HEREFORDSHIRE ARCHAEOLOGICAL NEWS

HAN 52 September 1989

WOOLHOPE CLUB
ARCHAEOLOGICAL RESEARCH SECTION

CONTENTS

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No. 52 September 1989

PROGRAMME OCTOBER 1989-MARCH 1990

1989

Sunday 15th October	Looking at industrial remains, Forest of Dean.	Meet at the crossroads car park beyond Upper Lydbrook. Map 162, GR 613146 Leader: Rosamund Skelton
Sunday 5th November	Visit to some castles in Herefordshire.	Meet at Kilpeck Church. Leader: R Sterling-Brown
Monday 4th December	AGM and Annual Dinner	Golden River Restaurant, Commercial Street, Hereford. 7.30 for 8.00 pm

1990

Tuesday 16th January	Herefordshire Valleys Survey.	Meet at Llanwarne Village Hall at 7.30 pm. Talk by James Dinn of County Arch Dept.
Tuesday 27th February	Archaeological sites from the air.	Meet at Llanwarne Village Hall at 7.30 pm. Talk by Howard Dudley.
Sunday 4th March	Capler and Oldbury Camps	Meet at Green Man Inn, Fownhope. Leader: Elizabeth Taylor

Programme Notes

1. All Sunday meetings start at 10.30 am.
2. December, January and February meetings are in the evenings.
3. In case of bad weather contact Leader or a Committee member.
4. Guests are very welcome.
5. Wear suitable clothing and footwear, and bring food and hot drink.
6. Llanwarne Village Hall is opposite the old ruined church and has a street light. The best approach to Llanwarne is the A49 from Hereford, turn right at small signpost to Llanwarne. Car park by ruined church.
7. There will be a small charge to cover hire of the hall, etc. It is anticipated that light refreshments will be available.

Hail and Farewell

The Woolhope Club ARS would like to welcome Malcolm Cooper as the new County Archaeology Officer, we look forward to a growing collaboration with Warndon. Our best wishes go with Adrian Tindall in his new post in Cheshire.

Lecture

Mary Thomas and Elizabeth Taylor are giving a lecture on Saturday, 7th October at 2.15 pm in the Woolhope Club Room, on the results of the Corras Investigations.

Subscriptions 1989
These are now due and should be paid to the Treasurer, Mr J V Harding. Cheques should be made payable to Woolhope Club/ARS. Members are reminded that in accordance with the resolution passed at the AGM in December 1989, the current subscription is £2.50 per year. Prompt payment, if not already made, would be appreciated by the Treasurer.

ARS OFFICERS AND COMMITTEE FOR 1989

Chairman:	Mr P Halliwell
Secretary:	Mr M Hemming
Treasurer:	Mr J Harding
Field Secretary:	Mr M Hemming
Editor:	Mr P Halliwell
Assistant Editor:	Mr J Kirkwood
Committee Members:	Mrs R Richardson
	Mrs R Skelton
	Miss M Thomas
	Mrs B Harding
	Mrs E M Taylor
	Mr R E Kay
	Mr G Sprackling
	Mr C R Attfield
	Mr W T Jones
	Mrs M U Jones

Subject Recorders
Mr G Sprackling has been appointed the Recorder to the main Club on the Field Name Survey.

Mrs R Skelton is the Recorder for DMV's, and Mrs B Harding for Ornithology.

Annual Barbecue
The annual barbecue was held on Saturday evening, 29th July at the attractive home of Beryl and John Harding at Llanwarne. Because of the very hot weather it had been decided that it was best if the food was pre-cooked and brought to the barbecue by members.

As it turned out on the actual day, this had been a very wise decision, as the "Weather Clerk" decided to end the long drought on Saturday and the heavens literally opened. Some 26 members and their guests enjoyed the hospitality of the Hardings, and our thanks are due to Beryl and John for their preparatory work. The food was excellent, and our thanks must go not only to Beryl but to all those who brought food for the party.

A most enjoyable time was had by all despite being confined indoors. The talk was inevitably 'shop', which is perhaps as it should be. It is good that members should have the opportunity to get together socially besides the normal monthly meetings.

PRH

EDITORIAL

The standard of printing of No 51 left much to be desired, and in fact was made far worse by the advice given to the Editor by professional duplicating people. The type of paper recommended for the master copy turned out to produce an even greyer copy than No 50. The Editor can only offer his apologies and promise that in future he will use his own judgment and keep away from the professionals. The cost of offset printing or photocopying is too great, and for the present we are stuck with this method of production. The real problem is to find a way to produce a blacker or darker master copy.

We were very sorry to hear of the serious illness of Mr Warburton of the Ross Community Service who duplicated Nos 48-51, he took a personal interest in the production. This, together with his helpful attitude improved the final result. The Archaeological Research Section would like to offer their very best wishes for his speedy and complete recovery.

I would like to thank the Assistant Editor and all those who have contributed to the Newsletter. May I very gently remind field-day leaders to let me have their reports as soon as possible after the event, so that we do not get behind with recording. The Editor is always looking for articles of archaeological interest from all members.

Editor

FIELD MEETING TO EXAMINE CASTLES, 8TH APRIL, 1989

Unfortunately this had to be cancelled at the last moment because the heavy and prolonged rains had flooded the moats of the castles that were to be examined. It was physically impossible to cross the moats to look for possible stonework on the mottes.

A recce by Roger Stirling-Brown, the leader, and the writer was carried out on 28/3/89, when even then some difficulty had been experienced in crossing the moats. Kilpeck, Orcop, Llancillo, Walterstone and Rowlstone were examined. It had been planned also to visit Bacton, but time ran out largely because too long had been spent in talking to farmers.

The object of the Field meeting was to examine mottes for possible stone work. Many of these sites had been considered to have only had timber structures upon them. It had been proposed to use Kilpeck as a model of what to look for and then to see what could be found on the other sites.

During the recce several courses of laid stone were discovered, and with more time and manpower greater success had been anticipated. It is hoped to include it as the November item or during the next programme.

PRH

DOWNTON

Mr Van Laun, the Woolhope Recorder on Industrial Archaelogy, has allowed us to reprint his remarks on Bringewood Ironworks. Members will remember that we visited the Downton area in March 1987 led by Mr J W Tonkin. The visit was written up in Newsletter No 48.

Editor

BRINGEWOOD IRONWORKS

Mr John Van Laun, whose article on 17th century ironmaking in southwest Herefordshire appeared in 'Historical Metallurgy' Volume 13/2, has sent the following information:

The existence of a furnace, forge and tin mills at Bringewood on the Herefordshire/ Shropshire border has long been known, but the exact location of the charcoal furnace has only recently been re-established.

The forge is known to have been in production in the late 16th century but the first firm mention of the furnace is not until 1637 although by inference it was probably in production well before. Some products of the furnace can be seen in the nearby churchyard at Burrington (SO 442 721) in the form of cast iron grave slabs, the earliest of which date from 1619.

A survey of 1662 shows the layout of the works with a weir some 200 metres upstream supplying water to furnace and forge. The furnace was built into the southern abutment of a bridge (demolished c 1772) for charging purposes and the forge appears adjacent to the furnace, an unusual procedure where demand for water power normally meant the separation of primary and secondary processes. The furnace today can be identified as being built into the ancient bridge abutment with two sides of the throat discernible. The stone pillar which supported tuyere and forepart lintels can be identified plus some of the stone wall cladding, and it seems likely that the other two sides of the furnace lining collapsed when the lintels were removed.

Although no identifiable remains of the forge can be found today, slag analysis from the presumed site has revealed a content of 66% iron oxide. The 1816 draft for the Ordnance Survey map also confirms the site in the vicinity.

In 1698 Richard Knight (b Madeley 1659) took over the works and he was followed by his youngest son Ralph, on whose death the furnace probably went out of blast. From 1733 to 1777 the Knights' furnace at Charlcotte and Bringewood concerns were associated together and detailed accounts await analysis for Bringewood.

In 1784 the forge was repaired and leased for 31 years. At this time it consisted of three fineries and one chafery,

The site must have been very congested with the six wheels needed to operate the bellows and hammers. Further downstream was a rolling and slitting mill. In 1783 this had two rolling stands as well as the slitting mill. The 1816 draft and Bryant's map of 1835 show a tin mill approximately 750 metres downstream from Forge Bridge. This was in production from 1741 to 1775 although re-leased with the forge in 1784.

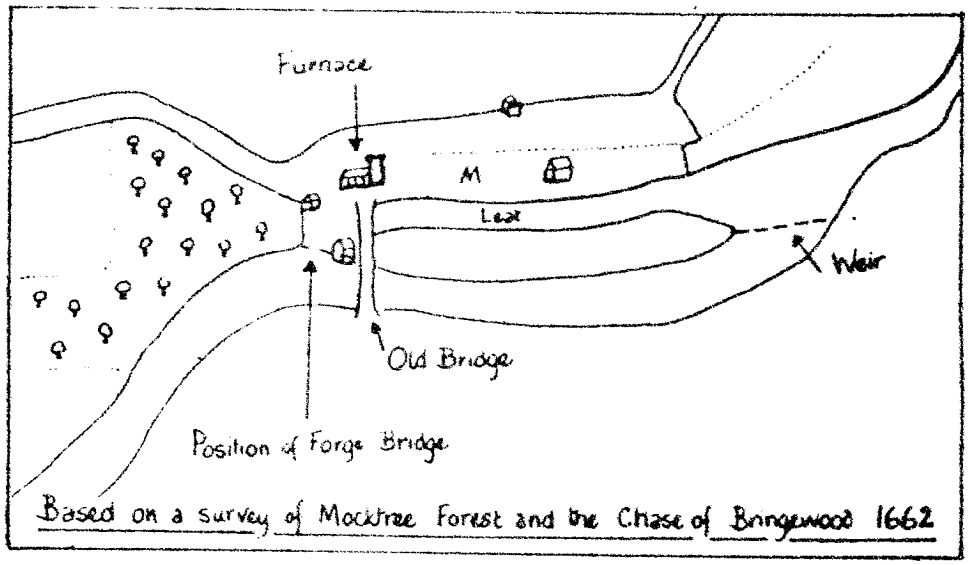
Bringewood is perhaps best known for Forge Bridge built by Thomas Arnolls Pritchard for Richard Payne Knight in 1772, a few years before Pritchard submitted his design for the Ironbridge. It is tempting to suggest that this Shrewsbury architect was drawn to the idea of an iron bridge by the proximity of the defunct furnace at Bringewood.

The site of the furnace is on private land and represents an undisturbed charcoal furnace site with high potential.

AN OUTLINE OF THE TECHNOLOGY OF THE CHARCOAL IRON INDUSTRY IN HEREFORDSHIRE, By John Van Laun

"Next add the Sylvan shades and silent groves
(Haunt of the Druids) whence the Hearth is fed
with copious fuel ……..
…….
Why shou'd Chalybes or Bilboa boast
Their harden'd Iron, when our Mines produce
As perfect martial ore?

'Cyder a Poem' Book I by John Philips (1708)



The principle of ironmaking involves the removal of oxygen from the ore by the chemical process of "reduction". In the period under discussion carbon in the form of charcoal was heated in association with the ore. The carbon combined with oxygen to release metallic iron.

The iron industry, until the 18th century, was a rural affair depending mainly on vast quantities of wood for charcoal. The furnaces and forges therefore tended to be located close to their source of charcoal (a raw material that did not travel well) rather than ore or the limestone needed for fluxing purposes.

In spite of its rural nature, enormous capital sums were involved in the iron trade, which led to the rise of such families as the Foleys and Knights.

Wrought or malleable iron could be made by constructing a small furnace of fire-resistant stones bound together with clay. By means of bellows a fire was kept burning and selected iron ore added to the fire. After some hours the iron ore would be reduced and the front of the furnace would be broken open and a "bloom" of a few pounds weight removed and beaten to remove waste and consolidate it. The sites where this occurred are known as bloomeries. Only low temperatures were achieved in the direct process of iron reduction which remained in a pasty non liquid state(1).

Until the late 15th century the direct ironmaking process was universal in Britain. A little before then, in the Walloon or French speaking part of Belgium, the development of the indirect process took place. In this the ore was deliberately reduced to cast iron which was then converted to wrought iron by a second process. This involved the building of permanent structures needing some form of mechanical power to provide the blast. Hence the development of the blast furnace. The importation of this technology also brought with it its own Walloon sounding terms which are still in use today.

Illustrated is a 17th century blast furnace based on remains at Llanelly near Abergavenny(2). It was built against a bank so that the raw materials of iron ore, charcoal and limestone could be taken across the bridge arch to the top of the furnace and charged in. Internally it was narrow at the top widening lower down to allow for the expansion of the "burden" as it heated, and narrowing again to the hearth where the molten iron collected. Over the charcoal period the “stack" was generally square.

Blast furnace production varied but St Weonards was producing 1.5 to 2 tons of iron over a twenty-four hour period in the 1700’s. This was run into a single depression in a bed

of sand and called a "sow". As the size of the furnaces increased, and with them production, a grid was constructed in the casting shed to make up the “pigs” of extra iron. The waste floated on top of the iron with the limestone flux and was tapped periodically as a slag. Sometimes castings were made direct from the furnace. Roaring Meg, the cannon cast near Goodrich and used in the Civil War, or the cast iron grave slabs in Burrington Churchyard are typical products made in this way. At St Weonards they made “Plates”, “Pallisades”, “Bowkes” as well as “Cast [Iron] Backs” in 1714.

The blast was directed into the furnace through tuyeres which were accommodated on their own side of the furnace. In the 17th century the blast was derived from bellows which were depressed by cams on a shaft turned by a waterwheel. Counter-poises re-opened the bellows which then re-filled with air. About four tons of air was needed to make one ton of iron.

A blast furnace could operate continuously but in the early days there were long breaks. As late as 1706 St Weonards was only operating for eight weeks. Sufficient charcoal was collected to enable a continuous run. This was stored in a coalhouse like the one at the back of the Llanelly furnace. An indication of the upheaval caused to the woodlands where a furnace operated can be gleaned from contemporary sources.

> "A charcoal furnace will consume from twenty-five to thirty thousand sacks in a year, each containing eleven to twelve bushels of charcoal, the produce of at least one hundred and twenty acres of woodland. If the wood replaces itself fully in twenty years, then twenty-four hundred acres of land would be necessary to keep such a furnace at work"(4).

Stops had sometimes to be made in summer, when the water supply failed. It is no wonder that running a furnace over a period was called a “campaign”. The technology was also little understood. John Fuller, the celebrated Sussex ironmaster, summed up the problems:

> “A Furnace is a fickle mistress and must be humoured and her favours not be depended on. I have known her produce 12 tons per week, and sometimes but 9 tons, nay, sometimes but 8, the excellence of a Founder is to humour her dispositions, but never to force her inclinations"(5).

After casting, the raw iron might be converted into wrought or bar iron at the forge. The voracious appetite of the furnace meant that forges were often sited many miles from their source of raw iron. The illustration of a forge is based on a painting by Peer Hillestrom. The schematic reconstruction below is derived from inventories of forges in southwest Herefordshire which supports the technology gleaned from other sources. Firstly the carbon-rich pig iron was fed into a charcoal-fired hearth called a finery. Here the iron was heated and stirred about with a bar while a blast of air was played on it. The oxygen in the blast combined with the carbon in the iron and, gradually, the cast iron was converted to wrought iron. The bloom or loop was manhandled to the chafery, a larger and deeper hearth, and here it was reheated to weld into a larger mass.

Finally the “anchony” was formed at the hammer. This was of heavy construction and inventories for Bringewood(6) give enough clues as to its form. A Hammer Beam or Shaft with tappet and gudgeons driven by a waterwheel. On this were four cogs let into a Cast Metal Ring weighing 40 cwt. These “cogs” or tappets lifted the cast iron Helve which weighed 50 cwt. After lifting and passing, the helve would fall onto the 5 cwt anvil. This was obtained from as far away as Hales on the Stour. The whole hammer structure was held by two legs 12 feet long and these were held in place by the Hammer Beam.

Forge production and costs were variable. In the middle of the 17th century Pontrilas forge was planning to make 160 tons of bar iron but produced only 88 tons in 1677 – a more realistic figure based on a figure of 84 tons for another year. In 1677 Llancillo produced 149

tons. Production costs for Pontrilas bar iron delivered at Bristol were nearly £12. Half of the cost was expended on pig iron at £4.50 a ton using 27 cwt. Charcoal amounted to one-sixth of 'the cost – 3 cords[7] to one load and 3 loads to a ton of finished iron. The haulage costs for charcoal testify to the need to localise charcoal production. The short distance charcoal was carried to Pontrilas from Dore Wood or Holling Wood came to either 45p or 37.5p to produce a ton. Transport costs to market were also high in the 17th century: 40p a ton from Pontrilas to Monmouth with a further 25p for water carriage to Bristol. In 1677 when Pontrilas iron cost £15 a ton delivered, the remote location of Peterchurch forge increased its costs to £18 a ton.

The dependence on charcoal was to bring the iron trade to its greatest crisis, which developed towards the end of the seventeenth century. The discoveries of Abraham Darby at Coalbrookdale on the Severn in the first decade of the 17th century announced the demise of the charcoal iron industry.

Nevertheless, charcoal remained the fuel at the forge for many more years. Tidnor Forge near Lugwardine was up for lease in 1790 consisting of two hammers, three fineries and one chafery[8]. However, at the same time the charcoal blast furnace was being superceded by the coke furnace in South Wales and the Forest of Dean. Where technology is concerned, particularly for the quality product which charcoal iron produced, it is difficult to be dogmatic. In Sweden it was not until the 1920's that the last charcoal furnace was blown out.

(1) The technology in the period is comprehensively covered in H R Scubert History of the British Iron and Steel Industry circa 450 BC – AD 1775 London 1957.

(2) J Aran “Survey of several estates situate in Brecon and Monmouth Counties and belonging to John Gapel Hanbury” c 1795 (in the possession of R Hanbury-Tenison).

(3) Unless otherwise stated, all references are from John Van Laun “17th century ironmaking in southwest Herefordshire” Journal of the Historical Metallurgy Society 13.2.1979.

(4) Encyclopedia Britannica Edinburgh 18924.

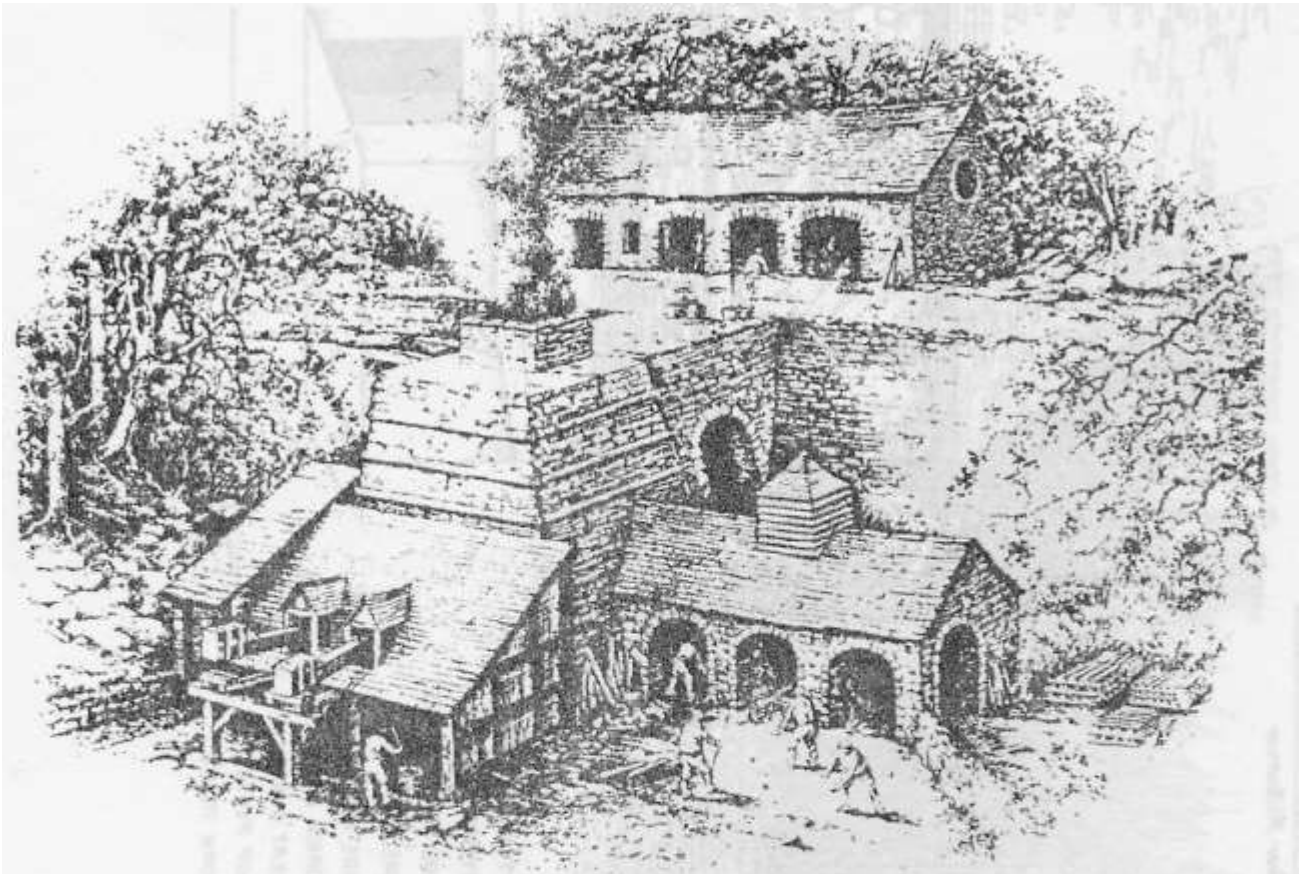
(5) Dated 1754. For John Fuller see Herbert Blachman Sussex Archaeological Collections Vol 67 pp 25-54.

(6) Hereford Record Office, Downton 407.

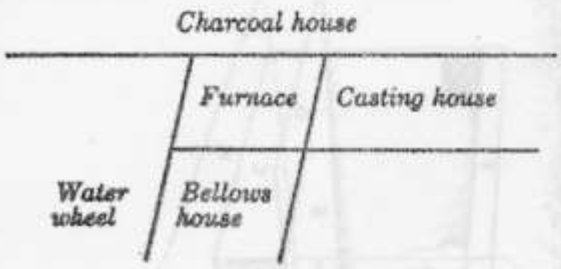
(7) A volumetric measurement. “The measure of cord in the Forest of Deane” 1686. Length of cord wood 8 feet 4 inches. “Heigh” of wood 4 feet 4 inches. Length of billet 2 feet 2 inches. Approximately 2.2 cubic metres. From H W Paar “The Furnaces of Coed Ithel and Trellech” HMS Vol 7 No 1 1973.

(8) Hereford Journal, April 1790.

WALLOON FORGE
after Peter Hillestrom
A BOTTOM PLATE
B TUYERE PLATE
C FORE SPIRIT PLATE
D FORE PLATE
E HARE PLATE
F MORRIS BARS
G GREAT PLATE IN YE WALL
H LOOP PLATE
I WORK PLATE
CHAFERY
FINERY



Reconstruction of Llanelly Furnace (charcoal-fired) based on a plan of c. 1795 by J. Aran. The layout of the buildings is indicated below.



MEDIEVAL FLOOR TILE CENSUS FOR HEREFORD AND WORCESTER

A study of the Medieval floor tiles of the county is now being undertaken. I would be grateful for any notifications of floor tiles discovered in the county, particularly those from unpublished sources.

Hilary White, Sites and Monuments Records Officer
Archaeology Section, Hereford and Worcester County Council
Tetbury Drive,
Warndon
Worcester WR4 9LS

SO633607, NETHERWOOD HOUSE, THORNBURY – HWCM No 6689

A collection of Medieval floor tiles have recently been reported to the county SMR by Mr Turner and Mrs Fisher, having been found in Netherwood House and environs. It is hoped that they will be published in fuller detail in the near future, but a short summary is included here.

The tiles are a very close match in design with those published from Worcester Cathedral (L Keen: The Medieval Decorated Tile Pavements at Worcester, in the British Archaeological Assoc Trans for 1975). There are fragments of 4, 9, 16 and individual tile patterns, bearing both foliage designs and coats of arms, notably England, Beauchamp, Clare, Audley and Warren.

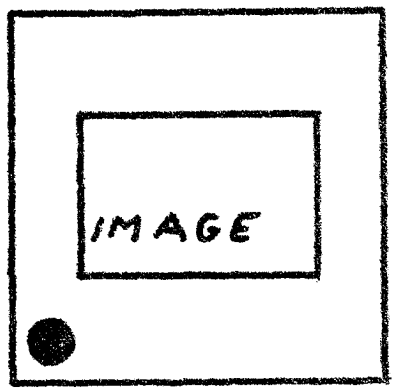
The tiles at Worcester Cathedral were laid in 1377 and the ones from Netherwood are probably very close to this in date.

Archive drawings of the tiles are currently retained by the author.

Hilary White
Sites and Monuments Records Officer

SPOTTING SLIDES

There are seven different ways of projecting a slide incorrectly. The eighth is the right one. The first wrong projection may be amusing, but a good lecture may be ruined if more follow. There is a standard, international practice of marking slides which everyone should follow.



The ideal drill, on getting your slides back from processing, is to mark them at once and not wait until you intend to project them. Hold the slide so that the image is correct as you look at it. Using a (preferably waterproof) black felt pen, mark a prominent round spot on the bottom left corner of the mount.

When making up a set of slides to be projected, arrange them in their slide box so that this spot is on the top right. The image is now upside down. Keep the spot in this position when loading the projector magazine. This ensures that the image faces the projector light. Also, you can see at a glance if all the slides are correctly positioned. Once a slide showing is under way it is very tiresome and often quite difficult for the projectionist to take a slide out and replace it correctly if it has not been spotted.

One more caution – it is best not to keep a slide in a hot projector for longer than, say, two minutes. Finally – it has been known for a box of slides to be accidentally dropped and scattered, so it is a good idea to number each slide consecutively so that they can quickly be re-assembled.

WTJ

RADNORSHIRE CHURCHES

A second field day to look at Radnorshire Churches was arranged for 11th June, 1989 to look at a further selection of churches; this time some Breconshire churches were included. This was a continuation of the visit last year on 12th June, 1988. The day's events were led by Richard Kay. The original recce for the trip was carried out by Richard Kay and the writer on 13th October, 1988.

Ten members and guests assembled at the Baskerville Arms, Clyro at 10.30 am. In addition to the programme of church visits printed below, the opportunity was taken to look at the gateway of the Abbey Dore Grange at Clyro (Court Farm), and the long barrow near

the farm. We also looked at the ramparts of the Iron Age fort at Bryn-rhydd Common and also Croes Feiliog where the stone cross in Llowes Church originally stood.

We also saw the Decoy Pool at Llowes Hall opposite the Bronze Age site "The Roundabout" on the Begwins Common. The pool is fringed by a windbreak of fir trees above which, on the hill slope, is a large Bronze Age round barrow. A very quick additional stop was made at Llanbedr Church, which had been visited last year, for the benefit of members who missed it. Just before lunch we passed Llanbwchllyn on the left, the largest natural lake in Radnorshire.

Lunch was taken on the summit of Penygraiq Hill between Llanbedr and Llandeilo Graban. On the right of the road descending to Llandeilo Graban, in the middle of a field east of Blaen Henllan Farm, is a small but prominent Bronze Age kerbed round barrow and cairn.

The churches were visited in the order below, but unfortunately at Gwenddwr church a service was in progress which limited our inspection to the outside, and at Aberedw it was not possible to locate the church key. Richard Kay's notes are reproduced in full. These are so complete that it would be presumptuous to attempt to precis. Because or the late hour it was not possible to visit the 13th century castle at Aberedw, but the earlier motte there was visited. The church at Llanfaredd also had to be omitted. The field trip concluded at 5.30 pm after an exhausting but very interesting day.

Llowes

Until the 1850's Llowes retained much of the fabric of the Medieval church but it was in bad repair, and even worse in the eyes of the fashionable Victorian society of the time, it was old fashioned! In 1850 a decision was taken not to repair but to totally rebuild it. Work was commenced in 1853, but owing to trouble with the buildinq contractors it was not completed until 1858, in a rather fussy interpretation of the Gothic of that time and now far too large for the small congregation it attracts. How much wiser they would have been had they remained content to repair and restore the building that they had inherited, in the local ecclesiastical style of Llanstephan, Llandeilo Graban etc, rather than construct the grandiose edifice we now see.

There seems to be little architectural record of the church which preceded the rebuilding; very little remains of it except the much altered lower stage of its west tower. The core of the tower walling and its facing of roughly dressed rubble of local stone seems to exist almost to the gable height of the nave. In both its north and south walls are tall blocked slit lights interrupted at mid height by horizontal slabs of a similar fashion to the ventilation slits of the older barns of the neighbourhood eg Nant-yr-Afferiad. The walls of the nave and chancel no doubt rest, at least in part, on the foundations of their predecessors. Structurally that is all that is left of the old church of St Meilig. The building stands in quite a large grassy churchyard with entrances on the east and west.

Within the church remains a battered and mutilated cylindrical bowl of an ancient font which has a projecting encircling plain medial band and later (?) circular to octagonal undercutting. The bowl, which has a damaged lip and is fractured, is held together by two clamping iron bands and rests on an incongruous rectangular base of concrete blocks.

But by far the most interesting object is the remarkable Cross of St Meilig (popularly called Moll Wallbey's Stone). This is a tall, tapering slab of pinkish sandstone, rather weathered and damaged, now in a place of honour and embedded upright in the floor at the west end of the nave. On one side is a wheel cross in high relief, its arms and shaft decorated crudely in geometrical strapwork forming a series of lozenges. The right arm of the cross has a spade shaped projection on the edge of the slab with a circular hole; there is no similar feature on the opposite edge. On the opposite face of the slab is a similar cross, but devoid of the wheel and lozenge ornamentation. The stone seems to be in the Celtic style but is possibly quite late in date, ie of the 10th or 11th century. One authority, R Thomas, gives a 7th century date for one side of the slab to a 10th century date for the other.

Traditionally it is supposed to be contemporary with St. Meilig who is reputed to have come from Clydesdale in Scotland to this place, and to have settled and founded a religious community in the 7th century. For many years the stone is said to have stood high up on a neighbouring hillside at a spot called Croes Feiliog, but as the valley and lower slopes of the hillside were cleared for agriculture the cross was moved from its original site to the present churchyard. The final move of the stone was made in 1980 when the cross was placed inside the church to prevent further weathering. The site of the original Community founded by St. Meilig is supposed to have been within an enclosure with multiple wide spaced ramparts and ditched defences, possibly of Iron Age date, on Bryn Rhydd Common at GR 186 415 north west of the village.

Llandeilo Graban

A remote little village sited high above one of the most beautiful stretches of the Wye Valley. The parish church of St Teilo, a picturesque and interesting building, stands in a roughly circular churchyard, the boundary of which for most of its perimeter is formed by a raised bank, externally revetted with masonry. This in turn is closely encircled by a narrow roadway from which radiate a number of lanes and footpaths. The building does not seem to show any structural details that can be placed any earlier than the 13th or early 14th century, even though it appears to occupy a much older site. There is a persistent local tradition that an earlier site of the church is now occupied by St Teilo's Barn half a mile to the north east. The barn structure seems to be of 18th century date and it has recently been converted into a dwelling. It was close neighboured by a Holy well or sprinq which issued from a subterranean culvert constructed of rough slabs of stone. The barn has one gable recessed into the hillside and above were traces of a banked enclosure and platforms adjoining.

The present church consists of an aisleless nave and chancel, west tower and a roomy porch. It has been suggested that the nave only represents the extent of the initial building and that in the later 14th or 15th century a pointed arch was made in its east wall and a separate chancel was added.

The porch, with benches on either side, retains some original cusped trusses to its roof and a hexagonal stoup bowl in a square recess. A holed cylindrical block of stone lyinq loose is said to have been a second stoup, but is more probably a portion of a pedestal or pillar of doubtful date and provenance. Both south doorway and priests' doorway have simple chamfered arches and jambs. The unchamfered pointed rubble arch which separates the nave from the chancel has an offset, presumably for the support of a vanished rood loft and screen. According to the RCAHM the whole structure of the church was renovated in the 17th and 18th centuries when square headed windows, altered again in the 19th century, were inserted in the north wall. The chancel East window is Perpendicular of local type, the tracery in the head of prolonged narrow lights similar to that at Llanbedr but without the cusping. There is a semi-circular piscina recess, the bowl projecting square with a shallow circular drain, and nearby is a much renovated credence table on a projecting corbel. The plain octagonal font is probably 14th century.

The chancel has been partitioned off from the nave in typical Radnorshire fashion. It contains an ancient oak chest. The wooden barrel roof of the nave has been much renovated, but it does contain some old timbers and wall plates which are also battlemented in the chancel. The tower, capped by a pyramidal roof, appears to have been largely rebuilt in the 19th century. It would appear to have been an addition to the west end of the nave, made not earlier than the 17th century and possibly later. It does not rise above the ridge of the nave roof. The nave would seem to have had originally a west gable wall which either supported a wooden belfry (as at Colva) or an open stone belfry (as at Llanbedr).

Finally the rather good 17th century gravestones lying against the exterior north wall of the church should be observed.

Llanstephan

Dedicated to St Stephen, this is an attractive but much restored building standing high, in a large sloping churchyard, on the slopes of Trewern Hill, looking down on the narrowing valley of the Wye and the hills of the Eppynt beyond. The churchyard is entered by an unusual 18th century Lychgate, under one roof with an adjoining stable for the use of the incumbent when he undertook services.

Like Llandeilo Graban, the building consists of an aisleless nave and chancel, west tower and south porch, and it would appear to have had a similar building history. It does not seem to show any structural details earlier than the 13th century, although the RCAHM seem to think that the nave appeared to belong to the later part of the 12th century, when it would have comprised the whole of the original church, to which was added in the 14th century the present chancel, communication to which was achieved by cutting an acutely pointed arch through the east wall of the nave (original church). This arch was replaced by the present chancel arch during the 1860's, when the nave roof was also replaced and much restoration work carried out. The unceiled Waggon roof over the chancel has been given a 17th century date.

The plain chamfered pointed south doorway is coeval with its original building, and the priest doorway, except for a few stones, is of the 19th century restoration. The south windows of the nave and chancel are considered by some to be the Decorated period. Pevsner says 15th century (?), and RCAHM states door and south windows of the nave are probably post-Reformation restored in the 19th century. The east window of three main lights is certainly local Perpendicular with its long narrow lights in the tracery head; it is similar to that of Llandeilo Graban. Near the south door is a recess for a damaged stoup. The porch is of indeterminate date and contains cusped roof timbers of the 15th century, and on its gable externally is a Sundial of 1756. Within the church note the image brackets on the east wall of the chancel, and octagonal font bowl of the 14th century (pedestal and base are 19th century).

The tower, the basement of which has been used as a vestry, is rectangular in plan the west face being 4' broader than the south face. It is of three stages with crude undressed openings rising only a foot or so above the ridge of the nave roof to terminate in a pyramidal capped roof of slates. The RCAHM consider it may date from the 13th century but, being built of poor local shaly stone, had been more or less rebuilt, perhaps more than once. The elliptical head of the entrance from the nave is possibly a late alteration from the original, which may have been like that of the south doorway of the nave. The tower has a distinct batter and is strengthened by massive upright timbers recessed into the masonry, possibly to carry the bells. The masonry of the tower looks very much like Post Reformation work.

Crickadarn

Crickadarn is a small village above the Clettwr Brook which makes a deep incursion into the eastern flanks of the Eppynt. Some four miles to the southwest, near the headwaters of another tributary brook of the Wye, the Cistercian Abbey of Dore had an important grange and chapel at Llaneglwys. There was the site of another large grange of the Abbey at Pool Hall half a mile west of Crickadarn.

The parish church, dedicated to St Mary, is of attractive appearance and stands in a raised circular churchyard. The aisleless structurally undivided nave and chancel seem to be of the 14th century. There is a south porch and a massive west tower with a projecting stair turret of late 15th or early 16th century date, constructed of well coursed blocks of ashlar masonry. It is of Breconshire type and a contrast to the poorly built towers of most Radnorshire churches. The two centered arched south doorway, priest's doorway (now blocked), and the single and paired lancets in the north wall are reputed to be the earliest details. The east window is Perpendicular, as are the two ogee south windows. The 15th century porch has a good roof with three trusses, with quatrefoil and trefoil cusping. The

outer one open to the south is also arch-braced and there are two tiers of foiled wind braces, rather elaborate for such a small roof. There is a large shapeless stoup in the west wall.

Internally the church has been greatly renovated by the restorations of the 1860's, 1890's and 1910. It is neat and tidy but swept bare of most of any interesting antiquities. There remains, however, a plain square piscina recess and a plain 14th or 15th century font, a wall monument of 1607 and in the north wall a 19th century fireplace. The nave roof is ceiled, but a large tie beam and braces over the site of the former screen are visible. The tower has a Tudor arch towards the nave, which has been extended to the west to include half the basement of the tower.

The remainder of the basement of the tower, serving as a vestry, is lighted by an oval window inserted at the time of the last restoration. The projecting balcony also belongs to this time. In the churchyard are the octagonal bowl, stem and base of a second font of doubtful date and provenance. The castle earthwork is a couple of hundred yards to the southwest.

Gwenddwr

Dedicated to St Dubricius, a simple single chambered church with a structurally undivided nave and chancel, south porch and a very low square west tower with a pyramidal roof. The church probably originated as the chapel of the nearby grange of Abbey Dore. This grange is stated erroneously in the church guide to have been a subject "priory" of Abbey Dore. The Cistercians did not have "priories" but an attempt was made to found a daughter house of the Abbey at Trawscoed in a detached part of Gweddwr parish three miles south of Llaneglwys (mentioned under Crickadarn). The attempt failed and it became yet another grange of Abbey Dore.

The church was extensively restored in 1886; of the old work some detail remains. The plain chamfered south doorway and a blocked priest's doorway are of the 14th century. The two northern lancets of the church retain old stonework; the more westerly of these has recessed spandrels and is presumably later than the other, if its obtuse head is anything to go by. The more easterly could be 13th century, of a date when the church served as the grange chapel. On the south aisle of the sanctuary is a deeply recessed square headed Perpendicular two light window, the sprandels of cusping crude and inadequately cut. The font has a small octagonal bowl which is ancient, but its stem and base are not. The porch, with masonry side walls and no outer doorway, seems to be later than the 15th century roof, which with its two quatrefoil and trefoil trusses and an arched one between them, and pairs of trefoiled wind braces, resembled that of Crickadarn. A slab bearing a floriated cross was preserved in the vestry in the base of the tower. There are three bells. The tower seems to be of post Reformation date. The churchyard slopes down steeply on the north, the approach being made through a little square of cottages and the school.

Aberedw

Dedicated to St Cewydd, a large (for the neighbourhood) church with a structurally undivided nave and chancel, an enormous north porch, and a tall two stage west tower, stands in a roomy churchyard above the river Edw.

The nave is probably of 14th century date, it has a reputed Decorated window and a sharply pointed Perpendicular north doorway. The chancel is of the same width and alignment as the nave and is probably coeval with it but their stone tiled roofs are not contiguous. There is no east window but in its place are tablets with the Decalogue. Perpendicular windows much restored in south wall are of three lights with deep splays. There is also a blocked priest's doorway. The open nave roof is of arch braced collared trusses set on moulded wooden brackets. The chancel has a coved plaster ceiling with wooden ribs. The division between the chancel and the nave is made by a mutilated Perpendicular screen of the usual Radnorshire type of fourteen bays. With ogee traceries above, it is a 17th century addition of two rows of flat wavy cut balusters with a large tie beam

on top. This addition is said to have been the former Communion rails. The unusual but not unattractive altar rails are 19th century Gothic and made of cast iron. They do not seem to have been within the church prior to 1912 and probably came from elsewhere. The porch has a characteristic double bench on each side and in the gable is a large truss with three big open trefoils. A large sepulchural slab against one wall bears the date 1.4.1604 and there are other monumental slabs on the walls within the church. The west tower, which has a pyramidal roof, has a Tudor-looking door to the nave. It was rebuilt in 1888 with a clumsy south door and belfry windows. Huge cracks in its east wall indicate approaching collapse if it is not quickly rebuilt once again. The older core of its masonry seems to be late, possibly post Reformation?

Through a gate in the southwest corner of the churchyard a path, in a short distance, leads to the remains of the earliest castle of Aberedw. This is a large motte partly carved out of a rocky knoll, on the edge of the cliff flanking the narrow wooded gorge of the River Edw, over a hundred feet below The top of the made-up motte is cratered by a bygone excavation, it may have borne a stone tower on top There is little indication of a bailey. If there was one It would seem to have been defended by nothing stronger than a wooden palisade.

A couple of hundred yards across a field to the northwest are the remains of a later 13th century castle on the edge of a steep bank above the River Wye. It was of one sguare ward, with a round tower at each angle and a gatehouse or gateway in the middle of the north curtain. There is a deep cut dry ditch around three sides. The western curtain and its two corner towers were largely destroyed when the railway line to Builth was constructed. Little more than the stump of the SE tower and lower courses of the north west tower and portions of the east, north and south curtain walls remain. Scanty though the remains are, they probably show more masonry than any other castle site in Radnorshire.

Llanfaredd

Dedicated to St Mary, the little church stands in one of the most clearly defined raised circular banked and externally revetted graveyards in the county, usually believed to indicate a pre-Norman Celtic site. It is a pleasing building; the walls are clearly ancient but much rebuilt and restored in the late 19th century. The roof, which has arch braced trusses with tie beams at the west, is much renewed too. The south door and the heavy oak lintel and jambs are of the 17th century and so too are the altar rails. The Perpendicular octagonal font, with roll moulded angles, stands on a slim but original octagonal shaft. There are a few 18th century wall tablets.

ARTICLES FOR ARS

It would be appreciated by the Editor if contributions could, if at all possible, be typed in such a form suitable for direct reproduction. Side margins are necessary for binding, and the type and diagrams etc should be as black as possible.

BLACKWARDINE

I have read with great interest Duncan Brown's suggestions and theories on the duration of the Roman occupation of Blackwardine, and of the discoveries by the County Archaeological Section on their dig in the railway cutting. I would beg to draw your attention to one or two points which I feel must be raised. The first is the excavation of a ditch three metres in depth and dated to the ANTONINE period. This "ditch" was investigated in 1974 and proved to be a conical-shaped pit. Having been restricted in the area of excavation that was confined to the railway cutting, the profile of a 'V'-shaped ditch would seem reasonable. However, if their excavation had carried itself into the field beyond, a conical pit would have been recorded. A second point: where the statement refers to "no features recorded over 170

metres" implies that no other ditches existed. This is strictly not correct. Does it therefore imply that there are no other visible forms that would suggest a ditch along the length of the cutting sides? If it does, then it is incorrect. The fact is that not only are there other ditch profiles, but we were able to trace distinct ditches belonging to two defensive systems.

Reading the site from the very beginning of the excavation is of paramount importance in the case of Blackwardine. We considered how much damage had been inflicted on the settlement by the railway cutting. It was obvious, therefore, that the banks of the railway cutting should be carefully surveyed to determine if, in fact, we were to evaluate whether or not the cutting had bisected the settlement which, of course, it had. In fact, Blackwardine consists of a large area, some 80 acres in extent, of Romano-British building remains. Within this area is a defensive ditch system which takes on a rectangular playing card shape, each side served by a single gateway. A smaller and earlier defensive ditch system lies within the area of the larger. The railway cutting enters the northeast corner of the defensive ditch system leaving no definable 'V'-shaped profile of a ditch on the northern side: due to the angle of its line the ditch profile appears as a deep elongated shape. However, the ditch profile it clearly visible on its southern side, where it can be traced in a southerly direction for 314 yards where it terminates at the eastern entrance. Beyond the entrance causeway it continues for 110 yards until it meets the southeast corner, and continues west until it meets the southern entrance. It carries on in a regular shape. The ditch was tested along its entirety and the gateways located, but only the eastern entrance was excavated. The ditch measured on average a depth of 6' 6", and contained a cleaning channel and had a width of 14'. Revetted on the inner face, the traces of a BERM measured 9' in width, whilst the base of a clay and turf rampart measured 22' in width, which was subsequently levelled to fill the ditch.

The northern defences lie on a line just beyond the railway cutting. The VICUS is situated beyond the gateway. To the northwest of the VICUS lies a small AMPHITHEATRE. Continuing westward, the CEMETERY is situated close to the modern roadway. The civilian settlement extends beyond the modern roadway northwards; it also follows a line northeast for some 500 yards. If we move in a southerly direction from the railway cutting, the settlement extends beyond Church Lane.

As to the dating of the site, Blackwardine has not been ungenerous in the amount of datable material available and has, in fact, produced large quantities of pottery sherds, coins and other artifacts sufficient in number to date accurately the various phases of occupation. It is not advisable to date sites by pottery along, unless accompanied by other related material. The discovery of isolated fragments or single coins proves little, and can only cloud the issue. Fortunately with Blackwardine, we were able to evaluate our finds, that had been excavated over a long period, and therefore a clearer picture emerged of the social behaviour of the inhabitants.

The Coinage

If we were to date the site by coinage alone, then we would have to say it was PRE-CLAUDIAN, which is a virtual impossibility. The simple fact is that Roman Republic coins have been discovered at Blackwardine. The earliest Imperial coins recorded from our excavations are JULIUS CAESAR, AR denarius, C49, S1006; CLAUDIUS, AR didrachm, C15, RIC56, BMC237; CLAUDIUS, Æ sestertius, C39, RIC60, BMC115; CLAUDIUS Æ dupondius, C102, RIC236, RMC290; NERO Æ quadrans, C185; NERO Æ quadrans, C183.

The coinage continues in an unbroken sequence to CONSTANTIUS III, and a single coin from the reign of VALENTINIAN III completes the coinage. The SUB-ROMAN or DARK AGE coinage, Æ minimi, were frequently found, sometimes together in a quantity as a hoard.

Pottery Types
The pottery follows the same sequence as the coinage. The earliest datable pottery was that of thin-walled vessels generally associated with military sites and known as varnished ware, lead-glaze ware, samian, early imitation samian, but most predominantly Severn Valley and black burnished ware, the latter being found in large quantities. The pottery continues in an unbroken chain well into the 4th century. Examples of Oxford late pottery were also found in quantity. The excavations uncovered a large pottery kiln, complete with furniture and bone tools, and proof that pottery was being produced on the site in the latter part of the 4th century. The neck and body of a double-handled AMPHORA discarded as a waster was recovered from the firebox of the kiln, and of a type unrecorded in Roman pottery style.

Artifacts with Military Connections
Items associated with Roman military occupation excavated from the site included pilam shafts, spearheads, bronze fasteners, cheek-piece ornamentation, iron cheek-piece with bronze stud, lance head, bronze riveted strap, bronze shield edge binding, iron shield boss, steel bladed dagger with bone handle, sling shot and apron mounts.

In general terms the evidence so far strongly suggests that at some time in its existence the site contained a strong military presence and may be from an early period, but the evidence is not conclusive to prove beyond all doubt that the site was in fact a military station. First and foremost, the defences must be proved to be military in origin and not a defended civilian settlement. We must remember that the Roman occupation of Blackwardine existed for some 400 years and that the superimposed levels in that period had been in many cases disturbed; however, the problem was defining the periods of each phase of military and civilian involvement. As the defensive system encompasses only a part of the settlement itself, and as the majority of building foundations lay beyond the defences, the first argument may be considered as a defended civilian settlement. Gradually, as the populus expanded, the fear of attack diminished due to the subjugation of he Northern Celtic tribes and defences were no longer called for. The ramparts were thrown down and the site expanded. If we consider this case with care, we realise that the buildings beyond the defence system must postdate those enclosed by it. On the other hand, if we can date accurately the defences and some of the buildings to the same period, then we must consider that one part of the site was protected whilst the other was not. This would obviously be comparable with a military installation and an unprotected Vicus beyond its defensive boundary. Therefore, the excavations were centred on this problem, and by using material from stratified and sealed levels we were able to arrive at the obvious conclusion that, in fact, the defensive system was erected in the same period of time as the earliest foundations of the area contained outside the defences. The conclusion, therefore, must be that the defensive system was military and that a small village grew up round it.

The dating of the site in its earliest period of Roman occupation must be PRE-FLAVIAN although the site existed as a military influence in the area into the 2nd century AD, and was subjected to many changes. We were able to date the period of the dismantling of the Fort from the sealed levels below the rampart clay within the ditch, and from the foundation and sleeper trenches we can accurately date the civilian settlement beyond the defences. A broad picture is therefore displayed for us to draw positive conclusions to the history of the site, and to its existence as a Roman military station. However, little has been said about the smaller of the two defensive systems. We were unable to carry out a full investigation of this system although its line was traced and the material recovered suggested that it did not postdate the larger defence system. In this area it would seem that the excavation did not advance far enough to make a positive conclusion to its exact role in the makeup of the site, but the general consensus of opinion is that it predates the larger by only a short period of time.

We must consider what part the Fort played in a wider area of conquest if, as I believe, the Fort is of the earliest period one can associate with the county, that is SCAPULAN. We must also begin to understand what role it played and on what line it was based for the Roman march northwards. First and foremost, the road system that links it with other possible military stations must be considered carefully, and here we must thank IVAN D MARGARY for his brilliant work on Roman roads, for it was he who traced accurately the road which concerns us here. I quote his report and his line M613, which runs from Weston-under-Penyard to Ashton near Leominster, which passes through Withington, Bartestree, Bodenham and Stoke Prior to Ashton. However, I have now completed the road from Ashton to Church Stretton, which completes the line. There has been much confusion between M613 and M610 that begins at Gloucester (GLEVUM), which Margary surveyed as far as Stretton Grandison. This line does not continue on to Stoke Prior but takes an independent course northwards. It would seem, therefore, that Blackwardine played an important part in the conquest of Wales and the West Midlands in the second half of the first century, and may be the hub of a larger and more complex fort system. It is certainly, in area, larger than any other known fort so far discovered within the vicinity, including forts at JAY LANE and BUCKTON, as LEINTWARDINE is probably not a fort site and therefore cannot be considered. It is true that we have much to learn and have only just begun to understand a small proportion of the whole picture. It is a beginning and I am sure that the future holds far more exciting discoveries as our knowledge expands.

Roads

The suggestion by Duncan L Brown that a road connects the BLACKWARDINE site to the fort and settlement at TEDSTONE WAFRE is, in fact, correct although the line of the road eastwards begins south of the BLACKWARDINE fort and not north of it. This road crosses the HUMBER RIVER where the valley bottom is at its narrowest, that is below HUMBER CHURCH. It proceeds eastwards on a perfectly straight alignment as far as BUCKLAND, where it meets the A44. It travels along this road as far as DOCKLOW CHURCH. Its course once more leaves the A44 and continues in a straight alignment just to the south of UPHAMPTON hill fort. It passes close to FENCOTE ABBEY FARM, where the modern railway cutting disturbs its line. Beyond the cutting, in sparse woodland, a raised and metalled AGGER measuring 18' between ditches can be seen for 250 yards. A rather worn and collapsed culvert can be observed. On meeting the modern road, the course takes on a new alignment and follows a green lane for some 300 yards. It enters an open field at MONTREAL. Its course here has been subjected to modern methods of agriculture, in that deep ploughing has destroyed the AGGER, but its course can be observed by scattered metalling. At the end of this field the road hugs closely to the hedge-line and is on a perfectly straight alignment for 1½ miles. A slight readjustment occurs as it prepares to ford a small brook at STREETFIELD. It then passes to the north of EDWYN RALPH in a series of terraces and short alignment. It passes close to FIELDHOUSE FARM and STONEYBRIDGE. It joins HIGH LANE south of the ROMAN FORTLET. This line can be followed with great ease and covers a distance of 9½ miles, although in places it has been subjected to post-Roman traffic which has destroyed its original construction. However, sufficient sections of Roman road still exist to confirm its origin.

A passing note: although little work has been done on the northern line where this road meets HIGH LANE, the strong suggestion is that HIGH LANE is a continuation of a Roman road on a north-south axis. I have looked carefully at several sections along this line and believe the course to be as follows:

From LEDBURY to the west of WELLINGTON HEATH, passing through BOSBURY, HARBOUR HILL to STEENS BRIDGE. Between these two points the road has a distinct suspicion of being of Roman origin. If we carry the line further on the high ground to the east of ACTON BEAUCHAMP, there is reason to believe another road crosses this point on an east to west axis. A section of road here is definitely of Roman construction. Proceeding

on, a possible line can be seen close to STANFORD BISHOP CHURCH. It appears that the line then climbs through CLATER PARK, BROCKHAMPTON, to the east of SANDY CROSS, where it takes on a perfectly straight alignment through UPPER NORTON, crosses the TEDSTONE DELAMERE lane just below the council houses and joins the modern road at HODGE HOUSE FARM lane. It then continues on, leaves the line of the modern and carries on to LEA GREEN and HANDLEY WILLIAM. Along this line there are sections that are without doubt of Roman construction, but a very careful and detailed survey must be carried out before this line can be confirmed.

Another interesting line which has certain features such as wide paved fords and should also be investigated is that from LOWER NORTON FARM eastwards towards WHITBOURNE. At the present time I am grappling with the continuation of M610 which I have advanced, although I must add slowly, as far as GRENDON BISHOP. When I have completed this line I feel that my next project is a suspected line on an east-west axis from WORCESTER.

W F Attwell

Blackwardine Addendum

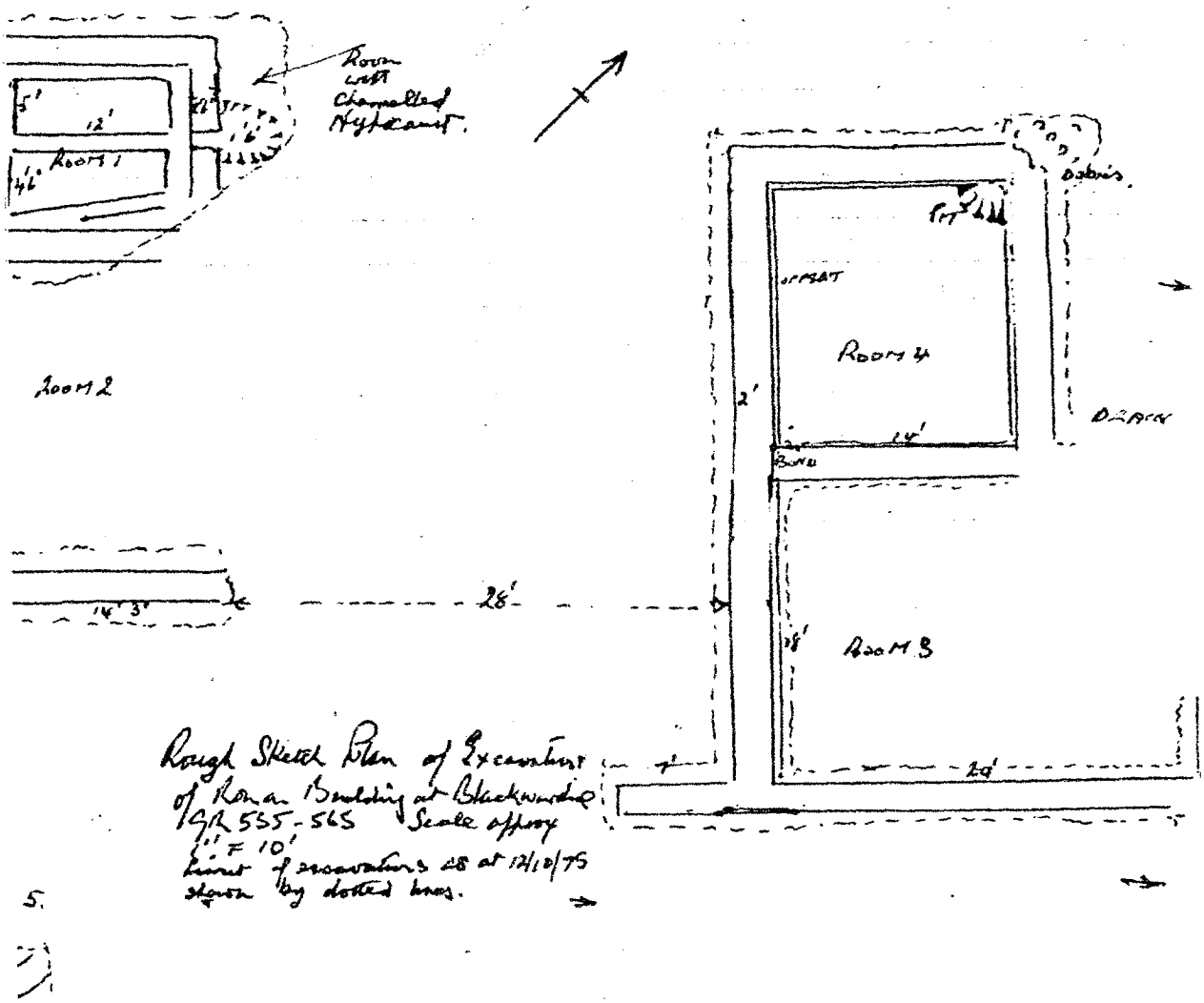
In Newsletter No 51 there was an article on Blackwardine by Mr Duncan Brown of the County Archaeology Unit; there were previously reports on the sites in Newsletters No 32 and 41. Mr Richard Kay has sent in his own notes on the site, made on 12/10/75, which are published here. The ARS visited the site on 20/2/83.

Editor

Notes on Blackwardine

The site lies in an arable field at GR 535565 just south of the old railway cutting of Blackwardine on gently sloping ground falling to Humber Brook on the southeast. Five rooms of a large building have been uncovered by a still unfinished excavation. Finds of coins and pottery indicate an occupation from first to end of fourth century and possibly beyond. Walling uncovered lay less than one foot below surface, and rises in places three or four courses above foundations of stones set on edge. Probably a villa complex similar to that uncovered a decade ago at Huntsham in the south of the county. Walling appears to be late, probably early fourth century. Room 1 with a channelled hypocaust appears to have been an addition to Room 2, the floor of which has not yet been uncovered. The walls of Room 4 have an internal offset probably marking the level of a vanished floor, painted plaster in red stripes has been found here together with bronze remains (Laurenca) and the site of a metalworking crucible. A pit, apparently also early fourth century, occupies north corner of room. This was covered by a later floor sealing a coin of Valens. Room J to the south, in process of investigation, is large 24' x 18'. The south external angle of Room 2 has the base of a massive square buttress. South east of Room 2 trial excavations have uncovered the walls of a fifth room which appears to have had an apsidal endinq. On the southeast are traces of a drain, and nearer the Humber Brook are indications of further buildings. In the nineteenth century, when the railway cutting was being excavated, further walling and cremation burials were discovered (See Transactions). The Roman road running north from Stretton Grandison towards Brimfield passes close to the west of the site. The villa complex may overlie or be adjacent to a first centurv industrial site. There is a first century fort at Stretton Grandison.

Richard Kay



ROMAN LEINTWARDINE (BRANOGENIUM): A FORT OR NOT A FORT?

The evidence

Dr Stanford's work on the Romano-British site at Leintwardine (Stanford 1968) has given us a major insight into the history and archaeology of the Roman period in the Marches of Wales. The site lies on Watling Street West, the major north-south axis of the first century frontier against the tribes of central Wales, and commands the river crossing at the confluence of the rivers Clun and Teme. The strategic importance of this point is marked by the Claudio-Neronian supply base reusing the hillfort at Brandon Camp, the late Neronian and early Flavian fort at Jay Lane, and the later Flavian and Hadrianic forts at Buckton, as well as a group of marching camps, all within two miles. Dr Stanford's excavations indicated to him that beneath Leintwardine village lay a civilian *vicus* related to the forts at Jay Lane and Buckton, dating perhaps from c AD 70, upon which was superimposed a fort of the mid to late Antonine period, with substantial timber and clay ramparts, and a series of three defensive ditches. The site seemed to have been used intermittently, with the rampart refurbished on reoccupation on two occasions.

Since Stanford's main series of excavations at Leintwardine, two further substantial areas of the interior have been examined and a series of evaluations and watching briefs

have taken place under the conditions for Scheduled Monument Consent (see Brown, forthcoming). Although these have added a great deal of data to the corpus provided by Stanford, they have also caused the hypothesis of military occupation at Leintwardine to come into serious question.

The only specifically military building reported by Stanford was the *Principia* on site C. John Sawle's 1980 excavation, intersecting several of Stanford's trenches (Sawle 1981), proved that no such building was present there, the features being interpreted as such proving conclusively to be of post-Medieval date. The *Via Principalis* along the southern boundary of this field was also shown not to have been present. Instead a building of mid to late Antonine date was present across the line of the suggested road, so its existence at a similar date, even if more recently eroded away, is unlikely. The deposits interpreted as the road proved to be periglacial deposits typical of the subsoils around Leintwardine. In fact, much of Stanford's excavational data came from very small scale excavations on site C, and interpretations extrapolated from them has been shown to be misleading.

One of the strongest arguments for maintaining that Leintwardine was of military origin was the form of the defences. The timber and clay rampart is of a constructional technique occurring at several military sites in the region, including Gloucester and Walltown (Shropshire). However, at most of these sites the method involved dates no later than the early second century, and may be related to land clearance due to the quantities of timber involved. In addition, dating evidence from excavations at Sawpit Bank have indicated that the *terminus post quem* for the rampart may be adjusted to ten years later than Stanford's date, to c AD 170. The series of three ditches is also potentially military in form. However, as Stanford indicated, at least one of these ditches is of a different phase to the others (Stanford 1958), and at the southwest corner two appear to converge, suggesting two or more phases of ditch construction. It is also worthy of note that triple-ditched enclosures elsewhere, identified by aerial photography, have never been claimed to be military; such an arrangement needs further investigation and research to clarify the position.

A further argument supporting military construction is the identification of a *Via Sagularis*, forming an inner circuit behind the rampart, wherever this area has been explored. The distance from the back of the rampart to the edge of the road seems to vary between less than 1m and 5m, while width is similarly variable, suggesting some irregularity of construction. This road was soon buried by material eroding from the rampart, and was not replaced. Although this feature might represent an argument for good defensive design, it need not represent a military feature: similar patterns of defence were used in King Alfred's Burghs, to allow quick internal transit of the burghal levies.

The identification of the bath house (site E5 within the rampart adjacent to Mill Lane) led Stanford to postulate an annexe, with a rampart or perhaps a ditch, dividing his fort from the most important ancillary buildings of the military *vicus*. In nearly every case in Britain, all the buildings of the *vicus* were situated outside the fort enclosure. Fieldwork north of Mill Lane has now shown that no evidence for the stiff grey clay of rampart material was present in the top metre of stratigraphy within two metres either side of the proposed line of the rampart dividing fort from annexe. Considering the normal spread of the distinctive eroded material, up to five metres either side of the rampart, it is therefore unlikely that such a rampart ever existed in this area of the site. In addition, no ditch of an appropriate defensive nature was present either.

Burnt clay pads on site A were interpreted by Stanford as bread ovens, due to their location in the corner of the fort, immediately behind the rampart. At Sawpit Bank similar features to these were identified, similarly sheltered by the rampart. However these were located nearer the centre of the fort's eastern rampart, one proving to contain Medieval pottery. Since these features are not of the 'keyhole' shape typical of such features on other Roman sites, and they are of a variety of phases, another explanation for them must be offerred. Such fireplaces as these could have served a variety of domestic or industrial

purposes throughout the life of the village, and were placed close to the rampart for shelter and to keep them well clear of timber domestic buildings nearer the road.

A re-evaluation

No specific break in settlement over the whole site has proved to be supportable from available dating evidence, so where did the civilian population go if displaced by the military? The suggestion that the site may have been a supply base can also be questioned. No evidence for granaries or other types of military storehouse have been found, and no specific purpose for a supply base has been postulated. Leintwardine can thus no longer be accepted as a longstanding military establishment.

So what can be suggested for the status of the site? The present interpretation of Leintwardine is that it was always principally a civilian settlement. Continuity of the *vicus* associated with Jay Lane and Buckton forts after the withdrawal of the military is very much in line with many other sites throughout Roman Britain. Similarly, many strategic settlements were fortified in response to the impending civil war in the 190's AD, when the governor of Britain, Clodius Albinus, made an attempt on the Imperial throne, but was defeated by Septimius Severus. It is possible that detachments of troops were dispatched to aid in the defence of important strategic sites, although this is not proven. Most of the structures identified at Leintwardine are typical of Roman domestic buildings, such as courtyard or strip houses, and less substantial agricultural buildings of a variety of types. The bath house is similarly typical of road stations, with a Mansio, as Leintwardine is likely to have been.

Dr Stanford's analysis of the village had been used as an indicator of a military presence in the central Marches until quite late in the Roman period. This can now be rejected in favour of a more peaceful scenario, with no protracted military presence here after the 130's AD.

Duncan L Brown, MA
Archaeology Section, HWCC

Acknowledgements

Thanks must go to S J Whitby for contributing the illustration and to H A White for her comments on aerial photography.

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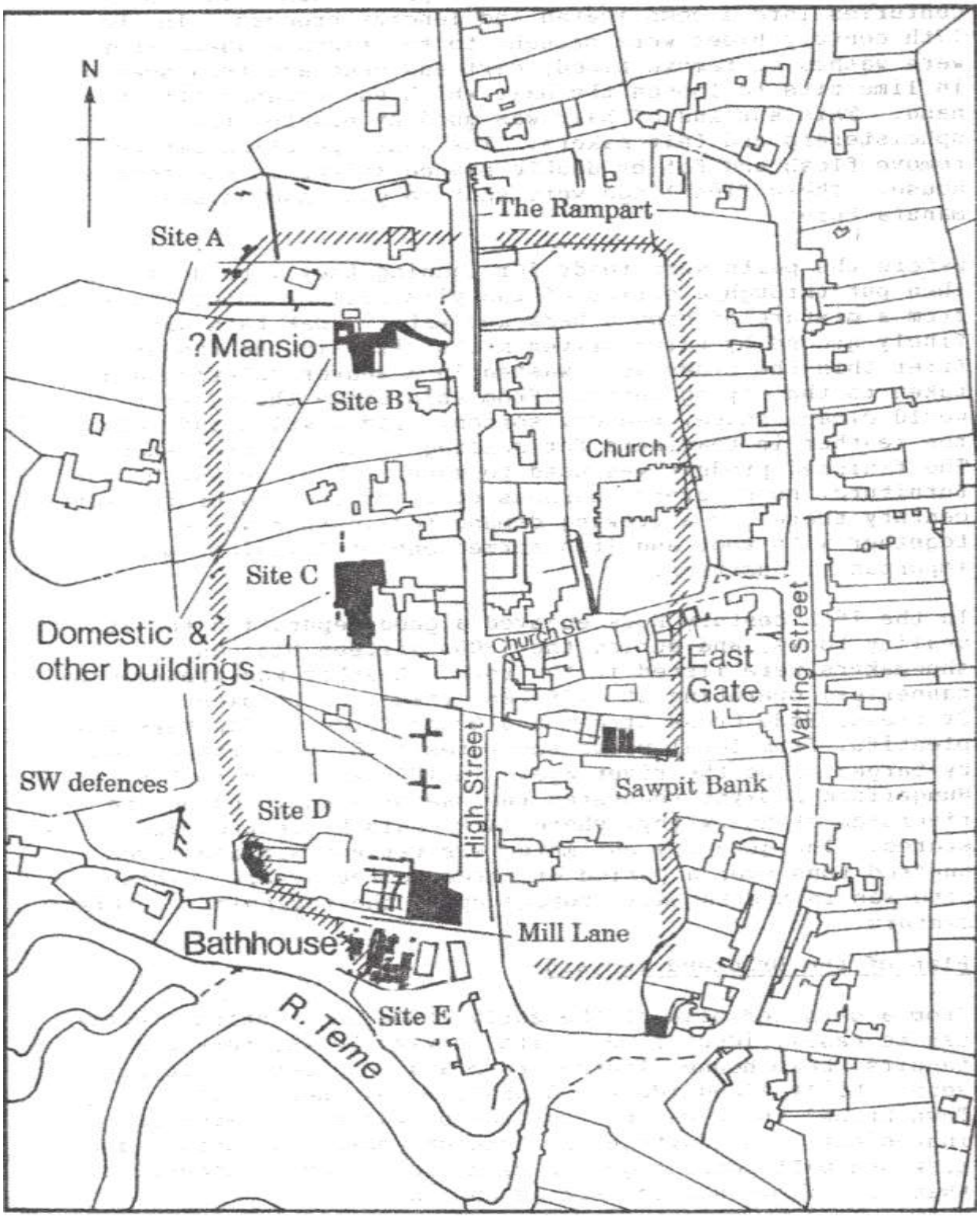
Leintwardine: indicating the location of fieldwork undertaken, 1958-1989



THE BROOKEND TANYARD AT ROSS
By Heather Hurley

Tanning

The craft of tanning converting raw hide to leather, dates from as far back as the Stone Age, progressing over the centuries into a complicated and lengthy process. In the 17th century hides were brought to the tanyard where they were washed to remove blood, dirt and dung and then soaked in lime pits to loosen the hair, which was scraped off by hand. This surplus of hair was used by plasterers, upholsterers and felt makers. The next operation was to remove flesh and fat by double bladed knives in the beam house. These fleshlings were sent to glue and gelatine manufacturers.

Before the pelts were ready for tanning they were de-limed then put through a series of tan pits full of solutions made from a mixture of ground bark and water. Oak bark was finely ground by water driven mills sited in the tanyard. After this the hides were washed in a weaker solution and taken to the drying lofts. From this stage the currier would clean, shape, reduce, soften, grade, weigh and colour the leather in readiness for selling in the leather shop. The finished product was used to make gloves, shoes, boots, furniture, book covers, harness etc. By the end of the 18th century there was a growing demand for leather which together with wool and iron formed one of Britain's most important industries.

In the 16th century Ross enjoyed a good reputation for its quality boots, and during the 1800's sixteen boot and shoemakers were listed in the town. Leather was produced by tanneries, operating at different times, at Brookend, Overross, Edde Cross Street and Broad Street. Oak bark was plentiful from local woods and forests and was transported by barges along the river Wye. In 1799 a letter to Sir Hungerford Hoskyns requested the use of a building on the riverside at Hoarwithy, where bark could be chopped and stored. The quantity estimated was between six and seven hundred tons over a period of three to four years. This site was in use as bark storage until the beginning of this century.

Plan of the Brookend Tanyard

From a detailed plan of the early 1800's the tanning process can be easily identified. Pits, drying lofts, bark mill, tanpits, beam house, leather room and shop can be clearly seen. Built alongside the Rudhall Brook (here called the Town Brook) there was no shortage of water, an important ingredient. In addition the handsome building contained a brew and malt house, together with two parlours, suggesting that the premises were used as an inn.

During 1988 this site was visited before being sold. No remains of the tanyard were visible as a mill recently used by SHACS had been built, which is at present being demolished to clear the site for redevelopment. The house and outbuildings are now used as an antique shop, and I was kindly allowed to explore the premises before it was sold. The interior and exterior of the building have changed very little since the early 19th century plan. The Brew House has gone, but a sunken Malt House, Cistern, Kitchen, Parlours and Passage are all interconnected and used to display antique furniture. Crumbling stairs lead from a tight fitting trap door into dark cellars, and the Leather Shop houses a store. The Pump is missing in the quaint narrow Court where the Stable and Leather Room have been converted into a cottage.

History

Apparently, tanneries were known to have existed at Ross since Elizabethan times. Documents dating from the late 17th century show that the Brookend Tanyard and Malt House were owned by John Merrick the Elder, a tanner of Ross. His son of the same name took over the property before it changed hands in 1722 and was subsequently used by local tanners – Michael Powles, Thomas Pritchard and Daniel Pearce during the 19th century. In 1808 Daniel Pearce sold the Tanyard and Malt House to James Frere, a former currier, who

traded as a tanner at the Brookend till his third son Charles took over the business in 1827. An Indenture of that date records a detailed outline of the property and its boundaries:

> "All That Messuage Burgage or Tenement with the Malt House and other Buildings Tanyard Garden and Orchard thereto adjoining and belonging situate lying and being in the Town of Ross aforesaid in or near a certain Street there called the Brookend and heretofore in the tenure or occupation of Daniel Pearce his tenant or tenants since of the said James Frere and now of the said Charles Frere. Also All that Tanhouse (formerly a Bark Mill and Bark kiln) with the Pits Yard Buildings" etc...

By 1836 Charles Frere ran into financial difficulties so the 'Excellant Tanyard' and its 'Neat and Clean Household Furniture, Brewing and Washing Utensils' were put up for sale. From about this time the tanyard appears to have ceased and been replaced by the New Tanyard at Overross operated by Elles Lee Saunders.

In the mid 19th century the Brookend property was probably divided into two, the tanyard being used for other purposes and the tanhouse, brew and malt house converted into an inn. 1855 saw the opening of the Hereford, Ross, Gloucester Railway with Ross station situated nearby, so it is not surprising that the pub was called the Railway Inn under the management of William Pye. The inn continued into this century with various landlords until it was delicensed during the 1960's and left empty for a number of years. From 1976 to 1988 the premises housed an antique shop, and since its closure we wait to hear of its future use.

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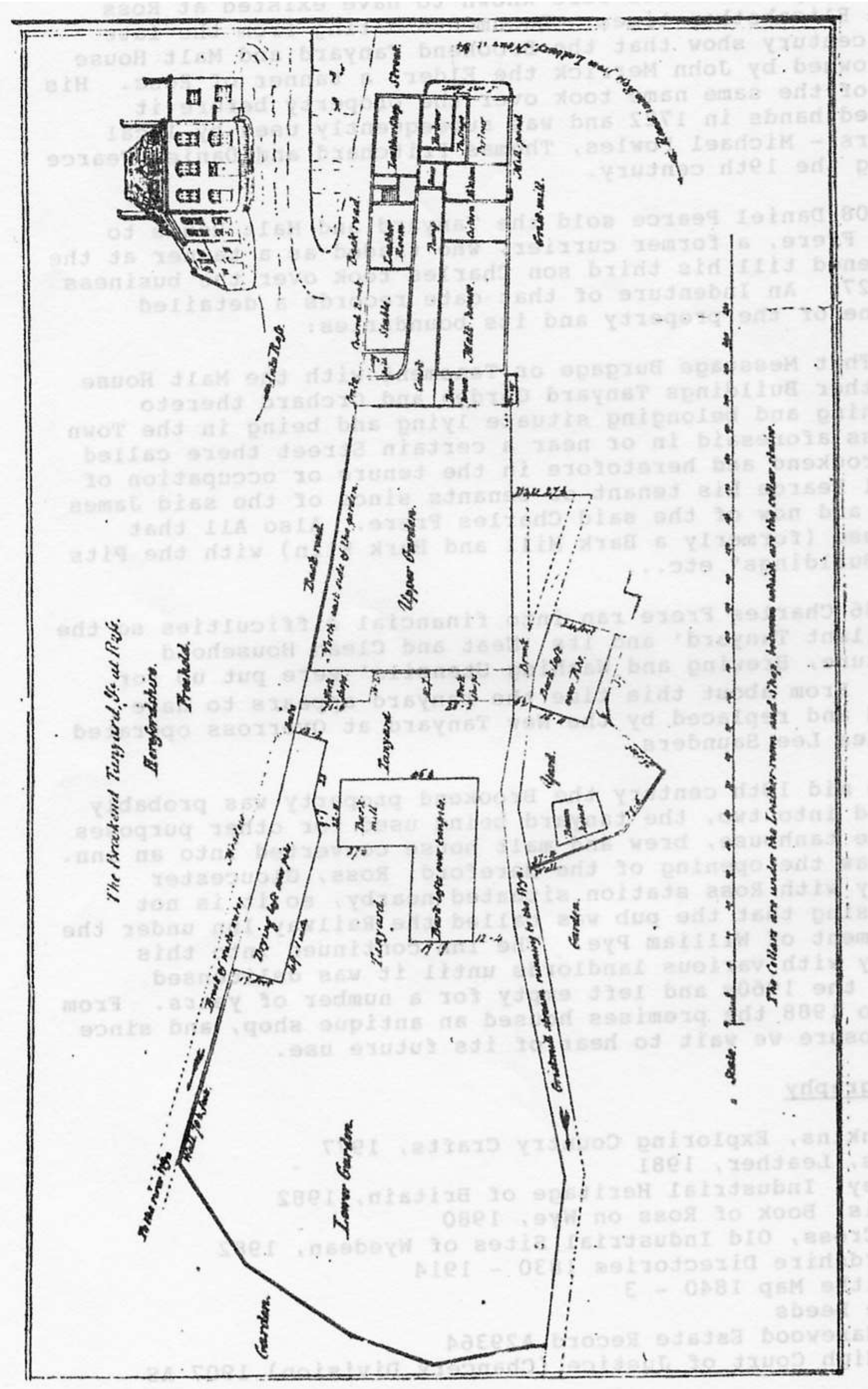
Private Deeds H R O Harewood Estate Record A29364
H R O High Court of Justice (Chancery Division) 1907 AS 58/6/21

Acknowledgement

Mr Michael McGarvie for his help and information.

Note: It was not possible for space reasons to include the two 'For Sale' notices about the sale of the property, fittings and furniture. These can be consulted at the Hereford Record Office.

Editor


The Brookend Tanyard, &c. at Ross.
Herefordshire.
Freehold.
Garden.
Lower Garden.
Tanyard.
Bark mill
Tanyard
Bark lofts over tanpits.
Drying loft over pits.
Brook of waste water
Work shops
North east side of the garden.
Upper Garden.
Back road.
Into Ross.
Stable.
Leather Room
Leather Shop.
Street.
Court
Pump
Malt house.
Cistern
Kitchen
Parlour
Mill pond.
Grist mill.
Yard.
Garden.
Bark loft over Pits.
Gristmill stream running to the Wye.
Road into Ross from Ledbury.
Scale.
The Cellars are under the Leather-room and Shop, between which are the cellar stairs.

FIELD MEETING AT ABBEY DORE, 14TH MAY, 1989

17 members and guests assembled at Abbey Dore church at 10.30 am to examine and measure the Cistercian Abbey under the expert leadership of Joe Hillaby. In the morning Mr Hillaby talked about the development of the Cistercian Order and how this had affected the architecture of the Abbey Church. We examined the reconstructed church, reconstructed out of the original Chancel Crossing Transepts and Ambulatory by Viscount Scudamore in 1633-4 as some recompense for his ancestors' despoliation of the monasteries. We noted the Laudian influences visible in the reconstruction. Joe Hillaby explained the reconstructed stained glass in the East Window and its significance; we also examined the fragments of columns and bosses etc. stored in the Ambulatory.

After lunch we measured the Nave and speculated about the position and size of the Conventual Buildings. The Chapter House especially invoked great interest, and it was felt that the existing remains could be best explained by accepting that the original Chapter House had been rebuilt or remodelled. It was noted with some dismay that the wall of the small paddock/garden which is, or on the site of, the Lane wall of the Lay Brothers wing, is in imminent danger of collapse. It was felt that steps should be taken to rectify this, as such Lanes are unusual in West Ranges of Cistercian Abbeys.

The meeting broke up at 3.15 pm after a very enjoyable and informative day. After a cold start the weather became warmer after lunch.

PRH

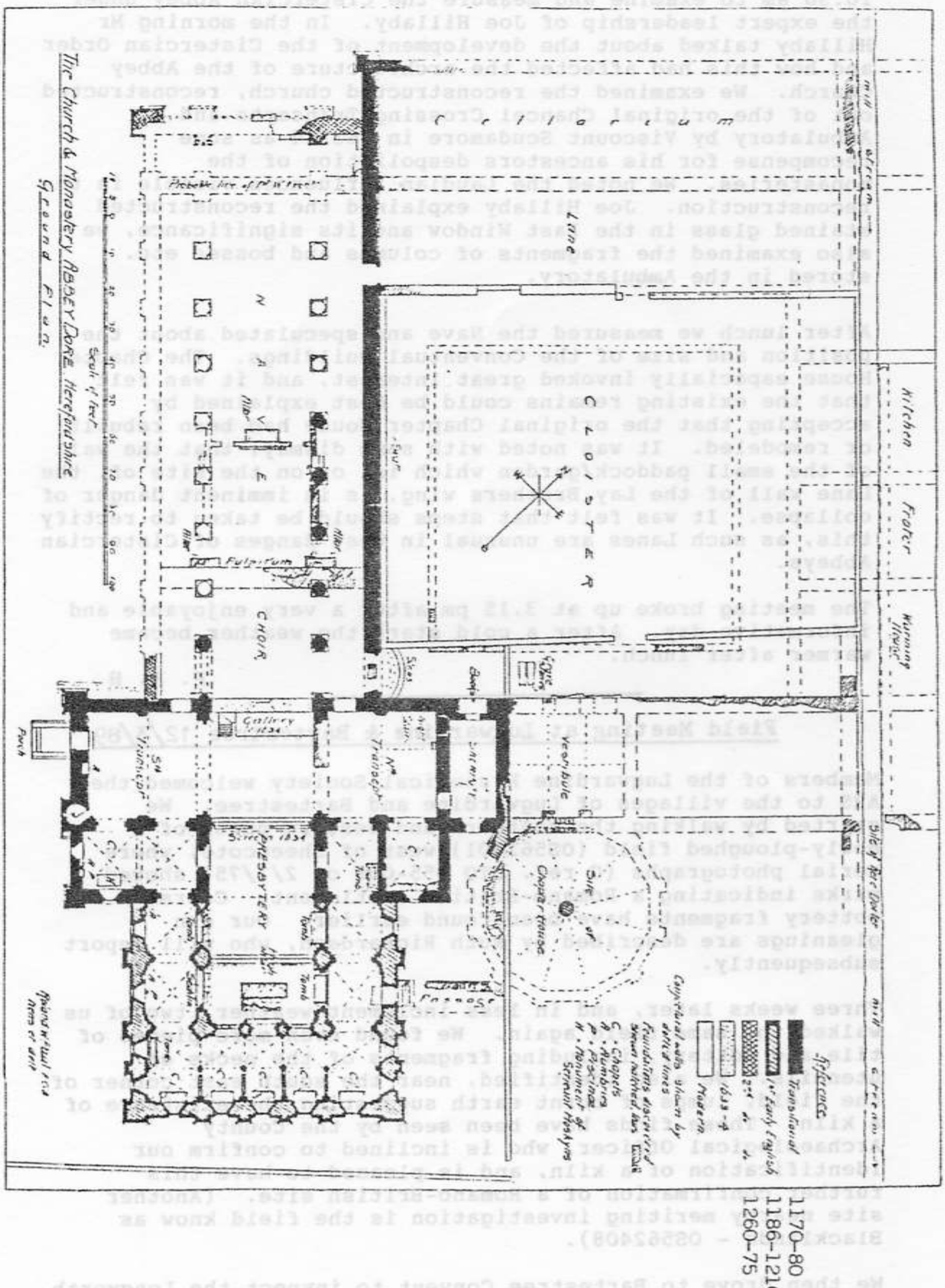
FIELD MEETING AT LUGWARDINE AND BARTESTREE, 12TH MARCH, 1989

Members of the Lugwardine Historical Society welcomed the ARS to the villages of Lugwardine and Bartestree. We started by walking the southern and western parts of a newly-ploughed field (OS562401) west of Sheepcote, where aerial photographs (C ref. BTQ 055-058 of 2/7/75) showed marks indicating a Romano-British settlement. Coarse pottery fragments have been found earlier. Our own gleanings are described by Ruth Richardson, who will report subsequently.

Three weeks later, and in less inclement weather, two of us walked the same field again. We found even more pieces of tile and pottery, including fragments of the necks of utensils. We also identified, near the southeast corner of the field, lumps of burnt earth suggesting the existence of a kiln. These finds have been seen by the County Archaeological Officer, who is inclined to confirm our identification of a kiln, and is pleased to have this further confirmation of a Romano-British site. (Another site nearby meriting investigation is the field known as Blacklands – OS562408).

We then drove to Bartestree Convent to inspect the Longworth Chapel. This C14 domestic chapel of the Longford/Longworth estate, which had stood by the moated Old Longford overlooking the Frome, had been used for some time as a barn before it was restored in 1857-9 by Robert Biddulph Phillipps of Longworth. In 1869, five years after his death, it was moved up to the Convent of Our Lady of Charity and Refuge, which he had founded in 1863. The E, N and W walls of the chapel (now oriented S-N) and the Medieval roofs have been rebuilt; the present W wall contains memorials to Phillipps, his wife and their two daughters. In a porch at the present N end is displayed the old west door. We also paid a brief visit to the first, and larger chapel of the convent, designed by E W Pugin.

After sandwiches and hot soup at the Crown and Anchor we returned to Bartestree, to a field known as The Rough – Lower Hodges on the 1839 Tithe Map (OS569410). Here Rosamund Skelton identified a hollow way on the N boundary of the field as the previous course of the Hereford-Ledbury road, and the platforms south of it as evidence that Medieval Bartestree had lain that far to the east down the slope from the Chapel of St James. (The site has been somewhat complicated by a stream running into the Frome, and by possible C19 gravel diggings).


The Church & Monastery, ABBEY DORE, Herefordshire
Ground Plan
CLOISTER
CHOIR
Lane
Kitchen
Frater
Porch
1170–80
1186–121C
1260–75

Back in Lugwardine, we visited St Peter's. This was originally a Norman church with nave and chancel. During the C13 a tower was built on the site of the present north transept, and later in the C13 the chancel was rebuilt in the Early English style. The C14 saw the addition of the south transept. In the C15 the upper part of the tower was removed, the ground floor becoming the north transept. The Perpendicular west tower was, we know, still being constructed in 1484. A south aisle was added in 1815, when the small Norman window, originally in the south wall of the nave, was reset in the west wall of the new aisle and a north aisle was built in 1843. But the present internal appearance of the church is due largely to F R Kempson, who carried out a thorough restoration in 1870-72. This involved lowering the side windows of the chancel, adding a vestry and lean-to organ chamber, inserting a new chancel arch, removing the walls between the transepts and the aisles, and inserting new arcades. The west tower, the bells, the reset Norman window and some of the memorials are of considerable interest.

This was a valuable and varied day. It has posed some fresh problems for the local historical society, which can probably not be seriously tackled until "Lugwardine in the C20" (the projected successor to "Lugwardine in the C19", which was reviewed in the January Newsletter) has been launched.

The weather was very slightly better than the average we have come to expect for ARS field days. It did not rain all the time.

JDE

POTTERY REPORT – RB SITE AT SHEEPCOTE, LUGWARDINE
Collected from plough soil 12th March, 1989. Grid ref: SO 5615 4002.

Almost all finds were very abraded sherds of pottery and tile. Pottery 1lb 3oz. Tile 5lb 13oz. At least 10 sherds were recognizably RB wheelthrown pottery (1-10). Two sherds (11 and 12) might be from 'parchment' slab-built ceramic objects. The most useful pieces were a red colour-coated base, a Dr38 copy rim and a grey ware rim with an applied damaged frill.

Six tile fragments are clearly RB: two pieces of a tegula flange and four pieces of tubuli keyed by straight and curved combing. Two pieces, sanded inside, could be imbrices.

Pottery

1. Rim of jar c 8" diam. Oxidised, slightly reduced core.

2. Rim of Dr38 red colour-coated copy. Traces of CC at angle of bead and flange.

3. Oxidised rim with reduced core.

4. Rim of jar c 6" diam, frill below rim. (In Essex comparable rims occur as hollow bases.) Almost entirely reduced.

5. Bead rim of beaker c 5" diam.

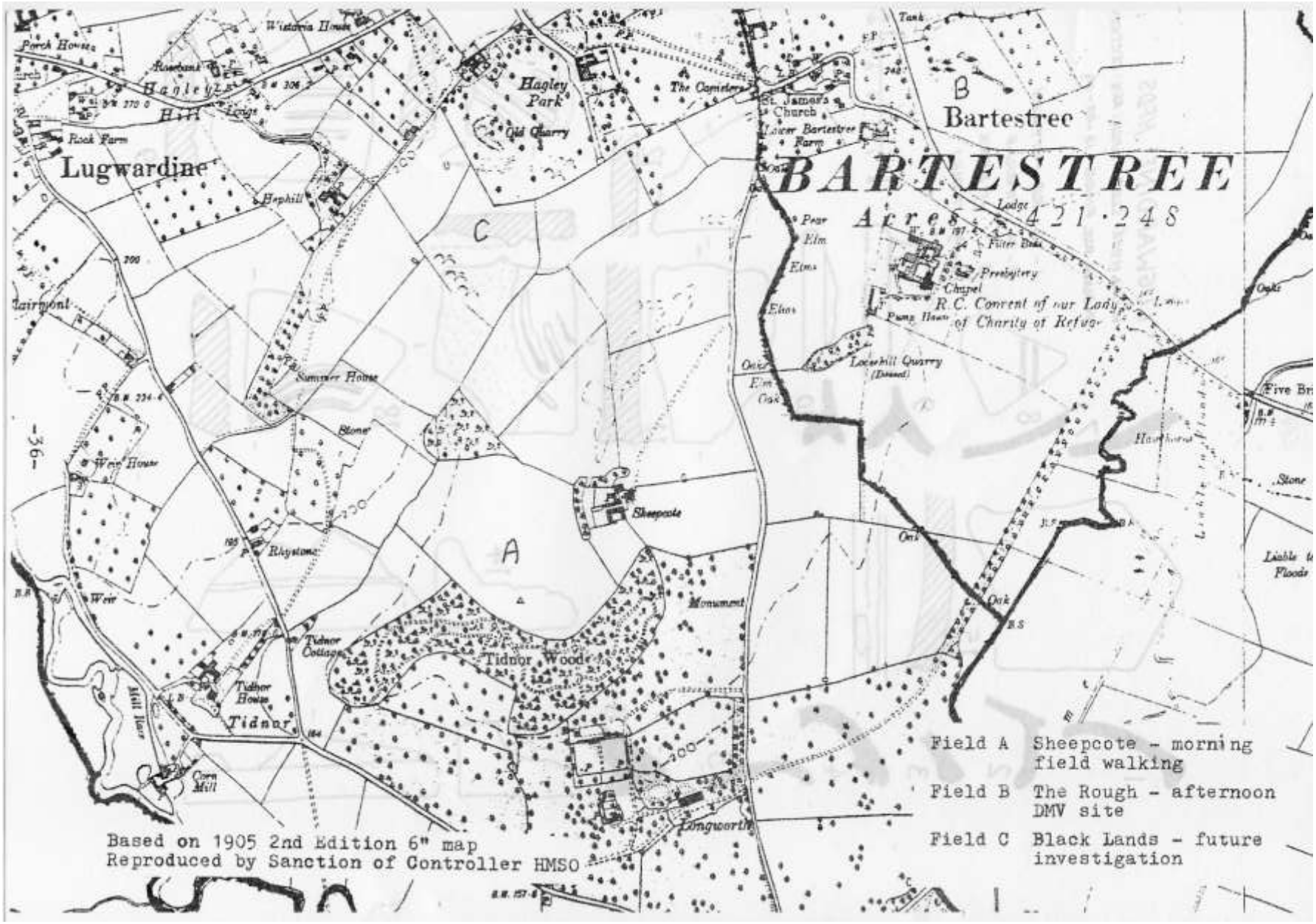
6. ? rim of jar or flagon c 7" diam.

7. Shoulder with edge of rim of ? bowl.

8. Body sherd of bowl with two grooves.

9. Footring of red CC jar c 2½" diam. Trace of CC on exterior.

10. Footring of red CC jar c 2" diam.


Lugwardine
Hagley Park
Old Quarry
Bartestree
BARTESTREE
Acres 421·248
St. James's Church
Lower Bartestree Farm
Lodge
Pear
Elm
Elms
Presbytery
Chapel
R.C. Convent of our Lady of Charity of Refuge
Lockhill Quarry (Disused)
Oak
Hephill
Fairmont
Summer House
Stone
Weir House
Sheepcote
Rhystone
Weir
Monument
Tidnor Cottage
Tidnor Wood
Tidnor House
Tidnor
Mill Race
Corn Mill
Longworth
Field A Sheepcote - morning field walking
Field B The Rough - afternoon DMV site
Field C Black Lands - future investigation
Based on 1905 2nd Edition 6" map
Reproduced by Sanction of Controller HMSO

11. Flat slab with one cut edge. Fabric comparable with Oxon parchment ware, with pale pink/brown CC on both surfaces.

12. As 11 but thinner and CC orange pink.

Tile

13. Tegula flange: fabric contains coarse grits. Reduced core.

14. Tegula flange: few grits, wholly oxidised.

15. ? Fragment of imbrex but curve very slight. Reduced core and sanded inner surface.

16-19. Wholly oxidised, very abraded pieces of tubulus. 16 has an internal sanded surface.

Additional unnumbered sherds

Possible imbrex and tubulus sherds.
Possible tegula sherds.
Coarse gritted tile fragments.
Tile fragments not identified.
Other sherds.

M U Jones

[These finds are marked 'LUG89'. There are the property of the Woolhope Naturalists' Field Club and will be deposited with the City of Hereford Museum.]

ROMANO-BRITISH SITE AT SHEEPCOTE, LUGWARDINE NG 5615 4002

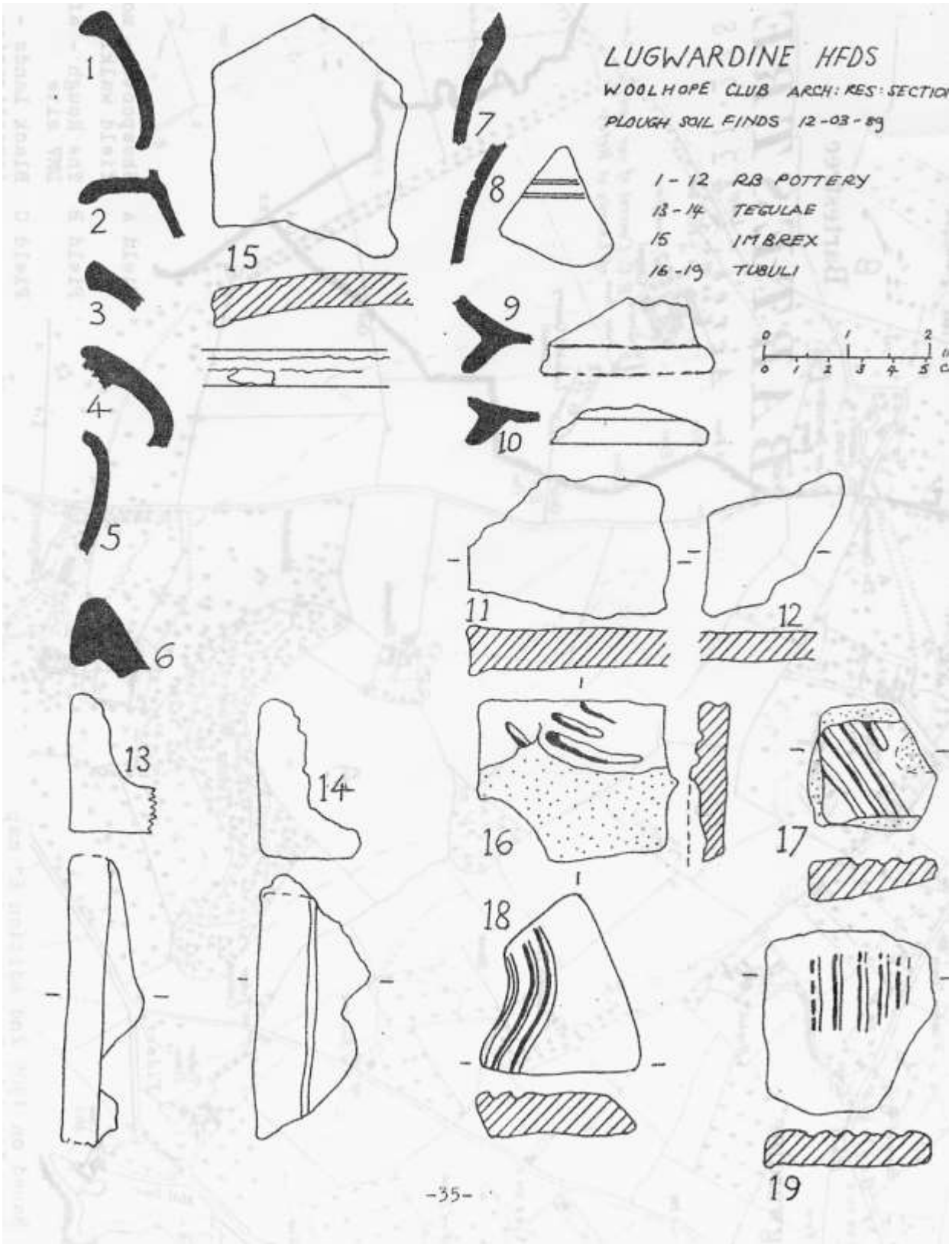
This site was clearly revealed by aerial photographs and was confirmed by Roger Pye in WARG Newsletter No 28.

The site is on a south facing spur at 250' with a stream to the south, in a steep valley. There are glacial deposits on top of red sandstone soils thus providing good drainage. Excellent views are obtained across both the Frome and Lugg valleys and also towards the Malverns; a very strategic position for what appears to be a farmstead. There is a noticeable bank around the contour which does not correspond to any property boundary. Across the valley is Backbury Hill Fort. Local belief is that this site is also an Iron Age camp. The photographs do show a circular crop mark to the southwest of the field.

The photographs also show a complex of buildings on the highest level of the field and here most finds were picked up on a subsequent visit. Better weather and drier soils showed up a spread of baked and blackened clay between the telegraph poles and the house. This may indicate a hearth, burnt buildings or an industrial site such as a surface kiln. The farm seems to have existed over a long period as the crop marks show different alignments of several buildings and enclosures.

The rich lands of the river valleys of the Frome and Lugg appear to have been more densely populated than had been thought, and new sites support this. The new survey by the County Archaeology Unit of the Lugg valley will be interesting, and hopefully their findings will confirm this.

Known Roman sites in the area include the settlement at Stretton Grandison known as EPOCESSA, near to the fort site at Canon Frome. Many domestic objects were found when the canal was dug in 1842 and drawn by Ballard. The fort site has never been fully explored but field walking has produced Samian pottery and building materials. Beside the River Frome at Yarkhill two Romano-British stone heads were ploughed up in 1985. At Putley, Roman finds from a building were found near the vicarage and the church. In the


LUGWARDINE HFDS
WOOLHOPE CLUB ARCH: RES: SECTIO
PLOUGH SOIL FINDS 12-03-89
1 - 12 RB POTTERY
13 - 14 TEGULAE
15 IMBREX
16 - 19 TUBULI
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
-35-

19th century the discovery of a mosaic pavement at Dormington led to enquiries about it in 1951 but the site had been lost (Trans WNFC, 1951). Roman pot was also found at Westhide in 1924 by Mr G H Jack (Trans WNFC 1924). Various pottery finds have also been reported at Nunnington, Withington and Marley Hall near Bosbury (Trans WNFC 1932).

Aerial photographs reveal another site at Lugwardine, close to the River Lugg, and near Marden a villa and pavement were found deep below the silt of the Lugg valley. Thus a picture is emerging of a farmed and populated area with more continuity of settlement than had previously been thought. Now more evidence is eagerly anticipated. It also provides an example of how our understanding of the past changes when archaeology provides the clues and an area is subjected to close scrutiny.

Jean O'Donnell

POTTERY AT HAZELFIELD, GARWAY, HEREFORDSHIRE
(From Medieval and Later Pottery in Wales, Number 8, 1985)
Bulletin of the Welsh Medieval Pottery Research Group

The following extracts have been made from a paper entitled 'Post Medieval Potteries in North Gwent' by Steve Clarke, Reg and Philomena Jackson, and David and Jan Jemmett. Published in 'Medieval and Later Pottery in Wales', Number 8, 1985. Bulletin of the Welsh Medieval Pottery Research Group.

HAZELFIELD, GARWAY

Location SO 4764 1980

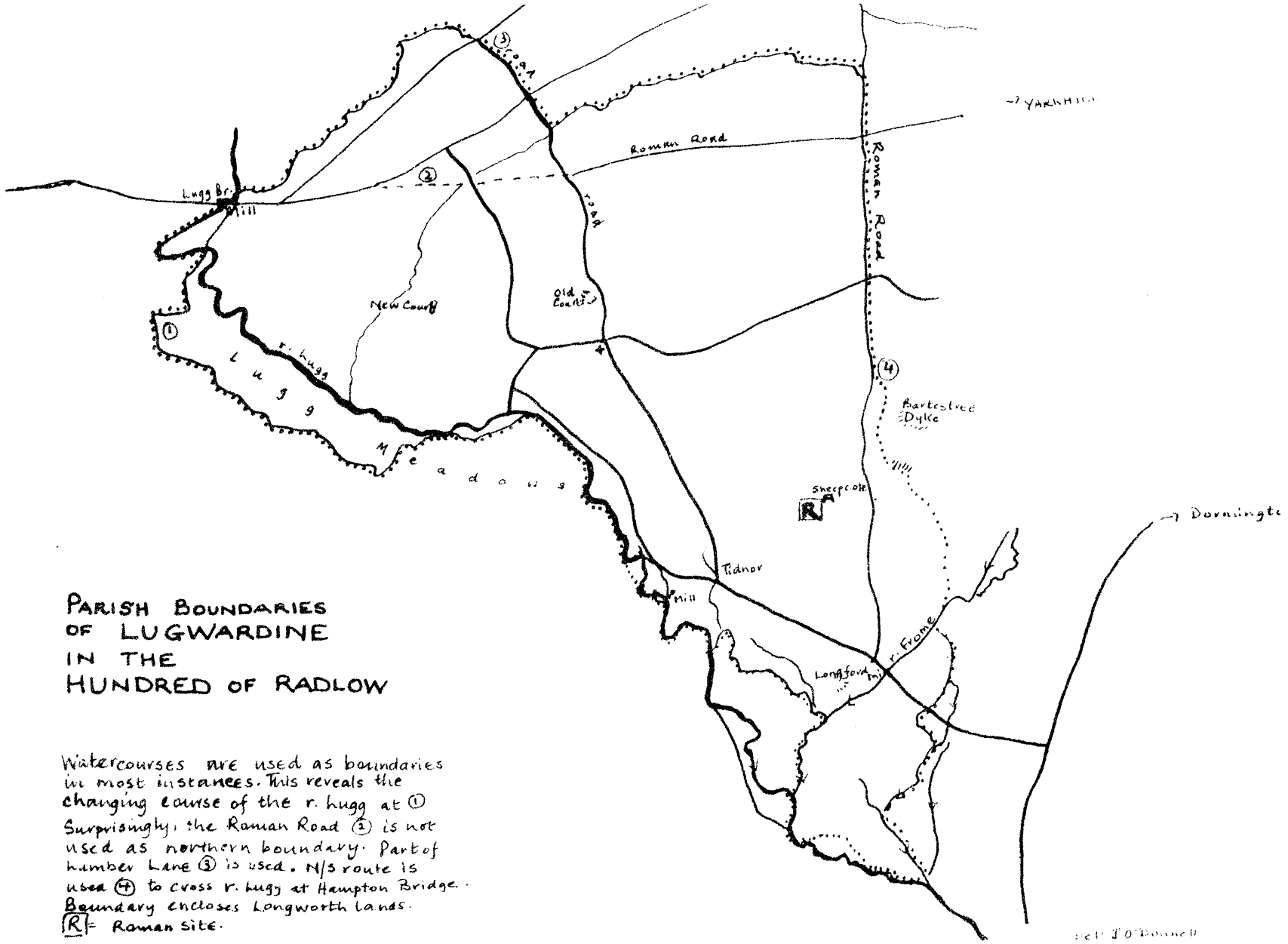
This site was found during the ploughing of a field which until fairly recently had been woodland. The site lies between the 500ft and 600ft contours, just below the crest of a hill that slopes down towards the River Monnow. A spring rises near the site and the natural rock contains deposits of red clay. Documentary evidence shows that the kiln was close to a field boundary, although this no longer exists.

Excavation

The site was totally excavated during the summer of 1984. A full report is being prepared and therefore only brief details are given here. The site was threatened by deep ploughing and the excavation proved timely, for the plough had already grooved the working floor and dislodged stones from the kiln wall.

The wood-burning, up-draught kiln, which had been built on the natural clay, was almost circular in shape and measured 1.20m by 1.30m internally. The north wall of the kiln survived to a height of three courses and was approximately 0.40m thick. The internal face of the wall had been vitrified. The south wall of the kiln had been destroyed, but its position was marked by an area of less intense burning of the underlying clay. The kiln had two opposing flues marked by a shallow stoke pit on the east side and by a spread of ash and charcoal on the west. The stoke pit contained small pieces of lead, presumably associated with the glazing process. Pedestals of stone with their faces vitrified, and areas of burnt clay, were evidence of internal divisions in the kiln. Large lumps of burnt clay were found all over the site, and may indicate that the kiln had a clay superstructure. A timber structure of indeterminate shape around the kiln was marked by five post-holes.

Against the kiln on the north was a floor made up of broken pots (fired and unfired) and kiln debris, and this area was retained by a roughly built stone wall running west from the kiln for a distance of 4.5m. The wall ended at a post-hole and spreading west from this was a large dump of kiln-waste. The kiln, retaining wall and waste dump were aligned along the north side of a deep gully which may be the field boundary shown on a late seventeenth century estate map.



PARISH BOUNDARIES OF LUGWARDINE IN THE HUNDRED OF RADLOW

Watercourses are used as boundaries in most instances. This reveals the changing course of the r. Lugg at ① Surprisingly, the Roman Road ② is not used as northern boundary. Part of Lumber Lane ③ is used. N/S route is used ④ to cross r. Lugg at Hampton Bridge. Boundary encloses Longworth Lands.
(R) = Roman site.

Conclusion

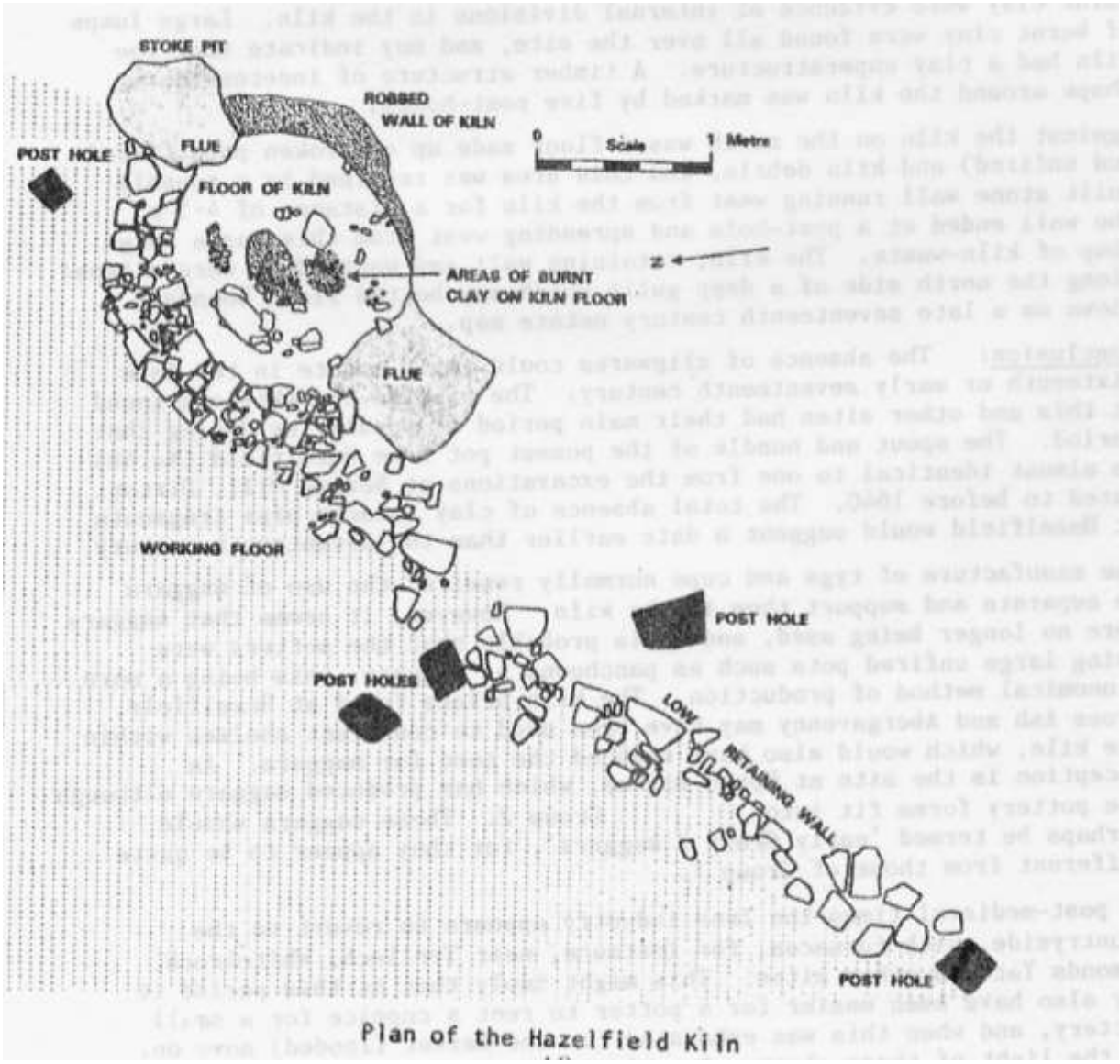
The absence of slipwares could imply a date in the late sixteenth or early seventeenth century. The pipkins and skillets found at this and other sites had their main period of popularity during that period. The spout and handle of the posset pot from Hazelfield (No 48) is almost identical to one from the excavations at Newton Mill, Dixton, dated to before 1640. The total absence of clay tobacco pipe fragments at Hazelfield would suggest a date earlier than the seventeenth century. The manufacture of tygs and cups normally required the use of saggars to separate and support them in the kiln. However, it seems that saggars were no longer being used, and it is probable that the potters were using large unfired pots such as pancheons as saggars, this being a more economical method of production. The kiln bricks found at Hazelfield, Cross Ash and Abergavenny may have been used to construct shelves within the kiln, which would also have reduced the need for saggars. An exception is the site at Upton Bishop, which has produced saggars although the pottery forms fit into Group 2. These saggars should perhaps be termed 'early Group 2 saggars', for they appear to be quite different from those of Group 1.

In post-Medieval times the iron industry appears to revert to the countryside, with furnaces, for instance, near Trellech, Whitebrook, Symonds Yat and other sites. This might imply that at this period it may also have been easier for a potter to rent a coppice for a small pottery, and when this was exhausted (or the market flooded) move on. In the light of these observations it may be significant that the only post-Medieval kiln site known from the larger settlements is the Group 1 site at St James's House, Monmouth, a site which on other evidence is thought to be early. All the other sites are in the countryside.

The kiln at Hazelfield seems to have been in use for a very limited time, perhaps only for a season, and there was no evidence that the potter lived on site in any permanent way. This could mean that he moved elsewhere and set up another kiln, perhaps because he needed a new supply of fuel. The kiln wasters from St James's House and Dixton are strikingly similar, and may even have been made by the same potter. The possibility that the potters of both groups were itinerant and moved around the countryside must therefore be considered. The writers are exploring the feasibility of a study of the fingerprints, some of them strikingly clear, left on the pots from the various kiln sites. By this method it may be possible to prove whether any of the widely separated kilns of the two groups were worked by the same potters.

[Among many others, the writers expressed their thanks to Mr and Mrs David Breakwell and their family, of Hazelfield, for allowing access to their land and for excavations to take place.]

Elizabeth Taylor



Plan of the Hazelfield Kiln

POTTERY DATING – EVENING MEETING AT LLANWARNE VILLAGE HALL, 16TH FEBRUARY, 1989

We were very fortunate in persuading Steve Clarke, Chairman of the Monmouth Archaeological Society, to come and give us some basic instruction on pottery dating. Steve is a nationally acknowledged pottery expert and he brought with him quantities of examples of various pots from Roman to post-Medieval which we were later encouraged to handle and examine.

Pottery has been used since Neolithic times and has only a short life in use. Once a pot is broken there is nothing you can do with it except throw it away. Other artefacts can be re-used or burned, or they rot away, but broken pots are extremely long lasting, even after centuries of ploughing they are still recognisable. Because of their short life, styles were always changing and the local variations make identification possible for both time and place. Steve put forward the idea that it should be possible to even identify post-Medieval pots made by individual potters from their fingerprints.

The identification of the place of a pot's origin gives important historical information about trading patterns. Differences are discernable even between adjacent Lordships, so the range of pots found in the Chepstow lordship differ from those found in the lordship of Monmouth which are different again from those found in Hereford.

Steve emphasised that because of local variations, pottery is an ideal subject for amateur study. Many of the pottery experts are amateurs who have the opportunity to acquire a really detailed knowledge of the pottery found in their locality, and this build up of knowledge allows for quite close dating.

A basic knowledge of geology can be helpful; for example pots found in this area which contain igneous inclusions are fairly certainly from the Malvern area, which is the only source of igneous rock. Oolitic limestone inclusions come from Gloucester and the Cotswolds. Some pieces show pitting where the limestone has dissolved and a simple test with weak hydrochloric acid (or vinegar) will prove the presence or absence of lime. Early wares from N Wiltshire also show pitting and have a typical light green glaze from an early date. Herefordshire and N Gwent sandstone clays have micaceous inclusions.

We were shown how, with a little experience, Roman pottery of various types could be recognised by feel as well as by appearance. In Wales and the parts of Herefordshire which were in the Marches of Wales, pottery was not used after the Roman occupation until the Norman conquest. The Saxon areas did use pottery: Chester and other wares, which terminated at about the time of the Conquest. Despite its name, more Chester ware has been recovered from Saxon Hereford than from Chester. The finding of one piece of Chester ware in Monmouth was thought so significant that it did much to sway the decision to fund an excavation in Monmouth by the Gwent and Glamorgan Trust. However, that one sherd still remains the only one and it is much more likely to have reached Monmouth as the accidental result of some booty laden Welsh raid into Saxon territory than as any kind of indication of a Saxon settlement there.

Limestone gritted cooking pots from the Vale of Gloucester are common in Gloucester and the Severn Valley and are also found in both Hereford and Monmouth in the 11th century, decreasing during the 12th. The locally made cooking pots are easily recognisable, not only from their sooty exteriors but by their inturned rims. Their use became less common by 1400 when metal cooking pots came into general use.

Early forms of the local Monnow Valley ware have combed or scratched decoration and glazing was used from about 1150. By about 1200 the first pieces of rouletted ware appear. The earliest forms used simple diamond and other patterns, then a rapid development in style and artistic skill occurred. Expert opinion was that the patterns were made by carving the design onto a wooden wheel but this would be very difficult. Steve Clarke saw that the patterns on the pots had certain notches and that the high relief of the pattern was as the designer would have made it. (In other words it was not a negative image). Being a printer helped him to work out the method which must have been used and having made a model and used it very successfully, he has now proved the technique.

A matrix was made by inscribing the pattern on a flat strip of clay, then rolling a blank clay roulette wheel over the fired matrix which when used on the pots gave the same print as the matrix. This method allowed for immense variety and freedom of design. Some – like the patterns of running leaves – are very beautiful and some are extremely complex. Though not very clear, some appear to be attempts at small pictures.

We were shown slides of various types of Roman, Medieval and post medieval pots. We were told that from N Herefordshire to S Gwent the styles of 16th to 18th century pots were similar, though there were variations from kiln to kiln. Kilns in N Herefordshire and at Cross Ash in Gwent were using the same decoration of crushed white quartz fragments which looked very attractive on the black ware.

Group 1 16th century pots were fired using large saggers. The typical three-handled black glazed tygs are very bulbous. Later Group 2 tygs are upright; no saggers were used at this time and the tygs were probably stood inside larger pots for firing. Applied decoration

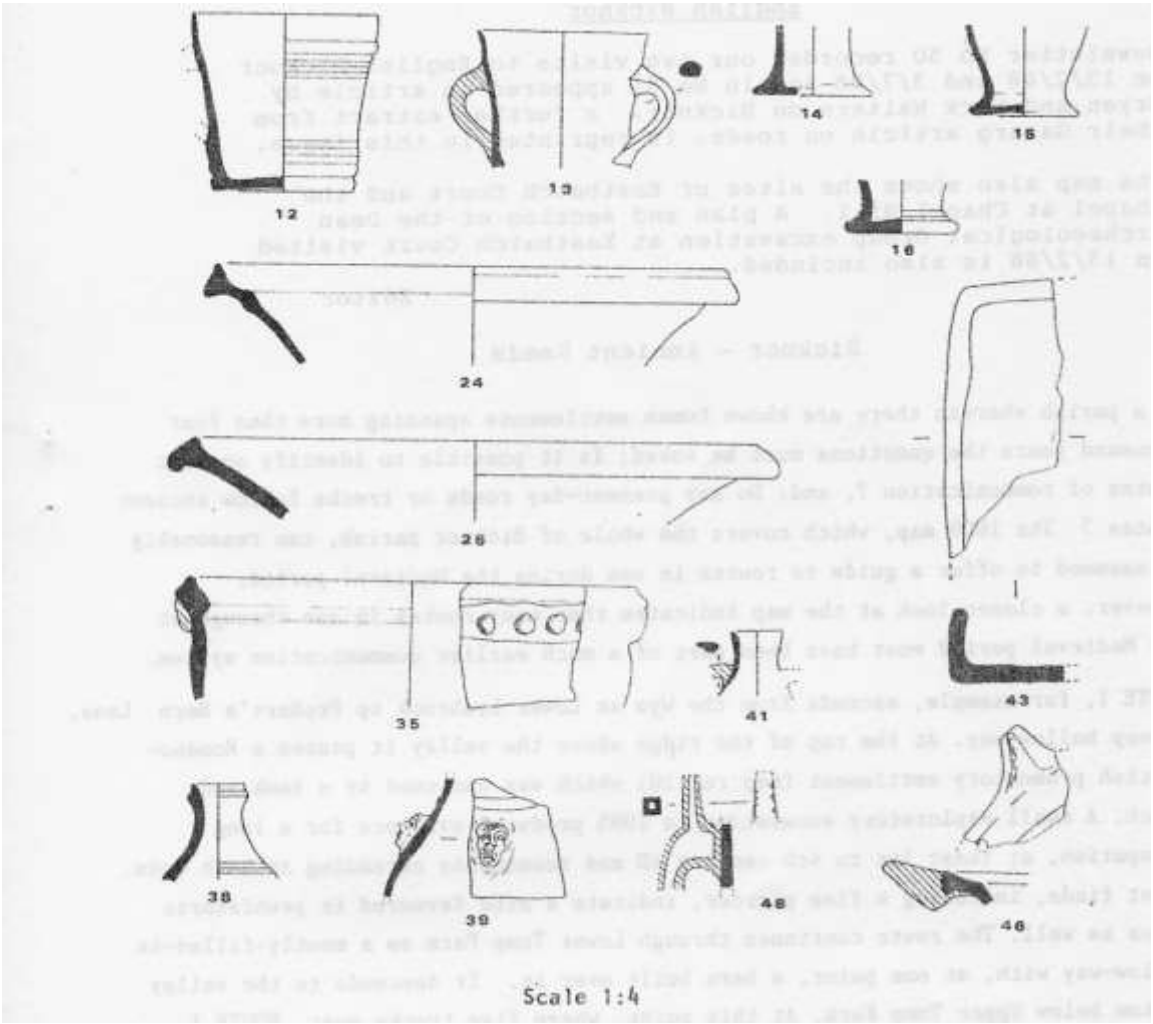
was much used, and in this group came the early large pancheons which continued to be made and used into this century.

We were shown some slides of the Hazelfield kiln in Garway, which was excavated in 1984, where 1½ tons of wasters had been recovered by the Monmouth Archaeological Society. This was a 16th century wood-fired kiln which appeared to have been used for one season only. The probability is that itinerant potters set up kilns which served the needs of the neighbourhood and then moved on. Medieval kilns seem to have been located in towns and centres of trade but the post medieval kilns have been found in isolated areas away from settlements. All were near woods, and a water supply in any quantity seems to have been unimportant. The clean clay in sandstone areas needed little preparation. The Hazelfield kiln was tucked away in a corner of the field near to an ancient hedge and on the edge of a ditch.

The variety of pots made in these kilns surprised everybody. Everything from ridge tiles to the moulded animals used as handles for pot lids. Even imitations of the Belarmine salt glazed stoneware bottles were being made and ornamented with the typical face medallions at Hazelfield.

Steve Clarke's enthusiasm was inspiring. Members began to feel that pottery recognition did not have to be a subject suitable only for 'experts' – above and beyond our capabilities. It is a subject endlessly fascinating in itself and even a basic knowledge can be immensely useful for a group such as ours. We are very grateful to Steve for giving us his time.

Elizabeth Taylor



Pottery
Approximately 1½ tons of pottery were recovered and this is still being analysed. However, it includes:

- Black-glazed tygs/cups with flared (Nos 15-16) or cylindrical bases with straight sides (Nos 12-13) and plaited handles.
- Pancheons with club rims (Nos 24-25).
- Bowls and dishes.
- Storage jars with thumbed applied cordons around the rims (No 35). Some storage jars are also decorated with thumbed applied strips.
- Jars and jugs.
- Flasks/bottles (No 38), some with applied face-masks (No 39).
- Costrel? (No 41.)
- Posset pot (No 48 – a hollow handle and spout).
- Skillets/pipkins (No 46).
- Collanders.
- Basting trays (No 43).
- Chafing-dishes.
- Crested ridge tiles.

Kiln furniture
Sandstone bats. A number of vitrified bricks were found which seem to have been used in the kiln. There are no obvious saggars.

ENGLISH BICKNOR
Newsletter No 50 recorded our two visits to English Bicknor on 13/2/88 and 3/7/88, and in No 51 appeared an article by Bryan and Mark Walters on Bicknor; a further extract from their Gararg article on roads is reprinted in this issue.

The map also shows the sites of Eastbach Court and the chapel at Chapel Hill. A plan and section of the Dean Archaeological Group excavation at Eastbach Court visited on 13/2/88 is also included.

Editor

BICKNOR – ANCIENT ROADS
In a parish wherein there are known human settlements spanning more than four thousand years the questions must be asked: Is it possible to identify ancient routes of communication, and do any present day roads or tracks follow ancient routes? The 1608 map, which covers the whole of Bicknor parish, can reasonably be assumed to offer a guide to routes in use during the Medieval period. However, a closer look at the map indicates that many routes in use throughout the Medieval period must have been part of a much earlier communication system.

ROUTE 1, for example, ascends from the Wye at Lower Lydbrook up Probert's Barn Lane, a deep hollow-way. At the top of the ridge above the valley it passes a Romano-British promontory settlement (map ref 10), which was enclosed by a bank and ditch. A small exploratory excavation in 1985 produced evidence for a long occupation, at least 1st to 4th century AD and reasonably extending at both ends. Flint finds, including a fine piercer, indicate a site favoured in prehistoric times as well. The route continues through Lower Tump Farm as a mostly filled-in hollow-way with, at one point, a barn built over it. It descends to the valley bottom below Upper Tump Farm. At this point, where five tracks meet, ROUTE 1 crosses a stream. There is a fine length of paving with revetted kerbs, two

metres in width and revealed recently by the DAG excavation team. It leads to and from a crossing of the stream. Large sandstone slabs lie nearby; one has been incorporated into a stile. They were probably used, with a central pier stone, as the 'bridge'. The route continues to the west of the stream until it is crossed by the present day Eastbach-Bicknor road. From here it ascends in a recently filled-in hollow-way and is crossed by the B4228 (Route 7) just south of Cowmeadow Farm. It continued through Hillersland and Staunton to Monmouth, although the stretch of the B4228 between Dryslade Farm and Bicknor is in itself part of an ancient ridgeway route. Route 1 completely ignores Bicknor and clearly pre-dates the Medieval period.

ROUTE 2 is the probably Medieval track that connected church and castle to the existing route.

ROUTE 3 is also of Medieval date, surfaced with iron slag and linking a Medieval iron-smelting site in Windmill Field, in a south-easterly direction, with Route 4. It was probably used for the transportation of iron-ore from the scowles on Hangerbury Hill.

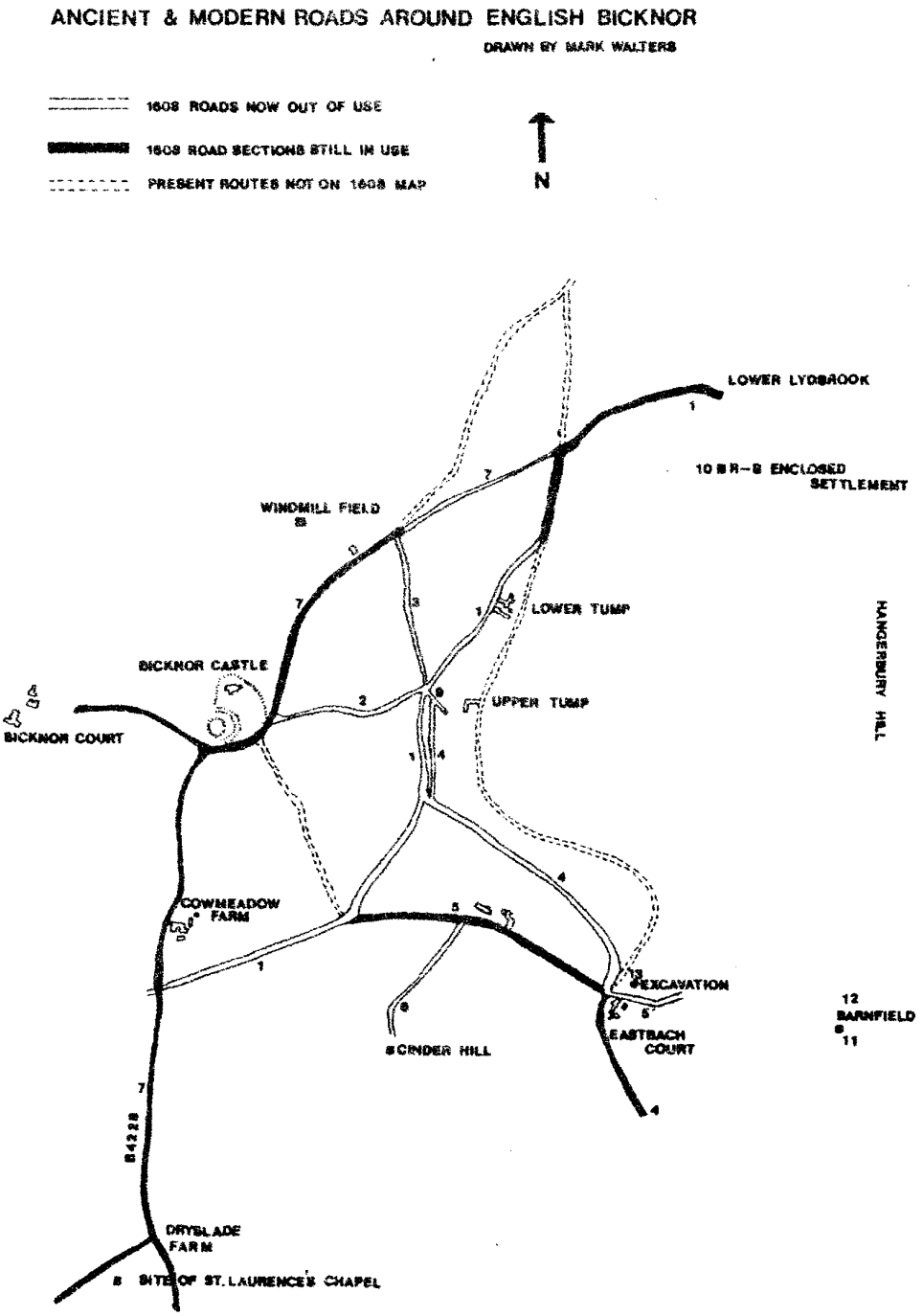
ROUTE 4 is of ancient origin and continues from Route 1 below Upper Tump Farm but without crossing the stream. It ascends a natural hollow-way to Eastbach where it crosses the east-west Route 5 that continues in an easterly direction via Lydbrook to Ruardean and beyond.

ROUTE 5 passes close by a pre-Roman site at Hangerbury Hill summit before descending into the Lydbrook valley. The Hangerbury site must have continued into the Roman period, as confirmed by finds in the vicinity of a silver denarius of Augustus, a 2nd century enamelled bow and fantail type bronze fibula, and Samian and other Romano-British coarse pottery. Numerous flint finds along its course suggest the possibility of even earlier prehistoric usage.

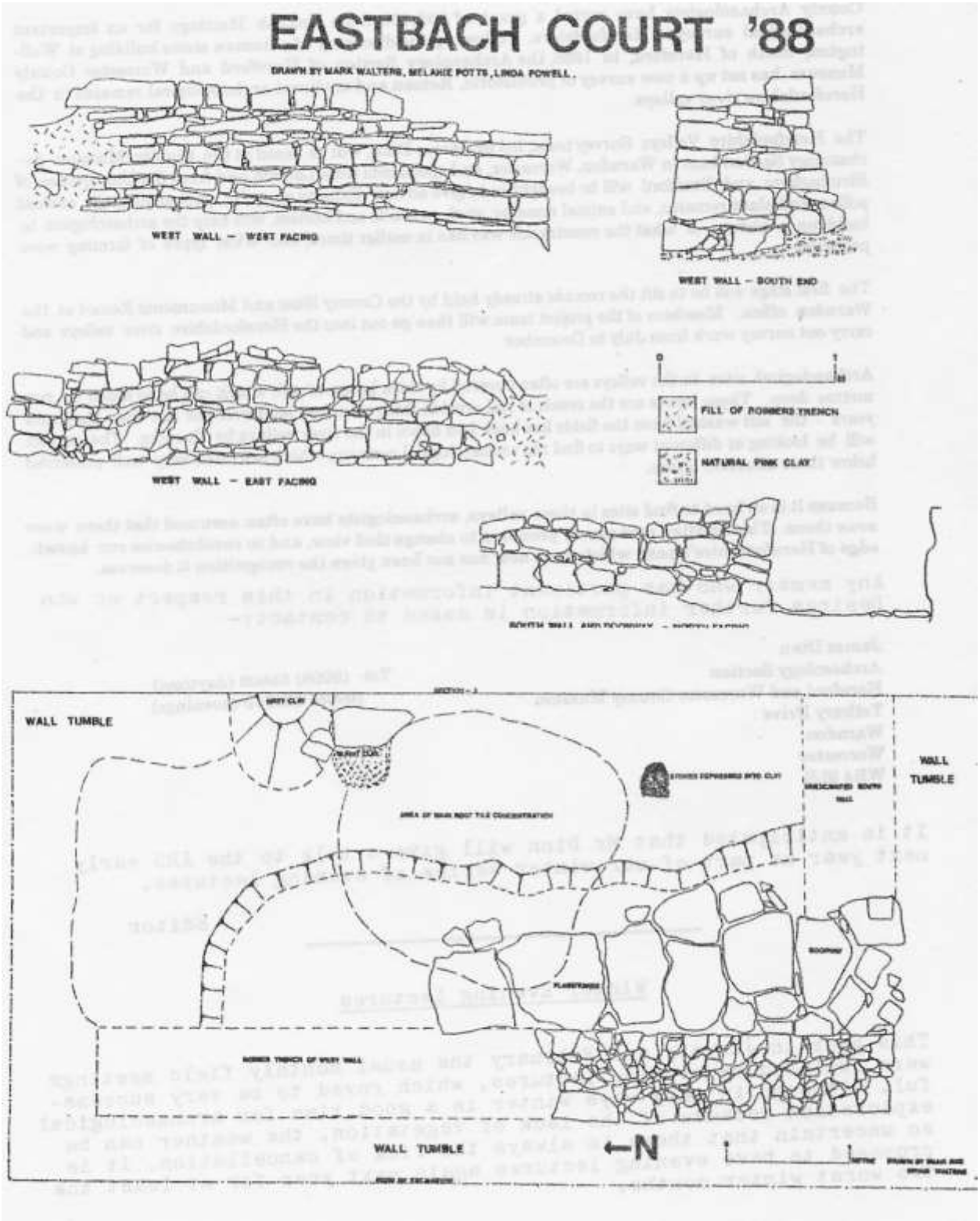
ROUTE 6 is a short section of road, probably of Medieval date, connecting Cinder Hill to Route 5.

ROUTE 7 follows Route 1 from the Wye at Lower Lydbrook until it crosses the stream in a south-westerly direction at the western end of Probert's Barn Lane, where Route 1 bends south to the east of the stream. It joins the B4228 just north east of Millway Cottage by Windmill Field. The kink in the road around the church and castle is probably of 11th/12th century origin. It almost certainly went directly through a pre-Norman settlement, possibly that of Morganwy. It is interesting to note that prehistoric flint material has only been found close to the ridgeway route. To the west of Cowmeadow Farm virtually no flint material is to be found on field surfaces until the next ridgeway route is encountered (the present road from Coleford past Symond's Yat to the Huntsham peninsular). At Dryslade Farm and close by the site of St Laurence's Chapel, Route 7 divides. The direct route continues along Bicknor Street to Berry Hill. The south west branch ascends a hollow-way in the direction of Coleford, which is on an ancient north-south ridgeway route between the Severn and the Wye close to which has been found an abundance of prehistoric flint material virtually throughout its length. St Laurence's Chapel is of particular interest. The earliest reference to the chapel so far identified refers to it and a nearby tenement in 1337 (104). The dedication to St Laurence may indicate much earlier origins. In Germany churches dedicated to St Laurence can be shown to be of Roman-period origin. In England it appears that similar dedications indicate earlier religious sites. In Buckinghamshire, for example, churches dedicated to the saint are grouped around Roman-period settlements. At Cholesbury and West Wycombe the churches are within hill forts, possibly suggesting sites of continuing religious significance (105). Further investigation by DAG will hopefully confirm that this holds good in the border country.

In summary, research so far strongly suggests that most of the routes through and around English Bicknor, except for the shorter sections, have origins earlier than the Medieval period and that some were probably in use from prehistoric times.



EASTBACH COURT, 1988



HEREFORDSHIRE VALLEYS SURVEY

County Archaeologists have netted a grant of £38,000 from English Heritage for an important archaeological survey in Herefordshire. Following the discovery of a Roman stone building at Wellington, north of Hereford, in 1986, the Archaeology Section of Hereford and Worcester County Museum has set up a new survey of prehistoric, Roman and Medieval archaeological remains in the Herefordshire river valleys.

The Herefordshire Valleys Survey team, led by James Dinn, will be based at the County Museum Archaeology Section base in Warndon, Worcester, and specialists from London and from the Universities of Birmingham and Bradford will be brought in to give advice. Experts on soils, geomorphology, ancient pollen and plant remains, and animal remains such as snails and beetles, will help the archaeologists to build up a picture of what the countryside was like in earlier times, and what types of farming were practiced.

The first stage will be to sift the records already held by the County Sites and Monuments Record at the Warndon office. Members of the project team will then go out into the Herefordshire river valleys and carry out survey work from July to December.

Archaeological sites in the valleys are often covered by thick layers of soil, which can be as much as two metres deep. These layers are the result of soil erosion from ploughed land over the last four thousand years – the soil washed from the fields has been laid down in the river valleys by flooding. The project will be looking at different ways to find the archaeological remains, which are often very well preserved below these alluvium layers.

Because it is so hard to find sites in these valleys, archaeologists have often assumed that there were none there. This exciting new survey promises to change that view and to revolutionise our knowledge of Herefordshire's past, which up to now has not been given the recognition it deserves.

Any member who has pertinent information in this respect, or who desires further information, is asked to contact:

James Dinn
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Tetbury Drive
Warndon
WORCESTER WR4 9LS

Tel: (0905) 58608 (daytime), (0905) 420016 (evening)

It is anticipated that Mr Dinn will give a talk to the ARS early next year as part of our winter series of evening lectures.

Editor

Winter evening lectures

This year in January and February the usual monthly field meetings were replaced by evening lectures, which proved to be very successful. Although in many ways winter is a good time for archaeological exploration because of the lack of vegetation, the weather can be so uncertain that there is always the risk of cancellation. It is proposed to have evening lectures again next year for at least the two worst winter months.