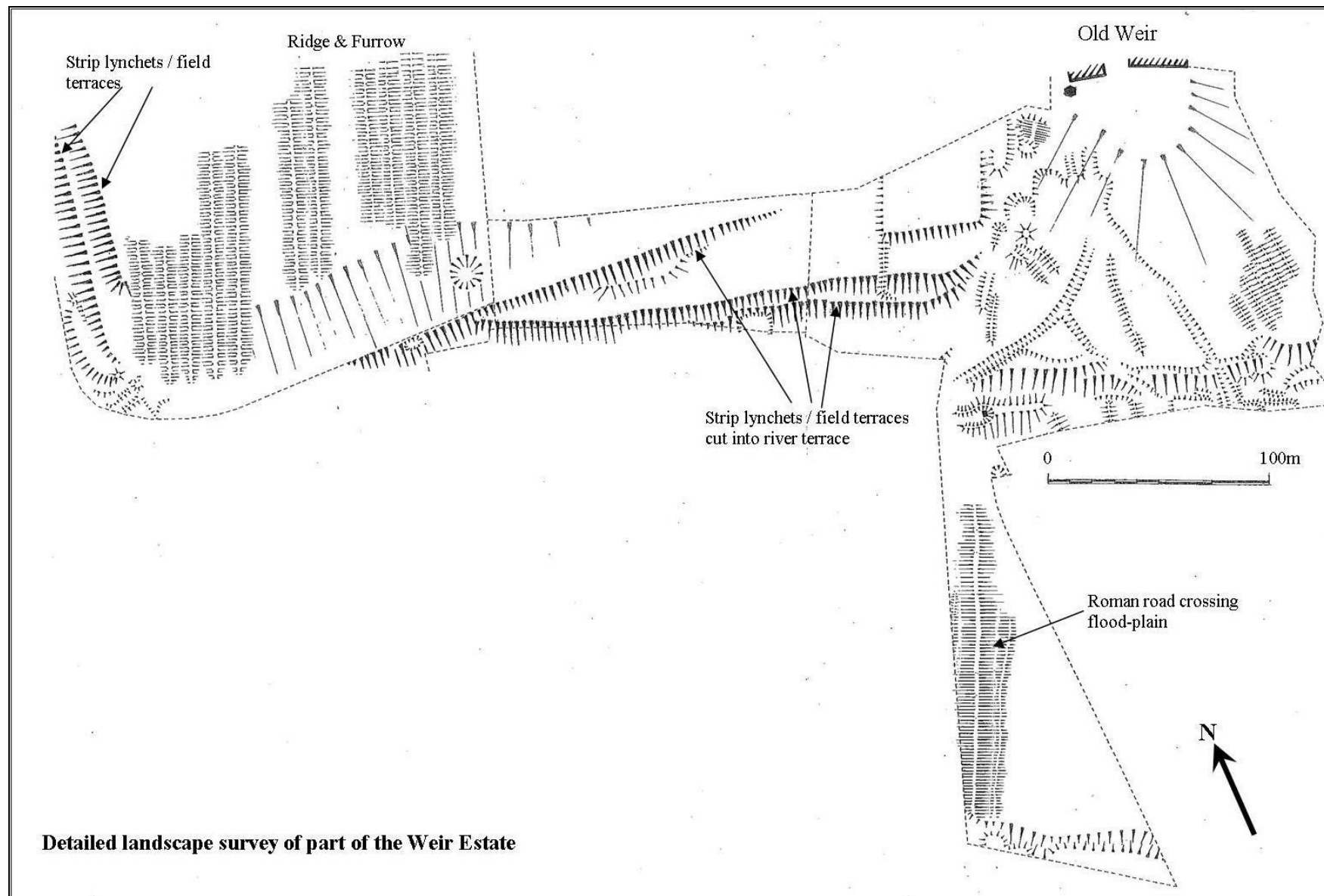


Figure 5: Location of features identified during the detailed survey in 2004

Fieldwork in 2005

The Project Design had envisaged four trenches being opened. The first was to provide a section across the 'causeway' in the field immediately adjacent to the river. The aim was to discover information about the construction of both the causeway and the road itself. The second trench would target the river crossing at the river bank. The intention was that it would throw light upon the nature of the crossing – in particular, was there any evidence of a bridge here? The third trench would be sited to examine the 'attached' causeway. This appeared from the earlier fieldwork to provide a raised area close to deeper silt perhaps representing a docking area close to the downstream bend of the river. Meanwhile the fourth trench was designed to examine the area of putative settlement close to the western side of the road.

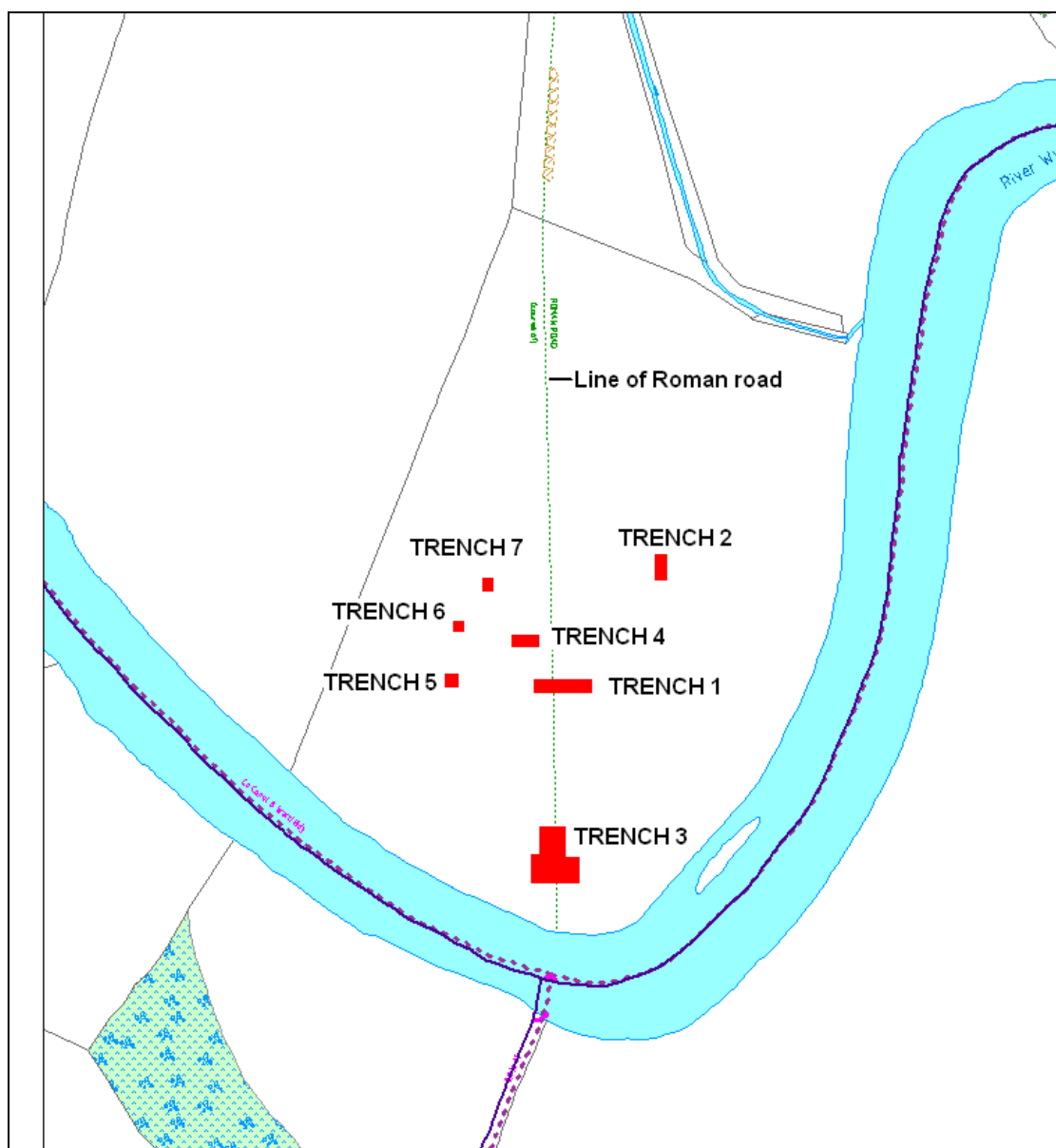


Figure 6: Trench location plan

GSB Prospection of Bradford carried out geophysical survey before the Big Roman Dig and during its course, on both banks of the river. An initial survey using magnetometry within the loop of the river at Old Weir immediately traced something that was invisible at surface, since coverings of alluvium in the past 300 years and more had obscured it. This was the existence of an extensive 'landscape' of classic 'reversed-S' furlongs on the floodplain. This marked an extensive medieval open field system with associated headlands, one of which was soon found to comprise the 'associated causeway' feature examined in the third trench opened at the site. Attempts were then made to locate buried stonework marking the 'buttress' for the arch of a stone bridge or the foundation for a wooden one on the north bank of the river using Ground Penetrating Radar. The survey produced definite readings at depth indicating solid levels, but no clear structures were definable.

Trench 1

Trench 1 was located directly over the earthwork/causeway of the Roman road and crossed it perpendicularly. Its total (after an extension to take in the complete width of road and causeway) this trench measured 17m long and 4m wide. Upon removal of the turf the top of the gravel made road was visible and this was followed to either side to a depth of 0.5m. The gravel surface road [010] appeared to be in remarkably good condition with only limited plough damage from the very top of the camber. Surface [010] comprised a fine, fairly uniform gravel which was well compacted into a bed of lime mortar and extended for approximately 6m in width. The surviving road surface showed signs of light wheel ruts over its entire width. Whilst its eastern edge was bounded by a shallow ditch or *agg*ar [022], the western edge ran onto a spread of well laid cobbles / large gravel, [065]. This surface appeared lower down in section than [010] and its edge was overlain by the makeup of [010] by approximately 1m. Surface [065] showed signs of heavy rutting and also areas of patching / repair and, like [010], had a total width of approximately 6m. It would appear from the worn state of the cobbles which comprised the surface of [065] together with the deeper and wider sets of wheel ruts that this carriage way had been subjected to significantly heavier traffic than [010].

A section cut through the upper gravel road way indicated that this had been completely resurfaced on three separate occasions [010], [060] and [063]. Each road surface was properly constructed with successive layers of yellow clay, *opus signinum* followed by a top dressing of gravel. The make up for the primary surface [063] was laid directly upon a layer of fine silty clay [064] which was also evident in trenches 3 and 4 and is understood to be a major flooding event.



Plate 2: Trench 1 showing both the upper and lower road surfaces



Plate 3: The lower road surface within trench 1 showing heavy rutting.

The exact organisation of the two types of road surface remains uncertain. Was the large cobbled surface [065] constructed as a “make shift” road during the initial Roman colonisation of this part of the county? If this were the case do the higher but better made and considerably smoother series of gravel

roads [010], [060] and [063] represent a later improvement phase which not only made the road more comfortable but also raised the roadway up over the floodplain to form a causeway. Were both road surfaces used, (the upper gravel road and the lower cobbled road) at the same time – the upper road for lighter but faster traffic and the lower road for heavy slow traffic? The stratigraphic evidence would suggest that the cobbled road was constructed first but continued in use throughout the life of all three upper road surfaces suggesting that the latter thesis is correct. Such an explanation is also supported by the types of wheel ruts present on each road surface.

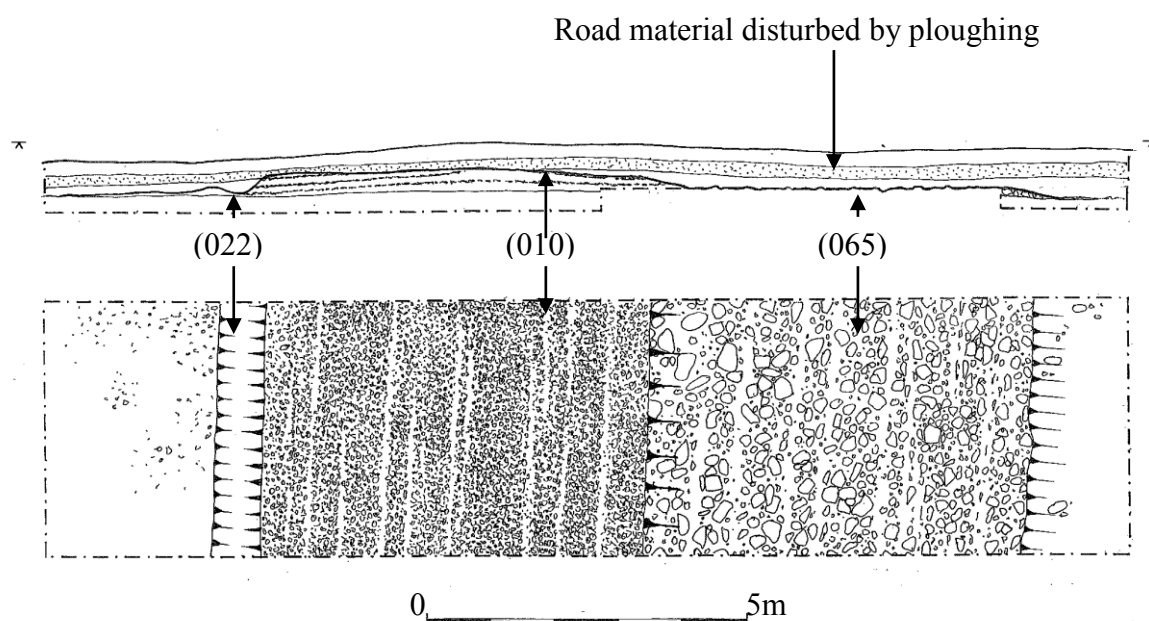


Figure 6: Plan and North facing section of Roads within Trench 1.

Trench 2

This was excavated across the 'attached' causeway but did not progress beyond the initial machine cut of approximately 4m long and 2m wide, because the bank was comprised entirely of alluvium. It was immediately evident from the results of the GSB geophysical survey that this earthwork represented a headland running along the northern edge of a series of medieval field furlongs. Closer re-examination of the intersection between the two 'causeways' in the light of these findings revealed that the headland did actually extend up onto the camber of the road 'causeway'.

Trench 3

Trench 3 was located at the point where the road ceases to be a visible earthwork as it dipped down towards the river. This trench was aligned with the axis of the road in order to record the extent, angle of dip and traces of bridge abutment etc. The trench was expanded twice to take account of the width of the overlapping road surfaces encountered beneath the alluvium giving a total length of 15m and a stepped width of 5m at its northern end to 12m at its southern end. The depth of trench 3 varied from 0.3m at its northern end to 1.65m at its southern end, this reflected the angle of dip of the Roman road surface.



Plate 4: Trench 3 looking north, along the length of the latest Roman road

A similar sequence of road surfaces was encountered in trench 3 to those recorded in trench 1, including the continuation of the eastern *agger* ([022] in trench 1 and [041] in trench 3). However, the three successive gravel road surfaces which formed the causeway in trench 1, did not follow the same line as each other within trench 3 having only a minimal overlap with one-another. It would appear that as the road surface was systematically replaced the point at which it met the Roman river bank successively moved downstream (eastwards) by between 2 and 3m each time.

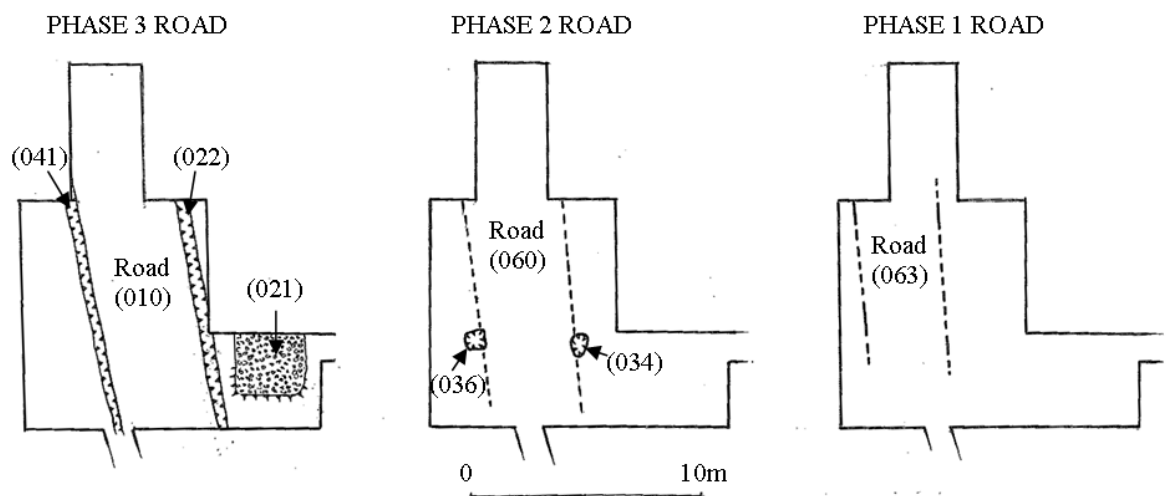


Figure 8: Plan of Trench 3 showing road phases and other significant features.



Plate 5: Trench 3 looking north showing the complex of road surfaces.

Associated with the second phase of these surfaces were two large, square (or oval) post-holes [034] and [036].

To the east of the *agger* [022], (which related to the most recent road surface), an area of cobbling [021] was recorded. This formed a roughly 4m square area immediately above the Roman shore line [038]. This formed either a cobbled area in front of a roadside building, or a track leading to a riverside

structure. This impression was reinforced by the finds from this area that included abraded domestic pottery and items such as a fragment of the bronze binding of a wooden box.

Trench 4

A fourth trench was opened some 20m north of trench 1. This trench was designed to clarify whether there was any settlement activity very close to the road itself on its western side, and to examine the alluvial sequence directly beneath the road. The trench measured 8m by 6m and was excavated to a depth of 1.5m. The western edge of the road was sectioned and the alluvium beneath sampled. The alluvium extended down to and beyond a charcoal-enriched horizon [024]. The excavation of this trench confirmed that there were no roadside features or deposits of roman date fronting the road at this point.



Plate 6: Eastern section of Trench 4 showing depth of alluvium below the Roman road.

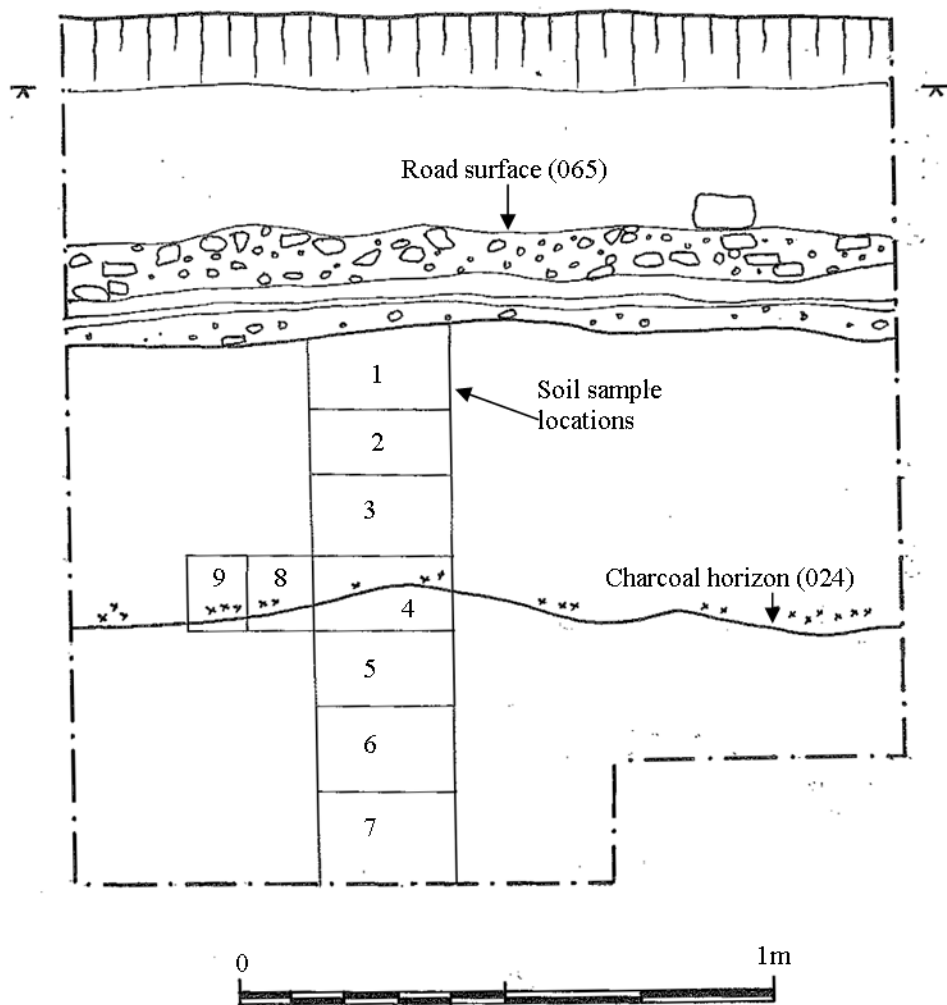


Figure 9: Eastern section of Trench 4.

Trenches 5, 6 and 7

A series of three 2m square test pits were excavated approximately 40m to the west of the Roman road. All three revealed a simple alluviation sequence. At 0.5m-0.6m depth in all three trenches there was a discernible horizon featuring charcoal enrichment of the alluvium (as in trench 4, [024]). In the northern-most, (trench 7), of the test-pits was found a small assemblage of Neolithic or early Bronze Age worked flints, mostly derived from the enriched horizon and a single small sherd of pottery. It appears similar to WHEAS fabric 5.4, dated to the Bronze Age and noted elsewhere in Herefordshire, for example at Wellington Quarry. No trace of Romano-British activity was found in any of the test pits. All three pits were excavated to depth of 1.2m.

Complementary survey work

GSB Prospection of Bradford carried out geophysical survey before the Big Roman Dig and during its course, on both banks of the river. An initial survey using magnetometry within the loop of the river at Old Weir immediately traced something that was invisible at surface, since coverings of alluvium in the past 300 years and more had obscured it. This was the existence of an extensive 'landscape' of classic 'reversed-S' furlongs on the floodplain. This marked an extensive medieval open field system with associated headlands, one of which was soon found to comprise the 'associated causeway' feature examined in the third trench opened at the site. Attempts were then made to locate buried stonework marking the 'buttress' for the arch of a stone bridge or the foundation for a wooden one on the north bank of the river using Ground Penetrating Radar. The survey produced definite readings at depth indicating solid levels, but no clear structures were definable.

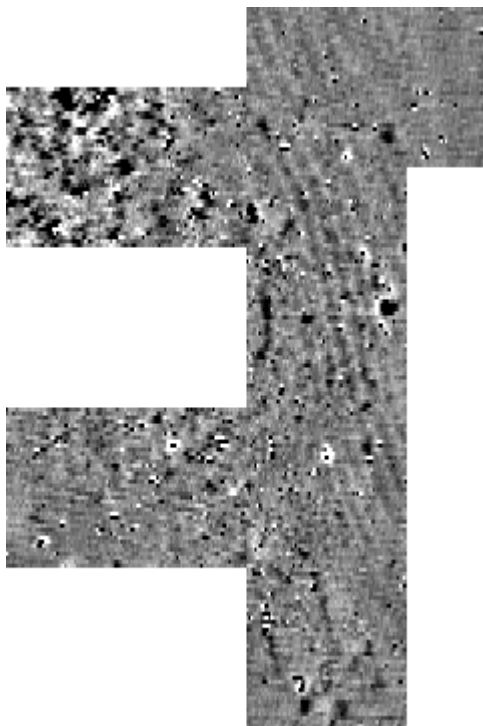


Figure 10: Results from the magnetometry survey undertaken by GSB Prospection Ltd. Clearly showing the ridge and furrow.

The River Basin Dynamics and Hydrology Group at the University of Wales, Aberystwyth was commissioned in parallel to carry out a preliminary study of the form and development of the Wye in the vicinity of the site. This rapid survey was undertaken by Dr. Eric Johnstone immediately prior to the broadcast. His survey concluded that the Wye had altered its course dramatically immediately downstream of the enclosure and that this section of the river was considerably straighter with less meandering and would have been broad but relatively shallow and fast flowing.

Discussion

Before the Romans

The emphasis of the discussion so far has strongly been upon the Roman road and Romano-British activity. However, the 2005 excavations encountered evidence for activity on the floodplain

There is clearly a coherent sequence of deposits that can be, and were, examined in the vicinity of the road and its causeway. The importance of the presence of the road is that it acts as a convenient 'datum' for the accumulation of alluvium locally. In principle, therefore, all the deposits lying beneath the road are therefore of pre-Roman date, and indicate two things. Firstly, the rapidity with which silting occurred in the two thousand years preceding the road construction, and, secondly, the apparent relative lack of accumulation against the western side of the road after its construction. Or, alternatively, is this situation not as simple as it appears: did instead the very lightness of the road construction enable silt to continue to accumulate beneath it after it was built? The place of the open field system within all this, and the effect of its creation and use represent a further conundrum here. The 2005 fieldwork has opened up the questions here, rather than resolved them.

The Roman Roads

When compared to other lengths of Roman roads that have been excavated within the county, the apparent segregation of traffic onto separate carriageways across the softer alluvial deposits appears to be unique. The construction of the foundations also appears to differ from the perceived conventional. For example, beyond the first hundred metres or so out from the edge of the floodplain, the character of the 'causeway' changes considerably. In effect, from this point the road *is* the causeway, and its foundations were simply laid thinly over the alluvium. In other words the road was simply 'floated' over the soft deposits, with the concrete used to bond the road substrate and its surfaces together forming the very foundation of the whole structure. Its strength lay in its tensile bonding across space, and paradoxically in the very lightness of the construction. As such it is testament both to the skill of the engineers who designed and built in – and to their confidence in those skills.

The composite construction of the road in this part of its course was interesting – with a 'high/fast' element to the east and a 'low/slow' element to the west. The latter comprised large cobbles set directly onto the foundation matrix. The cobbles showed much wear, and there were broad worn ruts (approximating the width of broad axles) which were noted running axially along the roadway. Surface scratching of cobbles suggests use by slow moving heavy vehicles that had experienced slippage in wet conditions. In contrast the higher roadway on the eastern side of the road was made up of a light gravel and mortar matrix. Narrower spaced narrow pairs of ruts were a feature of the partly degraded upper surface.

The evidence for maintenance of the two roadways was also interesting. The procedure for the 'lower' western carriageway appeared to have been simply to patch the surface where it had become worn or stones had lifted out. In contrast, both the foundation and the surface of the 'upper' road were re-laid on top of the old surface when the latter had begun to break up. This had occurred twice during the time when the road was in use.

No dating evidence was found for the period of use of the road. By the ford, three roads were distinguished, separated both stratigraphically and marked also by changes in alignment. The first of these roads appears to have been connected with a bridge, the northernmost foundations of which (two post-holes) were detected in the 2005 excavation.

Whether these phases were separated by a hundred, fifty, twenty or even just five years is impossible to ascertain, however. If a hundred years separated the rebuilding and re-alignment of the road, we could be seeing a plausible AD100, 200 and 300 phasing.

Evidence from Trench 3 would suggest that with each resurfacing phase of the "upper" road within Trench 1, a slightly different location was used to cross the river. It would appear that the three phases of road construction identified within Trench 1 correlate to the three separate road alignments recorded within Trench 3. These appear to "creep" successively westwards, (upstream), as time goes by. This obviously suggests there that the crossing point gradually moved upstream.

The river crossing: Bridge, ferry or ford?

The geophysical and excavation evidence would suggest that a large masonry structure forming bridge abutments and associated stone superstructure did not exist and certainly during the filming, this reason was given for the televised conclusion that the road might just have descended into the river bed and up the other side, with a ford at low water and a ferry at other times. However there are a number of reasons for considering the presence of some form of lighter bridging structure:

- ◆ From a common-sense perspective, (for Roman engineers the Wye), would not have been a significant river to span with a bridge.
- ◆ A river with as significant a fall and as swift a flow as the Wye features at The Weir would have 'washed out' a paved ford very rapidly. The evidence for scour seen at the southern limit of the trench north of the river crossing reinforces this view.
- ◆ The latest of the three courses of the Roman road revealed in the excavations, made a sudden turn eastwards as it approached the river. This suggests that it was re-aligned onto a specific structure that had been created on the river-bank.
- ◆ This latest road had a defined edge both to the west and the east as it began the descent of the slope to the former river bank. These edges narrowed as they approached the bank, and there had been a significant

deposit of stones made to a depth of over a metre between them. This suggests that a kind of 'gabion' foundation supported a ramp here leading to a bridge.

- ◆ The first and second roads appear to have been supported by a similar stone-filled structure, and the carriageway of the second road, and its eastern limit, were 'framed' by two very large diameter post-pits. The most plausible explanation for these pits is that they supported the northern superstructure of a bridge or straining posts for a ferry.
- ◆ The river Wye rises in height very quickly after rain at its headwaters in Wales. This, together with its high velocity, would render it impassable for significant portions of the year. It would therefore appear unlikely that such an important arterial route could have operated without a more reliable form of crossing.

Other associated structures

There were both features and finds made in the area immediately adjacent to east of the crossing on the former river bank (Trench 3), that were indicative of the close proximity of settlement activity. The exact nature of such activity could not be determined in the excavation, since the finds, and an area of metalled surfacing, were found at the extreme eastern limit of the excavation.

It is nonetheless potentially significant that the geomorphological study suggested that the course of the river may have been straight rather than possessing a northerly bend at this point in the Roman period. As noted above, it may further be significant that the finds made on the riverbank could derive from the river having cut through this area of activity rather than being derived (as had been assumed from previous survey) from erosion of the south bank. The finds on the river bank of the present course of the river include significant amounts of tile, and the possibility therefore exists that there was a villa located on this bank, then facing south over the river.

Farming the Medieval floodplain

The only evidence for post-Roman activity noted in 2005 was provided by the geophysical survey results showing the presence of ridge and furrow. This however is extremely significant when set in context of the survey results previously obtained for the property at The Weir, where extensive remains of further ridge and furrow cultivation have been noted and recorded. Possibly farmed from a township within Kenchester parish centred upon the present Old Weir farm complex, this field system is remarkably extensive – apparently extending both on the higher ground above the river, and on the floodplain itself, westwards the half kilometre to New Weir, and beyond.

This is a situation with further direct parallel to the south of the river. The township of Canon Bridge within Madley parish still survives today. It is clear from the presence of furlongs a kilometre to the north-west of the township that the medieval open field landscape extended apparently without interruption right across the south bank landscape here, irrespective of the localised broken character of the terrain. In both cases, what is very evident is considerable settlement shift from the Roman period pattern, but also just how

extensive was the development of open-field farming, and presumably also growth in population within this landscape in the medieval period down at least to 1350.

The Weir project Open Day, 11th July 2005

Neil Holbrook did a great service to the local promotion of The Weir project by announcing the open day on air during the final live broadcast from the site during 'Big Roman Dig' week. The open day deliberately coincided with the last day of the week-long series of broadcasts. The result was impressive. Over 450 visitors came to the site (memorably, including a member of the Emperor Vespasian's Praetorian Guard seconded from Dorset) and were escorted around it in six guided tours led by two guides in tours starting on the hour from the National Trust property car-park. Thanks to the property manager, David Hughes, a marquee was set up in a paddock adjacent to the car park.



Plate 7: The County Archaeologist (Dr. Keith Ray) and a member of Emperor Vespasian's Praetorian Guard describe the Roman road in Trench 1 to a tour on the open day.

Appendix 1: context descriptions

Context	Trench	Site type	Period	Description	Date
001	7	Layer	Prehistoric to modern	Flood deposit, numerous small flint flakes.	30/6/05
002	6	Layer	Geological/Prehistoric to modern	Flood deposit, no dating material, similar to 001.	30/6/05
003	5	Layer	Prehistoric to modern	Flood deposit, occasional flint flakes.	30/6/05
004	2	Layer	Geological/Medieval to present day	Flood deposit.	30/6/05
005	3	Layer	Roman to modern	Flood deposit.	1/7/05
006	3	Structure	Roman	Roman road, uppermost surface, same as 010.	1/7/05
007	3	Structure	Roman	Roman road, second surface.	1/7/05
008	7	Layer	Prehistoric	Land surface, higher clay content than 001.	2/7/05
009	1	Layer	Roman to modern	Flood deposit.	2/7/05
010	1	Structure	Roman	Roman road, uppermost surface, same as 006.	2/7/05
011	1	Cut	Roman	Drain cut along center of road.	2/7/05
012	1	Structure	Roman	Stone bank over bank.	2/7/05
013	1	Structure	Roman	Bank material.	2/7/05
014	1	Fill	Roman +	Ditch fill.	2/7/05
015	3	Cut	Roman +	Post hole/burial ?.	2/7/05
016	3	Cut	Roman	Post pad, west side of road.	2/7/05
017	3	Structure	Roman	Cobble wall extending south from 016.	2/7/05
018	3	Layer	Roman	Cobble to west of wall 017.	2/7/05
019	3	Cut	Roman	Post pad, east side of road.	2/7/05
020	3	Fill	Roman +	Ditch fill, east side of road.	2/7/05

021	3	Layer	Roman	Cobble surface, east of ditch fill 020.	2/7/05
022	1	Fill	Roman +	Ditch fill, west side of road.	2/7/05
023	1	Structure	Roman	Uppermost gravel surface of western bank.	2/7/05
024	4	Layer	Roman +	Flood deposit	13/7/05
025	4	Layer	Roman +	Plough action or percolation	13/7/05
026	4	Structure	Roman	Uppermost road surface	13/7/05
027	4	Structure	Roman	Base construction	13/7/05
028	4	Structure	Roman	Base layer	13/7/05
029	4	Layer	Prehistoric	Flood event/old ground surface (contemporary with flint finds ?)	13/7/05
030	4	Layer	Geological/ Prehistoric	Flood event ?	13/7/05
031	4	Layer	Geological/ Prehistoric	Flood event ?	13/7/05
032	3	Structure	Roman	Gravel under road surface	3/7/05
033	3	Layer	Roman	Clay base of road	3/7/05
034	3	Cut	Roman	Post hole	3/7/05
035	3	Fill	Roman	Fill of 034	3/7/05
036	3	Cut	Roman	Post Hole	3/7/05
037	3	Fill	Roman	Fill of 036	3/7/05
038	3	Layer/structure	Roman ?	River edge (due to flooding ?)	3/7/05
039	3	Layer	Roman/post Roman	Build up of deposits behind 038	3/7/05
040	3	Structure	Roman	Construction layer	13/7/05
041	3	Cut	Roman	Drain cut phase 2 road)	6/7/05
042	3	Fill	Roman	Fill of 019	6/7/05
043	3	Structure	Roman	Roughly laid cobble	6/7/05

044	3	Cut	Roman +	Cut of later wall	6/7/05
045	3	Cut	Roman	Cut, east end of 043	6/7/05
046	3	Cut	Roman	Beam slot	6/7/05
047	3	Fill	Roman	Fill of 046	6/7/05
048	3	Layer	Roman/ Roman +	Hardstanding east of Phase 2 road.	6/7/05
049	3	Fill	Roman	Fill of 016	6/7/05
050	3	Cut	Roman	Cut for cobble wall 017	15/7/05
051	3	Cut	Roman	Mirror of 036 but on other side of road	15/7/05
052	3	Fill	Roman	Fill of 051	15/7/05
053	3	Fill	Roman	Fill of 015	15/7/05
054	3	Structure	Roman	large stone in base of 050	15/7/05
055	3	Structure	Roman	Large stone in base of 050	15/7/05
058	1	Layer	Geological	Flood deposit	13/7/05
059	1	Structure	Roman	Base layer of road	13/7/05
060	1	Structure	Roman	Lime and tile layer of road	13/7/05
061	1	Structure	Roman	Yellow clay and gravel layer of road	13/7/05
062	1	Structure	Roman	Upper lime and tile mix of road	13/7/05
063	1	Structure	Roman	Gravel and lime layer of road	13/7/05
064	1	Layer	Roman+	Flood event	15/7/05
065	3	Structure	Roman	Heavily rutted cobble surface (construction road).	15/7/05
066	3	Structure	Roman	Uppermost layer of road	15/7/05
067	3	Layer	Pre Roman	Large to small river cobble	15/7/05

Site Archive

10 Sheets of site drawings
4 Entries in field notebook
67 Context cards
Drawing, photographic, level and context registers
140 digital photographs
6 sheets of inked drawings
Finds Register
1 Box of finds
This Document

Acknowledgements

The first expression of thanks is due to the landowners and sponsors of the project. At The National Trust, Jeremy Milln (Regional Archaeologist) and Rob Woodside (Territory Archaeologist) provided support and assistance, along with property manager, David Hughes, and property Head Gardener Ned Price. The tenant, Mrs. Hewer, Herefordshire Council property services George Osbourne, and Mr. Price the tenant farmer at Upper House Farm. All at Wildfire, Emily and Richard at Time Team, Neil Holbrook of Cotswold Archaeology, who provided useful insights into the development of the landscape locally in the Roman period. Thanks are due to HM Forces. Thanks are also due to Judy Stevenson of Hereford Museum, and Peter Reavill of the Portable Antiquities Scheme (Ludlow Museum) for support during the Open Day. Special thanks must go to Herefordshire Council staff and volunteers, and especially to Tim Hoverd (Site Manager), David Williams and Julian Cotton (Site Supervisors), Clementine Lovell and Christopher Atkinson (Site Assistants), to Benedikte Ward (Finds Manager), and to volunteers John Robinson, Gerald Ford, Jacqui Hicks, Dennis Williams, Adrian Poiner, Colin and Sheila Archer, Terry White and Steve and Andy Palmer.

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Validation

Herefordshire Archaeology operates a validation system for its reports, to provide quality assurance and to comply with Best Value procedures.

This report has been checked for accuracy and clarity of statements of procedure and results.

Dr. Keith Ray, County Archaeologist