

TRANSACTIONS
OF THE
WOOLHOPE
NATURALISTS' FIELD CLUB
HEREFORDSHIRE

“HOPE ON”



“HOPE EVER”

ESTABLISHED 1851
VOLUME XLVIII 1994
PART I

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Woolhope Naturalists' Field Club 1994

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Proceedings, 1994

SPRING MEETINGS

FIRST MEETING: 8 January: Dr. J. C. Eisel, president, in the chair.

The Sectional Recorders for Archaeology, Botany, Buildings, Entomology, Geology, Herefordshire Field-names, Industrial Archaeology, Mammals and Ornithology gave their reports for 1994 which are printed on pp. 141-65.

SECOND MEETING: 22 January: Dr. J. C. Eisel, president, in the chair.

The minutes of the out-of-county visit 1-8 September, 1994, based at Eaton College near Norwich were read and slides taken by members were shown.

THIRD MEETING: 5 February: Dr. J. C. Eisel, president, in the chair.

This was the thirty-first F. C. Morgan Lecture and was held at St. Martin's Parish Centre. Mr. C. R. Musson, B.Arch., from the R.C.A.H.M. (Wales) gave an illustrated talk on 'Peep-holes on the Past: Air Photography for Archaeology.' He explained that he used a two or four-seater, high-wing, modified aircraft based at Shobdon. Maps were very important and automatic cameras were used to take vertical photographs which were taken at about 1,000 ft. flying at about sixty miles per hour. Weather conditions had to be right and some years it was not possible to take any photographs. Aerial photography had become important to recreate the past. The photographs are used as illustrations to describe the past, for educational and research purposes and for conservation and management of landscapes. He illustrated his talk with various examples e.g. an enclosure in the arable land at Woodhampton, Wigmore; an oval enclosure and ditch at Holsty, Vowchurch; a possible formal garden at Boreatton Hill, Baschurch; and many others showing crop marks, early field systems, Iron Age sites and Roman roads.

FOURTH MEETING: 5 March: Dr. J. C. Eisel, president, in the chair.

Mr. Tom Wall gave an illustrated talk on 'The landscape and Nature Conservation at Downton Gorge National Nature Reserve.' He explained that there was very restricted access to the Silurian limestone gorge which was formed during the late glacial age. It is of national importance for natural history and geology. He referred to fossils discovered by Murchison, mosses, ferns, lichens, oak, lime, field maple, wild service tree, pied flycatcher, long-haired fallow deer, silver-washed fritillary, herb paris, dog's mercury, water crow-foot, otter, grey wagtail and dippers, all to be found in the gorge.

Richard Payne Knight who was born at Wormsley Grange in 1750 designed the Castle and was a friend of Foley and Uvedale Price. In the 18th century one tenth of British iron was produced in Downton Gorge when eleven water-wheels were working on the river Teme. Knight published three books: 'Landscapes' in 1794, the second one criticising Repton's landscapes and a third one on trees. He preferred to develop the landscape

with an irregular symmetry to the Castle which was a contrast to Berrington Hall by Henry Holland. The thirteen water colours of Downton by Hearne in the 1780s illustrate Knight showing off the natural landscape.

SPRING ANNUAL MEETING: 26 March: Dr. J. C. Eisel, president, in the chair.

The assistant-secretary reported that the club now had 811 members.

Dr. J. C. Eisel reviewed the club's activities during the year and gave his address 'Spires' which is printed on pp. 13-22.

Mr. D. A. Whitehead, M.A., was installed as president for 1994/5.

FIELD MEETINGS

FIRST MEETING: 5 May: KINNERSLEY CASTLE AND CHURCH

A visit was made to Kinnersley Castle which is a moated site with visible remains on the north and east sides. The present castle constructed of stone rubble and brick is L-shaped in plan with wings projecting to the east and south dating from the late 16th and 17th centuries with later additions. The present entrance doorway is one bay further east on the north front. On the exterior were seen moulded string-courses, mullioned and transomed windows, brick gables and a five-storey staircase. Inside, on the ground floor there is 17th and 18th-century panelling. On the first floor in the parlour there is a fine plaster ceiling with geometrical panels and a moulded cornice of c.1595 and a fireplace with Ionic columns supporting an elaborate oak-tree design with Tudor roses. On the second floor there is some original plaster on the walls depicting tendrils, sprigs, and rosettes and an overmantel with three arcaded bays dated 1618. At the top of the staircase is a 'tailor's table' and from this there is an enclosed newel stairs to the roof from which there are good views.

Also visited was the church which dates from the 12th century but was rebuilt in the late 13th century. The saddle-back tower was built in the 14th century followed by the north and south aisles with the south arcade being rebuilt in the late 15th century. There is a fine medieval bell frame in the tower. The monument to Francis Smalman who died in 1633 and who may have been the builder of the castle shows him with his family and also the family of his wife who had been previously married. The decoration of the nave and chancel was designed by Bodley whose gravestone was seen in the churchyard.

SECOND MEETING: 28 May: MISARDEN PARK AND OWLPEN AREA

The morning was spent at Misarden Park gardens. In the early 17th century the house which is not open to the public belonged to the Sandys family and remained in their hands until the late 19th century. In 1914 it was purchased by Noel Wills, the grandfather of the present owner. Russell added a wing at the east end of the house in 1914, and this was burnt down in 1919 and was replaced in 1920/21 by Lutyens. Kip shows gardens with

ornamental trees, shrubs and yew hedges in 1712. The yew topiary and butler's walk depict the influence of Lutyens. In the 1930s Mrs. Wills laid out the gardens as seen today and since 1982 much new planting has taken place.

The afternoon was spent at Owlpen Manor where members were welcomed by the owners Mr. and Mrs. Nicholas Mander. Mr. Mander outlined the history of the manor which passed in 1464 to the Daunt family by marriage with Margery de Olepenne. About 1850 it passed to the Stoughton family and was uninhabited until 1926 when the house was acquired and repaired by Norman Jewson, an arts and crafts architect, and since 1974 has been owned and is being restored by the present owners. The hall and chamber over date from c.1540 with a west wing added in 1616 with the initials of Thomas Daunt on it. The earlier east wing with timber-framing inside was remodelled in 1720. Of particular interest were the late 17th-century painted cloths in the great chamber. The gardens and yew trees date from the early 18th century, the gazebo from the late 17th century and the barn with braced collar trusses from the late 15th century.

Owlpen Church was virtually rebuilt by Manning, 1828-30, and altered with a chancel added by J. P. St. Aubyn in 1874-5. The tower was added in 1912. Powell of Whitefriars Glass Works executed the mosaics in the chancel in 1886, the alabaster reredos in 1887, the mosaics on the walls of the baptistry in 1913 as well as the stained glass in the three west windows. Memorials to the Daunt family date from 1542 to 1803.

THIRD MEETING: 18 June: HEREFORD AREA

This meeting was the president's choice when Mr. Whitehead led members on a tour of relic parks and gardens in the vicinity of Hereford. The first visit was to New Court in Lugwardine parish, a five-bay Georgian house gothicised by H. H. Seward in 1809-10. In the entrance hall was seen the fine rococo plaster ceiling of about 1750 with the arms of the Reed family who had occupied it from the early 17th century. Next visited was Longworth Court Hotel, a six-bay, brick, Georgian house built about 1788 and designed by Anthony Keck. It probably replaced a former house which stood on the flood meadow between the rivers Frome and Lugg. The rounded bays reflect the work of Keck and in the late 18th century it was regarded as one of the finer country houses in the county and was owned by members of the Walwyn family. At the Old Rectory, Mordiford, a five-bay early Georgian brick building where the principal windows have heads as keystones, were seen the yew gardens which are being restored.

In the afternoon the first visit was to the site of Rotherwas House which was demolished in 1925. The dining-room panelling and chimney-piece are at Amherst College, Massachusetts. Relics of the garden hedge leading down to the river were seen. The chapel now in the hands of English Heritage has a nave and chancel in one with 14th and 16th-century windows and a hammer-beam roof with one tie-beam dated 1589.

Exteriors were viewed of Dewsall Lodge designed by Nash; Haywood Lodge, a seven-bay, brick house of c.1710 and Belmont House where Dr. John Matthews employed James Wyatt to build the three-storied house which was completed c.1790 and gothicised by E. W. Pugin, 1867-73. Repton created the landscape which was added to by Francis

Wegg-Prosser in the late 19th century. The final visit was to the site of Allensmore Court which was demolished about 1955. Only the stable block of about 1780 survives.

FOURTH MEETING: 21 July: LLANGARRON AREA

First visited was Bernithon Court which was built for the Hoskyns family about 1695. It is brick, five bays, two storied with a hipped roof. It passed through the hands of the Phillips, Rudge, Drinkwater and Barnadistan families. Col. Barnadistan restored the house and garden in 1926 and in 1951 it was purchased by Mrs. Simmons, a great aunt of the present owners. The doorway and fireplaces have bolection moulding, the ceilings have plasterwork with grapes, pomegranates and the fleur-de-lis, the fine staircase has turned balusters and there is some 17th-century panelling. The seven-bay, stone barn with queen-post trusses was viewed.

Llangarron Church dedicated to St. Deinst, a Celtic saint, was visited. The chancel, nave and tower date from the 14th century; the porch was added in the 15th century; the north aisle was added in the late 17th century, rebuilt in 1841 and repaired in 1975. The octagonal font is 14th century, the pulpit Jacobean and the communion rail late 17th century. Some good monuments survive.

The final stop was at Michaelchurch Church which since 1973 has been in the care of the Redundant Churches Fund. This church has always been united with Tretire. It is built of local sandstone with chancel and nave dating from about 1100 with alterations in the 13th century. Of particular interest are the 12th-century font and the 13th-century murals on the east, south and north walls.

FIFTH MEETING: 13 August: MILLICHOPE AND ASTON EYRE AREA

The morning was spent at Millichope Park where the owner, Mrs. Berry, said the house was built in 1840 for the Revd. Robert Norgrove Pemberton under the direction of Edward Haycock of Shrewsbury. The entrance used to be at ground-floor level but has been blocked up. The front has a portico of fluted Ionic columns at first-floor level with terraces to the right and left. There is a lake with a Rotunda nearby dated 1770 as well as formal gardens and woodland walks.

The first visit in the afternoon was to the Forester's Lodge at Upper Millichope, a rare survival of a stone first-floor hall house dating from c. 1300 with ball-flower ornament on a doorhead. Alterations took place in the 17th century as is seen in the timber-framing, the roof structure, the attic storey and the ovolo-moulded windows.

Next visited was Aston Eyre Church dating mainly from the Norman period with a transitional chancel arch. Of particular interest was the tympanum over the south door, the best piece of Norman carving in Shropshire and similar to the work at Shobdon Church, i.e. the Hereford School of Sculpture.

The owner of the farmhouse, now in a poor state of repair, lying to the north of the church allowed members to view the outside. It dates from the 14th century with a hall and cross-wings and was re-roofed in the 17th century.

SIXTH MEETING: 10 September: BLAENAVON AND MERTHYR TYDFIL AREA

The Big Pit Mining Museum at Blaenavon was visited in the morning. Members went to the Lamp Room and were kitted out with a safety helmet, cap lamp and 'self rescuer' and then went down in the cage in groups and walked through the underground workings. The shaft is 294 ft. deep and was sunk in 1880 and coal was produced until 1980. Other buildings seen were the winding engine house, the blacksmith's shop and the pit-head baths which were built in 1939.

Cyfartha Castle at Merthyr Tydfil, now a museum and art gallery was the afternoon's venue. The house was built in 1824/5 by William Crawshay of the noted family of ironmasters, designed by Richard Lugar and cost £30,000. The grounds covered eighteen acres including a lake. The Crawshay family left Merthyr in 1889 and the house was unoccupied until 1900 when it was purchased by Merthyr Tydfil Corporation for £18,000 and converted into a grammar school and museum which opened in 1910. The grounds became a public park. During 1990-2 many of the rooms have been restored to period decor. On display are 18th to 20th-century ceramics from Britain and Europe, an art collection including watercolours by the 19th-century Merthyr-born artist Penry Williams, and many items depicting industrial archaeology.

GALASHIELS VISIT: 6-13 July

Thirty-seven members spent a week based at the Scottish College of Textiles, Galashiels. A stop was made at The Raven, Prees Heath, for coffee and the party then proceeded to Sizergh Castle which was visited after a picnic lunch in the grounds. The castle has been the home of the Strickland family since 1239 and the house and estate were given to the National Trust in 1950. It consists of a peel tower dating from about the middle of the 14th century, a Tudor great hall enlarged in Elizabethan times and remodelled in the 18th century, a central block adjoining the great hall and two Elizabethan wings: the whole forms three sides of a rectangular courtyard. The castle contains one of the richest early Elizabethan interiors in England i.e. oak panelling, overmantels and fireplaces. In the drawing room was a portrait by Romney of Colonel John Matthews, M.P., of Bacton and Belmont, Herefordshire.

A brief stop for tea was made at Langholm and the college was reached by 6.30 p.m. After the evening meal Mr. Ward outlined the week's programme.

The first stop on Thursday morning was at Leaderfoot to view the three bridges over the Leader Water, all three side by side. The earliest is the 18th-century road bridge followed by the railway viaduct carrying trains from 1865 to 1965 and the modern road bridge. The rest of the morning was spent in Jedburgh where visits were made to the castle, abbey and Mary Queen of Scots House.

Jedburgh Castle was destroyed by the Scots in 1409. Under an Act of 1819 it was agreed to build a new prison, so the old castle site was given by the burgh and the county provided the money. Archibald Elliott designed it with a battlemented curtain wall and gatehouse, but within followed the principles of John Howard, the prison reformer. It was used from 1823 to 1886. Today it is a museum depicting prison life in an elegant Georgian

building. Jedburgh Abbey was founded in 1118 as a priory but became an abbey in 1152. It took seventy-five years to build. The present ruins show the Romanesque east end and triforium similar to that seen at Romsey Abbey and vestiges of the Norman south transept and north transept rebuilt in the 15th century. The west doorway and two doorways to the cloister walk are late Norman. The central tower was rebuilt 1504-8. Mary Queen of Scots House is a 16th-century bastle house where she stayed in October and November 1566. It is built of coursed rubble dressed with yellow, grey and red freestone from a local quarry with crow-stepped gables, turrets and small windows. Today it is a visitor centre telling the story of Mary's life.

The first visit in the afternoon was to Smailholm Tower which unfortunately had not been opened by the custodian. A climb up to it showed that it was a 15th-century peel tower built by the Pringle family and owned by the ancestors of Walter Scott in the 17th and 18th centuries. Next visited was Mellerstain, the home of the Earl and Countess of Haddington, and one of the great Adam houses of Scotland. George Baillie commenced building the mansion in 1725 employing William Adam who built the two wings, and forty years later his grandson, another George Baillie, employed Robert Adam, a son of William, to build the central block, 1770-8. The ceilings are outstanding in preserving the original Adam colours and there is a superb collection of paintings and period furniture. The gardens were laid out in 1909 by Sir Reginald Blomfield who linked the lake to the terraces with a long sweep of lawn.

After the evening meal the party journeyed to Aikwood Tower, the home of Sir David and Lady Steel. It is a 16th-century peel tower built and owned by the Scott family, eventually abandoned as a dwelling house and used for agricultural purposes until 1989 when it was purchased by Sir David Steel. It has been painstakingly restored. Lady Steel welcomed members, gave a brief history and short tour of the house, which was followed by an entertainment by herself and two others on James Hogg, 1770-1835, 'The Ettrick Shepherd.' The evening ended with a variety of refreshments.

Friday morning was spent in Edinburgh with a visit to the castle and optional visits to the Camera Obscura, The Scotch Whisky Heritage Centre, The Royal Mile and Gladstone's Land. The castle stands on the top of an extinct volcano. St. Margaret's Chapel with a nave and a small stone-vaulted apse is Norman and the oldest remains in the castle. The main buildings are the Palace Yard and King's Lodging dating from the 15th century and remodelled and heightened in the 17th. The Great Hall along the side of Palace Yard was built by James IV in the 16th century and has a magnificent hammer-beam roof and houses an interesting collection of weapons. Gladstone's Land is a tenement in the Lawnmarket dating from the 16th, 17th and early 18th century comprising a basement and six storeys. It was restored in 1935. Inside are painted wooden ceilings and painted plaster on the walls of 1620. Other notable buildings seen were John Knox's House, perhaps the oldest house in Edinburgh of the mid-16th century, Lady Stairs House of 1622, Huntly House completed in 1633 and St. Giles's Cathedral with features dating from the late 12th to the 20th century.

In the afternoon the first visit was to Robert Smail's Printing Works at Innerleithen which was acquired by the National Trust for Scotland in 1986 on the retirement of

Cowan Smail the last of the family which had owned the firm for over a century. It is a living example of a small printing works which served the needs of local businesses. The type-setting systems and printing machinery demonstrate the old methods and equipment, and the meticulous records are evidence of the life and times of the local community. The final visit was to Kailzie Gardens which stands at 600 ft. above sea level on the south bank of the river Tweed. A plan to improve and develop the deteriorating garden began in 1962. Because of severe winters only the most hardy plants are selected.

The first visit on Saturday morning was to Anderson's Mill and Museum in Galashiels. Unfortunately the mill was not working because the workers were on holiday. The party was taken around and the history of the firm and the making of the cloth were explained. Members travelled to Peebles from where the majority walked along the riverside path and up to Niedpath Castle; others were taken around by coach. The castle was built by the Hay family in the second half of the 14th century, a stone tower of four storeys and a basement with a projecting wing. Alterations were made in the 17th century since when it has changed little. The walls are 12 ft. thick and traces of murals were seen on the plaster and ceiling joists on the third floor.

A picnic lunch was eaten at Dawyck Botanic Garden which is part of the Royal Botanic Garden, Edinburgh. The garden covers twenty-four hectares and dates from 1691 when the estate was acquired by the Naesmith family who introduced new species from Europe and North America. William Burn designed a new house in 1832 and 800 hectares of mixed woodland were planted. The Balfour family added extensive North American conifers to the arboretum and gave it to the nation in 1978. Clearing and replanting has taken place.

A visit was made to Stobo Kirk, one of the oldest churches in Scotland, with a chancel, nave and west tower dating from c.1120. The porch was added c.1500 and the north chapel of 1928-9 in the Arts and Crafts style replaced a chantry chapel or mortuary aisle of the 15th century. A gravestone to William Hogg, a brother to the 'Ettrick Shepherd' was seen in the graveyard.

The final visit was to Traquair House which claims to be the oldest inhabited house in Scotland. Since 1491 it has belonged to the Stuart family. The north end of the main block was built by 1107 and by the 15th century became a peel tower of three storeys and the rest of the house including the wings was completed by 1660-80. Painted beams and floor boards in the drawing room were found in 1954 and there are red and black painted murals c.1530 on the plaster walls in the music room. At the back of the house is a formal garden and two terminal pavilions with ogee-shaped roofs.

As usual Sunday morning was free and although the weather was wet some went to church services whilst others went for a walk around the college. After lunch Bowhill, the border home of the Duke of Buccleuch, was visited. The main block of 1812 and the two wings added in 1814-5 were designed by William Atkinson, the Victorian wing was added by William Burn in 1831-2 and the chapel which was never consecrated by David Bryce 1875-7. The stables are 437 ft. long. In addition to the superb art collection of particular interest was the hand-painted Chinese wallpaper in the Morning Room and Boudoir of c.1790.

Despite the rain members visited the ruins of Dryburgh Abbey which was founded by the White Canons of the Praemonstratensian Order in 1150. It was badly damaged by the English in 1322, 1385, 1461 and 1544. In 1919 it was given to the nation by Lord Glenconner. It consists of an aisled cruciform church, a cloister, an eastern range containing vestry, parlour, chapter-house, warming-house and dormitories and a southern range comprising refectory and kitchen. The tombstones to Sir Walter Scott and Earl Haig were seen in St. Mary's aisle.

Abbotsford, the house of Sir Walter Scott, 1771-1832, was the first venue on Monday morning. In 1812 he purchased Cartley Hall farmhouse and renamed it Abbotsford. In 1822 the old house was pulled down and the main block built using the architect William Atkinson. The west wing including the chapel, kitchen and domestic offices was added in 1853. Some 9,000 books were seen in the Library, hand-painted Chinese wallpaper in the drawing room and many historic relics including a collection of armour and weapons.

The rest of the morning was spent in Melrose. The Cistercian abbey was founded in 1136 and by 1146 the church, cloisters, refectory and other buildings were completed. In 1246 a new hall was built. In 1322 and 1385 the abbey was pillaged and in 1545 destroyed by the English. Architectural features from the 12th to 16th century were seen. Nearby the Commandator's House of 15th and 16th-century date houses the finds recovered during excavations e.g. pottery, coins, metal and bone objects and carved stones from the 12th to the 15th century. Some members visited the Priorwood Herb Garden, the Melrose Motor Museum and the Trimontium Exhibition, whilst others went shopping.

After lunch at the George and Abbotsford Hotel the party returned to Galashiels and visited Old Gala House, the oldest building in the town begun in 1583 by the Pringle family of Smailholm Tower. It has a painted ceiling of 1635. In 1988 it was renovated and is used for local history displays and exhibitions. Thirlestane Castle, the home of the Maitland family was next visited. The central part or keep has four corner towers dating from 1570-90. Two front towers and a grand staircase were added by Sir William Bruce 1672-8 and rich plasterwork was used in remodelling the State Rooms. In 1840 David Bryce and William Burn added two large wings flanking the central keep. The ceilings of the Restoration period are said to be the finest in existence. The last visit of the day was to Lauder Kirk built in 1678 in the form of a cross and designed by Sir William Bruce. Members were welcomed and entertained by the equivalent to our parson and churchwarden. After the evening meal Mrs. Betty Smith gave an illustrated talk on 'Houses of the Border.'

On Tuesday morning members returned to Edinburgh and were conducted through the Palace of Holyrood House, the Queen's official residence in Scotland. The palace was constructed 1671-9 by Robert Mylne and designed by Sir William Bruce under the influence of Palladio and Inigo Jones for Charles II. The medieval tower was retained but altered to fit in with the new building. During the reign of George V renovation, redecoration and refurbishment took place. Mary Queen of Scots lived here from 1561-8. In the ruinous abbey kirk architectural features of the 13th and 15th centuries were seen. The next visit was to the Georgian House, 7 Charlotte Square. This building is set in the

gracious symmetry of Charlotte Square, part of the New Town of Edinburgh, 1766-1840, comprising a number of elegant and spacious streets and crescents. Robert Adam in 1791 was the architect for the square which is one of the finest in Europe. The three-storey town house has been furnished by the National Trust to show how it would have been in 1796.

Lunchtime was spent at the Royal Botanic Garden. It was founded in 1670 and now covers twenty-seven hectares. Some members visited the art exhibition in Inverleith House. The party then travelled to Craigmillar Castle which is one of the best preserved examples of the late medieval period. It stands on a rocky hilltop and the L-shaped tower was commenced in the early 15th century by the Preston family. The inner courtyard was added in the mid-15th century and the outer courtyard in the 16th century. In 1660 the castle was purchased by Sir John Gilmour who employed William Chambers who it seems built residential accommodation on the west range of the inner courtyard. In the 18th century the Gilmours moved to Inch House and Craigmillar by 1775 was ruinous. Since 1946 it has been cared for by the Historic Buildings and Monuments. The chapel dates from c.1520.

The final visit of the week was to Lennoxlove, the home of the Duke of Hamilton. The tower was built c.1345 by a Maitland and in the mid-17th century the last of the Maitlands, 1616-82, completed extensive additions. The house then passed through various families. In the 1900s Major William Baird undertook extensive restoration and in 1946 it was sold to the 14th Duke of Hamilton. The contents of the house are part of the collection from Hamilton Palace which was demolished in 1919. In the Great Hall was seen the death mask of Mary Queen of Scots. A herd of the wild white Cadzow cattle were seen in the grounds. They came to Lennoxlove in 1976.

After the evening meal an informal meeting was held.

On Wednesday members left for the long journey home. A stop was made for coffee at the Moffat Woollen Mill where also some purchases were made. A picnic lunch was eaten at the Killington Lake Service area and tea at the Raven, Prees Heath. Mr. Tonkin thanked Mr. and Mrs. Ward for arranging the visit and for including such a variety of subjects and Keith for his safe driving. Despite the weather being rather cloudy and at times damp, it was a very enjoyable and happy week. Perhaps one should also record the laughter of those who tried to play pool..

AUTUMN MEETINGS

FIRST MEETING: 1 October: Mr. D. A. Whitehead, president, in the chair.

This was the thirty-second F. C. Morgan lecture which was held at the St. Martin's Parish Centre. Dr. Johnny Birks who is in charge of the Vincent Wildlife Polecat Project gave an illustrated talk on 'Britain's recovering Carnivores - studying the return of the Polecat.' He said that the polecat was a member of the weasel family. They were larger than stoats and weasels but smaller than martens and otters and are distinguishable by the dark and light fur facial markings. It is not found in Ireland or eastern Europe but was common all over Britain until the 1800s and by 1915 was extinct except in Wales and pos-

sibly along the Welsh border. This was due to organised game shooting. Today, the polecat can only be trapped under licence. Since the reduction of rabbits due to myxomatosis it has colonised the whole of Wales, the Shropshire, Herefordshire and Gloucestershire border, and has spread into ten midland counties as far east as Oxfordshire, and appears to have returned to Cumbria and Argyleshire.

The polecat is a solitary, nocturnal animal and is found in hedgerows and along the edges of woodlands and in daytime can be seen resting by rabbit warrens, disused badger setts and in farm buildings. As their footprints are not distinguishable from those of mink and ferret, a road casualty is useful for research purposes and for pinpointing their distribution. Dr. Birks explained that his project was to assess the habitat, the diet and the number of polecats by radio-tracking and the study of road casualties.

SECOND MEETING: 22 October: Mr. D. A. Whitehead, president, in the chair.

Mr. Howard Dudley, M.Sc. gave an illustrated talk on 'Herefordshire and the Marches from the air.' His first topic was hillforts. In general their shape can be seen well from the air, particularly as many are surrounded by trees. In the case of Thornbury there was an orchard planted inside the hillfort, while at Little Walterstone the interior was obscured by trees. A number of upland hillforts were clear of trees and at Caer Caradoc and Old Oswestry the multi-vallate nature could easily be seen.

He pointed out that crop marks were only visible for a few days in July when the disturbance of the soil caused the crop to change colour at different times.

Border castles showed up especially well where much masonry remained as at Raglan and Goodrich. The earthworks at Hereford and Clifford were also very visible.

Another topic was the various bridges down the Wye, the wooden toll-bridge at Whitney-on-Wye, the brick bridge at Bredwardine and the footbridges at Sellack and Foy.

Churches and large houses with their terraced gardens stood out as did the different types of modern development in Hereford as at Maylords Orchard and the Belmont area. A selection of slides of river meanders, reservoirs and the radar dishes at Madley concluded the talk on what can be seen from the air.

THIRD MEETING: 12 November: Mr. D. A. Whitehead, president, in the chair.

Mr. J. G. Hillaby, B.A. gave an illustrated talk on 'De Lacy Castles: A Reconsideration.' He explained that the de Lacy family originated in western Normandy; one brother held the honour of Weobley and the other the honour of Pontefract. Walter I died in 1085 and Hugh II inherited the lands in Normandy, Herefordshire, Shropshire, Gloucestershire and the Marcher lordship of Ewias Lacy. He followed Strongbow to Ireland and became lord of Meath, 1172-86. His son Walter II married Margery de Braose and his son Gilbert who died in France in 1230 had been lord of Ewias. Walter II had looked more to Ireland than to the Marches. From 1210-3 he was exiled by King John. In 1213 Hugh was recalled to lead the marcher lords against Llewellyn and the Welsh.

Mr. Hillaby referred to various castles held by the de Lacys and tried to date the various features in them from the above historical evidence. Examples he gave were the D-shaped gate tower c.1215 and the hemispherical buttresses and strainer arch of reused stones carved pre-1223 at Longtown. The Mortimer tower at Ludlow was hemispherical and had an early-13th century gateway which was later blocked. He compared these with de Lacy castles in Ireland, for example at Trim where the circular entry tower and barbican are similar to those at Ludlow. Other similar features were to be seen at Dundalk, Carlingford, Castle Rocke and Dundrum.

Finally he suggested that the castle which stood on the mound at Weobley, which was a de Lacy borough, and according to Silas Taylor's 17th-century drawing had turrets on the walls and keep was probably completed by Walter de Lacy whilst in Herefordshire in 1223.

WINTER ANNUAL MEETING: 3 December: Dr. J. C. Eisel, senior vice-president, in the chair.

Officers for 1995 were appointed. The accounts for the year ending 31 December 1993 were presented and adopted. These are printed on p. 12.

The chairpersons of the Archaeological Research Section and the Natural History Section gave reports on their work during the year. These are printed on pp. 168-78.

An Accumulative Index of the Club's *Transactions* covering the years 1955-87 has been compiled and issued to members. The Club is very grateful to Mr. G. Rees for the preparation of the index on his word processor.

The highlight of the year was the award to the Club by the British Archaeological Awards of the Graham Webster Laurels. This award was in recognition of the field-name survey from the 19th-century Tithe Map Apportionments of every parish and township in Herefordshire as the best entry in the service of education in archaeology for the public. Twelve members went to York on 23 November where Mrs. Richardson on behalf of the Club received from Lord Montagu of Beaulieu a certificate, an inscribed pottery bowl and a cheque which will be used for aerial photography. The Club is indeed grateful to all those who took part in the project over a number of years.

EDITOR'S NOTE

With reference to Vol. XLVII (1993) pp. 299-317 'Herefordshire Barrows' it has been drawn to my attention that the reputed Long Barrow at Pipe and Lyde SO 513349 was removed in 1969 'and proved to be a natural formation.' (Woolhope Club - Archaeological Research Section News Sheet No. 14 (Aug. 1969). The possibility that it was not a barrow had already been suggested in News Sheet No. 6 (Nov. 1967).

with the tower. This would not be unusual: at Rochester, Kent, a central tower was built in 1343 and capped with a similar lead-covered wooden spire, which survived until 1749.⁶ The weight of the new tower at Hereford soon caused problems, and later in the 14th century the piers were cased and subsequently pillars were inserted to support the N. and S. arches.⁷

After the 14th century alterations there was no change for more than 450 years. Then on Easter Monday, 17th April 1786 the W. tower fell, after giving signs of its impending collapse for some time previously. This collapse started a chain of events in Hereford, which are detailed below.

It was decided to employ the architect James Wyatt - soon to wreak havoc at Salisbury as well - to supervise the necessary repairs to the cathedral. Over the next ten years the cathedral was repaired, and altered. The triforium and clerestory were rebuilt, the nave shortened by a bay, and a new W. front constructed. But more importantly, the spire was deemed unsafe and removed, as were the four pinnacles, and the pierced parapet was replaced by battlements. The cost was raised by subscription and by mortgaging some of the cathedral estates, but in 1793 the Dean and Chapter appealed - unsuccessfully - in the *Hereford Journal* for another subscription to enable them to finish the central tower: this money does not seem to have been forthcoming.⁸ In 1830 Canon Russell gave money to the Dean and Chapter to build the four pinnacles to complete the top of the tower.⁹ The issue of the *Hereford Journal* of Wednesday, 1 June 1831 reported that the first stone of one of the pinnacles had been laid the previous Saturday, and the issue of 4 January 1832 reported that the pinnacles had been completed.

In May 1841 it was discovered that the Norman piers supporting the tower were in a dangerous state and as a result the bells were stopped from being rung.¹⁰ It was found to be necessary to rebuild the piers and in the course of the work the vaulting above the arches was removed to reveal the internal lantern structure of the tower. This work took almost seven years, and the bells were not rung again until 26 April 1848, when they rang to welcome a new Bishop to Hereford.¹¹

With this work the central tower took its present form.

ALL SAINTS', HEREFORD

The most prominent of the two surviving spires is that of All Saints'. The lower stage of the N.W. tower was built in the latter part of the 13th century, and the detail suggests that the belfry stage was completed before the year 1300. The spire, with its roll mouldings at the corners, was built early in the next century, and, unlike Salisbury, it is most likely that it was built using external scaffolding. This would have consisted of poles lashed together, gradually extended higher as the work progressed. (Pl I).

Such an imposing tower was obviously intended to hold bells, and the inscriptions of three of them were recorded about the year 1656 by Silas Domville, alias Taylor, the antiquary.¹² There is indirect evidence to suggest that at least one of these bells was cast in London in the early part of the 15th century.¹³ In 1553 there were six bells, a number equalled in few parish churches at that time.¹⁴

No further information is available about either bells or steeple until the start of the churchwardens' accounts, the first surviving volume of which covers the period 1619-65.¹⁵ These show that over the years the tower and spire have been the source of much worry and expenditure. The site on which the tower was built was softer on the N. side and over the years it has gradually sunk on that side so that it is somewhat out of the vertical. The first surviving record of repair work occurs in the accounts for 1621/2, when John Parsons was paid a total of £20 for pointing 'the Spyer of the steeple' and 'the Tower of the steeple,' as well as part of the body of the church. As part of the work stone in the tower was cramped together, the cramps being set in lead, and the bar on which the weathercock swung was repaired. But this work was not successful, and in July 1625 stone fell from the 'steeple.' On 25 July three workmen were paid to carry the fallen stone into the 'bell house,' and on the same day there was a payment of 11s. (55p.) to 'Lane of Ros for coming to viewe the steeple by Mr. Maiors appointment.' A carpenter made a winch to haul up the stone, and the work was put in hand. The first payment to the stone masons was made on 6 August and the last on 6 December. Generally five or six men were employed, the principal mason being Thomas Tompson, who was paid 2s. 6d. (12½p.) per day, while his labourer was paid 18d. (7½p.) per day. Forty-five loads of stone were used during the repairs. At the end of the work a new weathercock was set up and this had been made by Brian Newton at a cost of £2 - somewhat less than the bar of iron on which it swung, which, with associated blacksmith's work, cost £2 4s. 4d. (£2.21½). The weathercock must have been a fine sight as it was coloured red - at a cost of 2s. (10p.). Regrettably, at the end of the repairs Thomas Tompson and his labourer fell from the steeple, and the parish gave them 20s. (£1) towards the hurt they had sustained.

These repairs to the steeple were evidently satisfactory, and nothing further seems to have been done until 1662/3, when there was a payment of 1s. 6d. (7½p.) to 'James Samms & Francis Sayse for going up the inside of the Spire for their advise.' John Williams, 'Playsterer,' was paid £1 for pulling down and putting up the 'Wether Cocke' which was repaired by Thomas Swinfield at a cost of 10s. (50p.) and coloured in oil by Richard Smyth for 8s. (40p.). A clue how John Williams ascended the spire is given by a payment of 12s. (60p.) for 'putting in ribbs in the Spire to y^e sd Jo W^m and for Cramps' and there was a payment of 4s. 6d. (22½p.) 'att Severall times one the workmen amending the Steeple.' Despite the inference, nothing much seems to have been done to the spire - at least, it was not recorded in the accounts.

This first volume of accounts finishes at Easter 1665, and the next volume of churchwardens' accounts, covering the years 1665 - 1765 is missing, so any repairs recommended in 1662/3 may have been detailed in the missing volume. As a result the thread is taken up again with the volume started in 1765.¹⁶

The shock of the fall of the W. tower of the cathedral on Easter Monday 1786 must have weighed heavily on the minds of the churchwardens of All Saints', and it was decided to take expert opinion on the condition of All Saints' tower and spire. On 13 June 1786 5s. (25p.) was 'paid at a meeting of Mess^{rs} Hardwick taking a view of Tower:' the accounts show that Mr. Hardwick was paid two guineas (£2.10p.) the following day. This was the architect Thomas Hardwick, best known for his work on London churches.¹⁷ His opinion would not seem to have been encouraging, and it was first decided to take down the tower

and spire and rebuild them. Advertisements asking for a contractor willing to do this were placed in the *Hereford Journal* at the end of September 1786, and also in the Oxford and Worcester papers. A plan of the proposed new tower was available for inspection at Messrs. Hardwick's in Rathbone Place, London, or at the house of the churchwarden, Mr. Poultney, in Widemarsh Street, Hereford. Perhaps no-one was willing to undertake it, or the estimated cost was too great, but it was decided to repair the tower instead, and this was done the following year. Curiously, before the repair work was started a new weathercock was made by Christopher Colloe at a cost of £1. 7s. 9d. (£1.39p.) and this was put up on 20 May 1787, 12s. (60p.) being spent on liquor.

The repair work was put in hand two months later. Part of the scheme involved building two buttresses at the N.E. corner of the tower, and one at the N.W. corner. The work at the N.E. corner was started on 5 July 1787, and finished on 10 August, when 5s. (25p.) was spent on the workmen, no doubt on liquid refreshment. Only two days later the ringers were paid for ringing for some unspecified occasion. The foundation of the N.W. buttress was laid on 6 October (another 5s. spent), but it is unlikely that it was finished by 25 October, when the bells were rung for the anniversary of the King's Accession. Perhaps the ringers had no doubts about the stability of the tower! There seems to have been some problem with the work, and the matter went to arbitration. On 15 November bonds were drawn up at the Swan and Falcon when £1 1s. (£1. 05p.) was spent, and the result was given on 14 December, the arbitration costing £27 6s. (£27. 30p.). No result is specified, but it is no doubt significant that a series of payments to Mr. Dyche¹⁸ that had started on 17 August finished on 8 December, and others to a Mr. Walker¹⁹ started on the same day. The masons were treated at Christmas (5s. again), and the final payments were made on 15 January 1788: these included payments to both Dyche and Walker. Mr. Hardwick was paid £16. 5s. 6d. (£16.27½p.) the next day. It was during this repair work that wrought-iron tie-rods were inserted in the tower, but the nature of the accounts is such that it is difficult to identify the relevant entry. A payment of £5 to Thomas Brutton, whose name occurs in a contemporary trade directory as a blacksmith, is much too small.

In the 1850s there was again concern about the state of the fabric of All Saints' Church, including the tower.²⁰ A vestry meeting on 11 August 1853 considered a letter received from the Archdeacon of Hereford in which he insisted on the immediate repair of the battlements and spire: among the options considered was that of removing the spire and repairing the tower. The matter was, however, postponed from meeting to meeting, but a meeting on 7 December 1854 empowered the churchwardens to advertise for estimates to repair the tower and spire, and so such an advertisement appeared in the *Hereford Times* of 9 December. Curiously, the same advertisement had already appeared in the issue of 9 September 1854.²¹ Despite this, nothing further seems to have been done, despite a meeting of 21 December that decided that the churchwardens should call on the Archdeacon to inform him that they were taking all necessary steps to secure the loose stone on the tower.

The poor state of the tower did not prevent the bells being rung. Thus in August 1855 the band of ringers from Gloucester Cathedral celebrated their ninth anniversary by visiting All Saints' where they 'rang several peals of grandsire, much to the delight of the

lovers of this ancient music.' They then adjourned to the Elephant and Castle Inn to partake of an excellent dinner provided by mine host, Mr. Browning. The visitors returned to Gloucester at night by a special train.²²

Somewhere about this time, during the 1850s, the weathercock was taken down by a couple of men and exhibited around the pubs in the city. It is not known how they managed to remove it.²³

Meanwhile, the state of the tower was causing more concern, and in September 1862 a Mr. Bigglestone was paid £1 to remove loose stone from the steeple. It was thought necessary to hire a policeman for 2s. (10p.) to guard the street while this was being done.²⁴

In 1870 a steeplejack from Coventry called George Frith was called in to remove the weathercock. He did this by flying a kite over the bar through the capstone and allowing the kite to fall to the ground. A heavier rope was then pulled over and a rope with a counterweight at the end was wrapped round the bar, both ends being in Bewell Street, and the counterweight hauled to the top. Frith ascended by means of a cradle, drawn up by the counterweight. Colloe's weathercock was removed and replaced by a new one made to the design of Dr. Isbell, of the Moorfields. A photograph of the steeplejacks at the top of the spire during the work in 1870 is in the Pilley collection in the Reference Library in Hereford. When the old weathercock was brought down, it was found that it had bullet holes in it, but despite this it was sold for two guineas. Frith was paid £15 for taking down and replacing the weathercock, and a further £65.10s. (£65.50p.) for repairs to the spire and lightning conductor.²⁵

However, these repairs were only of a minor nature, and in 1877 George Gilbert Scott was called in to give an opinion on the tower. He concurred with the opinion of Mr. Nicholson, the diocesan architect, that the tower was in no danger of collapse, but that the spire was in a poor state.²⁶ But nothing was done, and in 1883 the city surveyor served a notice on the vicar and churchwardens to repair the spire.²⁷ This was done in 1885 under the supervision of Mr. Nicholson, the high cost of the necessary scaffolding counting for a substantial part of the cost of £1700. The contractor was Mr. Henry Welsh, and a service of thanksgiving for the completion of the work was held on 15 December in that year. A report appeared in the *Hereford Times* of 19 December 1885 and this detailed the work that had been done. As the roll mouldings were much decayed, each stone was cut out and replaced with one cut to shape, and such was the size of the stones that most had to be cut from a block of stone about 3 ft. square. The four lucarnes in the base of the spire were in such a poor condition that they were completely rebuilt, and any loose stone was scraped off and the spire pointed. During the restoration of the spire, it was found that the new weathercock had again been used as a target, and it was necessary to repair the tail.²⁸ One night a hard round hat was put on the weathercock by some unknown person who climbed the scaffolding, but this blew off the next morning.²⁹

The report of the work carried out makes no mention of the bend in the spire, neither does it make any mention of a wholesale rebuilding of the top section, although some of the top at least must have been dismantled because of the way the mouldings converge. This leads to the conclusion that the bend may well have been due to the work done in 1625.³⁰ Interestingly, a letter from Alfred Watkins published in the *Hereford Times* in May

1897, stated that the earthquake that had happened in December 1896 and which had caused widespread damage - reported of course in the Club's *Transactions*³¹ - had caused the top of the spire to lean towards Broad Street instead of Bewell Street. This does seem rather unlikely, and the top was more likely to have fallen than done this.

In 1906 W. Larkin, a well-known steeplejack from London, was called in to report on the condition of the weathercock. He found it was damaged again, with bullet holes, and so brought it down to earth. Larkin took the weathercock to London, where it was repaired and regilded, and then replaced it on 8 February 1907. On that occasion Mr. Ernest Heins, a churchwarden, and his daughter Elsie made an ascent to the weathercock in the presence of many spectators.³² A photograph of the weathercock was taken and issued as a postcard, and on this the damage to the tail can clearly be seen. It seems likely that the weathercock has been taken down and cleaned since then, but I have no information on this.

There were further tower repairs in 1915, and it seems to have been on this occasion that the battlements were rebuilt and more tie-rods installed, but there are no records of this lodged in the Hereford County Record Office.³³

Recent repairs are perhaps still fresh in people's minds, and so need mentioning only briefly. In 1991 an inspection of the spire revealed that some large pieces of stone in the upper part of the spire were loose, and scaffolding was erected as a safeguard. On 24 January 1992 the weathercock was removed from the position where it had been placed in 1907, owing to fears that its vibration would cause further deterioration in the stonework. At about the same time it was decided to stop the bells being rung. After protracted negotiations it was decided to repair and rebuild part of the spire, and subsequently the top forty feet or so of the spire were taken down and rebuilt in new stone, the work being finished in the autumn of 1993. Interesting, the pattern of the replacement stonework was designed by computer, a modern aspect to the ancient masons' craft. It is to be hoped that no further work is necessary for many years.

THE TOWER AND SPIRE OF ST. PETER'S

The tower of St. Peter's Church is on the S. side, unlike that of All Saints'. Of three stages, it was built in the late 13th century, and the octagonal spire was probably added early in the next century, somewhere about the period that the spire of All Saints' was being constructed. (PL. II).

As was the case with All Saints', bells were no doubt installed soon after the tower was built. One mediaeval bell survives, cast at Worcester c.1450-75, and this hangs in a late mediaeval frame: in 1553 there were four great bells in the tower and a small bell. The frame has been altered subsequently, but was originally made for five bells, so it seems as if a pit was left empty for subsequent augmentation. There are five bells now, and the other four were cast - or recast - in the 17th century. Unfortunately existing churchwardens' accounts do not start until 1695,³⁴ and so no contemporary information is available about their casting. This is a pity, as two of them were cast in 1648³⁵ by John Finch of Hereford: he lived in St. Peter's parish, and his burial is recorded in the parish register.

From the outside it is obvious that the tower and spire have been restored on several occasions in comparatively recent times. The first record comes in the accounts for 1719/20, when John Williams was given 1s. (5p.) 'for earnest in pointing the Steple.' The accounts for 1720/1 show that John Williams was paid £13 for this work and for gilding the weathercock, which had been repaired at a cost of 3s. (15p.). Williams was also paid 5s. (25p.) for a cradle, from which he evidently did the pointing. Interestingly, the person who replaced the weathercock on All Saints' spire nearly sixty years before had the same name, and it is tempting to think that they were related; it cannot have been the same person.

The shock of the collapse of the W. tower of the cathedral also caused the fabric of St. Peter's to be looked at carefully and repairs to be effected, although with not such despatch as at All Saints'. A vestry meeting on 29 July 1788³⁶ called for the ceiling of the church to be inspected, and a further meeting on 21 August discussed the poor state of the church and called for 'an Estimate of the Expenses of repairing the spire part of the Church.' Accordingly, Mr. Richard Goodman was called in. St. Peter's accounts for 1788/9 show a payment of £3 3s. (£3.15p.) to him 'for Estimation on Acct of the Spire.' This was discussed at a vestry meeting on 6 January 1789 and the minutes record:

'It is likewise the Oppinion of this Meeting that M^r. Goodmans Estimate Amounting to £120 for taking down part of the Spire reducing the ribs Tooling over the Stones that are decayed rebuilding the Spire with New Stone taking down the Pinacles and Cooping the Parapat be Approved of.'

A further meeting on 2 March 1789 empowered the churchwardens to contract with Mr. Goodman for the necessary work to the tower and spire.

This work on the tower was part of a larger restoration, including repairs to the roof of the nave and the cost of this was likely to cause problems in the parish. Accordingly, an advertisement was placed by the churchwardens and minister of St. Peter's in the issue of the *Hereford Journal* of 6 May - and repeated each week for the next two months - asking for subscriptions from wealthy and humane inhabitants of Hereford, to save the burden falling on poor householders:

'The charge of taking down, and rebuilding part of the Spire, and South Aisle of the above, of a new centre roof, cieling (*sic*), &c. being chiefly to be estimated after the building is completed, cannot be exactly ascertained, but must be very considerable.'

This appeal was ill-judged, as there was an on-going appeal for the initial estimated cost of £7,500 for repairs to the cathedral, subscriptions to which were reported each week in the pages of the *Hereford Journal*, and so this further appeal was not likely to succeed. However, a Royal Brief was issued for contributions towards the repairs,³⁷ but the money from this was slow in coming in, receipts of £134 19s. 11d. (£134.99½p.) and £15 19s. 10d. (£15.99p.) not being recorded until the accounts for 1791/3.

A vestry meeting on 19 June 1789 decided to put the repairs in hand, the minutes recording:

'It is likewise ordered that the wall at the west end of the Church be taken down and rebuilt and also that Richard Goodman be Employed to take down the Parapat

Wall of the Tower and rebuild the same According to the Estimate now delivered amounting to the sum of Thirty four Pounds Nine Shillings, he having undertaken to set out the Peddestals for the Pinnacles into the Above Estimate.'

A vestry meeting on 17 December 1789 agreed on further work.

'It is Ordered and resolved that M^r. Goodman be immediately employ^d to Chip over and point the West end of the Tower of St. Peter's Church in the same Manner as the Spire of the s^d church is done and to take out the decay^d Stones out and replace the same with new ones in a Workmanlike manner which he has undertaken to do as by an Estimate now deliver^d for the sum of Twenty Seven Pounds Seven Shillings.'

The accounts for the period 1789/91 show that Richard Goodman was paid a total of £267 18s. 8d. (£267.93p.) for his work.³⁸ Mr Parker was paid £408 19s. 11d. (£408.99½p.) for stone,³⁹ while the joiner, Mr. Gwillim Jones was paid £1033 2s. 9d. (£1033.13½p.) and the glazier, a Mr. Knill, was paid £176 7s. 5d. (£176.37p.) for his work - offset by £72 16s. 5d. (£72.82p.) that he paid for old lead.

The work was a matter of celebration, and when the first stone was laid the workmen were treated to a drink, and they were likewise treated when the weathercock was put up, presumably at the end of the work on the tower and spire. This weathercock was a new one, for a payment of £2 19s. 6d. (£2.97½p.) was made 'To Mr. Honniatt for the Weather Cock &c.' A solid copper key on display in the church is said to have been the weathercock in question but the accounts are quite clear that a weathercock was supplied and not a weathervane. Thomas Honniatt lived in the parish and later served as a churchwarden: in a trade directory of 1793 he is recorded as being a brazier.⁴⁰

Goodman's work on the tower was adequate for about seventy years, but there was then renewed concern. It was estimated that repairs costing £795 were needed to repair and partly rebuild the spire and battlements. The parish did not have that kind of money, and so a vestry meeting on 1 August 1861 considered a petition to the Bishop to enable a loan of £530 towards the cost to be raised.⁴¹ This was rejected by the meeting and so a poll was demanded, which took place the next day. The petition was approved by a majority of 144 to 113, and the signatures of those polled appear in the vestry minute book. The work was done in 1862 under the supervision of George Gilbert Scott and about 30 ft. of the spire was rebuilt. The accounts for 1862/3⁴² show that Mr. Chick was paid £25 for supervising the work, while G. Gilbert Scott received £39 2s. 9d. (£39.12½p.). 'Mr Chick' was no doubt William Chick, who had set up as an architect on his own, and a trade directory of 1867 shows that at that time he was in practice as an architect and was also the county surveyor.⁴³ His office was in the Shirehall, very convenient for St. Peter's!

The ordinary churchwardens' annual accounts do not mention the work done on the spire in 1862, and the money for this must have been accounted for separately. A vestry meeting on 4 September 1862 considered the accounts for the work done to the spire. £795 had been received from the Commissioners of Public Works, partly as a grant and £530 as a loan. £774 18s. 2d. had been spent and there was £64 2s. 9d. in outstanding liabilities, leaving just over £44 to be raised by voluntary subscription. The loan was paid off over a period of twenty years, £26 10s. being paid off each year, together with interest at 4%. Money was raised by a voluntary spire rate and there was evidently a problem in col-

lecting this. At a vestry meeting on 6 August 1868 it was proposed that a proper spire rate already made be collected instead of the voluntary rate. This was withdrawn when a proposition was made that a deputation wait on the Revd. John Venn, the vicar of St. Peter's and a well-known public philanthropist, and request him to preach a sermon on behalf of the spire rate. I have been unable to trace whether this was ever done.

Ninety years elapsed before further major work was done on the tower, £4000 being spent on repairs to the spire and parapet in 1949-50.⁴⁴ As at All Saints', money has been spent on repairs to the tower in the last year or two, but not so much as at All Saints'. It is to be hoped that the stone used tones down to match the other.

REFERENCES AND NOTES

- ¹ Hewett, *English Historic Carpentry* (1980), 141-5, also pl. V.
- ² Speed's map of 1610 shows that St. Owen's had a tower, while St. Martin's had a spire. This latter is confirmed by Browne Willis, *Survey of the Cathedrals* (1727), 505, where he states: 'As to St. Martins, it stood without Wye-bridge, against the Bishop's Garden, and had a Spire Steeple, and as I was told, three Bells.'
- ³ The new church of St. Nicholas was opened in 1842: the consecration was reported in the issue of the *Hereford Journal* of 27 July. At the same time a new church of St. Martin was being proposed, to be built on a completely new site: this was opened in 1845.
- ⁴ A good drawing of the W. tower is given in Browne Willis *op. cit.* (usually bound between pp. 500/1).
- ⁵ The plate showing the view of the cathedral from the N. in Browne Willis (normally bound between pp. 498/9) shows that the upper stage of the W. tower was covered, like the central tower, in a profusion of ballflower.
- ⁶ Palmer, *The Cathedral Church of Rochester* (1897), 16, 28-30.
- ⁷ Fisher, *The Cathedral Church of Hereford* (1901), 14 and 43. The pillars were erected in the episcopate of Philip Bisse (1713-21). Bannister, *The Cathedral Church of Hereford* (1924), 102.
- ⁸ Britton, *The History and Antiquities of the Cathedral Church of Hereford* (1831), 46-7.
- ⁹ Britton, *op. cit.* in note 8, 43-4.
- ¹⁰ *Hereford Journal*, 26 May 1841.
- ¹¹ *Hereford Journal*, 3 May 1848.
- ¹² British Library Harleian MS 6868.
- ¹³ Taylor also recorded the inscriptions on four of the bells in the cathedral, which bore a coat of arms 'a fesse int 3 ewers ore.' One of these bells survived until 1865 and was of a type considered to have been cast in London in the early part of the 15th century. One of the bells at All Saints' bore the same unusual inscription as one of the bells at the cathedral.
- ¹⁴ Stanhope and Moffat, *Church Plate of the County of Hereford* (1903), 216.
- ¹⁵ In Hereford County Record Office (HCRO) Ref. BC 63/1. Extracts from this volume are quoted without any further reference.
- ¹⁶ HCRO Ref. BC 63/2. This volume covers the period 1765-1830. Extracts are also quoted without further reference.
- ¹⁷ Thomas Hardwick also designed Nelson's Column, erected on Castle Green by Wood of Hereford in 1809. *Trans. Woolhope Natur. Fld. Club*, XXXV (1956), 178.
- ¹⁸ Dyche had put in an unsuccessful tender for the work to be done when the W. end of the cathedral fell down in 1786. (Inf. ex Mr. D. Whitehead).
- ¹⁹ There are several candidates for 'Mr. Walker'. James Walker was a Hereford ironmonger who went bankrupt in 1783 (HJ, 18 August), and there was another ironmonger of the same period called William Walker. A William Walker was John Nash's assistant/clerk of works at Hereford Gaol 1792-8, Stoke Edith 1795 and Corsham Court 1796. (Gummerson, *John Nash* (1980), 35, kindly brought to my attention by Mr. D. Whitehead) and he seems to be the most likely candidate.
- ²⁰ HCRO Ref. BC63/7. This volume of vestry minutes covers the period 1809-55.
- ²¹ Hereford Reference Library (HRL) PC 179. Included in this item is the bill for the two advertisements at a cost of 13s. (65p.).
- ²² *Hereford Journal*, 29 August 1855.
- ²³ ALOH (William Collins), *The History of the Parish Church of All Saints, Hereford* (1909), 18.
- ²⁴ HCRO Ref. BC 63/3.
- ²⁵ HRL PC 2281, 66a, PC 179 fol. 64a.

²⁶ HRL PC 2281, 66c, 67a.

²⁷ *Hereford Times*, 19 December 1885.

²⁸ HRL PC 179 fol. 213.

²⁹ *Ibid.*

³⁰ The matter will be decided when the archaeological survey, carried out before the recent repairs to the spire, is published.

³¹ *Trans. Woolhope Natur.Fld. Club*, XV (1896), 228-35.

³² *Hereford Times*, 9 February 1907, 23 February 1907 p. 4, Gratis Supplement, where a photograph is given.

³³ *Kelly's Directory of Herefordshire* (1917), 65.

³⁴ HCRO Ref. AG 7/22. These accounts cover the period 1695-1722. Extracts are quoted without further reference.

³⁵ Incorrectly given in Sharpe, *Church Bells of Herefordshire* (1976), 217.

³⁶ HCRO Ref. AG 71/1. The vestry minutes cover the period 1776-1820.

³⁷ A copy of this is hung in the vestry.

³⁸ Richard Goodman was evidently of some celebrity and carried out work on the tower and spire of Ross-on-Wye in 1790. This work was reported in the *Hereford Journal* of 15 September 1790, where the method used by Richard Goodman was described.

'The steeple of Ross church is repairing by the same able workman (Mr. Goodman of Lidney) who has so highly improved the church of St. Peter's, in this city. The merits of this architect are probably unknown to many of our readers:- By means of a ladder, in lengths of about twelve feet each, and so contrived that the upper ends of the first joint receive in mortice the lower ends of the second, and so on to any length, he is enabled to ascend to the height of steeples in general, in a few hours. The enormous expense of scaffolding from the ground is thus superseded, and is erected with much facility on that part only which requires to be repaired. The joints are fastened about six inches from the building, by means of staples for that purpose, and the whole when reared has the appearance of a neat and uniform ladder. The mechanic who some years since raised a circular stair-case of wicker work to the top of Islington church, received and deserved much credit for his ingenuity; but the method above-mentioned is perhaps infinitely preferable in every respect, and certainly so in the very material ones of cheapness, expedition, simplicity and effect.'

In *Trans. Woolhope Natur. Fld. Club*, XXXV (1956), 178 it is stated that Francis Goodman of Mordiford, 'architect' partly rebuilt St. Peter's and its spire in 1793. This information was almost certainly taken from Duncumb, *History of Hereford Vol. I* (1804), 599, where a description of the method used is also given. However, St. Peter's accounts make it quite clear that the contractor's forename was Richard and the above extract shows that he came from Lydney.

³⁹ William Parker had a quarry at Bartestree but lived in Hereford. He supplied stone for much work at this period and indeed supplied the stone that was used in the repairs at All Saints' in 1787/8. See, for example, his advertisement in the *Hereford Journal* of 5 June 1799.

⁴⁰ The work of repairing St. Peter's was finished by June 1790. A report in the *Hereford Journal* of 9 June 1790 states:

'On Sunday last, Divine Service was performed in St. Peter's Church in this city, and an applicable discourse was delivered by the Rev. Mr. Foley. - Almost the whole body of the Church, and part of the spire, have been taken down, and rebuilt with that expedition and taste, which reflect particular credit on every one concerned in the business. - The congregation was very numerous.'

⁴¹ HCRO Ref. AR 77/21. Annual Vestry minutes for the period 1860 - 1920.

⁴² HCRO Ref. AR 77/17.

⁴³ *Littlebury's Directory of the County of Hereford* (1867), 219.

⁴⁴ HCRO Ref. AR 77/18.

⁴⁵ Evans, C., *A Short History of St. Peter's Church, Hereford*, n. d. c. 1950.

The Diocese of Hereford, 676 - 1200

By CHRISTOPHER N. L. BROOKE

It is a privilege to me to visit this Society, whose distinguished work in archaeology and local history I have long admired - and whose name I regard as the most romantic among those of our great local societies; and a double privilege to be asked to give the F. C. Morgan Lecture, and in particular to join you today in doing honour to the memory of his daughter, Miss Penelope Morgan, for many years Cathedral Librarian. There will be many here who knew her, some better than I. But I greatly valued her friendship, and owed her many kindnesses. For a quarter of a century, with many interruptions - from 1942 to 1967 - I was engaged, first with my father, then with Dom Adrian Morey, in studying Gilbert Foliot, bishop of Hereford in the mid-12th century, and editing his letters and charters; and my first article, in collaboration with my father, was a study of the Hereford cathedral chapter in the 12th century, published in 1944.¹ When I first was able to inspect the Hereford muniments in 1945, they were in their wartime home, the National Library of Wales in Aberystwyth. But in the 1950s I came to study them in Hereford, and had the first of a number of meetings with Penelope Morgan, whom I came to regard as a paragon among cathedral librarians and archivists - for she performed both roles in those days: ready and eager to help the searcher; with limited resources but deploying to the full the qualities most needed: professional expertise, friendliness, an eager wish to help. On one of my visits in the 1960s, I brought a party of students from Liverpool. We arrived almost unheralded as evensong approached. Nothing daunted, Miss Morgan led us to the Chained Library and the students had the unique experience of seeing some of the treasures of your marvellous cathedral library in their natural habitat, freed from their chains for a moment for their benefit. We perused the books as the strains of evensong flowed up from the cathedral choir below us. It was an unforgettable experience for us all.

Thus Hereford is identified in my memory with Miss Morgan. I have had other friends here, and recall earlier visits with pleasure and warm appreciation. The Library must also be associated in my mind with the Canon Librarians I have known, with the late Sir Roger Mynors - the great scholar and Herefordshire squire who excused himself to me for flying from a Cambridge to an Oxford professorship on the grounds that Oxford was nearer home; and most recently with Dr. Rodney Thomson who has completed the catalogue of the manuscripts - one of the greatest of our cathedral libraries, a unique treasure of the English Church.

It is not of the cathedral and the library that I am going to talk, but of the see, of the bishopric and the bishops. I have given the dates of my lecture as 676-1200. I must own at once that nothing whatever happened in 1200 - it is a date of convenience; and it is very doubtful if anything happened in 676. A previous President, Mr. Hillaby, in a brilliant article in your *Transactions*, has shown grave reason to doubt whether the see of Hereford really dates from 676.² I shall be expected to say something of how I think that case stands; I shall say something of the special character of the diocese as a frontier bishopric in the Welsh march - Hereford in Wales as the 12th-century Exchequer clerks habitually

called it; and I shall try to reveal it, as it comes into the clear light of day in the 12th century, in the activities of the two great 12th century bishops, Robert de Bethune, the austere canon regular from Llanthony, and Gilbert Foliot, the monk from Cluny and Gloucester. I shall find it as a geographical expression and (I hope) leave it as a diocese.

In 1944 the Brookes, father and son, were pioneers. No one had seriously tackled the medieval cathedral chapter since Canon Bannister and Canon Capes, and they had sketched its history with something of a wild surmise.³ I am a pioneer no longer, but rather a veteran, reviewing the troops who have marched through his territory. I have mentioned Mr. Hillaby, who has illuminated many passages in the story I shall tell. The church in Hereford itself has been studied archaeologically by Mr. Shoemith and his colleagues, and in a Cambridge thesis by my pupil Dr. Alison Pearn as one of a group of Mercian towns.⁴ The cathedral and the diocese have been investigated by Dr. Julia Barrow, whose edition of the bishops' charters - the episcopal Acta of the diocese - from 1079 to 1234 was published in 1993.⁵ Her introduction carries a succinct and penetrating account of the early history of the see, especially illuminating on the 12th century. In 1990 appeared Patrick Sims-Williams' *Religion and Literature in Western England, 600-800*, which sets the origin of the sees of Hereford and Worcester in a wide religious, cultural, political and social context. The Welsh aspect of the story has been especially illuminated by Wendy Davies, the first Professor of Medieval History in University College London, the first woman Dean of the Faculty of Arts in UCL (so I believe), whose early work threw floods of light on the ecclesiastical history of south-eastern Wales, including the ancient kingdom of Erging, now southern Herefordshire.⁶ They do not all agree at all points; but my aim will be to draw out the elements on which we can firmly base our story; and for the rest, where they are not at one, attempt to tread as delicately as Agag.

The historian who wishes to understand the conversion of England in the 7th and 8th centuries has to grapple with two fundamental facts not easily reconciled to one another. Anglo-Saxon England was the one part of the Roman empire wholly pagan, and so, ripe for an entirely new pattern of church organisation. But it had been part of Roman Britain which in its later phases was Christian; there were Christian churches in abundance in Wales and Scotland and along the borders of the Saxon conquest - and a considerable no mans land whose status is to us obscure and was always ambiguous.⁷ From the 8th century on Offa's dyke was the frontier between these two worlds. Like all frontiers it gives much too precise an impression: it lay in the heart of a frontier zone. The frontiers of England and Wales were not precisely drawn until 1974, and down to the 19th century there were some differences between so-called national and diocesan frontiers here and there.⁸ But for our purpose Offa's dyke would serve well enough if it were not for the notorious fact that it leaves much of Herefordshire out.⁹ If we examine the churches and the patron saints of southern Herefordshire - Herefordshire S. and W. of the river Wye - we find them predominantly Welsh; this was the old kingdom of Erging. It once stretched much further E., since *Ariconium*, which lies well to the E. of the Wye, seems to have given the kingdom its name.¹⁰ But in the period we are studying, from the 7th to the 12th centuries, the Wye was its frontier, which underlines the very peculiar fact that the English overlords and bishops who made Hereford the centre of this see placed it on the frontier.

The old Roman sees which survived, after many vicissitudes, in most of Italy and France, and in some places elsewhere too, had been fairly precisely based on the small provinces of the late Roman Empire. Their centres lay in Roman cities. This pattern was and is most complete in Italy, where the Roman cities most fully survived, and every city had its bishop. In England the Church had to start afresh after the mission of St. Augustine sent by Pope Gregory the Great in the 590s.¹¹ One of the main keys to mission strategy was the loyalty of tribes to their king; and the conversion of the king and the unity of the tribe were central to the policies and hopes of the missionaries. The story is far from simple; but it was broadly speaking true that dioceses and tribal areas had the same boundaries; and in many cases the medieval diocesan frontiers tell us more than county boundaries about early and mid-Saxon political geography. Thus the kingdom of Kent had two sees, at Canterbury and Rochester; the South Saxons one, at Selsey (later at Chichester). London was the see of the East Saxons, with the Middle Saxons thrown in for good measure; the East Angles had sometimes one, sometimes two in early days; the West Saxons expanded from one to five, and so forth. The period when the pattern became fully established was the pontificate of Theodore, archbishop of Canterbury from 668-9 to 690, more specifically the 670s. Theodore was a Greek Syrian monk living in Rome of advanced age when the pope laid hands suddenly upon him in 668 and sent him off to England to be archbishop of Canterbury. Theodore found the church in chaos, and in the newly-formed kingdom of Mercia, recently converted and a great power in the land, there was no bishop at all. Mercia covered the whole of the midlands and a good deal of the west country, from Leicester to Hereford, and competed with Northumbria for dominance in the island as a whole. One of Theodore's first acts when he arrived in England in 669 was to call the saintly and retiring Bishop Chad out of Lastingham and send him to the king of Mercia. Like the later Franciscans, Chad was in the habit of performing his missionary work on foot; but Theodore was an old man in a hurry, and personally hoisted him onto a horse and sent him riding into Mercia.¹² Chad effectively founded the see of Lichfield; but in Theodore's eyes this was only a makeshift arrangement. He determined to break Mercia up into smaller, more manageable units. He seems to have had some trouble with his fellow-bishops, but to have found allies in the kings of Mercia, and, above all, in the pope. Early in the 670s there were seven bishops in England. In 679 the pope decreed that there should be an archbishop and twelve bishops. 'To make up this number,' says Patrick Sims-Williams, 'we should have to include the dioceses of the Hwicce and the Magonsaetan [the sees later called Worcester and Hereford], and indeed their bishops, Bosel and Putta, attest an authentic charter already in 680, alongside their spiritual and temporal overlords, Theodore and Aethelred of Mercia' (Wulfhere's successor).¹³ To this Mr. Hillaby would object that there was no bishop of the Magonsaetan at this date and that Putta by this date had no see at all. We are in deep waters.

The see of Hereford was formed out of the most westerly portion of Mercia. Of this there is no doubt. By about 800 the region it covered was known as the kingdom of the Magonsaetan, the folk of Maund, a sub-kingdom of Mercia.¹⁴ The see was to retain in fossilised form its ancient frontiers even when the counties of Shropshire, Herefordshire and Gloucestershire were formed. For the medieval diocese of Hereford included half Shropshire, all Herefordshire and Gloucestershire west of the Severn.¹⁵ By the same token the see

of Worcester occupied the territory of the Hwicce which stretched as far W. as the Malvern Hills. The name of the Magonsaetan does not appear in 7th or 8th-century texts - unlike the Hwicce which is undoubtedly an ancient name. By 800 the see was firmly established at Hereford and about the same time the see is first (in surviving documents) called the see of the Magonsaetan; by 800 we are on firm ground. If we ask why its early history is so obscure the answer, I think, is really quite simple: because the Venerable Bede did not know about it.

It might be said with pardonable exaggeration that what Bede tells us about the early history of the English Church is secure knowledge; and what he omitted we can never know. There are other sources; and Bede was not infallible. But it is an extraordinary chance that the story of the early English Church should have been recorded by the most accurate and historically minded scholar of the early middle ages; I have little doubt Bede deserves that title.¹⁶ But he could only pass on, as he carefully points out in his celebrated preface, what he had been able to discover.¹⁷ He knew much of the history of his own Northumbrian Church; and he was able to gather good sources from Canterbury and Rome and other sees. He seems to have sent round a kind of circular letter of appeal for information; and it is only too abundantly clear that the bishop of this part of Mercia (whatever he was called) never answered his letter; if he had, we would know more. This is not a unique circumstance. Lindsey (that is, the kingdom of Lincolnshire) is passed over in a silence almost as deep.¹⁸ We cannot expect much light on our story from Bede.

Bede does tell us the story of a man called Putta, who was bishop of Rochester, whose see was devastated in 676 by the king of Mercia; so Putta - a learned man and very musical, so Bede tells us, but not energetic in practical affairs - took himself off (strangely enough) to the bishop of Mercia who gave him a church and a small estate where he lived happily ever after, going round churches improving their music.¹⁹ Now by a curious chance the early bishops' lists give the name of Putta to the first bishop of Hereford.²⁰ These lists, like Bede, are not infallible - it is odd that another like source, Cuthbert's epitaph, omits Putta; but the lists are based on good tradition and worth serious attention. This coincidence has led to the traditional view that Putta, after leaving Rochester, founded the see of Hereford in or about 676. But no recent scholar who has read Bede's text carefully - neither Mr. Hillaby, nor the late Professor Wallace-Hadrill nor Professor Sims-Williams - has reckoned that Bede can be talking about the first bishop of Hereford.²¹ Yet it is a striking coincidence: a Bishop Putta goes into Mercia in 676 and about the same time (if the bishops' list is correct) a Bishop Putta becomes established in western Mercia - and a Bishop Putta witnesses that rare bird, a genuine early Mercian charter, of the year 680.²² Putta was not a common name: this one or these two men are the only Puttas known to have held bishoprics in Anglo-Saxon England. That may not be quite so remarkable as it seems, for there is reason to think it was not so rare a name in early times as it later became. There are various Putta's only recorded in place-names - such as the Putta whose wharf gave its name to Putney, and the Putta whose meadow gave its name to Putley in Herefordshire, interestingly enough.²³ So it could be chance; but it's an odd chance. Mr. Hillaby goes further, and suggests that the bishops' list is wholly in error: that Putta, bishop of Hereford, never existed.²⁴ This is perfectly possible; but it might be thought a little peremptory. I have another explanation; but I am not at all sure it is cor-

rect. If it is not, then Mr. Hillaby may well be right - and in any case I think he is right most of the way.

The papal letter of 679 strongly suggests that a bishopric in western Mercia was at least intended; without it one cannot make up the number twelve. Granted the vagaries of St. Wilfred at this time, and other difficulties, it is actually very hard to count the number precisely. But it really does look as if the pope had been told about a new see in western Mercia. That is not to say that it existed. But if Putta was roaming in western Mercia performing episcopal and musical functions, it might well have been reckoned that he was a kind of precursor of the bishops who were firmly settled there soon after. The papal letter of 679 registered an intention; the bishops' list recorded the tradition that Putta was a kind of proto-bishop of Hereford. Or again, Bede, who knew so little about western Mercia, may simply have misled us; he is giving us the Rochester not the Hereford end of the story - Putta may really have been bishop of western Mercia after all. I doubt if we shall ever know: all that seems clear to me is that a see in western Mercia was plotted by Archbishop Theodore in the 670s.

There have been doubts about what title the first bishop used, and about where the see was first founded. The only precise evidence is from a letter of Gilbert Foliot, which I published myself (not for the first time) in 1967.²⁵ Gilbert writes as ex-bishop of Hereford (he had been translated to London in 1163) to his cousin Robert Foliot, bishop-elect in 1173 or 1174, asking him to confirm the rights of the church of Ledbury 'for the sake of the episcopal see which it held long since and out of reverence for the holy bishops whose bodies lie there.' A letter of the 1170s is hardly cogent evidence for the events of the 670s, and there are various possible explanations; it is possible that there was confusion in the tradition since Hereford as well as Ledbury may have lain in the old district of Lydas. If so the see may always have been at Hereford - the burh in Lydas - as Mr. Hillaby has suggested to me; and it certainly settled there in quite early days.²⁶

The land of the Magonsaetan, western Mercia, the diocese of Hereford, whatever we call it, remained a frontier province. To the exchequer clerks of the 12th century the centre of it was still 'Hereford in Wales.'²⁷ Offa's dyke might indicate with sufficient clarity where Mercia ended and Wales began; but there were to be for many centuries minor fluctuations in the diocesan frontiers, which show that there was frequent activity on the border.²⁸ Further S., on the bank of the Wye opposite Hereford itself, and to the S.W., lay the old Welsh kingdom of Erging, now southern and south-western Herefordshire - between the Wye and Wales; and here we are in territory much more constantly disputed. Its history between the 7th and the 11th centuries is little known; but it is clear from the survival of Welsh collegiate churches (clas churches or minsters), and the frequency of dedications to Welsh saints, that we are in a region predominantly Welsh in the early middle ages. In particular, this is the centre of the cult of St. Dyfrig or Dubricius, who was alleged in the 12th century to have been the first bishop or archbishop of Llandaff.²⁹

Hereford was still very much a frontier city in 1055, when it was sacked by the victorious Welsh prince, Gruffydd ap Llywelyn, who had just acquired supreme power in S. as well as N. Wales, and was in effect king of the whole of Wales. In 1055 he made an alliance with Aelfgar son of the earl of Mercia, who was in feud with Earl Harold son of

Godwin, the leading English potentate of the 1050s and 60s, the future king of 1066. In October 1055 Gruffydd and his ally sacked Hereford, and killed some of the canons. Peace was patched up at a meeting between Gruffydd and Harold at Billingsley in Erging. Soon after, the old bishop of Hereford died, and in March 1056 the warrior Bishop Leofgar, one of Harold's chaplains, was appointed to the see. But in June of the same year he set out at the head of the local levies and fell in battle with Gruffydd ap Llywelyn.³⁰

Meanwhile, at Whitsun 1056 (so it seems) a man called Herewald was consecrated bishop for Erging. The only things certain about Herewald are that he bore an English name - as did his son Leofric or Lifris, later Master of St. Cadoc of Llancarvan and archdeacon of Gwent - and that he was consecrated in England, probably by the archbishop of York, since Canterbury was occupied by the notorious Stigand.³¹ By 1104, when Herewald died, he was bishop in Glamorgan, and his successor Urban, another member of his family, it seems, claimed that he had all along been bishop of Llandaff. Now Urban was in effect the founder of the see of Llandaff, whatever had been there before him; and his life was dedicated to the attempt to prove that it had once been an archiepiscopal see - and so in no way subject to the rival archiepiscopal see of St. Davids - and that its boundaries included Erging and other territories also claimed by the bishops of Hereford. The Book of Llandaff enshrines these claims in a dazzling collection of forgeries: but though the saints' lives and the charters in the Book of Llandaff contain a great deal of fiction, they are also based on a remarkable quantity of fact; and it is a very delicate matter to elucidate quite what it amounts to.³² But the essence of the matter so far as it concerns Herewald seems tolerably clear. He started in Erging, presumably as a puppet of the bishop of Hereford, operating in territory devoid of episcopal care and politically dominated by Gruffydd ap Llywelyn. But when Gruffydd's power collapsed and Gruffydd himself was killed in 1063, the English could redraw the border and the bishops of Hereford lay claim to Erging. The eventual result of this was that Herewald found himself progressively excluded from his original territory, but went on to perform episcopal functions further S. and W., until he became effectively bishop of Glamorgan. It is clear that in the process the puppet bishop set up by the English had gone native, and become effectively Welsh; and his son Lifris became the Master of one of the most charismatic shrines in south Wales, that of St. Cadoc.³³ To Lifris we owe the earliest surviving Life of Cadoc, a strange medley of legend and folklore, portraying a far from attractive picture of its hero, who is more conspicuous for acts of power than of mercy or loving kindness. We have no reason to suppose the historical St. Cadoc was like this: the portrait was aimed at the enemies and rivals of Llancarfan in the late 11th century. By the time it was completed the English enemy had been replaced by the Norman: the Normans invaded Glamorgan in or about 1093 and St. Cadoc faced the most serious threat of all. Llancarfan was handed over by its conqueror, Robert Fitzhamon - founder of Tewkesbury Abbey and ancestor of the earls of Gloucester - to Gloucester Abbey, which threatened to colonise it and claim its relics.³⁴ In a dazzling epilogue to the Life of Cadoc, Lifris explained that the relics were not in Llancarfan at all - they were in Benevento in S. Italy. At the end of his life Cadoc had been transported miraculously (by air) to Benevento, changed his name to Sophia, and died and been buried in the abbey of St. Sophia in Benevento. Now there was undoubtedly such an abbey in the 11th century, dedicated to Santa Sophia, that is, Holy Wisdom; the

rest is pure fiction, doubtless intended to frustrate the abbot of Gloucester should he come demanding the relics. They are not here - they are a thousand miles away.³⁵

In the next generation a leading Norman royal clerk, Queen Matilda's chaplain Bernard, was to follow Herewald's example in remodelling the rival see of St. Davids. He had been in charge of the see of Hereford for a time in 1101-2, and was called 'priest of the church of Hereford' when he made his profession of obedience to the archbishop of Canterbury on his consecration as bishop of St. Davids in 1115.³⁶ But, like Herewald, he soon became absorbed in Welsh customs and traditions. He made St. Davids a diocese on the Anglo-Norman model with archdeacons and rural deans; but he fought a long and heroic battle to vindicate its independence of the see of Canterbury. He and Urban of Llandaff were rivals, not allies: rivals for large stretches of diocesan territory and for the title archbishop. Neither achieved all his ambitions; but they set a new pattern on the Welsh church for many generations to come. Hereford meanwhile could rejoice that the tide of battle had flowed further W.: and though it suffered many anxious moments - especially in the late 1130s when the Welsh rose against the Norman invaders after the death of King Henry I - the shape of the diocese became more secure, and Erging or Archenfield, to give it its Anglicised name, securely part of it.

While these dramas were fought out on the frontier, the see was developing new pastoral patterns, much like other English sees in the late Saxon period, if a little slowly. In its simplest terms, the missionary church in early and mid-Saxon times had established centres in major churches or minsters; from these, communities of priests performed pastoral functions over a wide stretch of territory. But in late Saxon times the dominance of the minster in pastoral care had broken down; rivals had appeared in the shape of parishes, much smaller units, sometimes the equivalent of villages. In many parts of England the formation of parishes came well before the conquest, and is lost in the mists of time. In some measure this may well have occurred in the see of Hereford. But some of the minsters retained their pastoral grip into the 12th century. A notable example of this is Leominster.³⁷

There are few words more ambiguous than 'minster.' It is the Old English equivalent of the Latin *monasterium*, and so it starts by meaning a monastery; but the institution and the word passed through so many vicissitudes that by the 11th and 12th centuries the word minster in contemporary texts can mean a monastery in the full sense of the word, or a large church served by a community of priests, or any large church, or any church at all:³⁸ and the antiquaries of the 19th century confused the matter further by designating certain particular cathedrals - York, for example, and its pro-cathedrals, Beverley and Ripon - as 'Minsters.' We cannot forget the word since it meets us constantly in medieval texts. So we have to give it some definition before we use it.

I use the word in the sense of a large church serving a district which was something between a diocese and a parish. This is not a perfect definition, but it avoids being too precise in a world where almost all our information is imprecise. The minster at Leominster must over several centuries have been served by a group of priests whose parish comprised a wide district fifteen miles or so across. How exactly they did it, we cannot tell: to what extent they carried the sacraments into the villages is totally unknown. But in early days it

is not likely that there were many churches apart from the mother church in Leominster: their spread came slowly. As well as the priests there was a religious community of nuns. According to 11th-century legend it had been founded by Merewalh, son of Penda king of Mercia, the first king of the Magonsaetan; and it may well be that when he was converted he founded or refounded the minster. But the name Leominster contains a Celtic or Welsh element; it may even be a translation of a Welsh name;³⁹ in later times it claimed some relics of St. David, and the legends of St. David himself claimed that the saint visited Leominster.⁴⁰ It is quite likely that there had been a Welsh monastery here before the Anglo-Saxon invasion. This is speculative; to its later history Mr. Hillaby has added considerably by his suggestion - based on some very interesting evidence - that an early 11th-century prayer book in the Cotton collection in the British Library was written at, or for, the nuns of Leominster.⁴¹ This apart, the only well-recorded event in its history is its dissolution in 1046. The rapacious family of Earl Godwine, Harold's father, found an easy prey in the convents of nuns of the west country. Godwine himself suppressed Berkeley Abbey in Gloucestershire; his son Swein carried off the abbess of Leominster and the property of her abbey with her.⁴² The story of Leominster was not forgotten. In November 1120 the White Ship was wrecked off the Norman Coast, and Henry I's only legitimate son perished in the disaster. In King Henry's make-up cruelty and piety were strangely mingled. He was one of the most unattractive of a harsh line of kings; yet he won golden opinions from monastic chroniclers for giving his subjects peace and security, and for his lavish generosity to the religious orders. His most elaborate foundation was Reading Abbey; and he endowed it with what remained in royal hands of three religious houses which had been suppressed in the reign of Edward the Confessor: it seems to have been a grandiose act of penance for his royal line, by which he hoped to find forgiveness (as he may be supposed to have seen it) for the sins which had been so fearfully punished in the White Ship. The three houses were Reading itself, formerly a convent of nuns, a male house at Cholsey also in Berkshire, and Leominster.⁴³ And so it was that the monks of Reading came to be lords of Leominster until the Dissolution. Their magnificent church in Leominster still tells its story after the refoundation. In the early 1120s, when Reading was founded, the monks of Reading acquired the church; in 1139 they settled a community of monks there, whose church is represented by the Norman aisles; a part of it was doubtless reserved for the parish. In the 14th century the church was extended, new aisles added, and a great part of it at least made into a parish church on the grandest scale. Meanwhile, in 1123 the bishop of Hereford, Richard de Capella, listed the churches, or anyway the villages, which comprised the whole area formerly served by the priests of Leominster. He listed thirty-nine villages; and even that evidently did not comprise the whole extent of what had formerly been Leominster's, but only what could still be retained by the monks of Reading.⁴⁴ For the break up of the old region into smaller parishes was under way. It had clearly not gone very far, for if it had, it is very unlikely that so much could have been salvaged. The bishop very likely included some villages, perhaps many, which as yet had no church: it was a kind of insurance for the monks - when churches were built there, they would be part of their domain.

One of the most spectacular exhibits in the English Romanesque Exhibition in the Hayward Gallery in London in 1984 was the gorgeous Romanesque sculptured font from

St. Michael's church in Castle Frome a little to the E. of Hereford.⁴⁵ This is an outstanding specimen of a group of noble fonts in this region dating from the early to mid-12th century; and in their turn they reflect a school of sculpture with its centre in Herefordshire. 'The style is a mixture of local and western French elements but the base suggests knowledge of Italian art,' writes Professor Zarnecki, the eminent art historian, who has always had a particular interest in the sculpture of Herefordshire, of which Kilpeck provides perhaps the outstanding example.⁴⁶ George Zarnecki inspired and planned the Romanesque Exhibition, and as I looked admiringly at the font from Castle Frome magnificently restored and displayed, I could not refrain from asking him what was happening to the babies in Herefordshire who were waiting to be baptised. Kindly and humane man though he is, he had not thought of them: for him the font is an expression of noble craftsmanship. It must be that for all of us; but to me it is equally a symbol of 12th-century pastoral care, a dramatic assertion by local patrons and a local community that the parish church is theirs, that the children of the village are baptised in their midst. For both George Zarnecki and me it is a cosmopolitan object in which the crafts and concerns of Herefordshire mingle with those of Christendom at large. Fonts survive in very large numbers from the 11th and 12th centuries, and represent the development of the parish as the social and religious centre of a community.⁴⁷ The village church and the village font had taken the place of the older minsters. The larger parochiae, the regions of minsters like Leominster, had been broken into smaller units.

It did not happen so everywhere. In Cheshire and Lancashire, for example, and further N., much larger parishes survived through the 12th century, when the canon law of parishes became established and parish boundaries fossilised. Bunbury in Cheshire retained a parish of twenty-four small villages; at the end of the Wirral peninsula West Kirby (the by or village with the church in the Norse tongue) and Bebington, counted twenty villages between them.⁴⁸ Ulpha in Cumbria, by the river Duddon, once formed the geographical centre of a parish running about fifteen miles from its base at Kirkby by the estuary to the top of Wrynose pass. But the Normans, by an absurd judgement of Solomon, made the river divide two parishes, Kirkby and Millom, each enormously long and narrow. The advent of the new canon law in the 12th century left a palimpsest, showing a variety of stages of development. But over most of the country, the division into small parishes was well advanced - though parishes still vary greatly in size.

There is thus a marked contrast between the parishes of much of this region (for all their variety) and those of Cheshire and the N.W. But the contrast between the English parishes and those of Italy is even more marked. There the large font in a small parish church is replaced by a single large baptistery, in which the babies of a whole city and its region - of a whole diocese, that is - were baptised. Such baptisteries had been common in the early church, and survive for example in Poitiers. But in Italy they were revived and rebuilt and continued to flourish in the central middle ages: hence the magnificent baptisteries of Parma and Florence and Pisa.⁴⁹ The font and the baptistery represent two different models of baptism, and two different models of a parish. In the early church when the baptised were mostly adults, it was common to have a long preparation in Lent and a great baptism of the catechumens at Eastertide. But as it became more and more common to baptise babies - and as the notion developed that if the babies died unbaptised they

could not go to heaven - the practice of individual baptism of quite small babies grew common. In Italy the old practices carried on, somewhat modified; in the N. individual baptism prevailed; and it came to be the special mark of a parish church - of the church of a worshipping community - that it should have a font and that its priest should baptise the children of the parish. Indeed, if we asked for a definition of a parish church, then one could say that it was the worshipping centre of a community, to which the people paid their tithes, in whose font their babies were baptised and in whose churchyard they were buried.

My final words must be for the two most notable of the 12th-century bishops of Hereford: Robert de Bethune, canon regular and prior of Llanthony, a saintly man and a notable pastor, bishop from 1131 to 1148; and Gilbert Foliot, monk of Cluny and abbot of Gloucester, bishop from 1148 to 1163, then bishop of London till his death in 1187, the man who brought the diocese of Hereford into the main stream of the English Church, but whose later life was marred by his bitter strife with Thomas Becket.

The first of the post-conquest bishops who is more than a name to us was Robert of Lorraine, a notable scholar and scientist, who had a hand in bringing to England the abacus - a sort of primitive computer, vital to the development of literate accounting.⁵⁰ The 12th-century bishops included no great warriors, and the early ones were from the commonest stock of English bishops of the mid-and-late middle ages, that is to say, royal clerks (as we should say, civil servants). Robert de Bethune and Gilbert Foliot represented a new departure: long before, in the 10th and very early 11th centuries, monks had had a monopoly of the bishoprics. But by 1100 they had become a rarity, save in the see of Canterbury itself and its satellite, Rochester. Robert had made a career for himself on the continent as a teacher, then settled down to be a canon regular at Llanthony in Gwent.⁵¹ Llanthony sits in a peculiarly remote spot under the Black Mountain in what is still a wild and romantic site. Here a pair of ascetics - one a hermit, the other a chaplain of Queen Matilda who had seen the light - settled down to lead the regular life at the very beginning of the 12th century. A few years later Henry I and Matilda were on the search for a religious house, fervent in prayer, which they could richly endow and make into a royal mausoleum and (one suspects) a suitable home for one of Henry's favourite nephews, Henry of Blois, future abbot of Glastonbury and prince-bishop of Winchester.⁵² The king and queen threatened Llanthony with what G. K. Chesterton once described as crushing endowments, and the founders rejected the offer. Henry himself went on to found Reading Abbey and many other houses. Llanthony remained poor and obscure, a remote haven: a house of canons following the Rule of St. Augustine not the Rule of St. Benedict, but in every other way closely similar to the Cistercian foundations of the next generation. In 1135 King Henry died, and south and central Wales, much of it recently conquered by the Normans, was aflame with rebellion almost in a moment. Llanthony was in the firing line, and the canons sought refuge in Gloucester. From then on till the early 13th century the two houses were run as one: Llanthony-by-Gloucester was the main headquarters; the old house in Gwent the outlying refuge of the ascetics.⁵³ But meanwhile the second prior, Robert de Bethune, had become bishop of Hereford. He combined patronage of the religious orders with a strong pastoral sense. His first love was Llanthony, which received much favour; but he gave encouragement to the settlement in Shobdon of the Augustinian

canons from Saint-Victor in Paris, the great intellectual centre, who later moved to Wigmore; whose second abbot, Andrew of Saint-Victor, was one of the most notable biblical scholars of the 12th century.⁵⁴ He also helped in the foundation of St. Guthlac's Priory at Hereford. St. Guthlac's had once been a collegiate church within the city: from 1143 it became a substantial priory, dependent on Gloucester Abbey, outside the walls.⁵⁵ The see already had an archdeacon and rural dean, so it seems; and the cathedral chapter had a dean and other dignitaries and fairly numerous canons. Robert seems to have infiltrated a regular element into the chapter; to have divided the see into two archdeaconries and to have made one of his Llanthony canons first archdeacon of Shropshire.⁵⁶ The formation of the Herefordshire parishes went on apace.

Robert de Bethune had had to bear the threat of Welsh incursions into his see after the revolt of 1136. He also suffered from the feuds of Stephen's reign, at their height in 1140 when Geoffrey Talbot and Milo of Gloucester (future earl of Hereford) besieged it and made the cathedral into a castle.⁵⁷ In later years fighting was sporadic; and it was Gilbert Foliot's business to restore the see after the anarchy of King Stephen's reign. In a measure he had performed this role already as abbot of Gloucester.⁵⁸ For Bristol and Gloucester were the chief centres of power of the younger Matilda, the empress, Henry I's daughter and Stephen's cousin and rival; and Gilbert as abbot of Gloucester was one of her staunchest supporters. But in the course of the 1140s a new star rose in the person of Theobald, archbishop of Canterbury, whose fame has been somewhat eclipsed by his more celebrated successor Thomas Becket; but who was in his day one of the most remarkable archbishops Canterbury had known. When England was a divided country, Theobald made it his business to hold the Church together, to make a unity of the province of Canterbury under the ultimate jurisdiction of the pope - indeed he claimed primacy over all England as his predecessors had done; and Gilbert seems to have been his chief contact in the west country - his spy, one might almost say, save that they seem to have corresponded, and even on occasions met, quite openly. Gilbert, still abbot of Gloucester, set off for the papal Council at Rheims in 1148, to which the archbishop went in spite of Stephen's attempts to prevent him. There Robert de Bethune died and Theobald arranged for Gilbert to succeed him.⁵⁹ It was a very tricky appointment politically. At first Gilbert was very much *persona grata* with the young prince Henry, Matilda's son, pretender to the throne; but Henry was deeply incensed when Theobald made Gilbert do homage and swear fealty to Stephen. Yet the archbishop managed to smooth these difficulties over, and eventually to bring off his greatest diplomatic coup by making peace between Stephen and Henry in 1153. When Stephen died, Henry II succeeded him, and Gilbert soon became one of his closest associates among the bishops, so close that Henry had him translated to London in 1163.

With Gilbert's translation our story must end. Looking back, it seems quite a natural thing for a bishop to be translated from Hereford to London. Three other bishops of Hereford have trodden the same path, and in the 14th century, and sometimes later, translation commonly deprived Hereford of its bishops. But in 1163 it was a very strange event. In the early Church the removal of a bishop from one see to another was forbidden - it was a kind of divorce; the bishop was married to his see. So it was always the case that translation required papal dispensation; and partly because of the ancient prejudice, partly

out of reluctance to involve the pope directly in appointments, translation was a very rare event. From time to time bishops moved up to Canterbury or York. But it was not until the 14th century - when all bishops were coming to be appointed (in the pope's view at least) by the pope, that translation became common, and the musical chairs so characteristic of the late medieval and early modern church began. The special circumstance in 1163 was that Thomas Becket had recently become archbishop of Canterbury, to Gilbert's sorrow; and the king, who had promoted Becket, had begun to realise that he and Becket were not going to see eye to eye. Henry wanted Gilbert as near to him as possible, at the centre of affairs, to give him support if the problems got worse; and Thomas himself hoped to find in Gilbert a man who would keep Henry from dangerous courses. So the pope, who at this stage regarded Gilbert as a moderating influence, readily agreed to his translation. In the event Gilbert did help to prevent some of Henry's more extreme courses, but was no peacemaker: he and Becket became embittered enemies; when Thomas was murdered Gilbert was under his ban.⁶⁰ It took him a long time to win absolution. In his later years he never (so far as we know) visited Hereford again. But in 1173-4 a cousin called Robert Foliot became bishop of Hereford, and the relations between London and Hereford remained close and cordial for many years to come: Foliots flourished in Hereford until well into the 13th century, and Gilbert meanwhile had filled the archdeaconries of the see of London with his nephews.⁶¹ It was to Robert as bishop-elect that Gilbert wrote on behalf of the church of Ledbury, sanctified (as he supposed) by the tombs of the bishops, their predecessors.

A great part of my life has been dedicated to studying the life and letters of two notable 12th-century churchmen, Gilbert Foliot and John of Salisbury. John was a close follower of Becket, and at the height of the controversies between them, in 1166, he wrote a celebrated series of letters in which he denounced Gilbert's role and labelled him Achitophel, after the evil counsellor of King David's court who had led the young Absalom into rebellion.⁶² John wrote in anger, and enjoyed the vigour of his own rhetoric; but his words inspired a celebrated apostrophe by Dom David Knowles on the ambiguous character of this notable bishop of Hereford and London.

'And now we come ... to the most enigmatic figure of all, to the man of probity whom even a pope revered for his austerity of life, the mirror of religion and glory of the age, the luminary who shed a lustre even on the great name of Cluny; ... the Achitophel who gave counsel ... against his master; the Judas, who made a pact upon the body of Christ, the church of Canterbury.'⁶³

Gilbert was a strange mixture of good and less good qualities, and certainly not colourless; and Robert de Bethune had some qualities of sanctity. These were bishops of high distinction: Hereford was no distant borderland, hidden away in the Welsh march. Its bishops were as cosmopolitan figures as its sculptors.

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- ³⁷ For this process in general and for the minsters, see Brooke, 'Rural ecclesiastical institutions' (cited in note 11); *Minsters and Parish Churches: the Local Church in Transition, 950-1200*, ed. J. Blair (1988). On Leominster, see J. Hillaby, 'Early Christian and pre-Conquest Leominster: an exploration of the sources', *Trans. Woolhope Natur. Fld. Club*, XLV (1987), 557-685.
- ³⁸ Brooke, 'Rural ecclesiastical institutions' (cited in note 11), 697 and n. 26.
- ³⁹ Sims-Williams, *op. cit.* in note 7, 56.
- ⁴⁰ Hillaby *art. cit.* in note 37, 600-5.
- ⁴¹ Hillaby, *art. cit.* in note 37, 628-54.
- ⁴² On Berkeley, see B. R. Kemp, 'The churches of the Berkeley Hernesse', *Trans. Bristol and Gloucs. Arch. Soc.*, LXXXVII (1968), 96-100, esp. 101; Walter Map, *De nugis curialium*, ed. M. R. James, revised C. N. L. Brooke and R. A. B. Mynors, Oxford Medieval Texts (1983), 416n. 1. On Leominster, see *Heads of Religious Houses, England and Wales, 940-1216*, ed. D. Knowles, C. N. L. Brooke, and V. C. M. London (1972), 214; C. N. L. Brooke, 'Princes and kings as patrons of monasteries: Normandy and England', in *II Monachesimo e la riforma ecclesiastica*, Miscellanea del Centro di Studi Medioevali, VI (Milan, 1971), 125-52, at 140 and n. 46.
- ⁴³ Brooke, 'Princes and kings' (cited in note 42), 140.
- ⁴⁴ B. R. Kemp, 'Some aspects of the Parochia of Leominster in the 12th century', in *Minsters and Parish Churches* (*op. cit.* in note 37), 83-95. For Bishop Richard's charter see *ibid.*, 83, 92 n. 3.
- ⁴⁵ *English Romanesque Art 1066-1200* (Exhibition Catalogue, 1984), 65, 178, no. 139.
- ⁴⁶ *Ibid.*, 178; cf. G. Zarnecki, *Later English Romanesque Sculpture, 1140-1210* (1953), 9-15.
- ⁴⁷ F. Bond, *Fonts and Font Covers* (1908, repr. with additional plates in colour, 1985: colour pls. 1-2 are of the font at Castle Frome).
- ⁴⁸ Brooke, 'Rural ecclesiastical institutions' (cited in note 11), 693; for what follows, *ibid.*, and 710-11. The pre-Norman history of the Duddon Valley is conjectural, but this seems the most probable explanation of the strange boundary formed by the river.
- ⁴⁹ C. N. L. Brooke, 'The medieval town as an ecclesiastical centre', in *European Towns, their Archaeology and Early History*, ed. M. W. Barley (1977), 459-74, esp. 460-1; E. Cattaneo, 'Il battistero in Italia dopo il Mille', *Miscellanea Gilles Gerard Meersseman = Italia Sacra*, XV-XVI (1970), I, 171-95.
- ⁵⁰ On Robert of Lorraine, see J. Barrow in *English Episcopal Acta*, VII (1992), xxxv-xxxvii.
- ⁵¹ On Robert de Bethune, see Barrow, *op. cit.* note 50, xxxix-xlii; J. Hillaby in *The Friends of Hereford Cathedral: 46th Annual Report* (1980), 21-42. The chief source is the Life by William of Wycombe, ed. H. Wharton, *Anglia Sacra* (1691), II, 293-321; and also ed. B. Parkinson, 'The Life of Robert de Bethune by William de Wycombe', unpubl. Oxford B. Litt. thesis (1951).
- ⁵² On Henry I and Llanthony, see Brooke, 'Princes and kings', (cited in note 42), 137 and note 40; and *ibid.*, for the similar interest in Montacute Priory and its possible link with Henry of Blois (cf. *Heads of Religious Houses, op. cit.* in note 42, 121). For Henry I's spectacular patronage of Henry of Blois, see Brooke, 'Princes and kings', 138-9.
- ⁵³ *Heads of Religious Houses, op. cit.* in note 42, 172-3.
- ⁵⁴ J. C. Dickinson and P. T. Ricketts, 'The Anglo-Norman Chronicle of Wigmore Abbey', *Trans. Woolhope Natur. Fld. Club*, XXXIX (1969), 413-46, at 422-7. On Andrew see refs. to the studies of B. Smalley in *Heads of Religious Houses*, 190, esp. her *Study of the Bible in the Middle Ages* (2nd. edn, 1952), 112-85.
- ⁵⁵ J. Barrow in *English Episcopal Acta*, VII (1992), xli and no. 21.
- ⁵⁶ *Letters and Charters of Gilbert Foliot, op. cit.* in note 25, 116-7, no. 18; A. Morey and C. N. L. Brooke, *Gilbert Foliot and his Letters* (1965), 268.
- ⁵⁷ *Gesta Stephani*, ed. K. R. Potter and R. H. C. Davis, Oxford Medieval Texts (2nd. edn., 1976), 108-11.
- ⁵⁸ For what follows, see Morey and Brooke, *Gilbert Foliot and his Letters* (1965), chs. 5-7. On Theobald, see *ibid.* 88-94; A. Saltman, *Theobald, Archbishop of Canterbury* (1956).
- ⁵⁹ Morey and Brooke, *op. cit.* in n. 58, 96-7.
- ⁶⁰ For these events see *ibid.* 98-103 and ch. 9.
- ⁶¹ On Robert Foliot, see J. Barrow in *English Episcopal Acta*, VII (1992), xliv-xlv; on Gilbert Foliot's family, Morey and Brooke, *op. cit.* in note 58, ch. 3, esp. 44-5, and 272-4. For what follows see note 25.
- ⁶² See esp. John of Salisbury, *Letters*, II, ed. W. J. Millor and C. N. L. Brooke, Oxford Medieval Texts (1979), 152-7, no. 175.
- ⁶³ D. Knowles, *The Episcopal Colleagues of Archbishop Thomas Becket* (1951), 37-8.

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"As to the River Lugg" - its vanished mills, broken weirs and damaged bridges

By ANTHEA BRIAN

INTRODUCTION

(a) A 17th century Survey of the River Lugg

'As to the River Lugg' is how the writer of 'A Survey of the Rivers of Wye & Lugg' titles his observations on the Lugg of its 'weirs, mills, bridges, fords & shallows'.¹ This survey is unsigned and undated. Reference to the survey was made by Cohen² and by Willan³ and large parts were transcribed by Paar⁴ who says 'the anonymous author appears to have had a sound appreciation of technical and commercial considerations and to have spoken as he found without favour' and who, from internal evidence, dates the survey at 1696 or just after. John Lloyd⁵, writing in 1873, makes no mention of this survey though it had been acquired by the British Library in 1856.⁶

The present writer did not discover this survey until after making a study of the distribution of water plants in the river Lugg and coming to the conclusion that the plant distribution was much affected by the remains of man-made structures still present in the bed of the river.⁷ Clearly a survey made nearly 300 years ago could be expected to throw light on what these structures were. So the river Lugg has been looked at again in more detail from the confluence to Leominster in an attempt to find how much remains of what the 17th century surveyor described and in addition a search has been made for documentary evidence relating to the history of each site. Both aspects of this study, in the field and in the archives, have been fairly superficial but by putting the two sets of information together for each site and comparing sites along the river a clearer picture has emerged of how the river Lugg was used before the 17th and 18th-centuries Navigation Acts and how much the river was affected by these Acts. It has been found that the surveyor was very accurate about his facts and the bulk of this paper follows him, site by site as he progressed up the river Lugg.

But who was this anonymous 17th-century surveyor? An indication is given in the fragmentary accounts for the Wye and Lugg Navigation which still survive.⁸ In 1697 the Trustees under the 1695 Navigation Act ordered that:

'Tho. Alderne, Jonah Taylor & Tho. Church should take along with them a skillful person to survey the charge of removing all obstructions in the sd. river & doing such other works as should be judged necessary towards making the sd. river navigable.'

Then on 11 August 1697 (or just possibly 1699, the last figure is badly smudged) three items clearly relate to this order:

'gave Mr. Daniel Denell for his survey of the sd. river	01-02-00
To the Boatman that carried us down the river	00-13-06
spent in the survey it being 3 days & 3 nights	01-15-00'

At that time the Trustees had recently been appointed under the 1695 Act to make the rivers Wye and Lugg navigable on their lower reaches and were to do this by buying up all the mills so that their associated weirs could be removed. (The Navigation Acts concerning the Wye and Lugg are described in Cohen and Lloyd, the two of importance to the Lugg were passed in 1695 and 1727). The mill owners were to be paid sixteen times the annual value of their mills and the money to do this was to be raised by a rate on the whole county.

The information about each site provided by the survey is exactly what the Trustees would have needed in order to implement the Act. At each site the surveyor describes the obstruction, names the owner and gives the annual value, accurately if he could ascertain this (presumably by asking at the site) or by his own estimate if the information was not available. He also describes how each obstruction should be dealt with to enable boats to pass, though sadly by the time he approached Leominster and the end of his journey he was recording less detail than when he started out from Chepstow.

The entries in the Navigation Accounts do not entirely fit the survey in two ways.

Firstly the survey is written starting from Chepstow Bridge and goes up the Wye to just above Hereford and then *up* the Lugg while the Navigation Accounts refer to boatmen carrying the party *down* the river. Perhaps, as Paar suggests, the party travelled up river on horseback, which would certainly have been easier, and only returned by boat. The three days and three nights could then refer to the return journey only which seems more likely as that period of time would not really have been sufficient for all the stops needed to collect information. If this is so then the accounts for the upstream journey are missing but, as will be seen later, the Navigation Accounts are very fragmentary and many other items are clearly missing too.

Secondly the Trustees asked only for a survey of the Wye and did not include the Lugg. However to implement the Act this was clearly an essential addition. Perhaps it is significant that the survey for the Lugg starts on a separate sheet.

The survey is beautifully written and very neat. It is clearly a 'good' copy rather than notes made at the time and could well have been drawn up after travelling both up and down both rivers.

The survey though undated was clearly carried out before the 1695 Act was implemented. The close correspondence both in dates and in what the Trustees had asked Daniel Denell to do and what the anonymous surveyor carried out makes it seem virtually certain that Daniel Denell was in fact the surveyor.

But providing the anonymous surveyor with a name only partly answers the question of who he was and why he was considered a 'competent person' to carry out the survey. Further light is thrown on this problem by Willan who, in writing of early river engineers, says that 'Daniel Dunnell, who succeeded William Bailey as engineer for the Exeter Canal improvements in 1699, received a salary of £3 a week.'

The Exeter Chamber Act Book has three references to this man;⁹ in 1695 'Daniel Dennell' and two others were given a lease to bring water into the city. In this lease he is described as a carpenter of the city of Gloucester.

In 1699 'Mr. Daniel Dunnell' attended a committee to discuss the completion of the 'waterworks'; also in 1699 it was asked that 'Mr. Daniel Dunnell do forthwith take into his care the finishing and completing of the new intended work for bringing ships to this city' he to be the sole director of the work.

With regard to the first entry Daniel Denell was certainly in Gloucester in 1695 when the baptism of his son Edward was recorded in the register of the church of St. Nicholas. But this is the only record so it seems probable he was not a permanent resident.

Denell's association with the early waterworks is still recorded in Exeter on a stone built into the garden wall of a house, now a hotel, in Mary Arches Street. The stone is said to have come from the engine house of the original waterworks and bears the inscription 'this waterwork was contrived by Amb. Crowley and Dan. Dannel AD 1694'.¹⁰

The 1695 waterworks would have provided plenty of work for a carpenter for not only were the pipes laid throughout the city made of wood but the 'water engine,' installed to raise water out of a leat from the river Exe, appears to have been built partly of wood and indeed looked very like a large mill-wheel.

With regard to the 1695 lease Daniel Denell was the only one of the three men involved who signed his name properly the other two only making their marks. Denell's signature is in a clear, well-formed hand but it is not the same as the handwriting of the survey which provides further evidence that the survey as it exists today is a copy.

Clearly this Daniel Dannel/Dennell/Dunnell was employed by the city council in two capacities, first to provide Exeter with a water-supply and then, following the defection of the canal engineer William Bayley, to complete its Navigation. In Exeter he was undoubtedly considered a 'competent person.'

Since the date, the name and the occupation of the Exeter engineer fit so well with what is known of the anonymous author of the survey of the rivers Wye and Lugg it would seem virtually certain that they are one and the same man and in the rest of this paper it is assumed that this is so. It would seem that the Trustees of the Wye and Lugg had obtained the services of one of the men best qualified in the country to carry out their survey for the Exeter canal works followed the second earliest river Act in the country and the first pound locks in England had been built here c.1564.¹¹ Denell was employed to deepen the whole canal and to convert the three shallow locks into the one so-called 'double lock' which is still present today.

The section of the survey relating to the river Lugg is quoted in full in this paper but has been divided up so that the part referring to each site is given at the start of the section concerned with that site. The sites are taken in order from the confluence up to Leominster as in the survey. Table 1 lists all the sites described by Denell.

Table 1. *Three 17th century lists of mills on the river Lugg*

<i>Denell 1697</i>	<i>QS 1679</i>	<i>Lloyd c.1695</i>
Hampton Bishop Tidnor	Hampton Tinders	2 at Hampton Wear 2 at Tidnol wear

Lugg bridge	Lugg bridge	2 at Log berg gates
Shelwick	Shelwicke	3 at Selek weare
Kings mills	Kings mills	3 at Kings mills
Wisteston	Wisteston	2 at Wistaesin weare
Fryers mill	Fryers mills	1 at Bodnham weare
Bodenham	Bodenham avowed to be thrown down	1 at Haming Corte
Hampton Court	-	2 at friers wear
Eaton	-	3 efinton

(b) *Other sources of information*

The rest of the information has been drawn together from a variety of sources. Some of these cover the whole extent of the Navigation and some refer only to individual sites.

One of the most important of these sources is the few sheets of Navigation Accounts that have survived. Although fragmentary they contain a lot of valuable detail, some of which is described below.

At a meeting of the Trustees in August 1698 it was ordered that the Accounts of Mr. Mathews, Mr. Penny, Mr. Church, Mr. Alderne, Mr. Taylor and Mr. Hill be examined at the next meeting. Obviously these were the key men involved in implementing the Act and carrying out the actual work for the Trustees. Sadly, accounts have only been found for two of the men and these are fairly certainly incomplete, however it is possible to make some estimate of what jobs each of the men was responsible for.

(i) 'Mr. Thomas Mathews Esq,' who was the owner of Lugg Bridge Mill, was described as the 'Receiver of the Taxes,' presumably the money due from each parish - an unpleasant job since parishes situated far from the two rivers objected to having to pay. Mr. Mathews was also responsible for paying out money to the owners of the mills bought up by the Trustees. He writes well and most of his items were passed by some unknown person who, acting as an auditor, wrote notes about the accounts. But he was criticised for failing to obtain conveyances of the mills from the proprietors as had been ordered by the Trustees and indeed as had been laid down in the Act. He was also criticised for paying himself interest for five months on the money he said he was owed by the Trustees for his own Lugg Bridge Mill. As he had the money available he could have paid himself straight away and this small item perhaps indicates that Mr. Mathews was not entirely trustworthy. This is borne out by an entry in the 1727 Navigation Act about the bridge at Hampton Bishop which was pulled down by the Trustees of the 1695 Act and rebuilt by the inhabitants at their own expense. According to the 1727 Act the 1695 Trustees had ordered 'the Receiver' to pay £70 towards the bridge 'but the said Receiver declined the same *pretending* that he had not so much of the said Navigation money in his hands.'

These items certainly imply inefficiency on the part of Mr. Mathews if no worse and it is perhaps no wonder that no proper minutes or sets of accounts survive if he was the man in charge.

A much more serious item remains unexplained. The 1727 Act states that £18,000 had been raised under the 1695 Act and that the great part of this money still remained unused. Nothing has been found about this large sum of money and this too presumably passed through Mr. Mathews' hands.

(ii) Mr. Penny also seems to have produced accounts since comments on them have been found but not the accounts themselves. He too seems to have been inefficient, failing to attend a meeting and not accounting for 'a considerable sum of money.'

(iii) Mr. Thomas Church's accounts have not been found either. It is not clear what his job was but he certainly dealt with selling some of the materials from the mills. He was one of the men who went with Denell on the survey of the rivers.

(iv) Mr. Jonas Taylor also went with Denell. His accounts survive and although badly written and described by the Trustee's auditor as 'extremely confused' they are full of valuable details of what was actually done on the river Wye. In modern terms he was probably the engineer in charge of all works on that river but he does not mention the Lugg.

(v) Mr. John Hill is described as the Clerk to the Commissioners and one page of his minutes of a meeting of the Trustees has survived among the Navigation Accounts. In one of the other papers he was referred to as 'not skilful.'

(vi) One other set of accounts is mentioned - those of Mr. James Powles. These were said to have been 'contained in 4 sheets of paper' and have not been found but notes made about this account survive and show that he was in charge of work on the river Lugg. He received £466. 11s. 7d. from Lord Coningsby and Mr. Mathews and raised £103. 10s. 0d. from the sale of millstones and materials from four of the Lugg mills 'for which sum he hath not accounted but is made to do it but defers because he hath more work to do upon Lugg.' This delay, since it may have led to the loss of these accounts, was most unfortunate and if these accounts ever turn up they would be very illuminating. It seems that James Powles had over £500 to spend on the Lugg up to Leominster, in contrast to the £81. 5s. 7d. spent by Jonas Taylor on the much greater length of the Wye. Should this have indeed been so then clearly a lot more work was done on the Lugg than on the Wye. Some of this was undoubtedly involved with the bridges but some could well have been used in putting locks into the weirs (see below).

In the absence of accounts for the Lugg some idea of the type of work carried out in the years immediately following the 1695 Act can be gained from Jonas Taylor's accounts for the Wye. These mainly involved work on the weirs and included;

- a) making iron pinchers to draw stakes
- b) making breaches in the weirs
- c) filling cribbs with stones at Hereford weir
- d) making weir hedges
- e) dredging the bed of the river, including scouring fords
- f) using a net and pole to remove gravel
- g) cutting trees to clear the 'lineway.'

Lloyd assumes that 'a full account of the doings of the Trustees and of the money disbursed in the purchase of weirs and mills' was lodged in the Custos Rotulorum of the county but was subsequently destroyed by a fire. In view of the delays and inefficiencies shown above in the sheets of accounts that do survive an alternative explanation might be that full Accounts and Minutes were never in fact produced or deposited.

Other valuable sources of evidence about the Navigation as a whole include the Quarter Sessions Order Books,¹² (subsequently referred to as QS) and the papers already mentioned compiled by John Lloyd in 1873 who was drawing on evidence subsequently lost.

(c) *The mills on the river Lugg, their position and value*

From the outset it was clearly realised by those promoting the Navigation that the main problem to be dealt with was the number of weirs built across the river. These were either for taking fish or for providing a head of water to power mills or had both these functions. Most were very ancient. The conflict between owners of weirs and promoters of navigations was of very long standing and common to most of England's lowland rivers. The promoters of the 1695 Wye and Lugg Navigation Act adopted the radical solution to the problem of buying up all the mills thus being able to eliminate the weirs. In doing this they were not innovators but were copying what had already been done on a few other rivers. The first such Act is said to be that of 1515 which allowed the City of Canterbury to buy mills and knock down bridges on the Great Stour river to facilitate their Navigation.¹³

Acts for the Exe and Welland followed in 1539 and 1571 and then in 1635 William Sandys obtained Royal Letters Patent to make the Warwickshire Avon navigable. This was followed by his 1662 Act for the Wye and Lugg, an endeavour that was said to have achieved nothing on the Lugg. Acts for the Itchen, Stour, Medway, Norfolk Ouse, Witham and Fal followed before the second Act for the Wye and Lugg in 1695. The dates for these 17th-century Acts are given to show that although the promoters of the 1695 Wye and Lugg Act were not the first in the field they were certainly among the earliest to promote river navigation by Act of Parliament. Only fourteen Acts concerned with river navigation were passed in the 16th and 17th centuries in contrast to forty in the 18th century.¹⁴

On many rivers private ownership of mills and their weirs continued and led to endless strife right on into the 18th and 19th centuries. These problems are graphically described for the Thames by Thacker¹⁵ and occurred on small rivers too, like the Blyth in Suffolk where a newly-installed lock was frequently rendered inoperable because the miller took all the water. After much dispute this problem was resolved by the Navigation authorities paying to convert the mill-wheel to a breast-wheel. This took less water than the over-shot wheel it replaced.¹⁶

On the lower reaches of the Wye most of the weirs were fishing weirs but on the Lugg all the weirs were associated with mills. Two early lists of these mills exist, (Table 1) one in QS the other in John Lloyd's papers, but when these are compared with Denell's Survey it is clear that neither is quite accurate. The 1679 QS list of mills on the Wye and

Lugg gives the names of the owners and yearly value of most of the mills. But for the Lugg the list is incomplete. What information is given tails off the further away the site lay from Hereford. Thus Wisterton and Fryers mills have no owners named and Bodenham weir was 'avowed to be thrown down' which at that time it was not. The two sites furthest from Hereford are not even mentioned.

Lloyd gives a similar list which he says is 'authentic and probably accurate' at the time of the 1695 Act. This gives the 'number of mills,' at each site and has been annotated, presumably by Lloyd himself. This list seems to be more accurate except for the last two entries. The annotator clearly had no idea where 'fryers weir' was situated and did not realise it was placed out of sequence and he states that 'efinton' was Ivington but it seems far more likely that the original writer meant Eaton since this mill comes in the right place at the end of the list and the name Eaton itself is missing.

Denell's list of mills is clearly the most accurate of the three contemporary lists available and he gives ten mills between the confluence and Lugg Bridge, Leominster.

When the number of mills is stated it is usually not at all clear what the term actually means. It probably refers to the number of mill-wheels or pairs of millstones and not to the building itself as it would today. This distinction is sometimes clarified by a reference to 'two mills under one roof.'

The 1695 Act empowered the Trustees to pull down the weirs 'after giving satisfaction to the several owners after the rate of 16 years purchase for the clear yearly value of the weirs and proportionately for any lesser estate in the said weir,' the latter could include tenants. The yearly value was to be fixed by the Commissioners who could examine witnesses under oath though no evidence of this happening has been found.

It would seem that the Trustees' method of obtaining the information needed to implement the Act was by the employment of the 'skillful person' so it is of interest to compare Denell's valuations of the mills with the amount of money paid out by Thomas Mathews to the mill owners.

This can be done because Denell gives the name of each owner while Thomas Mathews usually recorded the names of those to whom he paid money and, although he does not say what the money was paid out for, it has been assumed that if a name that he gives tallies with that of one of Denell's mill owners then the money was paid out to buy that mill.

In FIG. 1 the two sets of figures are compared. The annual values given by Denell for the mills without their land have been taken, multiplied by sixteen as the Act had ordered and set against the sum of money paid out by Mr. Mathews.

For most mills it is clear that Denell's valuation had been more or less accepted as the basis for payment. In some cases however there was a significant difference and possible reasons for this are discussed under the individual sites.

A much earlier list of mills can be extracted from *Domesday Book*¹⁷ and it is of interest to compare the number and value of mills recorded there for manors situated by the Lugg with those on other rivers. About eighty mills are recorded for the whole county

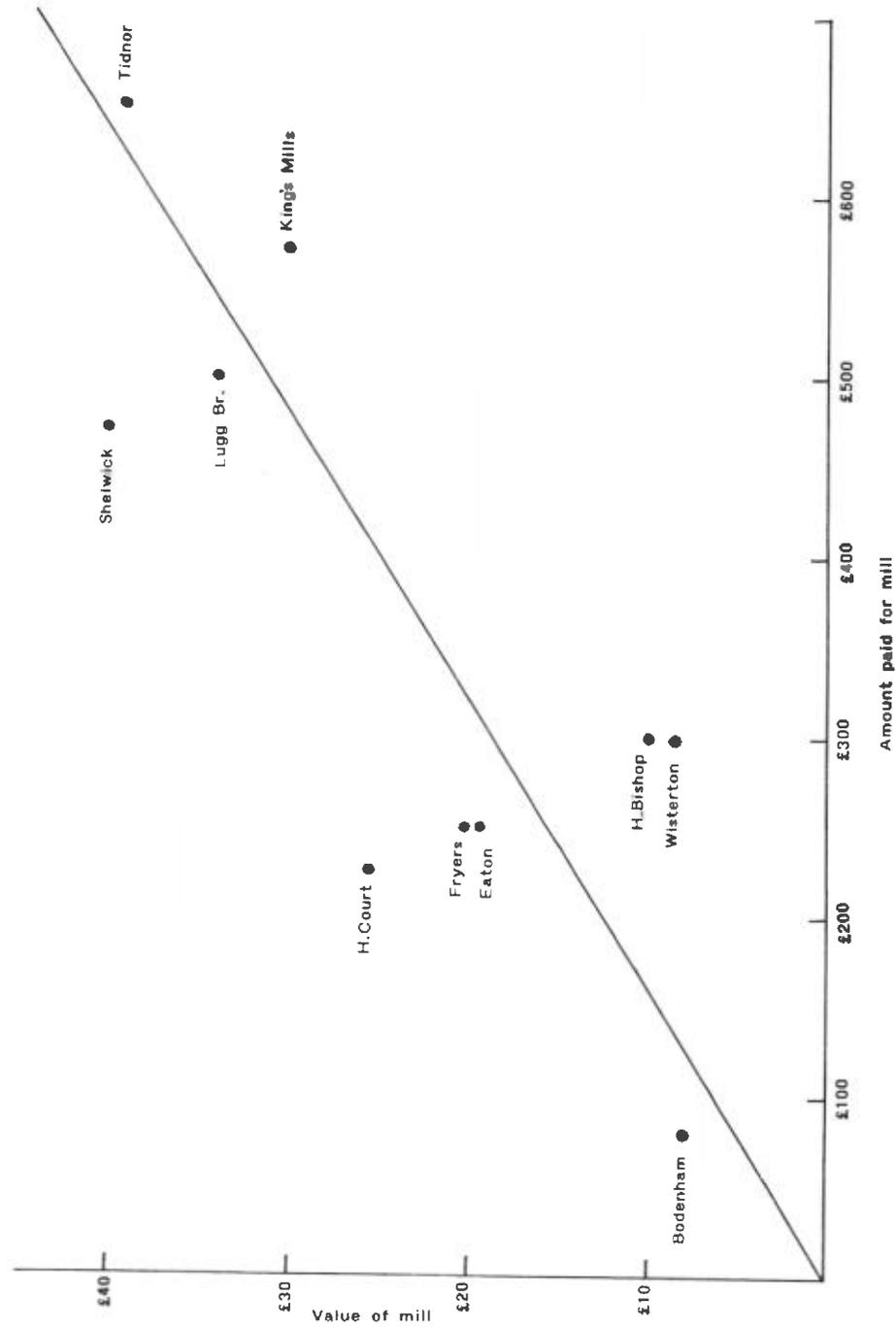


FIG. 1 Value of the Lugg Mills. A comparison of the value given in the Survey and the price subsequently paid to the mill owner. The diagonal line gives the annual value x 16.

and of these nearly one third were certainly situated in the Lugg Valley many of these probably on the Lugg itself. Only a detailed study of each mill site can indicate whether any particular mill recorded stood on the main river or on a side stream but this difficulty of interpretation applies equally to all the rivers in the county so does not invalidate comparative figures. The average value of the Lugg mills was 15s. 4d. while the average for the non-Lugg mills was only 6s. 7d. There were about twelve mills on the Wye which averaged 6s. 11d., little more than the county average. On the limited information thus available it is clear that at the time of Domesday the Lugg Valley was much the most important part of the county as far as milling was concerned. This probably implies two things: firstly that the river Lugg was more suitable for powering mills than the Wye and other smaller rivers in the county and secondly that there was a need for larger mills because of the amount of corn grown locally. Weldon Finn¹⁸ says that the 'value would to some extent depend on capacity, on the amount of grain milled and on whether it served one or two villages.'

It has been shown¹⁹ that at the time of Domesday the hay meadows beside the Lugg were much the largest in the county and since the two crops, hay and corn, complement each other - the hay being needed to feed the oxen that ploughed the arable land to grow the corn - it is not surprising that the Lugg Valley mills should also be the largest in the county.

It is suggested in this paper that eight of Denell's ten mills stood on Domesday sites and in each case the evidence for suggesting this is given. There is a presumption in favour of continuity of a site for if a mill was recorded in Domesday as Wenham²⁰ says 'it seems likely that a good site, once established, would be abandoned only with great reluctance.'

At four of the Lugg mill sites a fulling-mill was recorded at some time and the presence at another site is implied by the field name 'walkenmill close' nearby. The fulling stocks of these mills would have been powered by the same head of water that powered the corn mill. The records for these fulling-mills are all early, the last being in 1578. Denell records no fulling-mills on either the Wye or the Lugg which, had they existed then, he certainly would have done since their presence would have altered the value of the mill so presumably the fulling-mills had all gone by 1697.

The presence of these fulling-mills indicates that other great source of early wealth in the Lugg Valley - its sheep and their wool.

GAZETTEER OF SITES ON THE RIVER LUGG

The sites are given in order from the confluence of the Wye and Lugg up the river as far as Leominster. Denell's notes are quoted in full for each site that he describes, but for the sake of completeness some other sites have been inserted in their correct positions on the river their names being given in brackets. These additional sites are of two types, either places where old documents give some indication that there had been some structure associated with the river before the time of the Navigation or structures built after the Navigation had ceased to function. Table 2 gives a list of all the sites described.

Table 2. *Gazetteer of sites on the river Lugg*

Names given in the Survey are listed in capitals, other sites are given in lower case. These latter sites were not included in the Survey either because they presumably formed no obstruction at the time of the Survey or because the structure was built at a later date.

<i>Name of site</i>	<i>grid ref.</i>
Confluence of the river Lugg with the river Wye	565 375
Mordiford lock	568 374
MORDIFORD BRIDGE	569 375
HAMPTON BISHOP MILL	558 387
HAMPTON MEADOW BRIDGE	554 397
TIDNOR MILL	553 397
Tidnor lock	553 398
LUGWARDINE BRIDGE	547 406
LUGG BRIDGE AND MILL	533 423
SHELWICK MILL	533 423
Railway bridge - Hereford & Worcester line	534 427
Shelwick Green causeway	533 431
Catchpoles weir & Bracedory	534 435-436
Aqueduct - Hereford & Gloucester Canal	533 437
WERGINS BRIDGE	529 446
MORETON BRIDGE	513 458
KINGS MILLS	513 460
LASSONS BRIDGE, MARDEN	518 476
Railway bridge - Hereford & Shrewsbury line	512 486
WISTESTON MILLS	505 495
FRIERS MILLS	509 505
Railway bridges - Hereford & Shrewsbury line	513 510
Vern ford	519 500
Vern footbridge	518 511
Byfield bridge, footbridge by Bodenham church	529 508
BODENHAM BRIDGE	535 512
BODENHAM MILL	537 517
Lawn bridge, Hampton Court	519 523
HAMPTON MILL & HAMPTON OLD BRIDGE	515 526
Hampton new bridge	515 527
FORD BRIDGE	509 551
Volca meadow lock	514 571
Volca bridge	514 573
EATON MILL & Eaton Hall bridge	508 579
LUGG BRIDGE, LEOMINSTER	507 585

(Confluence of the Lugg with the Wye)

In passing up the Wye Denell makes no mention of the outflow of the Lugg nor in passing up the Lugg does he mention any obstruction at the confluence. So presumably in 1697 there was no structure in this position. However in 1702 a 'weare hedge' was being constructed here 'att Luggs mouth.' Three sheets of accounts survive in the British Library numbered 122 to 124 each labelled 'A further account of the several days work done at the weare hedge at Luggs mouth.'²¹ These sheets cover the period 4 July to 8 August and are wage sheets for eleven men who worked for the whole period and two more who only worked for one or two days. Between them they put in 230 man/hours. Thomas Hancock senr. was paid the most, 14d. a day, and was presumably in charge. The work must have begun before July but how long before there is no way of telling unless the other sheets are found. But even without these it was clearly a fairly extensive operation.

In 1786 a lock was marked here at the confluence on Isaac Taylor's map²² of that date. So it is very probable that the weir hedge was in fact associated with building this lock. If so then this was probably one of the first locks to be built on the Lugg.

In describing the weirs on the Wye Denell often distinguishes between the base of the weir, usually made of stones 'cribbed' together with stakes and the 'hedge' erected on top of the weir so possibly the structure built at the confluence in 1702 was comparable. Viscount Scudamore's accounts for August 1698 include;

'paid for fifteen thousand faggots for the weir £5--12--6'²³

This was probably Fownhope weir but may well indicate the type of material used a few years later at Lugg mouth.

Today there is a great deal of jumbled stone on either side of the Lugg at the confluence but as a lot of this has been deposited recently it is unlikely that any remains of the weir hedge made by Thomas Hancock and his gang could be found unless they are buried deep in the silt of the river bed.

Mordiford Bridge and Lock

'As to the River Lugg, the first obstruction is at Mordiford bridge, there is a shallow below the bridge which should be narrowed, and one Arch of Bridge raised, Else upon a flood here will be no passing vessels of 12 or 14 Tunns or more may pass as wee judge most part of summer.'

Mordiford Bridge is said to have been in existence in 1352 with the western of the two arches that span the river being of this date.²⁴ This is the pointed arch. The other arch, which is round-headed, together with the causeway is said to be probably 16th century.²⁵ It was reported to the QS in 1694 that the bridge was 'much in decay' and £204. 3s. 0d. was to be spent on repairs. Considering that in 1740 £200 built a whole new bridge at Lugwardine (see below) very extensive works must have been envisaged at Mordiford Bridge for that sum. Presumably this work was done before Denell's visit but the dates are very close and it is tempting to suggest that the eastern arch was in fact raised for the Navigation and is the round-headed arch we have today. If nothing was done about this bridge it is the only place on the Lugg where Denell's recommendations were definitely ignored. As many parts of the river were much easier to navigate in winter when the river was full than

in the summer it would obviously be very trying for boats to be held up by the first bridge they came to on the Lugg 'at times of flood.'

As for the lock, which lies on its own cut just below the bridge, nothing has been found out about the date when it was built but it seems likely it would have been built about the same time as Tidnor lock, next up stream, i.e. before 1714 (see below). It must have been repaired and altered many times but is today the best preserved of the Lugg lock sites and has been scheduled as an Ancient Monument. It was certainly a pound lock latterly and an 18th or 19th-century sketch by a Mr. Turton²⁶ shows beams for both upper and lower gates. (PL. III) The stonework holding the upper gates has been washed away but the metal loop and extension holding the head of the left-hand lower gate is still present.

Just upstream from the place where the channel for the lock diverges from the main river there are signs of a weir stretching about half way across the river as a sharp line. From the centre of the river here a rougher looking weir runs down to join the point between river and lock channel. Presumably when the lock was functional there was a much larger weir at this spot. To approach the lock boats would have had to pass under the eastern arch i.e. the later round-headed one. What was done about the shallows that Denell complained of is not known but there is still a very confused area of stonework and vegetation just below the bridge.

The only hint found of any mill on the Lugg at Mordiford comes in a grant by Queen Elizabeth to Blanche Parry in 1565 which included a weir in Mordiford 'called Rye Mill from ancient times' with a meadow and the watercourse late demised to William Hereford for thirty years.²⁷ If this mill did indeed stand on the river Lugg it was gone by 1697.

Hampton Bishop Mill and Hampton Meadow Bridge

'The next obstruction is Hampton Bishops Mill, Mr. Westfaling is the present proprietor, we could not learn the annual rent of the mill but according to the value of the other mills upon that River we judge this may be worth £10 per Ann. There is little obstruction but the wear made of Turf and Stakes. Here is a horse bridge over the river leading from Hampton to Lugwardine and is a Way from Midsummer to Candlemass whilst the meadows are common.'

Hampton Bishop Mill

Today there is no obvious sign of this mill except for the 'Back Brook' which has the right position and structure to have been a mill-lead. If this were so then the mill itself must have stood on the Back Brook at some point (see FIG. 2). Denell's public way would have had to cross the Back Brook and since it is always possible to cross a mill-lead at the mill itself it seems likely that the mill once stood where the present footpath crosses the brook. When this spot was visited in the very dry summer of 1984 and the Back Brook was dry extensive remains of a structure made of stone and wood were visible in the bed of the brook. The sketch plans (FIG. 3) were made after sweeping off the mud and silt and, on the basis of these plans it has been suggested that the structure is the remains of a water-mill, probably post-medieval but possibly late medieval. The parallel timbers with stones

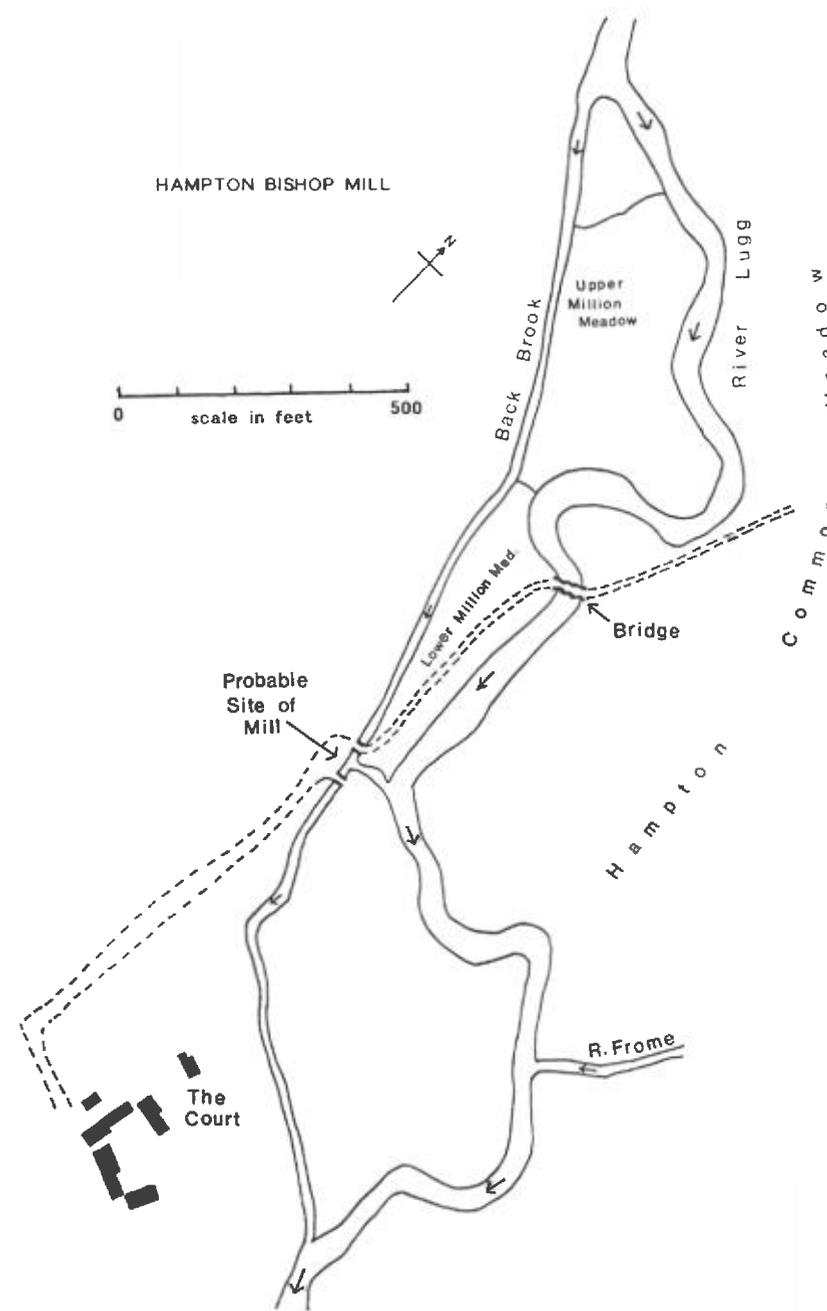


FIG. 2
The site of Hampton Bishop Mill based on 1904 O.S. map.

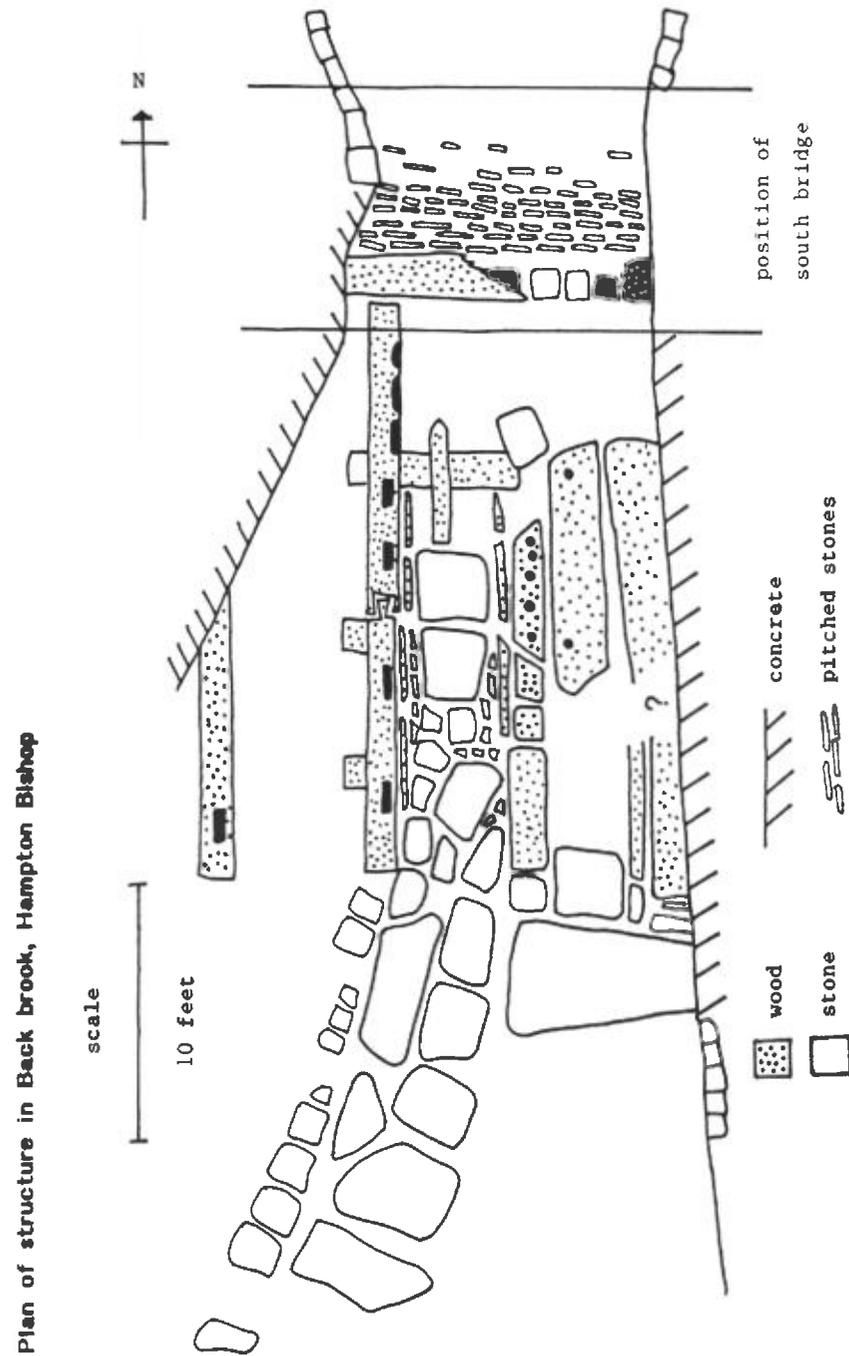


FIG. 3
Plan of structure in the bed of the Back Brook, Hampton Bishop.

between them were probably part of the tail-race.²⁸ Any other structures that may have survived have been buried under the recently made flood levées.

It seems reasonable to suggest therefore that this structure in the bed of the Back Brook is the remains of Mr. Westfaling's mill for which he was paid £300 in 1697.

The Navigation Accounts include some relevant information;

'for taking up the floodgates at Hampton Bishop Mill and for making the breach in the weir	£2-17-00
For an iron pincher for drawing the stakes	£0-07-06

With the mill situated on the Back Brook Dannel's weir of 'turf and stakes' must have stood just downstream of the place where the Back Brook leaves the river. Little can be seen at this spot today other than a rather stony bed to the river which causes a distinct riffle. The 'flood gates' were probably part of the mill itself and might, when closed, have diverted water back to the river down the side channel still present as shown on the sketch.

After the weir was breached the mill would have gone out of action so it is not surprising that the Tithe map (1842) marks nothing but the two bridges over the Back Brook at this spot. The Court Farm was situated nearby until the 19th century when the new Court Farm was built nearer the village and the old one abandoned. Mr. Jennings of Hampton Bishop has told me that the late Mr. Mayo, who had worked at the old Court Farm, had heard that the last occupants of the farm had repaired the structure in the Back Brook and used the water-power for some purpose, possibly milling, until the Court Farm was moved. There are indications that the wood and stonework of the structure in the Back Brook had been covered with concrete and this covering may well date from this more recent period of use. It may be that the remains of the mill have survived so long because they were covered in this way in which case, as the concrete has mostly now gone, the structure is at risk of being washed away.

Earlier references to a mill at Hampton Bishop cannot of course be tied to this site with any certainty but the presence of the Back Brook, a stream of considerable size which was presumably first dug to form a mill-lead, makes it seem likely that any earlier mills would have stood on the same site.

References to earlier mills in Hampton Bishop include;

Domesday Book which records 2½ mills worth 35s. This was the highest valued mill in the county assuming that the 2½ mills were on one site.

In 1325 Thos. de Langford was ordered to throw down a gorge (weir or sluice) that he had made in the Lugg.²⁹ This could well apply to the weir for the mill.

1404 the bishop of Hereford had 2 mills in Hampton Bishop, a water-mill and a fulling-mill.³⁰

In the 16th century there are several mentions of a mill owned by the Bishop and leased with two fields called Millhomme and Byfield. The field between the river and the Back Brook is today called Big & Little Million which could well be a corruption of Millhomme. Fields in this position between mill-race and river are also often called Byfield.³¹ There are thus scattered references to a mill on the Lugg at Hampton Bishop from 1086 to c.1700 and after that nothing has been found. It seems most probable therefore that there

was a mill on the Back Brook site from Domesday on until the iron pinchers were brought up to draw the stakes out of the river bed and breach the weir in 1698.

Hampton Meadow Bridge

The horse bridge described by Denell was considered by the Trustees to be 'inconvenient for the Navigation' and they caused it to be pulled down, according to the 1727 Act. This Act also states that because a public way led over the bridge, the inhabitants had to rebuild it 'which they did in a more commodious manner to facilitate the Navigation.' It seems possible that instead of destroying the whole bridge they raised new, higher arches on the old stone piers and if so these new arches are those present today and are built of brick. Brick seems to have been favoured by the Trustees and several other structures built at this time incorporate brickwork.

The Trustees of the 1695 Act had ordered the 'Receiver of the Navigation money' to pay the inhabitants of Hampton Bishop £70 towards the expense of rebuilding the bridge. This money was still unpaid by 1727 and under the Act of that year this debt was to be the first payment made after covering the charge of passing the Act. One cannot but wonder if the people of Hampton Bishop got their money this time.

This bridge is one of three on the lower Lugg whose main function was not the normal one of providing a route across the valley for a long distance road but rather to enable the local inhabitants to reach their Common or Lammas Meadow which lay on the opposite side of the river from their settlement. Wergins and Volca Bridges are the other two and all these three bridges are named after the meadows to which they gave access. These meadows were shut up for hay from Candlemas to Lammas and open for common grazing for the rest of the year. This is why Denell says the bridge is only a 'way while the meadows are common' and indeed Hampton Meadow is still a Lammas meadow today unlike the other two which were enclosed in the 18th or 19th century.

Tidnor Mill and Lock

'Next impediment above is Tidnor's Mills, being a corn mill belonging to Wid. Broome, a weare of stone, little other obstruction. The rent of the mills as we are informed is £56 per annum, so that the mills without the land is at £39 per annum, repaired by the tenants.'

The 1679 QS list of mills gives the proprietor here as Mr. Broome and the yearly value as £38 which tallies well with Denell's information.

This mill was bought by the Trustees of the Navigation and Widow Broome was paid £650. However, unlike most of the other mills, this one was not destroyed. The reason for saving it is not known but by 1714 some of the Trustees were complaining that 'the River Lugg continues still unprofitable to the County by not being made navigable and we are informed that the mill now standing on the said River Lugg called Tidnors Mill turns to no profit but that if the same were applied to the use of the Navigation on the said River Lugg it would turn to some more considerable advantage than it now does ...' As a result they determine to let the mill to one John Smallman.³²

The lease is very interesting on several counts:-

a) several closes of land and four acres in the Common meadow called Lugwardine meadow are excepted from the lease which shows that the Trustees had bought the land as well as the mill.

b) a clause specifically excepts 'the lock lately built near the mill and weir for the Navigation of the River Lugg ... and free liberty through the lock and for repairing the lock.' In addition James Smallman was not to hinder the Navigation in any way or build up or pull down the weir. This last clause was very important from the point of view of the Navigation because were the weir lowered the miller could, while milling drain the water out of the lock and bring the boats to a standstill. It was to avoid this sort of trouble which had occurred on other rivers that the Trustees had made sure the Act empowered them to buy up the mills and their weirs.

As Denell does not mention a lock here in his survey it seems certain that this lock was built between 1697 and 1713. The building of a lock fits well too with the absence of any mention of making a breach in Tidnor weir.

c) John Smallman was given permission to take two pairs of millstones and the two shafts and wheels from Shelwick Mill and also 'what stone can conveniently be taken and had from the weir called Shelwick without prejudice to the Navigation.' There is no mention of why Tidnor Mill was to be restored and Shelwick Mill destroyed.

By 1776³³ the 'corn grist mills' had become 'an iron forge called Tidnor forge.' This new use for the mill was probably the reason why the weir remained in repair until the 1920s when the Lugg Drainage Board made a new cut for the river to the W. of the lock. The weir was destroyed or covered over and the mill-leaf went out of use.

FIG. 4 is drawn from the Tithe map and shows how the watercourses were arranged.

The right-hand wall of the lock was probably lowered at this time to its present height, which is well below the normal water-level.

Lewis *et al* in their survey of *Flashlocks on English Waterways*³⁴ call this a flashlock or halflock and describe the left-bank wall noting the well preserved groove made to hold the iron gate anchor which is still present. They failed however to note the right-hand wall and the base of the wooden gate which is still *in situ* at the top end of the lock showing that this was in fact a pound lock with two sets of gates. The lock is about 12 ft. wide and Lewis *et al* give the length as 96 ft.

This lock must have been repaired and altered on many occasions but, because of its position relative to the weir, must be in the same position as the lock mentioned in John Smallman's lease.

Lugwardine Bridge

'About half a mile higher up the river is Lugwardine Bridge built of stone, arched very low, here should be a Draw bridge over one arch, no other Hindrance here.'

Old Lugwardine Bridge probably had three arches and Denell's recommendation that there should be a drawbridge here throws a flood of light on all the subsequent descriptions in the QS records of difficulties with this and other bridges.

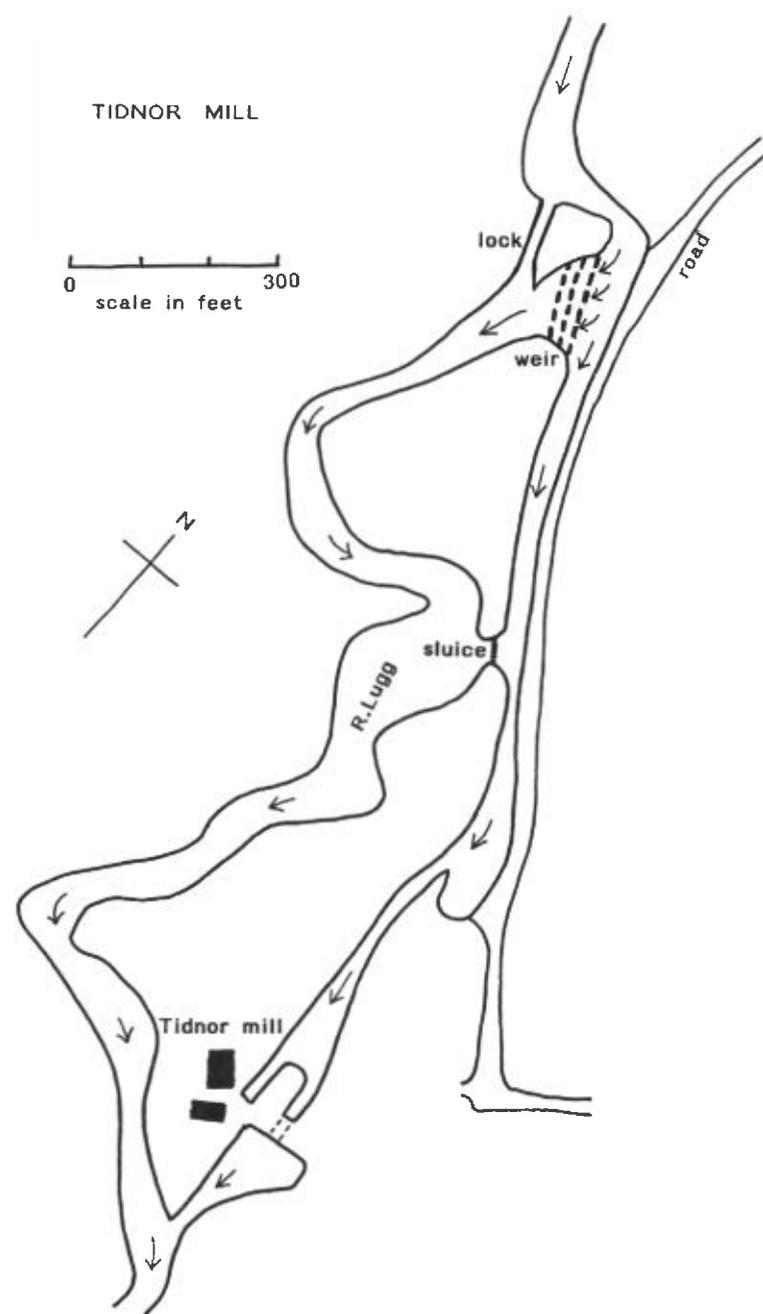


FIG. 4
The site of Tidnor Mill and lock based on Lugwardine Tithe Map 1839.

The problems created by breaking one of the arches of Lugwardine Bridge for the benefit of the Navigation and replacing it with a timber, drawbridge have been described in the earlier paper.³⁵ They culminated in the complete rebuilding of the bridge in 1740 when the builders were able to take advantage of an exceptionally dry season during which they diverted the river to 'lay the foundations of the ... bridge with piles.' The whole work cost £200 and there were no further reports of trouble with this bridge.

Lugg Bridge and Lugg Mill

'Next above is Lugebridge it is a substantial well built stone bridge but the arches too low for passage at a flood, a little above the bridge are Lugg Mills belonging to Mr. Thomas Mathews they are now let with the land at £37 per Annum, the repairs on the landlord except some small things the land belonging too is rented by them, is thought by us to be worth £3 per Annum. Here is no wear but floodgates and little hindrance (more) than the gates, were they taken away there would be free passage for boats of 20 Tunns.'

Lugg Bridge was probably the earliest structure on this site, or rather the ford that would have preceded the bridge, since this was where the Roman road from Worcester to Kenchester crossed the Lugg.

The present bridge is described by Pevsner as medieval. It was frequently mentioned in the QS records in the 17th and 18th centuries as in need of repair.

Milling here has a long history complicated by the fact that there have been two, quite different mills standing on different sites at different periods with a gap of fifty years when there was no mill here at all. (FIG. 5)

For convenience in identification the early mill will be referred to as 'Mr. Mathews' mill' since this was the one described by Denell. It stood 'a little *above* the bridge' and went out of use in 1698. The later mill will be referred to as 'Margaret Rede's mill' since it was built by her *c.* 1750. It stood on the site of the present Lugg Mill immediately *below* the bridge. Parr considered that the author of the survey was wrong in saying the mill stood above the bridge but here, as elsewhere when Denell's statements can be checked, his description has been found to be very accurate.

Mr. Mathews' Mill

This was the mill in existence when Denell made his survey. Its position above the bridge is confirmed by the fact that he records that there was no weir but floodgates. These were presumably fitted in the arches of Lugg Bridge to raise the necessary head of water to power the mill. This arrangement implies that the wheel was in the river itself and was undershot.

No sign of this mill has been found but from information given below it is probable that it stood on the left bank of the river with the then confluence of the Little Lugg and the Lugg itself just upstream and the bridge below. This area was much altered subsequently when Margaret Rede built her mill so it is not surprising that no remains of this mill are visible. In 1698 the mill was owned by Thomas Mathews Esq. who, as described above, appears to have been in charge of the financial side of implementing the Navigation Act. His entries concerned with Lugg Bridge mills are given below together with com-

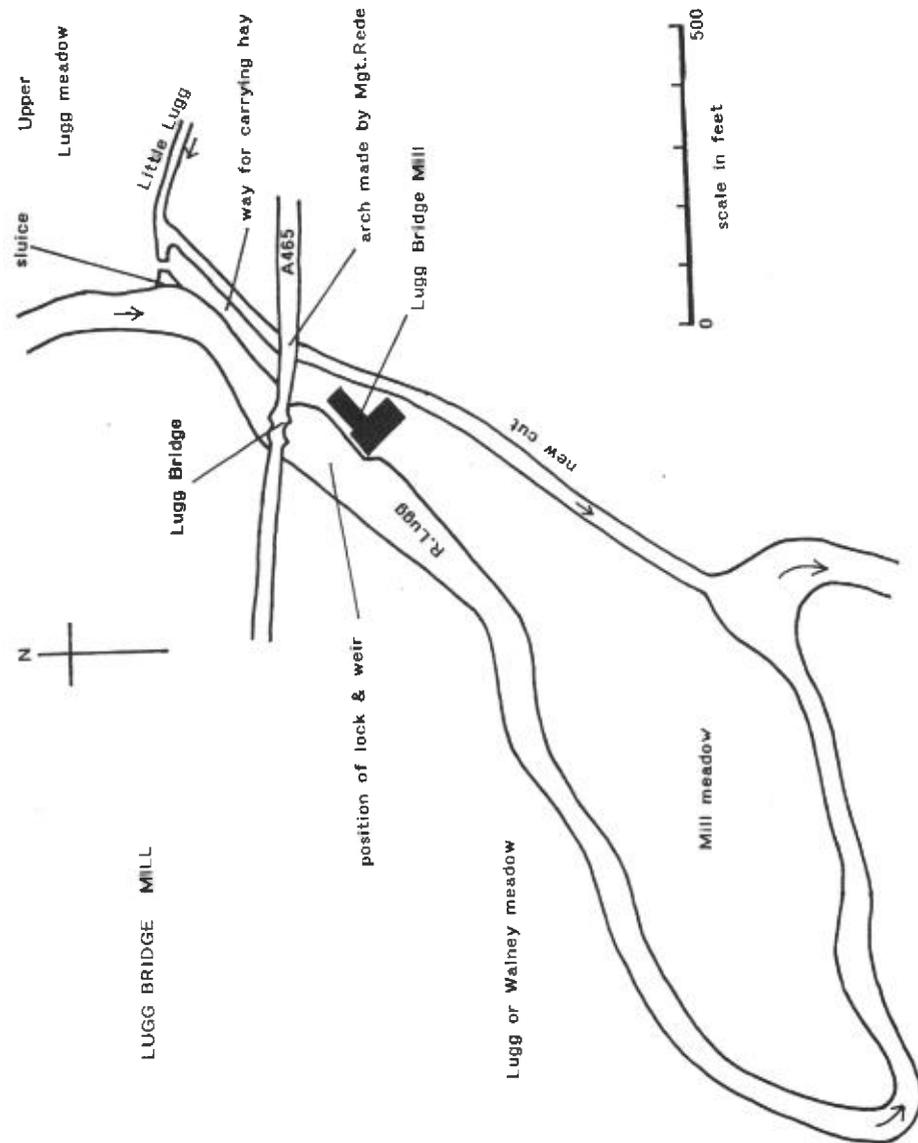


FIG. 5
The site of Lugg Bridge Mill and lock based on 1904 O.S. map.

ments, shown in brackets, which were written on the original document in a different hand.

On April 10 1698 Thomas Mathews records;

'paid to myself for my mills by order (ought to be allowed)	£500-00-00
interest of 5 months (we consider ought not to be allowed because he had money in his hand and his order does not express interest)	£ 10-08-04'
and on May 30 1698;	
'For my stones and gates by order (ought to be allowed)	£ 25-00-00
For mending the banks and levelling the ground to make it navigable (ought not to be allowed)'	£ 13-06-06

The second and fourth entries above are the only cases in all the accounts where the commentator reckoned that Mr. Mathews' accounts ought not to be allowed and it is probably no coincidence that in both cases Mr. Mathews was paying out money to himself.

The sale of the mill with its stones and floodgates in 1698 must have marked the end of this mill.

At a rather earlier date it seems probable that Mr. Mathews' mill is the one that caused trouble to 'a Captain, a Lieutenant and an Ancient of the Military Company at Norwich' who in 1634 on approaching Hereford as it was getting dark 'neere lost ourselves in a Mill Pool (for this lay in our way) had not that miraculously honest toll-dishing Miller directed us over that deep current by whose good guidance at last, though late, we entered the old city.'³⁶

As to the earlier history of this mill one of the Lugwardine mills recorded in Domesday most probably stood on this site.³⁷ Later there was a fulling-mill here when in 1569 cloth was stolen from the site³⁸ and a mill was recorded here in 1578.

Margaret Rede's Mill

The first indication that a mill was to be built on the present mill site below the bridge came in 1749 when the Trustees of the Navigation, in pursuance of the 1727 Act, gave a 99-year lease to Margaret Rede, spinster of Newcourt to 'erect and keep a good and sufficient weir and lock upon the River Lugg ----- for the passage of barges, boats and vessals upon the river at her personal cost.'³⁹

The weir was to be built at a site on the river adjacent to her own lands on the E. and the lands of the Dean and Chapter of Hereford Cathedral on the W.

This weir was built just below Lugg Bridge and was very substantial because when it was removed in 1925 by the Lugg Drainage Board Alfred Watkins described it as having dammed the water halfway up the bridge piers.⁴⁰

Margaret Rede was given liberty to build a mill or mills upon or adjacent to the weir and to impound and raise the water for the working of the mill at all convenient seasons consistent with the navigation of the river.

She was also given the 'flood gates and erections' on a piece of waste land on the W. below and near Lugg Bridge. These could well have been the remains of the floodgates associated with Mr. Mathews' mill which had been bought up along with his mill but perhaps never removed from the site.

Since the building of the weir could cause flooding of the land above Margaret Rede was specifically ordered not to 'impound the water in the river so high as to overflow the banks' and in addition she was ordered to make a watercourse from 'a certain rivulet or stream called Little Lugg to discharge the water from the rivulet into the River Lugg *below* the weir and this of course meant below the bridge as well.

To make this watercourse Margaret Rede is said to have agreed to purchase land. It is implied that this land, which lay to the N. of Lugg Bridge on the left bank of the river, was bought from the Trustees. Land owned by the Trustees in this area would have been that bought in 1698 from Mr. Mathews, in other words the site of Mr. Mathews' Mill. This confirms the position ascribed to the earlier mill above Lugg Bridge.

The watercourse made by Margaret Rede which was called the 'new cut or backbrook,' is still there today although it is often, wrongly, called the mill-race. In fact it had nothing to do with conveying water to or from the mill-wheel which was on the river side of the mill but in addition to relieving flooding above the bridge its other function was to carry the 'surplus and waste water from the mill pound.' This indicates that the part of the river above the weir was used as the mill-pond to raise a head of water for the mill and the new cut was used as an overflow channel as well as carrying the waters of the Little Lugg. To control the level in the mill-pond a sluice would have been required between the river and the new cut and this is mentioned in 1797 when the new owner of the mill is said to be responsible for keeping a floodgate in repair at this place. Indeed a sluice is still marked here on the 1904 O.S. map but is no longer present. Presumably when the Drainage Board took away the weir and the mill went out of action the overflow channel removing water from above the weir was no longer needed and all the waters of the Little Lugg were diverted to flow permanently down the 'new cut.'

This 'new cut' had to pass under the Worcester road and Margaret Rede made an arch here for that purpose. Concern was expressed about the possible dangers of this bridge to the highway and in 1753 the QS clerk was ordered to attend upon Mrs. Rede and demand a bond of £100 to indemnify the County from any damage that might happen to 'Lugg Bridge causeway by means of an arch made by her under the road at the east end of the bridge.' The responsibility for this arch still remained with the owner of the mill in 1831 when Charles Bodenham was ordered to repair it. There is still an arch over the Little Lugg in this position today, perhaps incorporating Margaret Rede's original structure in its centre.

When making the new cut Margaret Rede had also to maintain a right-of-way for the occupiers of land in 'Upper Lugg Meadow' to carry their hay out of the meadow to the highway. This way was to be made over part of the land she bought to make the new cut and it is still there today as the dead-end lane running N. from the main Worcester road opposite Lugg Bridge Mill between the Lugg and the Little Lugg. When this way was made it was said to be for no other purpose than for carrying hay - its present use as a car park for anglers could not have been envisaged! Before all the water from the Little Lugg was diverted down the new cut a bridge would have been needed to get from this lane into the meadow. When Richard Price bought Lugg Bridge Mill in 1797, he became responsible not only for the sluice or floodgate here but also for 'the bridge erected for carrying hay out of the meadow called Upper Lugg Meadow and the road leading therunto.'

The name 'Upper Lugg Meadow' is nowadays used for the part of Lugg Meadows between the Worcester and Lugwardine roads but in Margaret Rede's day 'Upper Lugg Meadow' was on the left or E. bank of the river and N. of the Worcester road. At that time it was still managed as a medieval Common or Lammas Meadow as are the Lugg Meadows still today.

Lugwardine in the nineteenth century gives the subsequent history of this mill.⁴¹ It was the last mill on the lower Lugg to grind corn and its end came in 1925 when the weir was demolished.

Shelwick Mill

'About half a mile higher are Shelwick Mills belonging to Mr. Jno. Fox, here are three mills and a stone weare of about 9 foot high, the annual rent of the mills as we are informed with the land now let with them is £89 per annum and the land we judge worth £45 per annum so that ye mills without ye land are at £40 per annum.'

In the Navigation Accounts Mr. Mathews records that on 14 February 1699 he paid Mr. Robert Fox and Mrs. Mary Fox for Shelwick mills £446. 18s. 8d. He also records paying to himself £2. 5s. 'for my attendance on the Trustees in London and other charges about the materials.' It sounds as though John Fox had died shortly after Denell's visit and that Robert was his son. Elsewhere in the Navigation Accounts Matthews paid three of the heiresses of Sir Henry Lingen (see under Kings Mills, Marden below) £7. 11s. 6½d. each for their shares in Shelwick Mill. It has not been discovered how they obtained these rights in the mill. From the price paid for the mill it would seem that the Trustees did not also buy the land (see FIG. 1).

There are scattered references to a mill at Shelwick from Domesday up to Denell's survey of 1697 but after that nothing has been found so it seems reasonable to assume that all the references refer to the same site 'half a mile' above Lugg Bridge.

Domesday records 'a mill at 30s' at Shelwick. This is the second highest value for all mills recorded in Herefordshire the average value of which is only nine shillings. This clearly implies that the Shelwick Mill was of importance.

The next reference comes from Bishop Cantelupe's Register c.1290 in which the bishop grants the village of Shelwick to his tenants for his life but excludes 'our mill on the Lugg'.⁴²

In 1404 an inventory of the bishop of Hereford's profits from his manors includes a mill at Nether Shelwick worth 40s. and a 'Fulling mill of no value because it is wasted for many years past.'⁴³

In 1578⁴⁴ Wm. Addye held a water-mill and land in Inferior Shelwick once held by Henry Catchpole. There may be some connection here with 'Catchpole's weir' mentioned in a perambulation of the Manor of Marden (see below).

The names Nether Shelwick and Inferior Shelwick fit well with Denell's mill site which is well downstream from the main part of Shelwick. Finally in 1663 the Herefordshire Militia Assessment includes the entry 'Mrs. Acton on Shelwick Mills - £2. 0. 0.'⁴⁵

The best indication we have of the actual site of Shelwick Mill comes from Denell's description as 'about half a mile above Lugg Bridge' and at about that distance above the bridge today there is a great deal of dressed or semi-dressed stone in the left bank and bed of the river. There is a very straight stone edge for about 60 ft. beside the river and various structures just up the bank (FIG. 6).

A little lower down in the field also on the E. side of the river is a sinuous channel leading to a roughly 60 ft. square depression. A possible explanation of all these structures and depressions could be that the stonework in the river represents the remains of the '9 foot high' stone weir from which water was directed down a leat, now the sinuous depression, to a mill-pool, now the square depression, by which the mill stood. The structures there today are very similar to those at the Bodenham Mill site (see below).

It is recorded that John Smallman, tenant at Tidnor (see above), was given permission to take stone from the Shelwick Mill which would account for its complete disappearance. He was also allowed to take stone from the weir but without 'hindering the navigation.' It is possible that, as at Tidnor, this indicates that a lock had been built into the weir and this might account for the stonework still present. The site deserves a proper investigation.

A sunken track bounded by old pollarded willows which is marked on the plan could well have led to the mill but has been cut off by the later lane running N. S. from Sutton to Lugg Bridge.

(*Railway Bridge*)

(*Shelwick Green*)

Denell makes no mention of any other site in Shelwick but for the sake of completeness a note is included here made by Alfred Watkins when he was describing work being done at Lugg Bridge by the Internal Drainage Board.

'A foreman told me of a fine cobbled stone causeway crossing the Lugg opposite Shelwick Green which they uncovered during the Lugg Drainage work.'⁴⁶

This was presumably where a well-marked grass-covered causeway or bank still runs down the centre of Shelwick Green Common to the river Lugg. The place has been visited when the river was fairly low but no sign of this causeway in the bed of the river could be

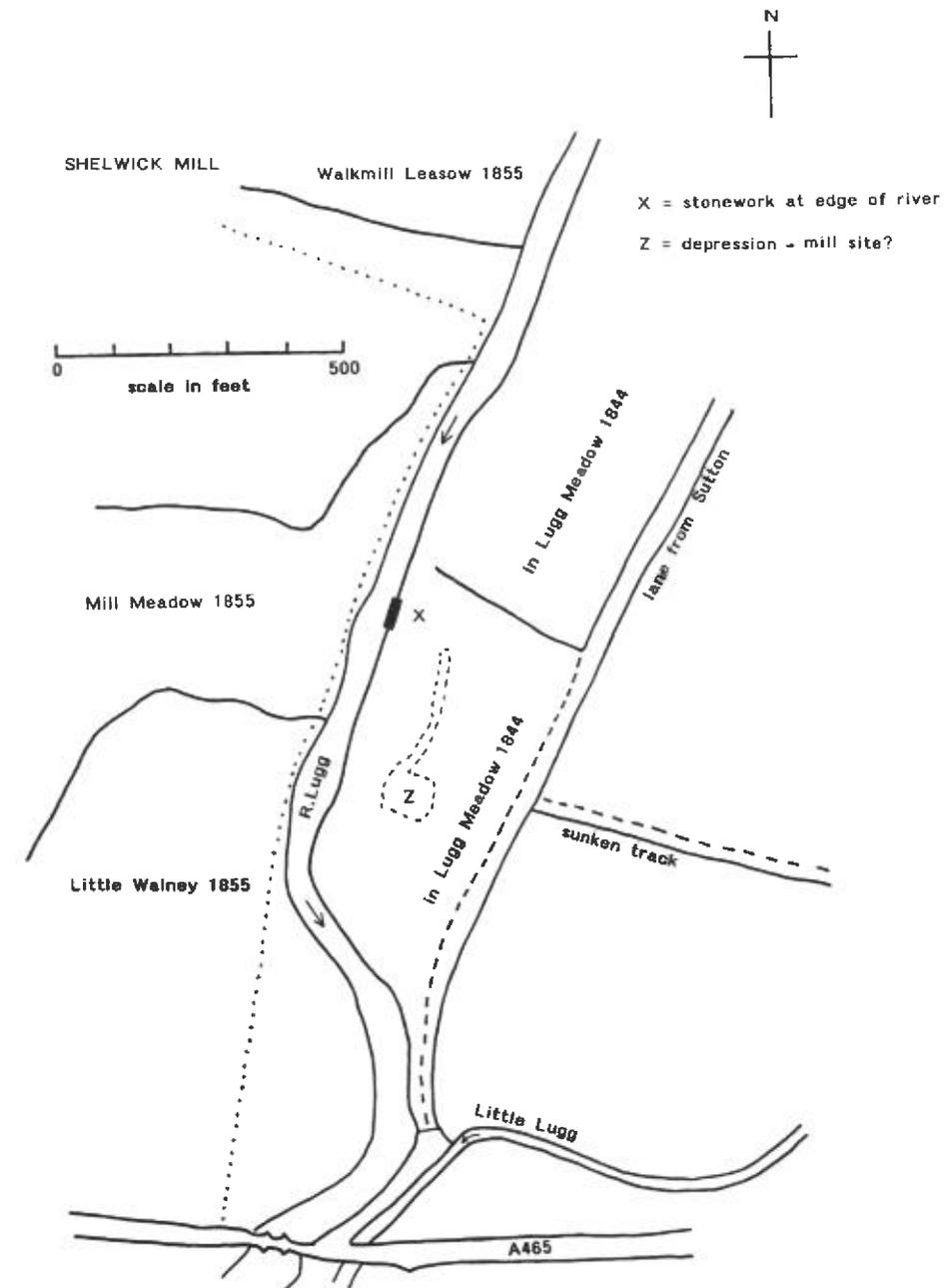


FIG. 6
The probable site of Shelwick Mill based on 1904 O.S. map.

seen. One wonders whether, when the Drainage Board uncovered it, they went on to remove it as well.

This may well be the Shelwick Ford mentioned several times in the Marden Inclosure Act of 1820 and it is probably significant that this way to the river was not inclosed at that time and remains a common to this day.

(Catchpole's Weir and Bracedory)

Both these places are mentioned as landmarks in the 'Bounds of the manor of Marden 1658' copied in the *History of the Manor of Marden*.⁴⁷ The writer of the manor survey was approaching the Lugg from the E. and 'came unto a Place called Bracedory at Great Lugg; and from thence up the said River of Lugg unto a place called Catchpoles Weare and over the said River there into the lower end of a brook called the Old Ea.' This is clearly describing the place where the parish boundary still runs along the Lugg for a short distance. The Coningsby map⁴⁸ c.1710 marks 'Mereer's Ford' at about this spot. Does this indicate where those following the Meers or landmarks crossed the river? Bracedory is mentioned elsewhere in the *History of the Manor of Marden* to do with a fishery. Few signs of either of these two places have been found either on the banks or in the river, only a slight riffle in the water and some depressions in the ground.

(Aqueduct of Hereford and Gloucester Canal)

This was built in 1844 and demolished in the 1920s. The remains of one of the stone piers is still visible in the bed of the river here when the water is low. The embankments on either side of the river remain as well as some of the syphons that carried the river under this very low aqueduct. Although much later than Denell's day it is worth recording that in 1868 the aqueduct seems to have been called Tovey's castle. Lot 2 at a sale of that date comprised an 'excellent Fishing Station at the aqueduct known as Tovey's castle, situated at the junction of the Canal and River Lugg This station is well known both for good Fishing and as the resort of numerous kinds of wild fowl.' The wild fowl, mainly Mute and Bewick swans, still congregated here in winter in large numbers until quite recently when the levées beside the river were made and the birds left.

The 1868 sale included a Fishing Box, withy beds and Fishing station.⁴⁹

Wergins Bridge

'The next hindrance is Wergins Bridge near Sutton, made of Timber but low.'

Wergins Bridge, like that at Hampton Bishop is unusual among the Lugg bridges in that the road to the bridge crosses a wide flood-plain on *both* sides making the approaches to the bridge extra prone to flooding. In contrast most of the other bridges cross from high ground on one side.

Wergins and Hampton Meadow bridges differ from the others too in that they were both the responsibility of the parishes in which they were situated and it seems probable

that the original function of both these bridges was simply to enable parishioners to reach their Common or Lammas meadow which in both cases was situated on the far side of the river from the main settlement. Indeed both bridges take their names from the meadow they served. The 'Wergins stone,' still standing in the fields here, may well be the last survivor of a set of stones which according to Silas Taylor writing c.1650⁵⁰ were 'set as markers so to direct a passage when the waters cover the meadows to a bridge called the Worgen over Lugg to Sutton.' At times of flood still today when the Wergins stone stands up out of the water the necessity for such markers is very clear.

It is not known what was done with the wooden bridge following Denell's report in order to make it suitable for the Navigation. However forty years later at a public meeting held in Sutton in 1749 the bridge was described as 'now out of repair and impassable' and it was agreed that a local tax be levied to raise money 'to repair and rebuild' the bridge.⁵¹ It is perhaps odd that no mention was made of having to accommodate the Navigation in this work.

Shortly after this an estimate for the work was accepted from one Thomas Chinn. This must presumably be the Thomas Chinn who was indicted at QS for setting locks against some of the County Bridges one of which was Wergins bridge (see below). Presumably when building a lock against the bridge Thomas Chinn also repaired the bridge. At any rate nothing more is recorded until 1784 in which year the Rector of Sutton and five others were advertising for estimates to 'erect a wooden or stone bridge over the River Lugg near the place where the old bridge formerly stood belonging to the several parishes of Sutton St Nicholas and Sutton St Michael.'

This indicates clearly not only that the old wooden bridge had collapsed but also that the bridge was the responsibility of the parish not the County.

After further difficulties a new bridge was built in 1785 by John Gethin of Kingsland and from the accounts it was clearly a stone bridge, probably the one photographed by G. H. Jack the county surveyor⁵² just before it was replaced c.1912. It was described as 'so narrow that a traction engine passing over scraped both sides.'

A comparison of the Ordnance Survey maps with the Coningsby map indicates that the earlier wooden bridge stood a little down stream of the later stone bridge. The site of the early bridge may be indicated by a well-marked riffle about 100 yards below the bridge today where the Water Board has recently dredged out a great quantity of gravel in which are a number of stones that could well have been part of some structure, i.e. abutments for the wooden bridge or an earlier ford. The Coningsby map marks a Withyford furlong in this area.

Moreton Bridge

'Next above is Moreton Bridge of stone but low should be raised in one arch.'

Pevsner suggests that this three-arched bridge was probably built in the 16th century and by 1660 the QS records say that it was 'in decay and in danger of being lost by the water wearing away the earth.'

Denell's recommendation was undoubtedly carried out as the right bank arch is still today considerably higher than the other arches. There is no obvious external sign of this alteration but this is most probably the result of repair work carried out in the 1920s under G. H. Jack.⁵³ In describing the work Jack reports that after strengthening the interior of the bridge 'the old stone facing was carefully replaced' but whether this care would have included retaining discontinuities in the stonework caused by the earlier raising and rebuilding of one arch is doubtful. By whatever means the arch was raised at the time of the Navigation it seems to have caused no trouble subsequently which perhaps indicates that the work was done in stone straight away rather than first fitting a wooden draw-bridge as at some of the other bridges. The relationship between this bridge and Kings Mills just upstream is described in the next section.

Kings Mills, Moreton

'A little way above the bridge are the mills called Kings Mills. Here are 3 mills, they belong to Mr. Symonds, vintner in London, let with the land now at £40 per annum repaired by the landlord. The land we value at £10 per annum and the mills at £30. Here is no weir but floodgates.'

This was one of the Lugg's most important mills and is identified by Sheppard⁵⁴ as being the Domesday mill in Marden valued at 20s. and twenty-five sticks of eels. This was the sixth highest value in the whole county.

At that time the mill belonged to the King and this may well be the origin of the name King's Mills although it reverted to the crown on many subsequent occasions.⁵⁵

The payments made for the mill as given in the Navigation Accounts are listed below;

Mr. Hords for Kings Mills	40.00.00
Mr. Dobyys 3 shares in 7 for the heirs of Sir Henry Lingen	42.17.01½
Mr. Herring	14.05.08½
Mrs. Eliz. Lingen	14.05.08½
Mr. Unett his wife's share	14.05.08½
paid for Kings Mills	450.00.00
unpaid by mills demolished	5.02.04½

In the accounts these payments were not all recorded consecutively but are put together here for clarity - clearly the ownership was complicated. Fortunately a good deal of background information is given in the *History of the Manor of Marden c.1720*.

The estate of Sutton Freen, of which Kings Mills formed a part, was owned by the Lingen family⁵⁶ in the 16th and 17th centuries. In 1656 Sir Henry Lingen with his wife Lady Alice mortgaged the '3 mills called Kings Mills with meadow grounds belonging' for £400 to Lady Elizabeth Langley. Sir Henry died in 1661 and Lady Langley, being then married to one Gunter, entered into possession as a result of the 1656 mortgage.

In 1672 Gunter and Lady Langley sold 'all their interest in the mortgage of the mills to William Browne, gent. an Apothecary in London.'

At this time the attorney involved was employed by 'one Simons who was a Trustee for Browne.' By the time that the *History of the Manor of Marden* was written Browne was

dead but Simons was still a Trustee. This then accounts for Denell's finding that the mills were owned by 'Mr. Symonds, vintner from London,' and highlights again the accuracy of the information given by Denell.

Presumably the largest sum of money paid for the mills, £450, to which Mr. Matthews attaches no name, was paid to Mr. Symonds as a Trustee. The £40 paid to Mr. Hords are accounted for by the fact that in 1677 the mills, were let to Richard Hords who held them at a rent of £40 per annum. The other four payments were all to members of the family of Sir Henry Lingen. When he died one son survived him but not for long and the estate then became the joint property of his seven daughters, Elizabeth, Joan, Blanche, Celia, Mary, Frances and Alice. Between them they still seemed to be entitled to £100 less a halfpenny from the sale of the mill which amounted to £14. 5s. 8½d. each. The *History of the Manor of Marden* describes fierce family quarrels over the division of the inheritance as a whole but as regards the mill the division appears to have been equable. Elizabeth was given her own share, the two youngest daughter's shares were taken by their respective husbands, Mr. Herring for Alice and Mr. Unett for Frances. Mr. Dobyys, who was a lawyer, took his wife, Mary's share and also the shares of Blanche and Joan presumably. Celia was dead already and what happened to her portion is not disclosed.

After the mills were bought up it seems fairly certain that they went out of use since there is no mention of them when the Manor of Marden was granted to David Rowlands⁵⁷ or in 1717 when it was bought by Lord Coningsby and the writer of the *History of the Manor of Marden* implied that the mills were pulled down, but there is no mention of sale of materials from this site in the accounts.

The only other information about the subsequent history of the site comes from the Coningsby Map c.1720. The part including the Kings Mills site is shown in FIG. 7. The channels that are present today are shown passing under the bridge as they still do but an extra one is also shown which leaves the river on the right bank and returns below what appears to be a weir marked with cross-hatching. Now Denell specifically stated that there was no weir, only floodgates, these were presumably fixed in the bridge arches to raise a head of water for the mills as at Lugg Bridge. It would seem therefore that the weir must have been built after the mill went out of action and the most likely reason for this would have been so that a lock could be accommodated at the site. This would explain why the extra channel was built, though no lock is actually marked in it. A lock may have been needed because, although the right-bank arch of the bridge had been raised, it was still necessary to lower the level of water at the bridge for the boats to get under.

In recent years the river has been much straightened in this area. Two depressions in the field on the left bank may be remains of the mill and the site itself seems to be marked by several pollard willows but otherwise the only sign of this once important mill is the old tail-race which passes under the left-bank arch of the bridge to join the main river just below. This is a fast-flowing stream with a stony bed and as a result water crowfoot grows here while it does not grow in the silty bed of the main river.

The weir was probably not very long-lived because no lock is shown here on Taylor's 1786 map.

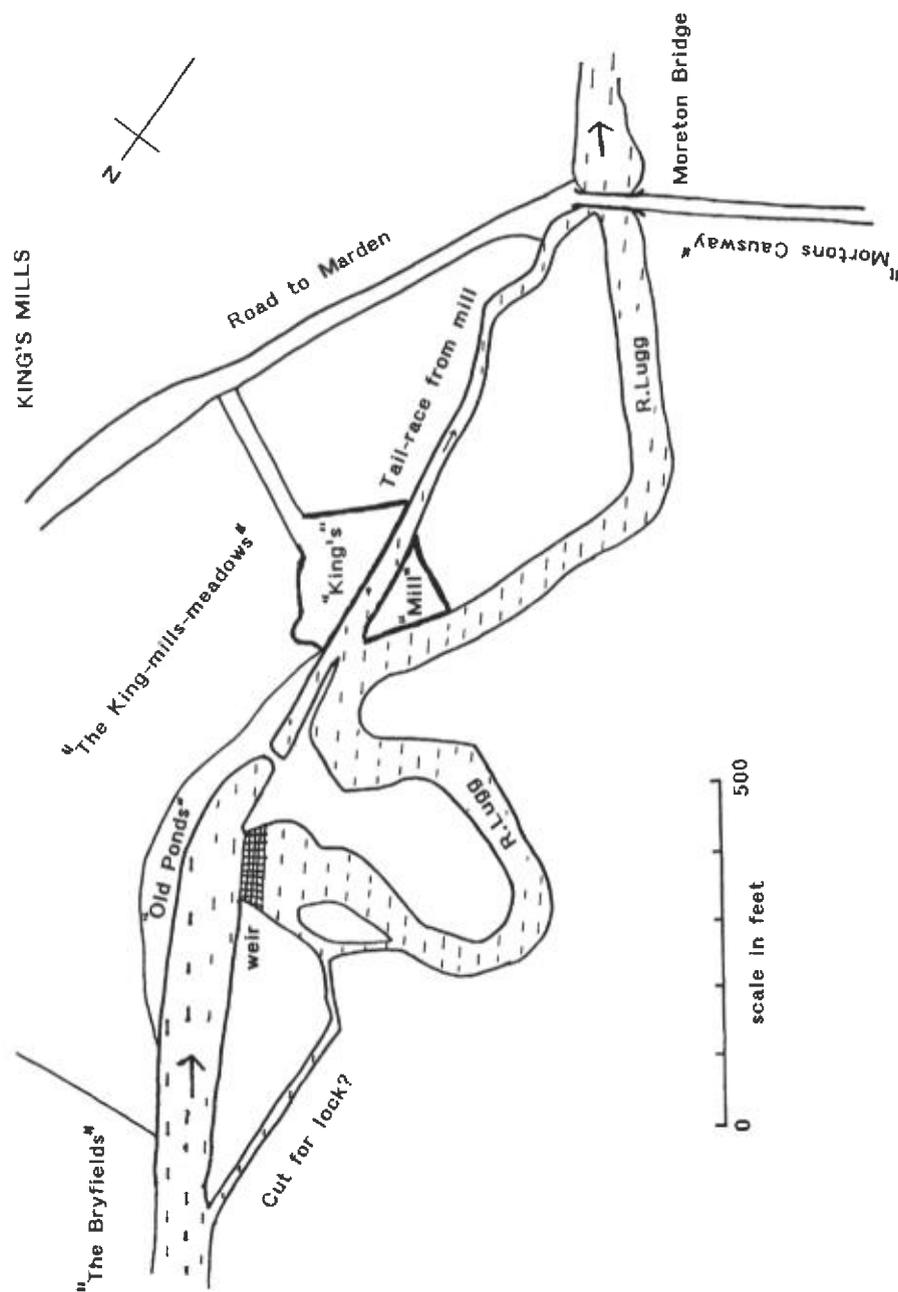


FIG. 7
The site of King's Mills, Marden based on the Comingsby map c.1720.

Laystone Bridge, near Marden

'About a mile above Kings Mills is a low stone bridge called by the name of Laston Bridge near Marden, this should be raised as the others.'

The first mention of 'Lassons bridge' found is in 1658 in the survey of the Manor of Marden which fits with Pevsner's description of a 17th-century bridge with a heightened Georgian arch. This date for its building is late when compared with the other Lugg road bridges but is borne out by the fact that the QS records do not mention Marden Bridge until 1737. In contrast the other major bridges were all described as 'in decay' in the previous century.

The 17th-century Laystone Bridge may have replaced an earlier one on a different site for Jervoise⁸ says 'Laystone bridge at Marden is thought to have taken the place of the bridge at Wisterton mentioned by Leland.' (see below).

Denell's recommendation that the bridge be raised 'as the others' fairly certainly led, as at Lugwardine, to the breaking of one arch and filling the gap with a lift-up bridge of timber. As described in the earlier paper⁵⁹ this structure was very unsatisfactory, the timber decayed and the bridge became impassable. In 1757 the raised brick arch that we see today, was built by one Thos. Davies, bricklayer, who also rebuilt one of the stone arches. Subsequently in 1815 John Gethin added an additional arch, presumably to the W. where it may have replaced some sort of causeway.

Wisteston/Wistanstow Mills

'Next obstruction above is Wistanstow Mills being 2 corne mills with about £2-10s per annum land is lett at £11. Mr. Price proprietor.'

This is one of the many once active sites on the Lugg where virtually nothing now exists. The writer's attention was first drawn to the site by the large patch of water crow-foot growing here which indicated a stony bed to the stream on a stretch of river that otherwise has a bed entirely of silt.

Leland records a stone bridge here at 'Wiseston village' the *History of the Manor of Marden* describes it as a 'former village' and Sheppard⁶⁰ marks Wistanstow as a settlement on her series of maps of Marden dating from the 11th century onwards. The bridge here was probably associated with the mill but by the time of Denell's survey the bridge had evidently gone.

When the mill was bought by the Trustees John Price of Wisteston Esq. was paid £300. From the graph (FIG. 1) it can be seen that this was well above the going rate, with or without the land, but no reason for this has been found. John Price was one of the Trustees of the 1695 Act and was appointed to examine Mr. Mathews' account in 1698. He, or perhaps his son, was also a Trustee of the 1727 Act.

After the mill was bought up the accounts record that two pairs of millstones were sold for £12 and the mill was probably abandoned. Alfred Watkins lived at Wistanstow Court as a boy⁶¹ and one cannot help wondering if he knew of this old mill site. A lane still leads down towards it. In the earlier paper⁶² it was wrongly suggested that this mill might have belonged to Dinmore Preceptory but the subsequent discovery of Denell's Survey

giving the names of the mill owners makes it clear that the Knights of St. John owned the next mill upstream not this one.

Denell fails to describe the nature of the obstruction here or how it should be dealt with but clearly there must have been a weir, indeed one is mentioned in John Lloyd's list of mills, and presumably this was breached. There seems to be no indication that a lock was ever made at this place.

The site has been visited on various occasions when the river was low and, as expected from the growth of water crowfoot, there is a great deal of stone, some semi-dressed, all across the bed of the river. In addition beside the right bank there is a large area of roughly tumbled stonework the whole of which is covered by coarse vegetation and very difficult to investigate but some of the stones are large and certainly dressed. This area is all covered by water for most of the year. The bank of the river at this place is almost vertical and there are indications of a narrow, mud-filled channel at its base between the vertical bank and the tumbled stonework.

Once, when the water was very low, the tops of a number of wooden stakes were seen projecting vertically out of the water near the right-hand edge of the river. These were roughly in two lines set at an angle to the flow of water. They might be survivors of stakes that once 'cribbed in stones' to make the weir, as described by Denell at other places on the Wye and Lugg. There is also some stone in the exposed face of the left bank of the river where a short section of wall of about three courses of stonework is visible at times.

Some of the stones in the river-bed are laid on edge as pitched stonework but many of these have been greatly disturbed recently, probably by canoeists to make V-shaped runs. There is no indication of where the breach in the weir might have been made.

No signs of a head or tail-race have been found in the fields on either side so it is suggested that the tumbled stonework against the right bank represents the remains of the mill itself but the site obviously needs a thorough investigation and should not be further disturbed till this is done.

Friers Mill

'Next obstacle are Fryers Mills now so ruinous that they cannot be used none liveing there, they were used to be lett together with £10 per An. land for £30 per Annum. these mills belong to one Wooldridge of Dinmore.'

This mill has left very little trace of its presence, not surprising since it was already out of use when Denell made his survey. The 1679 QS list of weirs on the Lugg places 'Fryer Mills' between Wisteston and Bodenham but John Lloyd's list gives 'friers wear' as upstream of Hampton Court though with a question mark. Denell's evidence agrees with the QS list and, since John Lloyd was uncertain, it is clear that the mill must have stood upstream of Wisteston and below Bodenham Bridge.

The QS list gives no owner for this mill so Denell's record is of particular importance here: 'one Wooldridge of Dinmore' must refer to a member of the Wolryche family of Dinmore Manor. This ownership is confirmed by Mr. Mathews' Navigation Accounts since he records paying £250 to 'Mr. Woobridge' though without saying what the money

was for, as was his wont. The Woolridge family acquired the Preceptory in 1559 so their ownership of the mill connects it with the Preceptory of the Knights Hospitallers of Jerusalem at Dinmore.

When Denell passed this way the name Dinmore would, to the local people of whom he must have enquired the name of the owner of the mill, have meant Dinmore Manor or Dinmore hill itself for the present settlement at the mouth of the tunnel only acquired the name of Dinmore with the coming of the railway.

Information on the early history of this mill has been taken mainly from Day⁶³ and Murray⁶⁴ and is given in chronological order below.

The earliest reference to mills owned by the Preceptory is in a Report made by Prior Philip of Thame to the Grand Master in 1338. In this document under the heading 'receipts' are included;

'From the rent of the fulling-mill at Dinmore	£2.10.0
From the water mill there	£1.16.8'

Since other places mentioned in the list are fairly far away e.g. Ludlow and Monmouth, one or both of the mills described as 'at Dinmore' could well be situated on the Lugg which is only a short distance from the Preceptory. At that time there was also a payment to a miller who was a member of the staff at Dinmore.

A 1505 rental of the Knights of St. John⁶⁵ for Dinmore is more explicit and includes:
'for Dinmore - one mill
for Wellington - 2 water mills situated on the Lugg called Fryermill.'

Murray gives a schedule of the extraneous possessions of the Dinmore Commandery 'at the time of the Reformation or earlier' c.1540 which includes a water-mill under Wellington parish.

Finally in 1559 the Preceptory was granted to John Wulridge and his heirs by Queen Elizabeth and the record of this grant also includes a water-mill on the river Lugg. This is called Fuger Mill in the *History of the Manor of Marden* when mentioning this grant.

All this information, including the use of the name Fryer Mill in 1505, makes it quite clear that Denell's 'Fryer mill' originally belonged to the Knights of Jerusalem.

No mill is given in Domesday Book so since the Preceptory was not founded until c.1190 it seems probable that this mill on the Lugg was built by the Knights Hospitallers themselves and this would account for the name given to the mill.

After the dissolution four generations of the Wolryche family owned the Preceptory and when Denell made his survey it would have been in the hands of John Wolryche who died in 1703. The mill must have gone out of use during his or his father's lifetimes.

The £250 paid by the Trustees to 'Mr. Woolridge' for his mill was the going rate for a working mill. Since the mill was described as ruinous the sale probably included the land as well. £10 was recovered by sale of 'materials' but the millstones are not mentioned. Perhaps they had gone already.

The information given above is of some help in trying to determine the actual position of the mill. Denell's account shows that it was upstream of Wisteston and the evidence that it was in Wellington parish means that it must have stood on the right bank of the river but below the Dinmore railway bridges which are in Bodenham parish. A site so placed was given in the earlier paper as a possible lock site - it now seems that this is the most likely site for Fryers Mill. If so it was situated just where the river finally emerges from its narrow valley, the incised meander⁶⁶ between Dinmore Hill and 'God Almighty hill' alias Cuddy meadow hill, onto the flat plain around Marden. This situation would have given a good head of water for the mill.

Certainly there was some structure here and the remains consist of;

- a) the end of a strong mortared wall of stone (wrongly given as brick in the earlier paper) sticking out of the river-bank at right angles the top being about 3 ft. below ground-level and the wall about 3 ft. high. This projecting end is rapidly disappearing as the river-bank erodes.
- b) a lot of tumbled stones in the bed of the river. These were first noticed due to the growth of water crowfoot indicating a stony bed to the river here and could represent the remains of the mill weir.
- c) downstream from the above on the right bank a squarish depression in the ground which fills with water regularly in winter and is very like the depressions thought to be associated with the Bodenham and Shelwick mill sites. No real signs of head or tail-race can be seen though a hedge may mark the line of the head-race leading from the river above the stonework on the site of the supposed weir. The hedge also marks a footpath which could have been the way to the mill.

(*Dinmore railway bridges*)

(*Vern ford and Vern footbridge*)

There was an ancient ford over the river beside the Vern and the flat stones are still visible in the river-bed. It was reported in the *History of the Manor of Marden* that 'in Ferne is the only ford over which the Lugg is passable.'

The footbridge that crossed the river near the Vern above the ford is marked on the 1904 O.S. map. This was a private bridge for use of the owners of the Vern and was a fairly recent construction. It was washed away by floods in 1924. Some large stones with rings in them were present at the site on the right bank of the river till the 1980s when they were buried or removed by gravel workings. They were probably part of the footings of this bridge.

(*Byfield Bridge - Bodenham Church Bridge*)

There is no mention in Denell's report of this footbridge. But it is an important crossing where five footpaths leading from the parts of Bodenham parish S. of the river meet and cross straight into the churchyard and the church and village just beyond. The

first record of a bridge at this site is in 1722 when it is called Byfield Bridge.⁶⁷ This was probably a wooden bridge, for the 1816 QS records state: 'wooden bridge at Bodenham, clerk to contract John Gethin to build this bridge at £28.' The bridge was apparently the responsibility of the county then as the present footbridge is today. The photo (PL. IV) probably shows John Gethin's bridge.

Below this bridge in the bed of the river are the remains of what appears to be a ford or causeway made of pitched stones. This runs diagonally across the river for about three-quarters of its width leaving a deep channel by the left bank. In the earlier paper it was suggested that this was the remains of a weir and lock but it now seems more probable that it was the original ford crossing the river to the church and that a part was removed for the benefit of the Navigation to allow boats to pass. Fords on the Wye were certainly broken in this way and the resulting difficulties were clearly envisaged in 1690 before the Act was passed in a document quoted by John Lloyd:

'If the Shallows and Fords of the river should be opened to give passage unto Boates, Then Consideration & Respect is to be had to the Inheritances of the Inhabitants of certain parishes bordering on the River having their lands lying on both sides thereof how to be provided in their Carriages of Husbandry viz., Wood, Hay, Corn & Compost...'

Since this was an important crossing the Trustees may well have had to replace the ford with a bridge and this would fit with the dates which indicate that Byfield Bridge was built between 1697 and 1722. If it were built by the Trustees that might account for it being a county responsibility thereafter.

Bodenham Bridge

'Next is Bodnam bridge, built of stone but very low must have one arch raised.'

The bridge described by Denell no longer exists but it seems probable that like several of the other Lugg bridges it was medieval and three-arched. The latter suggestion is born out by the fact that in the 1950s when the Water Board were 'scraping gravel from one part of the river bed to another' the bases of what appeared to be two bridge piers were uncovered. These were made of stone with mortar still present.⁶⁸

In 1672 this bridge was in bad repair (QS records) and two gentlemen were sent to 'view the bridge and strictly survey the decay thereof to consider and advise on the best way to repair the same.' No immediate repair work is recorded but some was paid for in 1695.

Nothing is known of the outcome of Denell's recommendation but, judging by what is known to have happened to other bridges on the river and the subsequent fate of this bridge, it is probable that one of the arches was broken or raised in such a way as to weaken the structure for in 1717 the bridge was in trouble, 'growing much out of repair and if not speedily attended to will be in a little time a very great expense.'

In 1799 John Gethin of Kingsland, bridge builder, was directed by the QS to survey the county bridges and report. It seems probable that he found Bodenham Bridge in a bad way for in 1816 QS were advertising for estimates for rebuilding the bridge to a plan of Gethin's. The work went ahead and a note by the Bodenham Parish Clerk in the church

register records that 'Anno Dom 1816 Bodenham new bridge over the river Lugg and the Five-footed bridge over the Moor brook were built.'

Evidence for the actual position of the old bridge in relation to the new one is given in the earlier paper and see note.⁶⁹

Bodenham Mill

'About a mile below Hampton Court are 2 mills belonging to Lord Viscount Weymouth and Mr. John Willington his tenant, now let (with £3-10s land) at £11-10s per annum'

The 1679 QS list of weirs on the Lugg says 'Bodenham avowed to be thrown down.' This statement implies doubt about what had happened to the weir but since the 1690 list (see above) says 'one mill on the Lugg at Bodenham weir' and since in 1698 the Navigation Accounts include 'paid to Mr. John Hill for taking down Lord Weymouth's wear upon Lugg, £2-10-00' it seems fairly certain that the 1679 information was wrong.

This mill is probably not on the site of the one recorded in *Domesday Book* for Bodenham because the Domesday mill lay in the Manor of Bodenham Furches which subsequently became the Township of Bodenham Moor and lies well away from the river. Lord Weymouth's mill on the Lugg lay in the Township of Bodenham Devereux.

The earliest reference found to this mill is in 1264⁷⁰ when on the death of Walter de Mucegros of Bodenham his possessions included two mills, one held of William de Furches (the Domesday Mill) and the other of the honour of Brecknock. The mention of Brecknock connects this second mill with the Devereux family⁷¹ and makes it very likely that the mill on the Lugg was first built between 1086 and 1264.

The next reference found to this mill is a lease of Box and Scutt mills with '1 acre of meadow called ye weare in Bunnell' (Bunhill) for ninety-nine years granted in 1611 by Robert Devereux, third earl of Essex, to Thomas Vicars along with the Woodhouse Farm in Bodenham.⁷² Other leases follow showing that the mill was clearly functional throughout the 17th century but by 1710 was being referred to only as 'a place called Lugg Mill.' The evidence thus points to the fact that the mill went out of use when the weir was broken following the 1695 Act. Lord Weymouth was paid £82 for his 'mill and interests' and one pair of stones was sold.

A 1684 will of one of Bodenham's millers, William Gibbons, survives with its inventory and this shows that the mill-house consisted of three rooms, dwelling-room, chamber over the dwelling-room and chamber over the mill. After the mill went out of action it seems probable that the people of Bodenham had to take their corn to the nearby Riffins Mill on Riffins Brook, a tributary of the Lugg. This mill had also belonged to the Devereux family but had been sold to Fitzwilliam Coningsby of Hampton Court in 1636. This meant that the demise of Bodenham Mill was of advantage to Lord Coningsby, a promoter of the Navigation.

The position of Lugg Mill, below the Isle of Rhea, is shown in the earlier paper and the reasons for placing it there were given then before Denell's Survey had been found. It is satisfactory that Denell's description 'about a mile below Hampton Court' fits the suggested site so well.

The weir for the mill still survives and is built of partly dressed stones that form a sharp, straight edge facing upstream which is regularly exposed when the river is low. There is a gap against the right bank but this is not very wide although most of the current flows that way. Against the left bank is a mass of tumbled stonework, a lot of it is dressed but it is so covered with vegetation that no structure can be made out. Neither of these breaks seems wide enough for the passage of boats so it is suggested that the right-bank break is the result of natural erosion and the stonework by the left bank is the remains of a lock, perhaps built after the 1727 Act. Only excavation would show if this is indeed so. If a lock did exist here it was short-lived because it is not marked on Taylor's 1786 map.

FIG. 8 is a sketch map of the whole area and shows a linear, ditch-like depression in the fields on the left bank which makes a loop leaving the river just below the weir and returning lower down. Near the lower end the ditch widens out into a squarish depression with a flat, boggy base which is 3-4 ft. deep and holds flood-water in winter. Where the ditch is near the river at both ends it appears to have been built up level with the field either by natural deposition of silt or by deposition of dredgings from the river.

The most likely explanation for these features seems to be that the ditches are the head and tail-race of the mill which itself was situated beside a mill-pond lying in the squarish depression. One apparent difficulty with this explanation is the course of Riffins Brook which cuts across the supposed head-race. This is not a problem however as Carey's map of 1801 shows Riffins Brook taking a different course well away from the postulated mill-site to join the Lugg further S. A new cut must have been made for the brook in the 19th century probably in an attempt to relieve flooding.

These remains of Bodenham Mill are very similar to those visible at the site of Shelwick Mill.

Presumably there was some good reason to do with the water-supply for placing the mill so far from the village. The position is just where the river, in its incised meander,⁷³ cuts through the Dinmore ridge of sandstone below the hill called Bunhill. This situation may have given the best fall in water-level available within the manor so that the mill only needed a fairly short head-race.

(Lawn Bridge, Hampton Court)

Denell does not mention a bridge at this site. However by c. 1810 one is marked on a map of the estate and this was replaced with a new one built in 1826. Yet another bridge was built in 1854 and this one was 'rustic' with spikes and bark fixed on the sides.⁷⁴

Hampton Court Mills & old Hampton Bridge

'Next obstruction is Hampton Court Mills and wear of stone all in very good repair, the mills are now let at £30 per annum with allowance of the keeping 3 horses the year about with grass and hay sufficient. These mills are my Ld. Coningsby's, here at this wear is the greatest difficulty for making a good passage of any I saw yet (as I conceive) yet may be made good. The stone bridge is very low.'

The value of the allowance for the horses was probably £4. 10s. since this was the abatement in rent given to the tenant of Hampton Green Farm who had to supply four

BODENHAM MILL

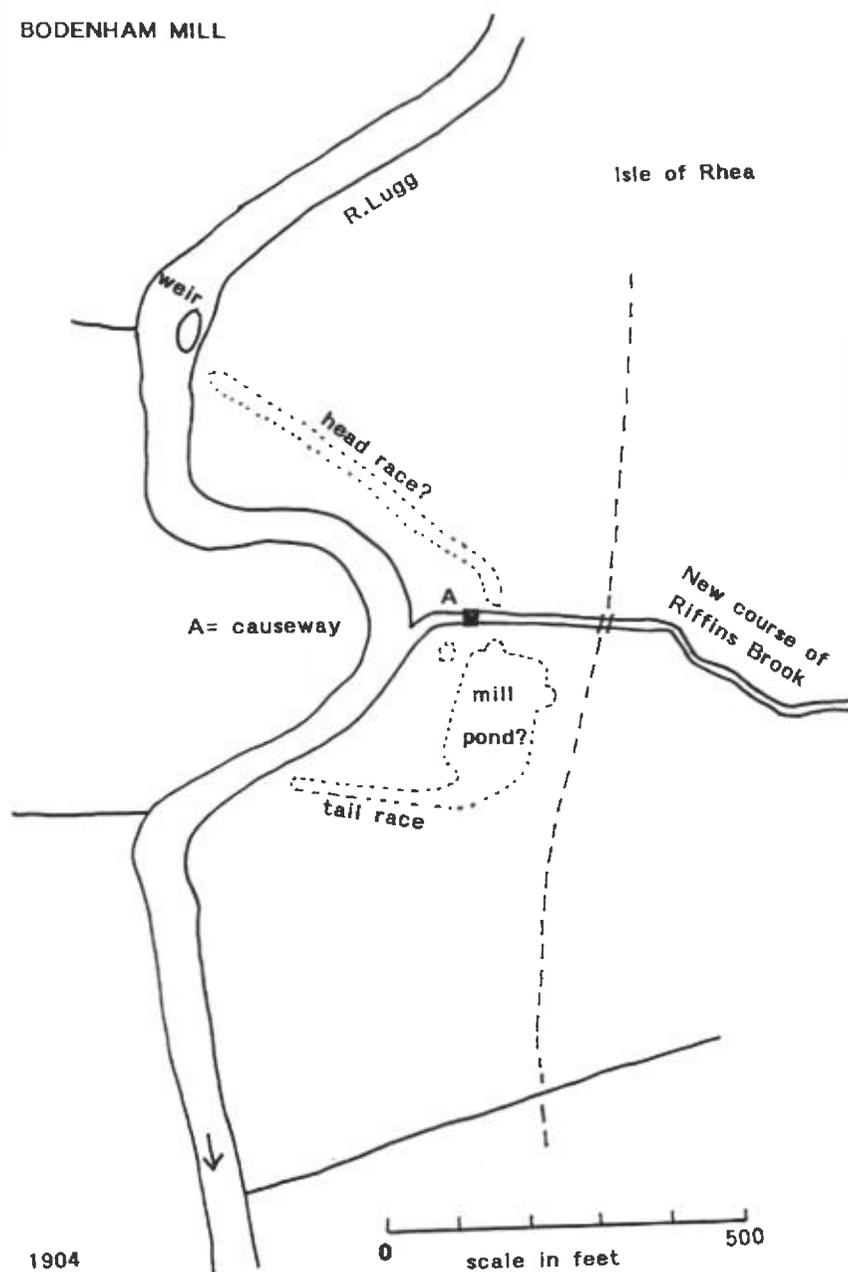


FIG. 8
The site of Bodenham Mill based on 1904 O.S. map.

and a half tons of 'good, sweet, well-made hay' each year to 'the miller of the mills of Lord Coningsby called Hampton Mills.'⁷⁵ The terms of this lease provide independent confirmation of the accuracy of Denell's reports.

The weir of stone is still present today but the mill and bridge have gone.

The early history of this site can be pieced together from various sources. There was a Domesday mill at Hampton situated in the smaller of the two manors of Hampton Richards and Hampton Mappenor.⁷⁶ These two manors were subsequently combined and various entries in the court rolls for the 15th century indicate clearly that road, bridge, mill and weir were all situated close to each other at that time. For example in 1414 one John Hare had allowed the 'weir beside the bridge' to become obstructed and a few years later had ploughed over 'the common way to the bridge.' Subsequent entries refer to a pasture called 'le Bylet' and 'Walkenmill Close,' both terms connected with mills. The mill itself is mentioned in a rental of 1529. The situation remained the same up to the time of Denell's visit but the Navigation Act brought radical changes to the site.

According to the Navigation Accounts Lord Coningsby was paid £225. 6s. 8d. for his mills, the total for some reason unknown being made up of four separate entries. This total was well below the sixteen times the annual value specified by the Act and paid to most of the other mill owners (FIG. 1). This perhaps indicates that the Trustees did not actually gain possession of the mill buildings and site. The absence of any entry indicating the sale of materials, particularly the valuable millstones, corroborates this interpretation and the subsequent history of the site shows that it did indeed remain a part of the Hampton Court estate.

It is unfortunate that Denell does not describe how he thought this large weir could be dealt with to make a navigable passage and the Navigation Accounts throw no light on what happened here.

It is clear that Lord Coningsby had anticipated the loss of his mill on the Lugg for by 1698 he had erected a new mill on the Humber Brook which flows into the Lugg from the N. just downstream of Hampton Court. On 15 Aug. in that year he leased 'All those his 3 new Watercorne Grist Mills and messuage' to Walter Rogers for three years.⁷⁷

It is possible that the millstones for this new mill came from Mr. Mathews' Lugg Bridge Mill for one of the entries in the Navigation Accounts reads;

'for work done at Lugg Bridge Mills for taking up the floodgates and millstones for the Lord Coningsby and Mr. Dancy £1-07-00.'

Despite having replaced his mill, it seems very probable that Lord Coningsby retained his weir on the Lugg, but for a purpose other than milling. In the 1690s he had had extensive formal gardens laid out around Hampton Court and these included a lake at the southern end which around 1700 was enlarged to accommodate a very elaborate fountain. These gardens were painted by Knyff in 1699 in two magnificent birds-eye views. Other drawings and plans were made soon afterwards.⁷⁸ It is clear from these that the water-supply for the lake and fountains was brought from the Lugg by a tree-lined channel starting close to and presumably just above the weir (the course of this channel is

still just visible as a depression in the ground today). The water leaving the lake evidently flowed out into the Humber Brook just before it entered the Lugg.

By using the old weir on the Lugg to provide a head of water the water-supply to the pool and fountain could have been controlled. Had the mill remained in its old position, there would have been conflict over the water-supply needed by the gardens and that needed by the miller in summer when the water was low. So it may have been to avoid this that Lord Coningsby built his new mill and was thus paid by the Trustees for doing something that he was going to have done anyway.

If this is a correct interpretation and the weir remained unbreached then some sort of lock would have had to be inserted in the weir straight away. Two lines of evidence indicate that this may indeed have been so.

Firstly Knyff's paintings of 1699 give contemporary views of the site at the crucial period when the Navigation was being established. In the foreground of Knyff's painting of Hampton Court from the S.E. there is a large barge with sails down being hauled up the river by six men while another with sail up appears to be coming downstream indicating that there was traffic on the river at that date. In his view of Hampton Court from the N.E. Knyff shows Hampton Bridge from the N. or upper side. It is clear that none of the three arches has been broken and against the right bank arch some structure has been built against the face of the bridge which sticks out all round the arch.⁷⁹ This could have held the gate or paddles of a flashlock the chamber of which would have been under and below the bridge. Secondly at the top end of the lock chamber as it exists today on the left side there is a column-like structure that appears to be built out of millstones stacked on top of each other.⁸⁰ It seems very probable that these are the stones from the old Hampton Mill, demolished when the lock was made and for which no record of their sale has been found. The whole lock may well have been constructed out of the materials of the mill.

The history of the lock itself is unclear. As already described, Knyff's painting indicates the presence of a lock in one arch of the bridge in 1699. Later on, c.1745 Thomas Chinn was said to have erected a lock against the bridge (see below) and Isaac Taylor in his map of 1786 marks a functional lock at this site.

At some period a vertical groove has been carved out all down the face of the column of millstones, a groove that could well have held the upper gate of a pound lock.

Lord Coningsby died in 1729 and the Hampton Court estate passed to his daughters and from them to George Coningsby, sixth earl of Essex. Under their ownership the formal gardens together with the pool and fountains disappeared. The weir itself had gone out of repair when in 1808 the estate was sold to Richard Arkwright, son of Sir Richard Arkwright the inventor. Richard Arkwright the younger would, of all people alive at that time, have known what could be accomplished by water-power since his fortune - and he was the richest commoner in England - had been built upon it.

Sir Richard Arkwright had built what was the first industrial mill in the world at Cromford (Derbyshire) because of the abundant water-supply there and subsequently built many more mills, all powered by water. His son was manager of the Bakewell Mill from the age of twenty-two and went on to become a substantial mill owner himself before subsequently inheriting all his father's mills as well.⁸¹

He lived in view of the Cromford mills and close beside the river Derwent for most of his life. This river is very similar in size to the river Lugg and both are sixty miles long. From Cromford Bridge the view of the Derwent Valley is very like the view of the Lugg Valley at Hampton Court with a wide, flat, flood-plain meadow on one side of the river and a steep, wooded hillside on the other. Richard Arkwright, when viewing the Hampton Court estate, is said to have found such charm in it that, when pushed, he raised his offer against his better judgement and above what he considered was its financial value for fear of losing it,⁸² one wonders if perhaps it reminded him of his home. Certainly he subsequently took a great interest in the running of the estate though he never lived there. As a result in the 1830s the Hampton Court weir was extensively repaired and the water of the Lugg used to power newly-built saw-mills cutting stone as well as timber and used for the large-scale alterations and additions made to Hampton Court at that time.⁸³ It is because of these 19th-century repairs that this weir still survives, the last of the old mill weirs on the lower Lugg.

It is interesting that just as the Hampton Court weir came into action the original Cromford mills ceased work because their water-supply failed and Richard Arkwright preferred to close the mills altogether rather than convert them to steam.

The Hampton Court weir is still standing today though badly in need of repair. It was surveyed in October 1991.⁸⁴ At that time the sluices fitted into the old lock chamber had broken and the water was rushing through the old lock chamber leaving the face of the weir dry. Underneath the stonework covering the apron/glacis of the weir wattlework was exposed. The structure of this wattlework is very similar to that of very early structures such as the Saxon fishing weir at Colwick⁸⁵ and it is tempting to think this may be part of the Domesday weir but unless the wood is carbon-dated it is impossible to say if the wattlework is really early or was put in when the weir was repaired at some later date in order to make a foundation for the stonework above. 'Inserting wattle' is indeed mentioned during the 19th-century repairs to the weir.⁸⁶

This weir is the only surviving weir on the lower Wye or Lugg and the whole of the site has a long and fascinating history with many adaptations of old structures to new uses. Because of the size and age of the weir it has changed the bed of the river radically together with the flora and fauna for over a mile upstream.⁸⁷

Old Hampton Bridge stood in close association with the weir and mill. In 1695 it was reported to the QS as 'much in decay' and in 1698 £10 was given to Lord Coningsby for repairs of Hampton Bridge 'charged on the county.' This is probably a reference to divided ownership for in 1751 QS allocated £5 for the repair of that part of the bridge belonging to the county 'viz the two arches next Hope under Dinmore.' This indicates a three-arched bridge with the left-bank arch, which would have been associated with the old mill, belonging to Hampton Court while the centre arch and the right-bank arch, which was involved with the lock, belonged to the county.

Denell gives no suggestions as to how the 'very low' Hampton Bridge was to be dealt with but Knyff's paintings show that they did not break an arch as on the other bridges. Possibly with a lock situated immediately below the bridge the water-level could be lowered enough for a boat to pass under the arch by opening the lock gate.

(New Hampton Bridge)

In 1826 the road crossing old Hampton Bridge was diverted and the Trustees of the Turnpike erected a new bridge, John Gethin superintending the work. This new bridge, which is the one the A417 passes over today, was built about 300 yards upstream of the old one so that the road no longer runs between Hampton Court and the Green Farm. The old bridge remained for a time as a private bridge for Hampton Court. It was referred to as 'old Hampton Bridge' in 1831 but had gone by the time of the Tithe map of 1845. A footbridge was built at the site of the old bridge in 1851 and then in 1864 an iron bridge to carry a tramway was built on what must have been the foundations of the old bridge, just above the weir. This tramway was used to bring stone and other materials in to the saw-mill. The line of the tramway is still visible as a raised bank across the fields towards what was the Oak Inn close to Hope under Dinmore Church, this was probably the line of the old road as well. Sadly the iron bridge collapsed into the river in the summer of 1991 when a herd of cows was driven across it and only the abutments with the stone pillars that stood at either end of the bridge remain.

Ford Bridge

'Next above is the Fords bridge built high with timber which will cause no hindrance there.'

Leland records a stone bridge here so perhaps the piers of the bridge described by Denell were of stone with the road carried on a timber structure 'built high.' In 1702 the QS records state that the bridge was 'in decay' and by 1717 it was 'in danger of falling occasioned by a current of water which falls upon it out of the highway.' This highway was presumably the main road from Hereford to Leominster which at this place passes very close to the river. There is no evidence that anything was done until 1736 when there was more trouble and it was reported that timber and workmanship of value £49. 1s. 2d. would be necessary. It was further ordered that 'a view be had of the bridge and an estimate made of the expense that will be absolutely necessary for the present repair without regard to the Navigation.' This seems to indicate that in 1736 few boats were actually using the river Lugg. It was also asked what would be the expense to build arches of brick on the piers of the bridge. This implies, as suggested above, that the bridge was basically a timber structure but that the piers were of stone. The use of brickwork was favoured by the Trustees. It was suggested for the new bridge at Lugwardine and was used at Hampton Bishop, Marden and Volca bridges.

In 1737 and 1738 four separate sums were paid out by QS for this bridge amounting to £130 though no details are given. This work was recorded as completed in 1738 except for parts of the side walls and some pitching for which £80 had been agreed. This was a lot of money and considering that £200 built a whole new bridge at Lugwardine only two years later it seems probable that the postulated timber super-structure was replaced at this time by stone arches to make an all stone bridge. Against this bridge in 1750 Thomas Chinn erected one of his flash or half-locks (see below) and the lock was marked as still functional on Taylors map of 1782 but no sign of it can be seen in the river-bed today.

This bridge may well be the stone bridge shown in the 1920s photo (PL. V) and described in a Report in 1933 as having a most inadequate waterway through three stone

arches and causing a serious impediment to the flow of the river, pounding back flood waters and rendering the main highways impassable after severe upland rain falls.⁸⁸ Probably as a result of this Report the bridge was replaced in 1933 with a concrete structure which, to come right up to date, had itself to be much altered to carry part of the carriageway of the Leominster bypass.⁸⁹

(Volca meadow lock)

Neither this lock nor the bridge close by are mentioned by Denell which probably means they were not present in 1697.

The lock stands just upstream of the confluence of the Arrow with the Lugg. It is marked on Taylor's 1786 map as being functional at that date and the Tithe map of 1843 shows a definite, parallel-sided constriction of the river at this spot. There is no evidence that there was an earlier weir or mill here and its position is remote from any road, house or settlement. It has been called 'Volca Meadow lock' in this paper because the field on the right bank of the river here is named Volca meadow.

Clear remains of the two side walls of the lock are still present today though in a ruinous state. The right-hand wall is about 25 ft. long and is built of stone against the right bank of the river, the top being at ground-level. Near the lower end is a vertical break or groove that could have held a lock gate. The left-hand wall, which is of comparable length, runs parallel with the right-hand wall down the centre of the river and is about 3 ft. wide the surface being flat with mortar between the stones. This wall has clearly been reduced in height so that it is below water-level even in summer. It is pointed into the current at the upstream end and coloured a striking red by the growth of a Red Alga. There are some stones quite high in the left bank of the river and in the river-bed on that side there is a lot of jumbled stonework. This could well be the remains of the weir that must have been associated with the lock.

This lock is of considerable interest. It seems probable that it was built during the phase of activity around 1700 (see below) and is probably the only lock on the river that has not either disappeared or been rebuilt and altered. As such it should be properly investigated before it all disappears in a flood.

(Volca Bridge)

This bridge with stone piers and three brick arches, crosses the Lugg just upstream of the lock on a now little-used cart-track leading from Stoke Prior. Denell does not mention this bridge nor does it figure in the QS records. The earliest mention found so far is in the Eaton Hall archives⁹⁰ when in 1717 a 'meadow and orchard at Volkeybridge' was being leased and again in 1723 when a meadow is described as 'near a bridge called Vokey bridge.'

The purpose of the crossing here was, fairly certainly, to enable the inhabitants of Stoke Prior, which lies on the left bank of the river, to get to their Common or Lammas hay meadow situated on the other side of the river in the angle between the Arrow and the Lugg. This Common meadow was called Volca or Vokey Meadow and was still held in

largely unenclosed strips at the time of the Tithe map in 1843. As with Hampton and Wer-gins bridges, this bridge took its name from the meadow to which it gave access. Since this meadow must have had medieval or earlier origins the crossing here must be very old and was most probably originally a ford. There is a lot of stone in the bed of the river here especially by the left bank. Building a lock just downstream of this crossing would have drowned out the ford and thus may have necessitated the building of a bridge, this would have had to be wide enough for hay carts. If this was indeed the reason for building this bridge then, since it was present by 1717, the lock must have been built before that date.

The use of brick in the structure of the bridge indicates too that it was built by the Trustees of the Navigation since they used brick in several bridges around that time.

Eaton Hall Mills and (Eaton Hall Bridge)

'Next obstruction at Mr. Brabazon's Mills at Eaton, they are now let at £30 per annum the land valued at £10.'

These mills probably stood on a Domesday site. The relevant entry in *Domesday Book* groups seven manors together with two mills between them valued at 24s. One of these manors is said by Thorn & Thorn⁹¹ to be the Eyton situated upstream of Leominster. However Coplestone-Crow⁹² shows that the tenorial histories of the two Eatons make it certain that *Domesday Book* is referring to the Eaton downstream of Leominster, i.e. the one that Denell records as in the ownership of Mr. Brabazon.

Assuming this to be so then of the seven possible manors where the Domesday mills could have been situated Eaton is the most likely place because it stood on the largest river.

A collection of papers relating to Eaton Hall, which belonged to the Brabazon family from 1624 until very recently, spans the period 1592-1867.⁹³ Out of nine of these documents containing descriptions of the property dating from 1592 to 1687 seven mention mills on the site while in contrast none of the thirteen later documents dating from 1707 to 1867 makes any mention of mills. This seems clear evidence that long-established mills here disappeared between 1687 and 1708 - just the period over which the Trustees of the Navigation were buying up the mills and demolishing them.

The most informative of these documents, probably dating from the first half of the 17th century is a rental of Eaton Manor and includes the following description;

'Firstly the house standing on Lugg bank with two water corn mills about some eight score paces distant, the wear and fishing adjoining to the house and two pigeon houses...'

Wallop Brabazon died in 1681 and his extensive inventory includes the items;

'at the mills two iron bars, one dozen of mill pikes, one iron maule and other things.'

In 1687 Katherine Brabazon, widow, leased the two mills to Chambre Brabazon of Leominster for ninety-nine years at an annual rent of £10. (Chambre Brabazon was later to become earl of Meath in 1707). This then would have been the state of affairs at Eaton when Denell made his survey though the rent had gone up to £20. Presumably Denell's 'Mr. Brabazon' was Chambre.

All the documents referred to above use the word mill in the plural but several of them qualify this term by saying 'two mills under one roof' so presumably there was only one mill building but it housed two sets of stones or even two wheels.

Denell gives no description of the obstruction or how it could be dealt with but since a weir is mentioned in the document quoted above this was presumably broken to enable boats to pass. 'Mr. Brabazon' was paid £250 for his mills, they were put out of action and the Navigation Accounts record £40 from the sale of materials from Eaton Mill.

As to the subsequent history of the site an estate map of 1802 (FIG. 9) shows neither mill nor weir but the general layout confirms the early-17th-century description given above; i.e. the house standing on Lugg bank with the weir, which was beside the house, being remembered in the field name on the other side of the river. Since this is correct one can assume that the mill did indeed stand 'eight score paces distant from the house' down a mill-race. Although not named as such the map shows the position of this race as a line running from just N. of the house to pass under the track to the bridge and on down to join the river Lugg.

From the bridge southwards this mill-race is still there today and remains of what could well be Mr. Brabazon's mills have been found about half-way along. These remains consist of a stone wall along the right bank and the end of a stone wall sticking out from the left bank at right angles. In the bed of the stream is an area of pitched stones *in situ* similar to those found at Wisteston and Hampton Bishop. In addition there are many tumbled, semi-dressed stones concentrated in the bed of the stream just at this place. This structure is about 500 ft. S. of the house which corresponds well with the eight-score paces given in the 17th-century rental. On the Tithe map the field beside the mill-race is called Mill Meadow which confirms this as the mill site.

Since there are traces still present of the mill itself it is reasonable to seek also for the weir, said to have been 'adjacent to the house.' On most of the other mill sites along the Lugg some evidence of a stone weir has been found but there are no such signs here. However when the Water Authority was carrying out drastic dredging of this part of the river in the 1980s which lowered the bed of the river by 6 ft. they brought up some massive timbers from just about the position where the weir should have been, just below the head of the mill-lead. These are square in section averaging 40 x 40 cm. the longest being 620 cm. long but an even larger one was left in the bed of the river being too large to be removed. All the timbers have mortice holes and tenons and clearly had formed some structure - could it have been a timber weir which perhaps also carried a bridge? It would clearly be of great interest to know the age of these timbers.⁹⁴

Since neither the 1802 estate map nor the Tithe map show any signs of the mill it can be assumed that it was destroyed after being bought up by the Trustees. The weir would have been broken and the mill-race, from lack of use, would have silted up so that by 1850 it ceased to be marked even as a field boundary.

Denell makes no mention of a bridge here which perhaps confirms the suggestion that the timber weir also served as a bridge. If that had been the case destruction of the weir would have necessitated the building of a new bridge because Eaton Hall held land on both sides of the river. Pevsner suggests that the present bridge is 17th century which

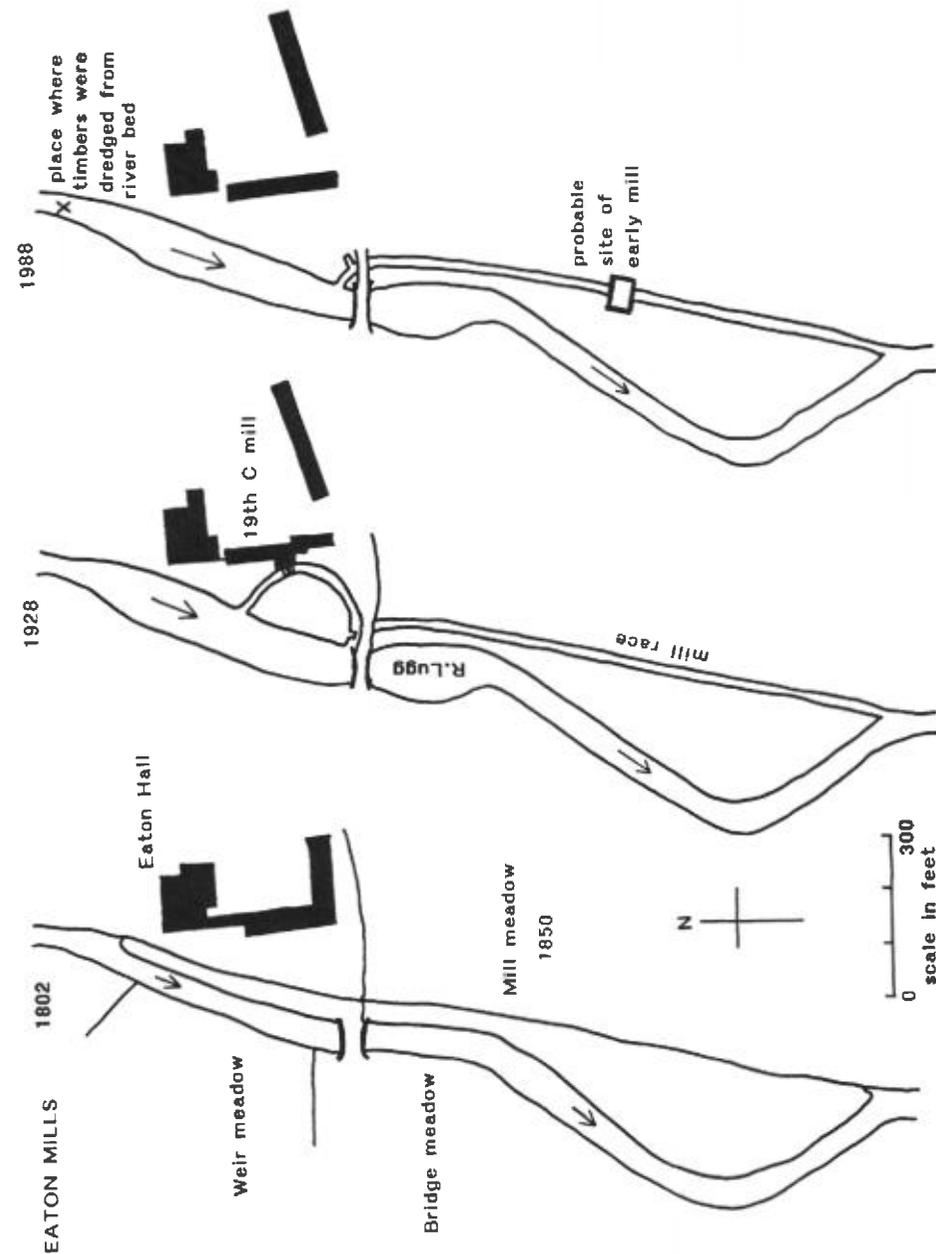


FIG. 9
The site of Eaton Mills at three periods based on an estate map and two O.S. maps.

fits quite well with the probable date of destruction of the mill as c.1698. Today there is a small weir at the base of the bridge but this results from later use (see below) and without this the bridge arches would have been as high as other bridges specially raised for the Navigation.

Destruction of the weir and sale of the mill materials was not the end of milling at Eaton. In the 19th century a new mill was built on a new site close to the house and above the present bridge. A booklet on the route of the Shrewsbury and Hereford Railway published in 1860 describes the 'large, round picturesque water-wheel' of the second mill as visible from the train.⁹⁵ The position of the wheel is shown on the 1928 O.S. map and the present owners knew that this wheel was sold by previous tenants. For this later mill a head of water had been provided by putting floodgates in the arches of the bridge, thus doing away with the necessity of building a weir. These floodgates are shown in position in a photo taken in the 1920s (PL. VI). The small weir at the base of the bridge today is probably formed by the remains of the structure that held the base of the floodgates. From the map it can be seen that the first part of the tail-race from this mill curved back towards the river above the bridge and the lower end of this is still visible as a blind-ended ditch. But because the water in the tail-race had of course to be discharged below the bridge the old head and tail-races of Mr. Brabazon's mill were opened up again after many years of disuse to form the tail-race of the new mill. An overflow channel from the river from immediately above the bridge also led to the mill-race. In the 1920s the Lugg Drainage Board removed the floodgates in the bridge and because this put the mill-wheel out of action they gave the farmer an 'engine' to power his machinery. (The floodgates had also been used for 'drowning' the riverside meadows). With the second mill no longer powered by water the upper part of the mill-race was filled in but the water still flows from the overflow channel above the bridge, under a small bridge and along the lower part of the mill-race along the old route.

Remains of Walter Brabazon's mills have probably survived in the bed of this mill-stream for so long because for over 100 years they were covered over with silt. Building the second mill and opening up the old mill-race has led to their exposure and the recent activities of the Water Authority in speeding up the flow of the river will have increased the rate of erosion and may well, before long, remove all traces of the mill recorded by Denell.

Lugg Bridge, Eaton, Leominster

'The next impediment is at Lugg Bridge at Lemsterbroad near Eaton a stone bridge but very low.'

The survey ends here with no indication of how Denell considered the bridge should be modified. In 1704 and 1753 according to the QS records some repairs were carried out on 'Eaton Bridge, Leominster' and then in 1757 £13 was to be laid out in 'erecting a stone arch over part of the R. Lugg' at Eaton Bridge. This perhaps indicates that one arch had, as with the other old bridges, been broken for the benefit of the Navigation and replaced with a wooden drawbridge before finally a new stone arch was built. Today the centre arch is slightly higher than the two side arches but not noticeably so.

With this entry the writer of the survey comes neatly to the end of the page leaving room only for a final flourish. Presumably how the Navigation ended on the other side of the bridge with a basin and wharf was no concern of Daniel Dannel's. With Lugg Bridge, Leominster he had completed his survey of obstructions and his job was done.

DISCUSSION

(a) *Navigation works on the river Lugg*

As regards the Navigation of the Wye and Lugg as a whole there were clearly various periods of activity, mainly associated with Acts of Parliament, each leaving a certain amount of written evidence and followed by a lull when, although the rivers were presumably still in use, nothing new was done and nothing was recorded. The first period of activity followed William Sandys 1661 Act when locks were put into some of the weirs on the Wye. However the following Act of 1695 specifically stated that William Sandys did nothing on the Lugg at that time so for the Lugg the first period of activity followed the 1695 Act itself. During this period the mills were all bought up, weirs breached and fords dug out or flooded, while bridges were broken and their arches raised, first with timber and then stone or brick. The full extent of the work done at this time is not known because the relevant sheets of the Navigation Accounts for the Lugg are missing but a lot of money seems to have been spent. In addition locks were put into some of the weirs at this time; certainly at Tidnor, probably at the confluence and possibly at Mordiford, Hampton Court and other sites.

The breaking of the weirs turned out, as predicted by many, to be a complete disaster. The mistake was freely admitted in the 1727 Act which stated that the pulling down of the weirs 'by experience have been found to prejudice the Navigation by occasioning great shoals and flats so that at low water the rivers are not passable in many places.' As a result the Act provided the means to correct matters and put back the weirs with locks incorporated in them but since no minutes or accounts seem to have survived from the activities of the Trustees appointed in 1727, little or no action seems to have resulted from this Act. The suggestion in 1736 that Ford Bridge should be rebuilt 'without regard for the Navigation' bears this out. After all why should individual landowners replace weirs when there were now no mills remaining to be powered by the river? Margaret Rede's new mill at Lugg Bridge was authorised by the Trustees but it was not built till more than twenty years after the Act and she had to pay for the weir and lock herself.

The second phase of activity on the Lugg seems to have been initiated by Leominster Borough and concerned the Lugg only though it must have been considered that navigational conditions on the Wye were good enough for it to be worth connecting Leominster up with that river. Under this renewed interest, according to Price's *Historical Account of Leominster*,⁹⁶ money was raised and 'an undertaker named Chinn' was employed to oversee the work. The documentary evidence supporting this statement has not been found other than a record in the incomplete set of Borough accounts for 1749 when one Abraham Seward was paid £25 'for the Naviga-

tion.'⁹⁷ However several contemporary letters from Lord Bateman of Shobdon to his agent, Mr. Fallowes, provide additional first-hand evidence and throw more light on what was happening at this time.⁹⁸ In 1746 Lord Bateman had received a letter from Mr. Morgan, the Secretary of the Navigation, with news that the Leominster Chamber had subscribed £50 and the Borough £200. He says he will subscribe but only when the work is carried out and 'he knows his money will not be wasted as the last lot.' Is he referring here to money collected following the 1695 Act or some later attempt following the 1727 Act? In the same year Mr. Fallowes says he will subscribe himself rather than see the Navigation fail and if it does fail it is certainly not Lord Bateman's fault.

In 1749 Lord Bateman is asking Mr. Fallowes to mention to the Commissioners for the Navigation that most likely a certain T. C. Williams would subscribe if asked but Lord Bateman does not want it known that the suggestion came from him.

In 1750 Fallowes is to pay £50 as ordered by the Commissioners which sounds as if subscriptions were no longer voluntary. Then in a very illuminating remark Lord Bateman goes on to say 'I hear Mr. Chinn has been indicted at sessions for setting the locks against the county bridges. Lord Oxford said it seemed to be a malicious indictment. He advises Chinn to get it put off till the sessions after the next and he will be then in the country and may be of service to him. I advise Chinn to send up to Lord Oxford an account of the proceedings and a copy of the indictment and he will advise him what to do. He may make use of my name to Lord Oxford.' The QS Rolls corroborate this and Mr. Chinn certainly seems to have followed Lord Oxford and Lord Bateman's advice. The Rolls for Easter 1750⁹⁹ contain four indictments of Thomas Chinn, late of Tewkesbury, millwright. In each of the four Chinn is accused basically of obstructing the king's highway at a certain, named bridge so that the king's subjects cannot pass over with their carts, cattle etc. as freely as they ought to be able to. He is also accused of setting up on 9 Jan. 1750 at each bridge 'a dam, commonly called a lock, floodgate or weir made of timber, iron and stone fixed to the public and common bridge.' As a result the river Lugg is obstructed and the bridge 'ruinous, broken and in great decay.' The four indictments are almost identical and refer to Ford Bridge, Hampton Court Bridge, Moreton Bridge and Wergins Bridge.

Chinn duly appeared at the Trinity Session 1750 when the earl of Oxford was present and gave a bond that he would appear at the next session which he did, Lord Oxford once again being present. On this occasion Chinn was fined 6d. on each indictment 'for the nuisance.' Clearly he got off lightly, thanks presumably to Lord Oxford, and he was not told to remove the locks. Indeed it seems that putting locks against bridges may well have been normal practice at the time. Certainly there was such a lock at Folly Bridge, Oxford, which was only removed in 1815 when the bridge was rebuilt.¹⁰⁰

There is no evidence in the subsequent QS records that these locks did in fact damage the bridges which bears out Lord Oxford's suggestion that the indictments were 'malicious' implying that they were brought by someone wishing the Navigation to fail.

Apart from this information from the QS rolls and a brief mention of Thomas Chinn in the Sutton parish records (see under Wergins Bridge) all later references about Chinn's activities seem to stem from Price's *Historical Account of Leominster* and this was published in 1795. It seems Price must have been referring to the indictments quoted above since he says that Chinn 'instead of putting locks at proper places put up gates where he found bridges crossing the river.' He accuses Chinn of working ignorantly and unskilfully and absconding with a great part of the money. But all this he says happened in 1714. Price has clearly got the date wrong. That being so one cannot help wondering if he has also muddled up the names of the men in charge and in accusing Thomas Chinn of absconding may really be harking back to Thomas Mathews, Receiver under the 1695 Act. As described above there is some evidence that Thomas Mathews was not only inefficient but also corrupt. In particular, as mentioned above, the 1727 Act mentions a large sum of money gathered in under the 1695 Act for which Thomas Mathews would have been responsible and which was apparently unused and there is no evidence to indicate that this money was found after the 1727 Act. The fact that both Lord Oxford and Lord Bateman clearly approved of what Chinn was doing and were prepared to stand up for him would indicate that he was not a rogue. In addition Lord Bateman, being concerned that the money collected should not be wasted 'as it had been before,' would be expected to have kept a close eye on Chinn's activities. It seems that Chinn did in fact complete the job he was given and this is corroborated by information given in a Petition to the duke of Beaufort in 1751 by William Pytts of Howton who is proposing to make the river Monnow navigable. He says his scheme has been objected to as unlikely to succeed because the Navigation of the Lugg has 'not yet answered expectations' and he goes on to discount this by saying:-

'And as for the Lugg, the Projectors there conducted their plan like one who t'is said built a coach in his house and when finished could not get it out without pulling down a part of his house. What can they do if Wye, into which Lugg disembogues, has not depth of water for the purpose at least a fourth part of the year. Tho they had made their own navigation complete but in that they were prest too for their locks are single, by which means they lose their water with every boat that passes whereas a double lock wastes no more than will just float a vessal between the gates.'¹⁰¹

This certainly implies that the scheme was completed and makes no mention of the contractor absconding. Price too agrees that a basin and wharf were made at Eaton Bridge, Leominster.

If the indictments were indeed malicious in intent the indicter would presumably have produced all the evidence he could to support his case. So presumably Chinn did not build locks at the other county bridges. These are listed below with suggested reasons why Chinn would not have built locks at these places;

Mordiford Bridge	probably because the lock below the bridge was already present.
Lugwardine Bridge	this bridge lay between Tidnor and Lugg Bridge locks and another lock here would not have been needed.
Lugg Bridge	a lock had been built here in 1750.

Marden Bridge	this bridge stands on a sharp bend in the river which must have made negotiating the bridge hard for barges even without a lock.
Bodenham Bridge	if a lock had been built at the old mill site, just upstream, another lock would not be needed at this bridge.
Lugg Bridge, Leominster	no evidence has been found of a lock here and yet one would have been useful to keep a steady level of water at the wharf above the bridge.

The total number of sites where locks were built is nine for certain with others possible (see Table 3). In the earlier paper it was estimated, from the number of locks on the Avon, that about twelve locks would be needed on the Lugg to control the drop in the river from Leominster to the confluence by the same amount. In that paper it was wrongly suggested that work on the Avon was relevant to the Lugg since William Sandys had worked on both rivers which he had not. However since Thomas Chinn came from the Avon, being a millwright from Tewkesbury, he too must have been acquainted with the weirs and locks on that river so perhaps knowledge of what was done on the Avon is relevant to what was done on the Lugg after all.

Table 3 Lock sites on the river Lugg

Site	Date of building	Present on 1786 map	Remains visible today
confluence*	1702?	yes	no
Mordiford*	?	yes	yes
Tidnor*	1700-1714	yes	yes
Lugg Bridge*	1749	yes	yes
Shelwick mill	?	no	?
Wergins bridge*	1750	no	no
Moreton bridge*	1750	no	no
Kings mills	c.1750?	no	no
Bodenham mill	c.1750?	no	?
Hampton Court*	c.1700? & 1750	yes	yes
Ford bridge*	1750	yes	no
Volca meadow*	c.1700 & 1750	yes	yes

sites marked with an asterisk certainly had a lock at some period.

It is interesting that on other Navigations too, millwrights, with their skills in building and maintaining water-mills with all the associated sluices, weirs etc., were chosen to be in charge of lock building. Two millwrights were employed on the

Thames to build locks in the late-18th century¹⁰² and Joseph Brindley, the great canal engineer, served his apprenticeship as a millwright.¹⁰³ As already explained Daniel Denell, a river engineer, began his career as a carpenter.

(b) The type of lock built - pound or flash

Lewis *et al*¹⁰⁴ in their survey of flashlocks on English waterways say that in the West Midlands flashlocks with gates rather than beam and paddles were the norm. These were called halflocks, navigation gates or staunches. For the Lugg they use the term 'halflock' and describe the three at Lugg Bridge, Longworth (Tidnor) and Mordiford. It seems that they must have visited the river when the water was high and so missed the remains of the upper gate at Tidnor lock which proves that this was, latterly at least, a pound lock. Mordiford too was a pound lock which is now scheduled as such. No clear evidence of two pairs of gates on the lock at Lugg Bridge has been found. These three locks were described in 1906 as still standing and in use within living memory.¹⁰⁵ It seems very probable that they were kept in repair and perhaps converted to pound locks in the 19th century. Tidnor lock has some blue engineering bricks incorporated in the upper walls which indicates 19th-century repair work.

Above Lugg Bridge only two lock sites remain today. The one at Hampton Court has been much modified but the Volca meadow lock probably remains unaltered and should be properly investigated. It may well have been a half or flashlock and date from c.1700 being later re-furbished by Thomas Chinn. Certainly William Pytts writing in 1751 and quoted above, says the locks were made 'single' for reasons of economy. Writing at that time he would have been referring partly to Thomas Chinn's newly-made locks but since the locks were not all made at one time it is possible that they were of different types, some half locks, some pound locks. A QS note in 1673, about bargemen damaging the locks gates through opening them by force before the water was 'at a level,' clearly implies that William Sandys' locks on the Wye were pound locks so the advantages of a double set of gates must have been well known in the area. Denell himself in 1699¹⁰⁶ was responsible for the building of a large pound lock on the Exeter Canal¹⁰⁷ but unfortunately on the Wye and Lugg in 1697 he was employed to advise on the destruction of weirs rather than on rendering them navigable by the insertion of pound locks.

(c) The bridges

The bridges on the Lugg were a major difficulty for the Navigation. Denell describes eleven of them and all but two were too low. He frequently said that one arch must be raised and for Lugwardine was more explicit saying that a drawbridge should replace one arch. Though today this sounds a drastic remedy it was not a new idea and may well have been standard practice. Examples on other rivers include Wallingford Bridge over the Thames where four of the arches were destroyed during a siege in 1646 and replaced with wooden drawbridges which remained until 1751¹⁰⁸ and on the Severn a print of 1793 shows what looks like a wooden drawbridge replacing a stone arch of a bridge over the river at Gloucester.¹⁰⁹

(d) Goods transported on the river

There is almost no first-hand evidence of what was transported on the Lugg but Price records the transport of timber, charcoal, bark, cider, malt, hops, wool etc. Most of these commodities were then exported from Chepstow to Bristol according to Waters.¹¹⁰

Export of oak bark for the tanning industry in Ireland is given particular mention. This rose from nothing in 1713 to 5,000 tons in 1796 when Chepstow was the main port in the country dealing with bark export. The extensive woodlands of the Hampton Court estate, including what is now Queenswood, show abundant evidence of former coppicing of oak. The trees are either multi-stemmed or, if they have been singled, have gnarled bases showing that they were once coppiced and a great deal of bark must have been produced. In the 19th century this was sent by waggon to the tannery in Leominster¹¹¹ but in the 18th century may well have gone downstream by boat. Lloyd mentions a Mr. Wheatston of Dinedor who remembers boating cordwood and timber down from Hampton Court.

The 1695 Act allowed for the building of 'Warehouses' to store goods awaiting shipment or collection, some of these were proposed for the Castle Green in Hereford and there must have been some by the wharf in Leominster. In addition it seems probable that a Warehouse was built at Bodenham just upstream of the bridge. The house by the bridge today called the Weirhouse was, within living memory, known more correctly as the Warehouse because up to 1830, when it was pulled down, a building of that name stood next door to the present house. This was described as a 'large, unsightly building' and the Bodenham Enclosure map of 1813 shows it as large as the house.¹¹² In 1818 it was described as an extensive malthouse.¹¹³ This would have been an excellent situation for a wharf and warehouse on the Lugg being half-way between Leominster and the confluence and close beside a road and bridge. It is also fairly close to Hampton Court.

In the 18th century this property belonged to the absentee marquis of Bath but up to 1753 it was leased to the Coningsbys of Hampton Court so that Lord Coningsby would certainly have been able to have a warehouse built here for the use of his estate.

Writing c.1895 the vicar of Bodenham, the Rev. Sturgess, says 'the house above the stone bridge is still called the Warehouse because here the barges used to discharge their cargoes.'¹¹⁴ This implies that some knowledge of the former use of the site still lingered in the village.

The bells of Leominster Priory formed the one cargo carried on the Lugg that is reasonably well documented. The idea that 'the present set of bells should be recast into eight' was first raised at a vestry meeting on 17 June 1755 when a committee was set up to treat with Abel Rudhall about this.¹¹⁵ They acted quickly for Mr. Somerset Watts, a churchwarden and member of the committee, records in his accounts for November 1755;

'paid Mr. Rudhall as per receipt £2-2-0
paid to Mr. Pennie for carriage as per receipt £15-1-0'

However Abel Rudhall who had visited Leominster to contract for casting the bells in November 1755, was not actually paid for this visit until February 1756 when he had to send his servant to collect the money, and Robert Pennie was not paid until 3 March 1756.

The two receipts have been preserved¹¹⁶ and that from Robert Pennie reads;

'Received March 3rd 1756 of Mr. Somerset Watts fifteen pounds one shilling for freight, journeys, to Chepstow to weigh, and other troubles with the bells belonging to Leominster pursuant to agreement with Mr. Watts.' (the words 'to Chepstow' have been inserted)
£15-1-0 Robt Pennie'

It seems the accounts show when the men should have been paid rather than when they actually got the money. If this is so then the bells were probably taken down the Lugg in November immediately after Abel Rudhall's visit. There is no entry in the accounts for the return journey for the bells but ringing days were again being paid for in 1756 so perhaps the £15. 1s. covered both journeys and payment was delayed till the bells were back again. If that was the case both journeys took place in the winter of 1755/56 when the river would have been high.

Robert Pennie's phrase 'other trouble with the bells' has been freely interpreted by subsequent authors and always attributed entirely to difficulties with the Navigation. Cohen for example writes 'after much navigational difficulty.' Certainly the idea of transporting church bells down the Lugg and back again seems incredible when the river is looked at today but the fact that the Leominster churchwardens were prepared to entrust their valuable bells to the river in 1756 may be an indication that at that time, when the latest works on the river had been carried out, the Navigation was in good order. The bells from All Saints, Hereford took a similar journey down the Wye.¹¹⁷

No contemporary record has been found along the route of the passage of the Leominster bells on their long journey. This indicates that there was no mishap and if such an unusual cargo has left no record of its passing it is perhaps not surprising that more normal cargoes have left no record either.

(e) Bow hauling

'Tho' our rivers are always too empty or full
Tho' we ten are aground for two months that we pull.'¹¹⁸

As with so much about the Lugg Navigation there is very little recorded about how the boats were moved but it is certain that as on other rivers they were hauled up river by teams of men. A few entries in the Navigation Accounts refer to making a 'lineway,' presumably for passage by these bow hauliers and their towing rope, while Knyffs 1699 View of Hampton Court actually shows a barge being hauled upstream by six men. Even as late as 1800 men were hauling boats from Chepstow and Monmouth and whereas five men could pull an unladen boat it took fifteen men per

twenty-five tons to haul a boat when laden.¹¹⁹ A graphic eye witness account of how weirs were passed is given explaining how the men fall flat on the ground with all their force at the shout of 'yo-ho' and then get up to secure their step and repeat the process over and over again till reaching deeper water. No wonder the job of hauling barges was described as 'very injurious to the men's manners.' On the Severn in 1805 this was used as an argument for building a horse towing path.¹²⁰

The Towing Path Act of 1809 for the Wye applied to the Lugg as well but no evidence has been found that a path was ever made beside the Lugg.

(f) How were the mills replaced?

'What though with our Weares all our mills they pull down,
That with bread and with searge serv'd our city and town?
Huge giants in shapes of wind-mills will succeed,
Each Quixot Projector has one in his head;'¹²¹

The author of the poem written in 1697 from which the above verse has been taken was voicing a real problem. The effects of the sudden destruction of the main sources of power in the lower Lugg Valley at the end of the 18th century must have been serious. Alternative water-mill sites must have been found but may well have been unsatisfactory. The writer of a case 'drawn for the opinion of Counsel' in 1690 quoted by John Lloyd expands on this difficulty and says that although above and about Hereford there are a great number of 'Brook mills ... yet from June to October they commonly serve to small purpose as also in winter time in frosts by reason of want of water at those times.' In another paper published in 1695 and also quoted by Lloyd the importance of the river mills in summer is stressed too, the writer saying that people are forced to bring their corn ten or twenty miles to be ground by mills on the rivers.

These alternative sites have not really been investigated but suggestions are made in Table 4 which lists the old river mills together with their possible replacements.

Table 4 17th century mills on the Lugg and their probable replacements after the 1695 Act

Place	Original mill on the Lugg	Replacement mill not on the Lugg
Mordiford	none?	mill on Pentaloe Brook
Hampton Bishop	Hampton Bishop mill	Longworth mill on river Arrow?
Tidnor	Tidnor mill	none (mill on river Lugg continued in use)
Lugg Bridge	Mr. Mathew's mill	Mrs. Rede's mill
Sheiwick	Shelwick mill	none?
Wistanstow	Wistanstow mill	none?

Dinmore	Friars mill	mill on Wellington Brook?
Bodenham	Box & Scut mills	Riffins mill on Riffins Brook
Hampton Court	Hampton mill	mill on Humber Brook
Eaton	Eaton mill	other mills situated elsewhere on the Eaton Hall estate*

* 'three corne mills newly repaired' are mentioned in the estate documents in the early-18th century.

From Eaton down to Moreton the river mills were probably all replaced by mills at the side of the valley on tributaries of the Lugg except possibly for Wisteston where the whole settlement, described by Leland as a 'village' with a stone bridge, had become totally deserted. Below Moreton the destruction of Shelwick mill and Mr. Mathews Lugg Bridge mill may well have left a gap hard to fill by mills on side-streams as the valley widens out. Mrs. Rede probably appreciated this and built her mill to satisfy a real need, certainly the new Lugg Bridge mill flourished. Lower still Tidnor mill was kept in operation by the Trustees and was perhaps only converted to an iron forge when it was no longer needed to grind corn. The work of Hampton Bishop mill was probably taken over by Longworth mill close by which stands on the Lugg's major tributary, the river Frome.

(g) *The end of the Lugg Navigation*

'Not with a bang but a whimper' probably best describes how the Navigation came to an end as locks decayed and went unrepaired so that fewer and fewer boats used the river - the coming of the canals was probably only the final straw. And so the river Lugg lost its old mills and weirs, features that on other rivers are so interesting and attractive, for what turned out to be a rather short term gain. But the 18th century works on the river have themselves left features of interest and the history of the Navigation, which is so ill documented, is still recorded in the bed of the river and in the structure of its bridges. Daniel Denell's Survey has proved an invaluable guide to elucidating what still remains in the river today. It was not the first survey of a river to be made, John Bishop had, for example, surveyed the Thames in 1560,¹²² but nevertheless it is a remarkable document and it gives us a fascinating glimpse of the river Lugg as it was in the 17th century.

SUMMARY

- (1) The aim of this study has been to determine how much effect work following the 1695 Wye and Lugg Navigation Act had on mills and other structures present on the river Lugg at that date. The unsigned, undated M.S. entitled 'Survey of the Rivers Wye and Lugg' has been used as a guide from the confluence with the Wye up to Leominster. This lists all obstructions and gives the owner and value of all mills.

- (2) It is suggested that the survey was written by one Daniel Denell who was paid for 'a survey' in 1697 by the Trustees under the 1695 Wye and Lugg Navigation Act. It is further suggested that this Daniel Denell is the same man as Daniel Dunell alias Dannel who was employed by Exeter City Council to bring water into the City in 1695 and to complete the building of the Exeter Canal in 1699.
- (3) The sites of the ten mills named in the survey have all been identified on the ground and the visible remains of these that still exist in the river or on its banks are described together with some account of the earlier history of the mills. Only one of these mills escaped destruction in the work following the 1695 Act, the others all went out of use though two were later built new on adjacent sites.
- (4) Nearly all the bridges crossing the Lugg were described in the survey as too low. Alterations were made to accommodate the Navigation and the extent and effect of these has been assessed.
- (5) The effect of subsequent works carried out on the Lugg in the 18th century by Thomas Chinn, a millwright from Tewkesbury employed by Leominster Borough Council, is discussed.
- (6) There is documentary evidence for nine locks on the Lugg and some remains of five of these are still visible.

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- ¹⁰⁵ Herefordshire County Council, *Special report of the Parliamentary and Legal proceedings committee as to canals and waterways in the country* (1906).
- ¹⁰⁶ *Op. cit.* in note 9.
- ¹⁰⁷ *Op. cit.* in note 3.
- ¹⁰⁸ *Op. cit.* in note 15.
- ¹⁰⁹ R. Russell, *Rivers* (1978).
- ¹¹⁰ I. Waters, *The port of Chepstow* (1977).

¹¹¹ HRO, A63/111/Box 139.¹¹² HRO, M/61/72.¹¹³ HRO, E41/290-295.¹¹⁴ HRO, AG3/65.¹¹⁵ HRO, AK3/68.¹¹⁶ HRO, AK3/37.¹¹⁷ Information kindly supplied by Dr. J. Eisel.¹¹⁸ HRO, *The Hereford Journal*, 1697.¹¹⁹ *Op. cit.* in note 110.¹²⁰ *Political Economy, Plymley's Shropshire*, (1803).¹²¹ *Op. cit.* in note 118.¹²² *Op. cit.* in note 15.

Go to Gaol In Hereford

By R. SHOESMITH & R. CROSSKEY

Hereford 'bus station is in a rather run-down part of the city to the rear of the Cannon cinema. An open area for car-parking, a couple of rows of bus-stop shelters, and a small rusticated stone building are all partly enclosed by a high brick wall. The average person could hardly be blamed for not seeing anything of particular interest, but beneath the ground are buried the traces of continuous occupation for a period of some 850 years.

Here, from 1144 till its dissolution in 1539, was the monastery of St. Guthlac (Price, 1796, 72). Here, in 1645, the Parliamentary troops hid in the monastic ruins before their successful attack on Bye Street Gate (Webb, 1879, 2, 252). Here, during the late 17th and 18th centuries, the Price family had a large house in landscaped grounds (Shoësmith, 1984, 329-31). And finally, here, in 1796, a new county gaol was built to the design of John Nash. The high wall and the 'bus station office, once the home of the governor of the gaol, are all that remain above ground of this impressive series of buildings.

This article is the result of many long discussions about the design of Nash's gaol, the conditions in this and other gaols in the city, and the gradual realisation that little had been written on this fascinating topic.

The article was almost complete when an anonymous donor provided the authors with the original drawings of a comprehensive survey of the gaol, which had been undertaken by the County Surveyor's Department in 1925, five years before all the main buildings were demolished. These drawings, the excellent series of photographs taken by F. C. Morgan in 1930, and recent archaeological excavations in the area have led to a much more detailed analysis of this complex than had previously been possible.

Inevitably, more information followed about other gaols which had been in use from time to time in the city, and this has been added to the original short article to provide as comprehensive a survey as possible.

INTRODUCTION

During the earliest periods of the city's history imprisonment was not the normal fate for a criminal. Gaols were under the control of the king, his local lords (including the bishop), and of the sheriff, reflecting the essentially military rule throughout the country. As a result, imprisonment tended to be for political offences and for those people who were inconvenient to the hierarchy. Criminal offences tended to be dealt with by summary sentences - whipping, stocks, amputation, execution etc.

As time went by, and a more equitable legal system began to develop, there was a gradual decrease in the direct authority of both church and state in favour of the civic corporations and shire authorities. These bodies effectively became the prison authorities in their local areas, but for obvious reasons were not interested in spending any great sums of money which might have been construed as being for the benefit of criminals. It was

therefore inevitable that, for many years, gaols were small and primitive and conditions were harsh. Gaolers did not normally receive any salary, being expected to live on what they could obtain from the prisoners and their friends.

Some years ago, F. C. Morgan produced an excellent account of the conditions of the poor and especially those incarcerated in the various gaols in the city in the 17th and 18th centuries (Morgan, 1966, 220-35). To a certain extent this article is complementary to that earlier one, which so well illustrates the extent of poverty in the city following the end of the Civil War and the difficulties of collecting the Poor Rate.

There was little material change in the conditions in prisons and the treatment of prisoners until the latter part of the 18th century. When John Howard (1726-90) became High Sheriff of Bedford, he was shocked to find that, even if declared innocent, a prisoner could not leave gaol until he had paid his fees to the gaoler. As gaolers received no salary, their only means of support were these fees. After suggesting that the County should bear the cost of the gaoler's salary, he set off for a tour around the country searching for precedents and inspecting prison conditions generally. His researches *The State of the Prisons in England and Wales*, first published in 1777, was to prove very influential in prison reform (Howard, 1792).

From this followed the Howard League for Penal Reform set up to improve the physical conditions inside gaols and to reform prisoners' habits whilst in custody. Attempts had been made to solve some of the long-standing problems by the Acts of Parliament of 1774 and 1777. The first Act laid down standards for prisons - that walls and ceilings were to be whitewashed once a year, rooms regularly cleaned and ventilated, infirmaries provided, naked to be clothed, underground dungeons to be used as little as possible, and generally that attempts be made to restore and preserve the health of prisoners. The later Act expanded on this by insisting on solitary confinement with well-regulated labour and religious instruction which, it was hoped, would help to reform the criminal and encourage in him the habits of industry. However, as prisons were built and maintained by Local Authorities, there was only a limited amount of enforceable action possible from central government.

As these new ideals came into force, new buildings were required and Howard extended his tours throughout Europe looking for suitable designs for new gaols. The eventual result was the construction of new prisons throughout the country. They were designed not just to incarcerate prisoners but to provide them with opportunities to learn trades and thus help in their reform.

In this article the available evidence for the several early gaols in the city is examined and discussed, and the design and use of the 'new' prisons which came into use in the early 19th century are described in some detail (FIG. 1).

EARLY GAOLS

The King's Gaols in Hereford Castle

The first castle in Hereford was built by Ralph, the son of the Count of Vexin before 1052. This is likely to have been a simple motte with a timber tower and possibly a bailey,

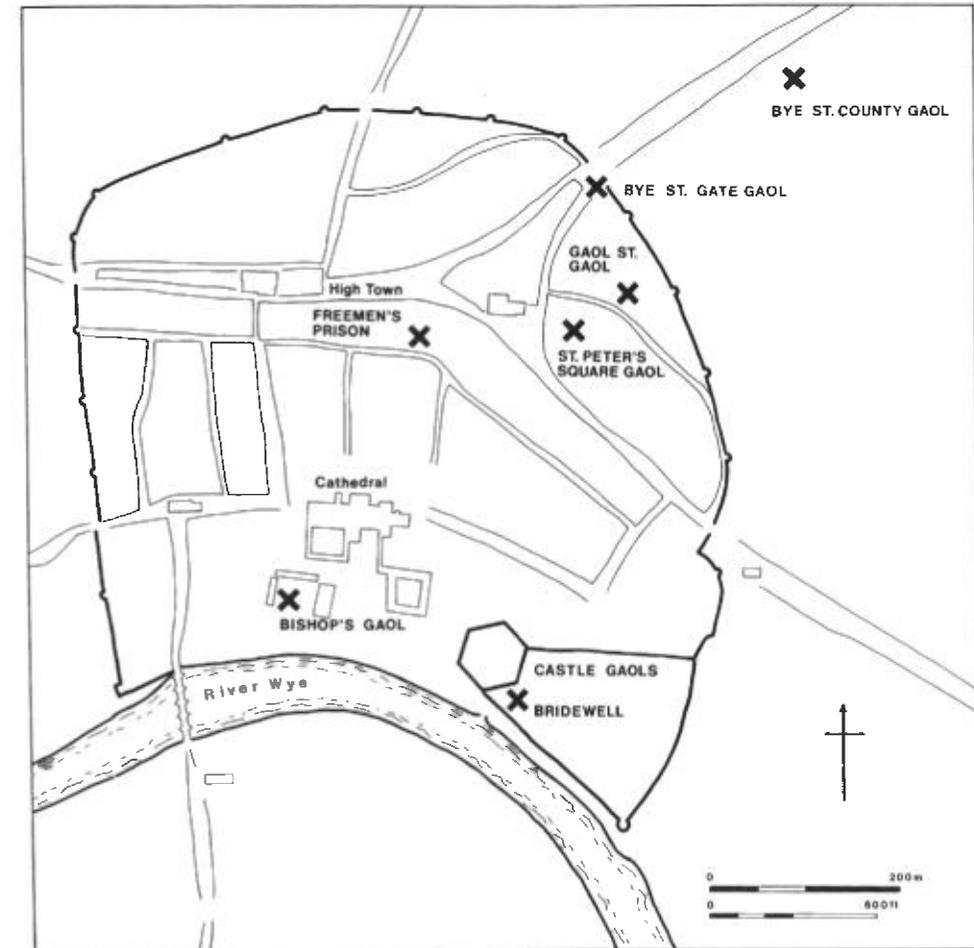


FIG. 1

The location of the various gaols in the city. The base map includes features of 17th and 18th century date.

and was sacked by the Welsh in 1055 (Shoesmith, 1980a, 57). It was probably rebuilt and extended by William fitzOsbern, who was created earl of Hereford directly after the Norman Conquest. Earl William died in France in 1071, and his son, Roger, was then involved in an unsuccessful attempt to depose King William. As a result he forfeited the castle of Hereford to the Crown and, apart from one or two minor exceptions, the castle remained a Royal stronghold for the remainder of its active life. Hereford Castle was of considerable strategic importance throughout the 12th and much of the 13th centuries and received almost continual attention (Colvin, 1963, 2, 673-7; Shoesmith, 1980b, 17-21). However, by 1254 there were a great many defects. One such problem, which was specifically mentioned, was 'the chamber under the curtain wall of the keep where the Jews are wont to be put when they are detailed for the tallage,' which was unroofed (*Cal. Inq.*

Misc., 1, 70-1). The sheriff was allowed £60 to carry out this and other repairs. Whilst the Jewish community in Hereford depended on royal protection in the castle in the event of trouble, it is apparent that they could also be imprisoned there should they not pay their due taxes (Hillaby, 1984, 365).

A record of the castle in 1265 gives a good indication of the number of buildings in the outer bailey (the area now known as Castle Green). There were the king's great hall, the king's small hall, and the county hall. There were also chambers for the king and queen and for their knights, an almonry, a counting house, a stable, two gaols, a chamber for the king's clerks, an exchequer chamber, a building in which siege engines were kept, and the usual offices (kitchen, bakery etc.) (*Cal. Lib.*, 1260-7, 175). It is likely that one of the gaols was that specifically reserved for the Jews whilst the other could have been used for anyone else who offended the king.

The castle had an important prisoner during the Barons' Wars of the 1260s. For a time it formed the headquarters of the Baronial party and had the influential Simon de Montfort as its governor. Because of this, Prince Edward, the eldest son of the King, having been taken prisoner with his father at the battle of Lewes, was brought to Hereford by his captor Simon de Montfort. It may, perhaps, be assumed that he occupied one of the suites of rooms in the castle rather than being incarcerated in the common gaol. He was apparently allowed to exercise on horseback on Widemarsh Common and it was during one of these excursions that he escaped to Wigmore Castle (Powicke, 1947; Noble, 1964, 113; *Cal. Cl. R.*, Hen. III, XIII, 124).

Hereford Castle gradually fell into disrepair during the 14th and 15th centuries and Leland makes no mention of a prison within the grounds in his early-16th-century description (Smith, 1964, 2, 64-5). Although some work was carried out on the defences during the Civil War, there were only two ruinous houses standing in the bailey according to the 1652 survey (Shoesmith, 1980b, 23-4). All the buildings which once crowded the castle bailey have been demolished for many years, but traces of them can still be seen. The regular lines of parched grass, which are now a well-known feature of the Green during long dry summers, indicate buried wall foundations dating back not only to the castle but to a much earlier period when the area was occupied by St. Guthlac's Priory and the city cemetery (Watkins, 1933, 36-46; Shoesmith, 1980b, 27-8). These visible features may well include traces of the two gaols which were in use during the reign of Henry III. One building from the castle era still survives. Described in 1652 as the Governor's Lodge, it was probably built as a Water Gate. After the Civil War it was used by the County Council as a Bridewell for some years (pp. 108-10).

The Bishop's Gaol

Early bishops could incarcerate people for refusing service as ordained by canon law and even for disrespect to the clergy. During the Middle Ages the bishop was also responsible for law and order within the part of the city known as the Bishop's Fee. The precise extent of the Fee is not accurately known, but it is assumed that it included most of the land around the present cathedral. The western boundary may well have been the ditch or stream course which once ran on the eastern side of Aubrey Street (Heys and Norwood,

1958). This ditch presumably led into a marshy area which started in the pronounced dip in King Street and included the low-lying parts of the present Bishop's Palace gardens and Gwynne Street (Thomas, forthcoming). By the 16th century there had been a substantial decrease in the power of the bishop to incarcerate people and his prison probably fell into disuse. It is assumed that the Bishop's gaol was within the grounds of the Palace but there is no conclusive evidence (Lobel, 1969).

In 1837, when preparations were being made for the construction of the Royal Hotel at Ross on a site which had contained one of the palaces of the bishop of Hereford, a dungeon was discovered which was considered to be an episcopal prison. It was evidently designed as an underground structure, with an opening in the roof. Inside the 12 ft. by 16 ft. (3.7 m. x 4.9 m.) room was a large block which had six iron rings attached to it, apparently for the security of the prisoners (Webb, 1879, 345-6). It may well be that the gaol associated with the Palace in Hereford was of a similar nature.

THE CITY GAOLS

Bye Street Gate Gaol

At the beginning of the 16th century, and probably for some time previously, the City Gaol was situated in the southern part of the buildings associated with the Bye Street Gate, the north-eastern entrance into the medieval walled city. (FIG. 2) The gate (PL. VII) was probably built during the late 12th or early 13th century, but the use of part of it as a gaol may well be later.

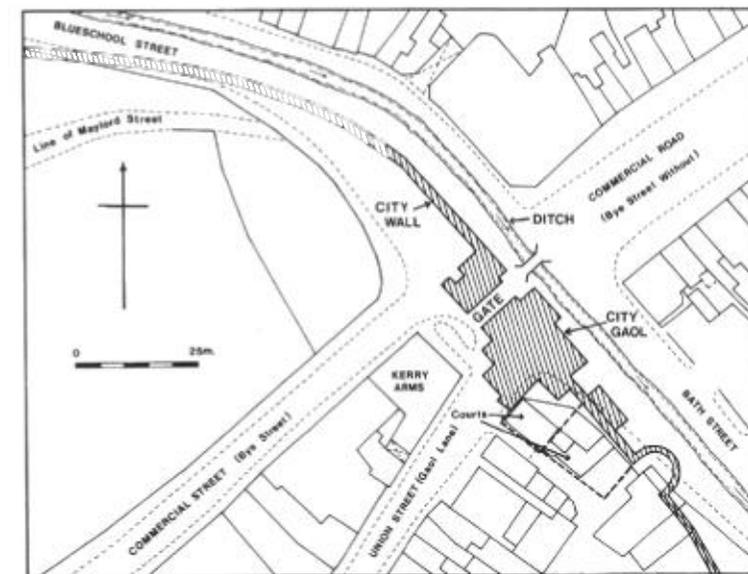


FIG. 2

The approximate positions of the City Gaol, the Bye Street Gate and the City Wall and Ditch, superimposed on a modern plan of the area. The early details are taken from Taylor's 1757 map. The Bye Street Gaol survived until 1842 although the Gate itself was demolished in 1798.

The gaol had a rather dubious reputation in the early 17th century when it was recorded that in a nine-month period during 1624/5, twelve prisoners in the Bye Street Gaol died. The verdict of fifteen jurymen was that nine of them died by God's visitation, one poisoned herself, one was drowned in the river Wye, and one 'did casually fall out of the gallery of the Boothhall' (Morgan, 1966, 223).

This gaol continued to be notorious in the latter part of the 17th century, being exposed as one of the horrific examples described in a booklet *The Cry of the Oppressed* published by Moses Pitt in 1691. This work contains a series of letters from various towns and cities in the country recording the plight of debtors in criminal gaols. The one from Hereford was written by John Taylor, John Seaborne and others. It mainly describes the actions of the gaoler, one William Huck, 'a common lewd person, a swearer, curser, liar, drunkard a common hunter of whore-houses' etc. who 'murdered one Mary Bar(n)ard, a prisoner, that was under his care by knocking her on the head with the gaol keys.' The conditions are well expressed by the comment that 'The said gaoler keeps his swine, geese, ducks and hens, stinking and breeding diseases among the prisoners' (Pitt, 1691, 26-30; Morgan, 1966, 234).

Summary punishment was considered necessary and normal. Thus in 1699, the City Council ordered the Chief Gaoler and his deputy to 'cause the several bodies of seven people (including women) prisoners committed to your custody, to be duly whipt as usuall in such cases and that then after you immediately set their bodies at liberty' (H.C.C. Minutes, 1699).

The various Acts of Parliament in the latter part of the 18th century gradually percolated through to Herefordshire and, as we shall see, the County authorities took resolute action, but not so the City Council. On 26 November 1792 the Common Council minutes note that:

'It appearing that the City Prison is at present in a very ruinous and bad state of repair and very insecure and incommodious for the confinement of prisoners, ordered that a Committee inspect the same and report to this House at a future meeting'

(H.C.C. Minutes, 26 Nov. 1792; Collins, 1911, 10)

Although they accepted an estimate for alterations and repairs to the prison in 1797 (H.C.C. Minutes, 29 Mar. 1797; Collins, 1911, 12), possibly as part of the scheme for removing the Gate itself, the works were apparently not extensive. Bye Street Gate was demolished in 1798 but the gaol buildings, which were on the south-eastern side of the gateway, were left and continued in use (Paving, O.B., f272; Collins, 1911, 12). This is well illustrated in a letter written by one James Nield to a Doctor Lettson of London in 1803 and eventually published in the *Gentleman's Magazine* in April 1808. At the time of writing there were only four prisoners and a lunatic in the City Gaol, but the commitments in 1802 had totalled 136. These were split into the several categories of debtors, felons and those in the Bridewell or House of Correction.

As this publication is one of the few which describes the layout of the Bye Street Gaol, now long demolished, the details are of interest:

'This gaol is in the Bye Street Gate, in which one room is called the Bridewell. It has a small Court with a sewer in it, and the Whipping-post. For Common-side Debtors here is a Free Ward, to which the Corporation allows straw: they have a little Court, about 15 feet square, with a sewer; and it is well supplied

with water. Master's-side Debtors have two Rooms in the Keeper's house, for which they pay 2s. 6d. per week each single bed; or if two sleep together, 1s. 6d. each. For Felons here are two small Court-yards, about 15 feet square, with a sewer in each, and well supplied with water.

In one of the Courts, down eleven steps, are two horrid dungeons totally dark (apparently no longer used). The felons have also three close offensive Sleeping-rooms, which I found scattered over with loose straw on the floor, dirty, and worn to dust. Here is likewise one room, justly denominated 'The Black Hole', which, if not impenetrably dark, has no light nor ventilation, save what is faintly admitted through a small aperture in the door: it is supplied with a barrack bedstead and loose straw; and in this wretched sink-hole was a poor deranged man, in the most filthy and pitiable state that it is possible to conceive.'

(Nield, 1808)

At the time of this visitation the gaoler, John Thomas, had an annual salary of £13 together with fees of 6s. 8d. and garnish of 2s. 6d. There was neither surgeon nor chaplain and the allowance for bread for prisoners of every description was four pence a day.

Nield must have had some effect for a later visitor to the gaol described it as:

'bearing marks of considerable antiquity, and formerly composed one side of Bye Street Gate, over which, in niches, were two rude representations of human figures chained. This Gaol contains one small cell, and three very high apartments, with a window in each; the whole very dry and clean: a dungeon beneath, once used for the purposes of confinement, has been converted into a cellar, by the interposition of Mr. Nield; whose benevolence of heart has induced him to pursue the plan of the much-lamented Howard, and to descend into the depths of misery for the god-like purpose of alleviating distress.'

(Brayley & Britton, 1805, 489)

It would seem that there had been a few improvements and the prison was, at least, relatively clean and tidy. The statues which once stood over Bye Street Gate (PL. VIII), when examined in detail, do not appear to be in chains. From the style of dress they could well date to a period before the gate building was used as a prison.

In 1827 Bye Street Gaol contained four cells for men and three for women, all for felony and misbehaviour; there were also three sleeping rooms for debtors.

The Police Force, as we know it, was initiated by Sir Robert Peel, originally in London, but rapidly extended to the provinces. It had followed from the Municipal Corporation Act of 1835 which, amongst other things, required the elected Councils to form Watch Committees and appoint Constables. The Hereford City Police Force was formed on 1 February 1836, with a superintendent, a serjeant and fifteen constables (Forrest, 1989, 50-1). The superintendent, who was paid £1. 10s. 0d. per week, was also appointed Gaoler or Keeper of the City Prison at an additional salary of £10 per annum plus coals (Collins, 1911, 80).

The City Council considered rebuilding their Gaol on the same site in 1837 (H.C.C. Minutes, 20 March 1837; Collins, 1911, 31) but this scheme was fraught with difficulties and the old Bye Street Gate prison continued in use until 1842. It was then replaced by new buildings on the N. side of what is still known as Gaol Street and the old prison was totally demolished shortly afterwards. The gaol site now comprises much of the southern part of Commercial Square (FIG. 2), with the open courts in the northern part of what is now Bastion Mews.

The Freeman's Prison

In the city there was a privileged class of prisoner with special rights for they were not incarcerated in the common gaol when they fell on the wrong side of the law. These

were the Freemen of the city who, if they lost their liberty, were confined in certain apartments in *the Bothehall* (Johnson, 1868, 81; Watkins, 1934, 49-53).

It was in 1393 that the mayor and commonalty of Hereford received a licence from the king to purchase a plot of ground between High Town and East Street which included the *Bothehalle* and possibly an area to the W. of it. They needed it because 'they have no house within the castle or city of Hereford in which the sessions of the justices of assize or of peace, or the Pleas of the city can be held' (Watkins, 1919, 167). It is here that the remains of several historic buildings still survive (FIG. 3).

The earliest building on the site is the Booth Hall itself, discovered in 1919 when a chimney-stack fell, exposing part of the medieval roof (Watkins, 1919, 165-70). It was built about the end of the 14th century, either just before or just after the site was sold, as a replacement for an older *Bothehalle*. It was apparently bought for public use, but by the 16th century part of it at least was used for trading by the mercer's guild. There always seems to have been a public right-of-way underneath the Booth Hall and it may be that the Hall was built on free-standing posts with an open ground-floor.

To the W. of the Booth Hall, and separated from it by a courtyard, was another timber-framed building constructed either in the late 15th or in the very early 16th century. Alfred Watkins recorded the final and complete demolition of this building in 1934 (Watkins, 1934, 49), but in 1992 an additional two bays were exposed during refurbishment works. Watkins considered that this building had been the Freemen's Prison, but the recent discoveries suggest that this is unlikely.

This timber-framed building, which had a jettied front facing the Booth Hall, was some 18 m. long and 6 m. deep (60 ft. by 20 ft.). One of the most significant features was a very high ground-floor room with a moulded and timber-panelled ceiling. This appears to have been designed as a large hall rather than a series of rooms. The upper floor comprised three roughly equal rooms, the southernmost having a ceiling similar to the ground-floor but with decorative plaster bosses and fleur-de-lis, and the other two plain ceilings. There was a chimney-stack attached to the S. wall of the building - its date is unknown - and possibly one inserted centrally. Watkins describes a basement underneath the northern part of the building, but its precise location is not known.

Recent documentary research has indicated that the Freemen's Prison adjoined Packers Lane, now East Street (info. Dr. Pat Hughes). One possibility is that the isolated timber frame, just to the S. of the Booth Hall and now exposed in the bar area of the hotel, could be the N. wall of the Freemen's Prison. This frame is part of a late-15th or early-16th-century building, jettied on the E., which shared a common approach with the Booth Hall and was part of the same plot stretching from High Town to Packers Lane. This area is now occupied by an 18th-century brick building which when built included a large assembly room.

The city authorities may well have used the Booth Hall for their meetings for some time, but in 1490 they built a new Guildhall or Tolsey (Watkins, 1919, 168). Could this be the building which was identified by Watkins as the Freemen's Prison? It certainly had a room of sufficient size on the ground-floor and rooms above which could be used for private meetings. By this time it would appear that some part of the Booth Hall was being

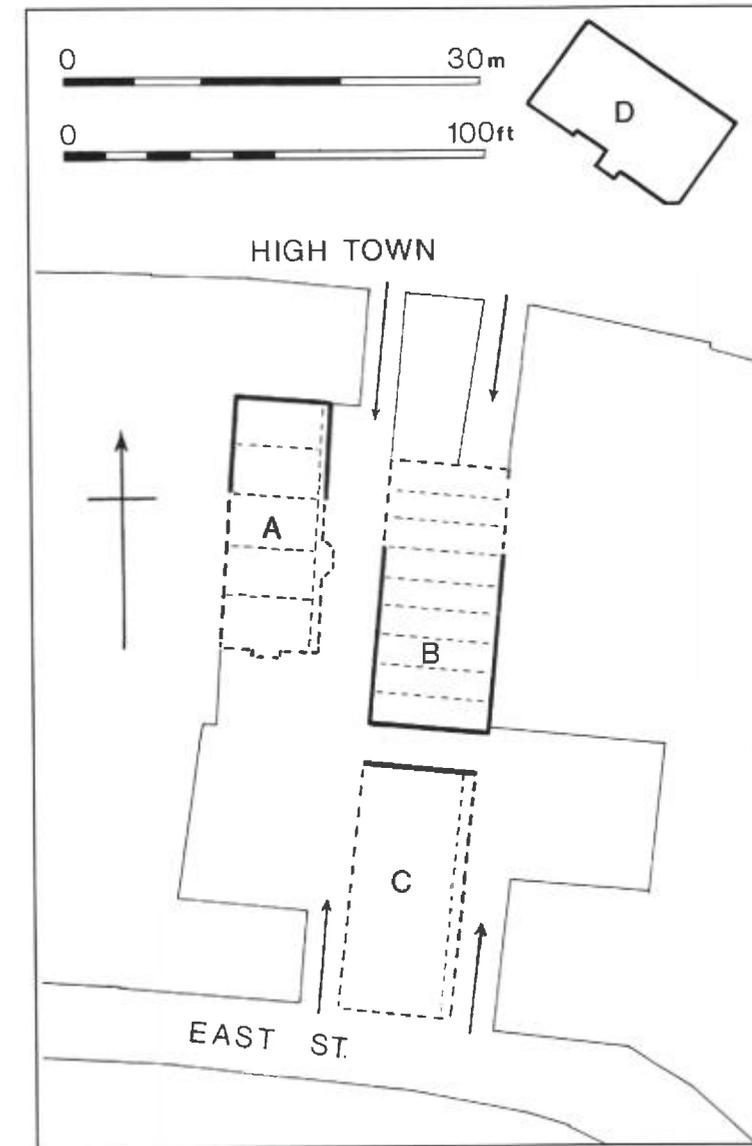


FIG. 3

The suggested location of the Freemen's Prison and its relationship to the Booth Hall and the possible Guild Hall. The arrows show the various entries from High Town and East Street (Packers Lane) into the various courtyards and under the Booth Hall.

A - The possible Guild Hall (which Watkins thought was the Freemen's Prison) later this was the Blue Boar Inn. The two northernmost bays survive.

B - The Booth Hall including a possible extension to the North.

C - The suggested position of the Freemen's Prison - only the northernmost frame survives.

D - The Old House.

used as a trading hall, particularly by Welsh traders selling their cloth. By 1686, the Minute Book of the Mercers Company records that linen and woollen cloth 'be brought or sold by wholesale and in grosse and not by retayle in the house or place in the said City called the Booth-hall, being the ancient and accustomed place for such sales' (Watkins, 1919, 168-9).

The first mention of the Freeman's Prison is during the reign of Henry VIII when 'every person condemned . . . finding surety, shall be imprisoned in the Bothehall instead of in Bistrete Gate, provided that it is lawful to go to divine service at St. Peter's, with the keeper of the Bothehall or other citizen, or with permission of the mere to go to dyn with a friend, or to his counsell lerned.' (Johnson, 1868, 81). A little later, in 1555, William a Prise who was 'detained in ward in Bouthehall' complained that he was not allowed to go to divine service as 'hathe bene accustomed tyme oute of mynde' (Watkins, 1934, 50). A sad event occurred in 1589 when a George Elliott was 'buried out of the Bouthall,' where he was presumably a prisoner (Watkins, 1934, 50).

Some changes had occurred by 1780 when the Mayor and city authorities agreed a twenty-one year lease to a George Willim, who had surrendered a similar lease dated 1766 in favour of his father, William Willim, following the latter's death. The new lease included

All that messuage or tenement called the Boothhall and all houses, stables, buildings &c., to the same belonging. Four chambers called the Freeman's Chambers and one house or office thereunto belonging. Two of these chambers having chimneys only excepted to the said Mayor for such uses as have been anciently accustomed for the benefit of such freemen as shall be committed prisoners to the said house and custody of the said George Willim. With (reserved) Free ingress, egress and regress thereunto as anciently and as often as need shall require. And it shall be lawfull as well to and for the said Mayor, Aldermen and citizens and all others whatsoever, to have and enjoy from time to time during the said term convenient Booth or Leather Hall for the sale of all tanned leather. The annual rent to be Five pounds and two shillings, with a couple of fat capons for the Mayor at the feast of Easter.

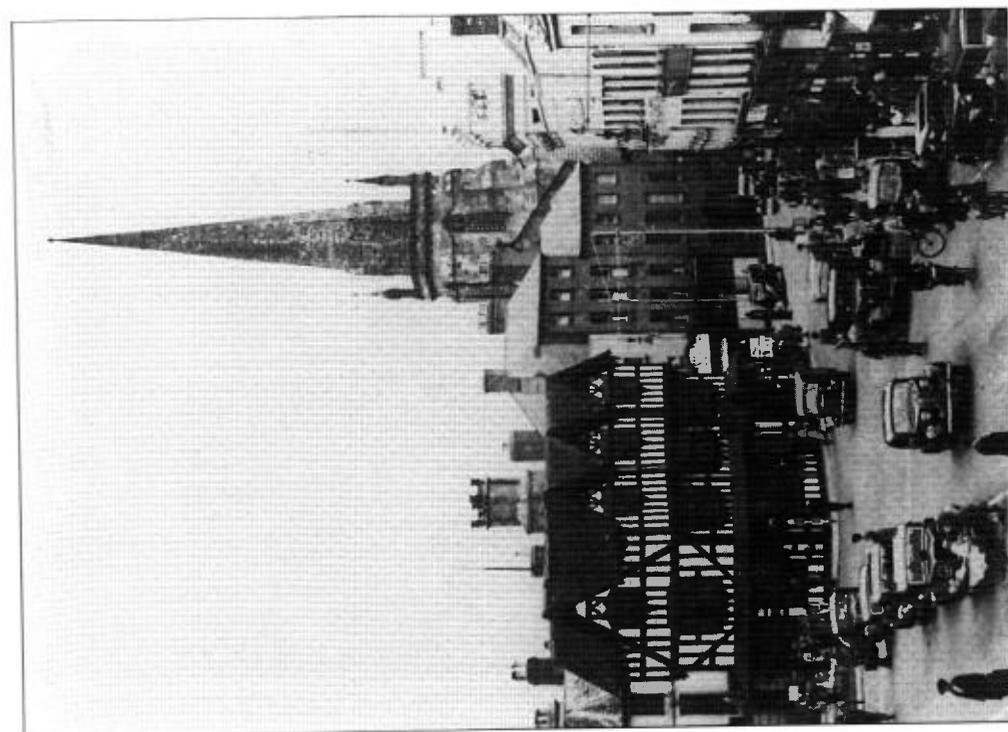
(Watkins, 1934, 50)

Ignoring the Mayor's perk, it is apparent that George and his father William acted as gaolers for the Freeman's Prison but that only two of the original four chambers, having chimneys, were required for this purpose. There was also an adjoining or nearby house.

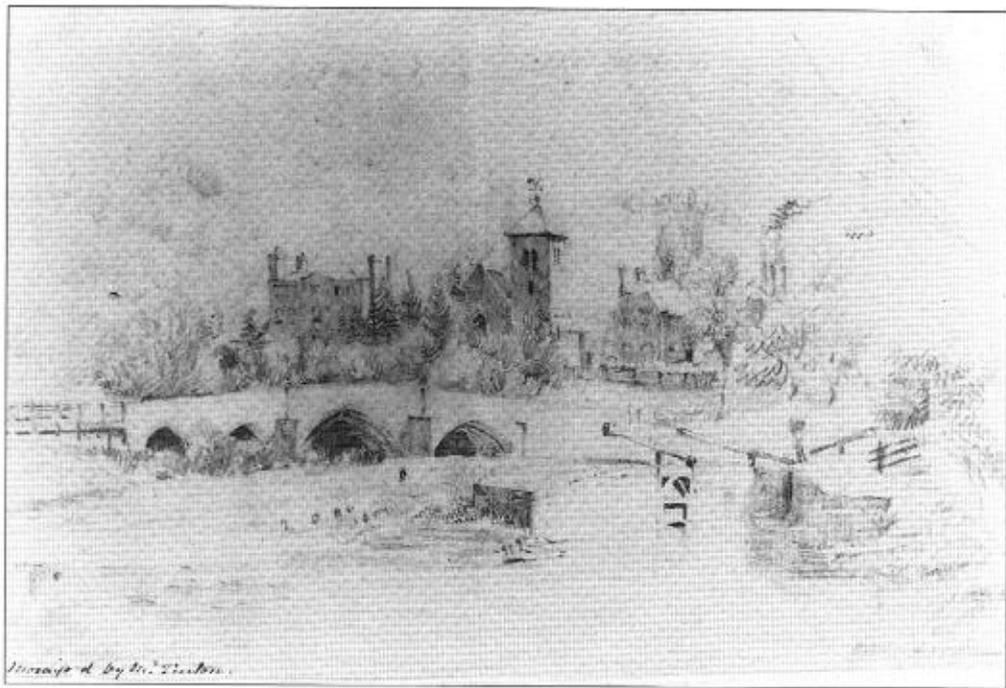
The Paving, Licensing and Lighting Act, which amongst other things empowered the citizens to 'pull down projections and remove nuisances,' came into force in 1774. The Commissioners appointed for this purpose were anxious to improve the whole of High Town which included the frontage leased to George Willim. The Minutes for 28 February 1783 records Willim's holding as 'a large pile of buildings which have now become ruinous and in great decay although Geo. Willim has spent considerable sums in repairs' (Paving, OB; Watkins, 1934, 51). Agreement was reached that the Mayor, Aldermen and citizens would sell the whole property to George Willim providing that he agreed to take down and rebuild the front which faced High Town 'in a handsome and ornamental manner' (Paving, OB; Watkins, 1934, 51). This was agreed and the new frontage block was built shortly afterwards. The old frontage building can be seen in a painting of 1812 (Collins, 1915, opp. p. 16). It is evident from the pavement details that there was a full driving-way leading to the Booth Hall (Powell, 1959, 207). This is now a narrow passage which continues underneath the ancient Hall before opening into the hotel yard.



I — A 19th-century view of All Saints' from Broad Street, Hereford. The appearance of the tower would have been marred had a proposed dial been installed on the south face of the tower. (K. Hoverd).



II — A view of St. Peter's from High Town c. 1950, about the time that repairs were carried out to the tower and spire. (K. Hoverd).



III — Mordiford Bridge and Lock. (By courtesy of the See Library, Hereford).



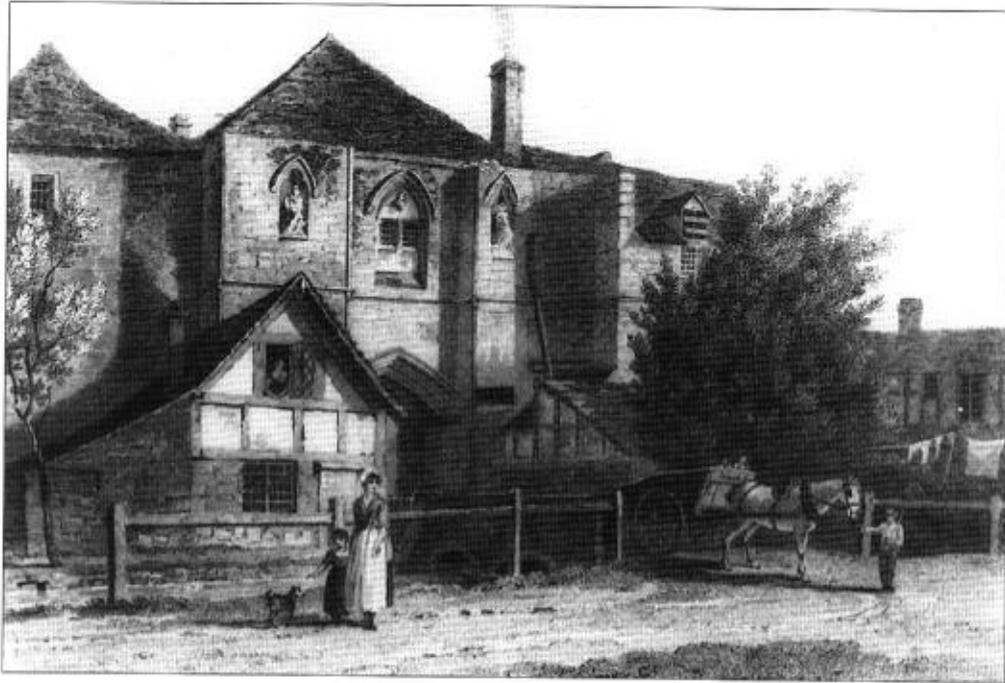
V — Ford Bridge, c. 1920. (By courtesy of the NRA. Photo by the Lugg Drainage Board).



IV — Byfield or Church Bridge, Bodenham, c. 1920. (By courtesy of the National Rivers Authority. Photo taken by the Lugg Drainage Board).



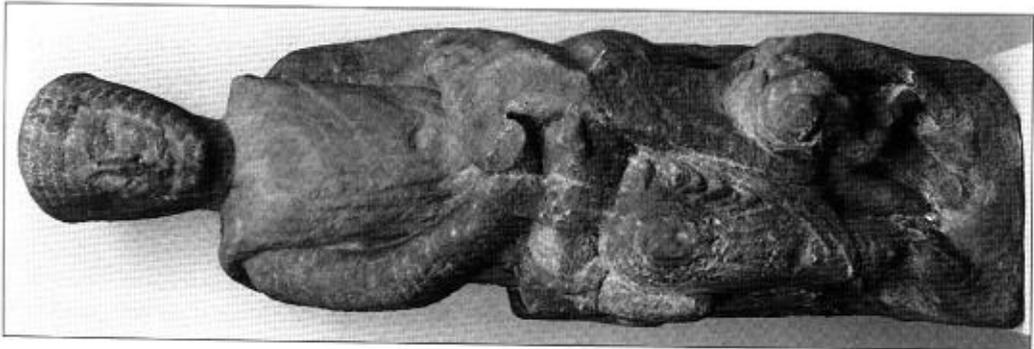
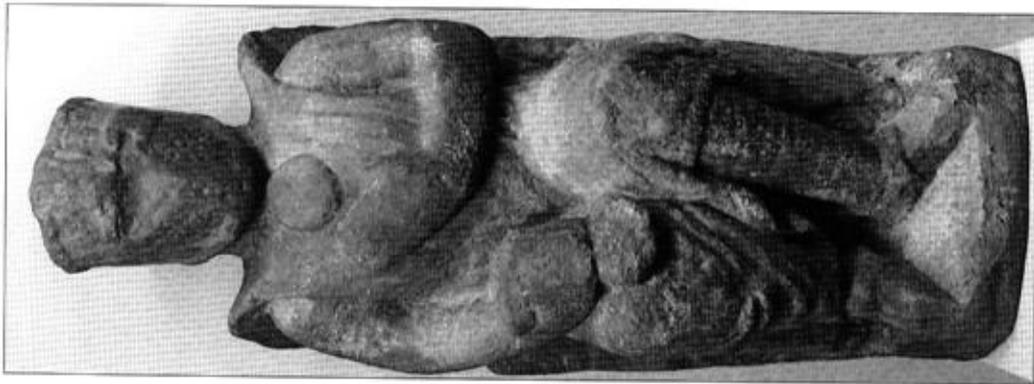
VI — Eaton Hall Bridge from upper side with floodgates in position, c. 1920. (By courtesy of the NRA. Photo taken by the Lugg Drainage Board).



VII — Bye Street Gate in the late 18th century. The City Gaol was in the rear part on the left.



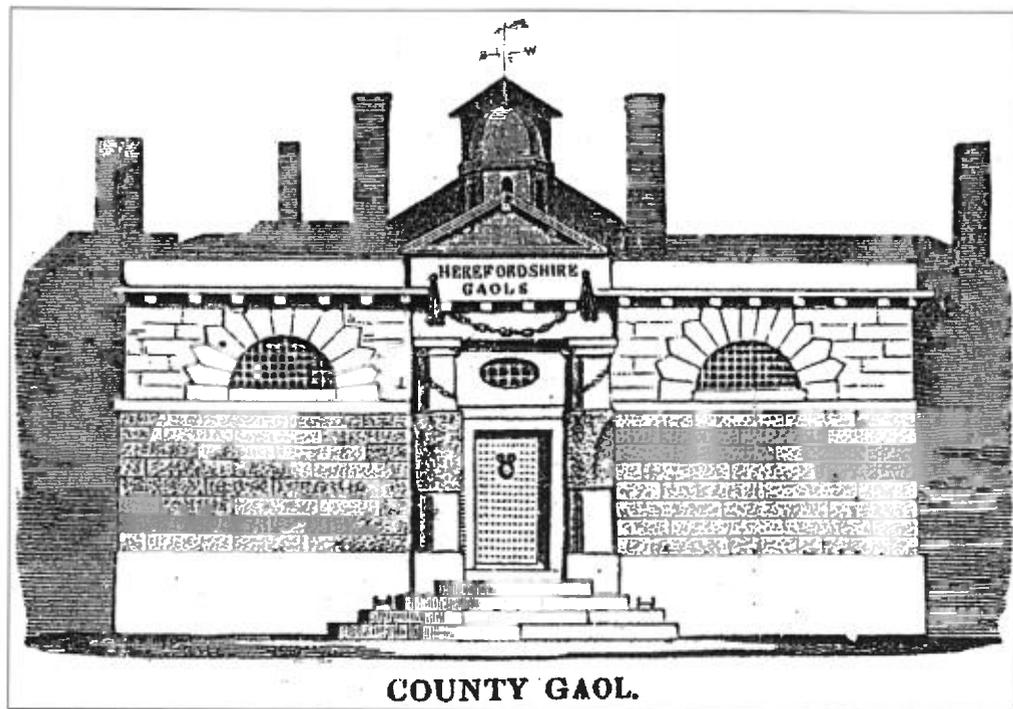
IX — The surviving part of the City Gaol in Gaol Street.



VIII — The two statues which stood in niches above the Bye Street Gate.



X — The Bridewell or House of Correction on Castle Green in 1798 from a painting by Wathen in the County Record Office. The building is now a private house.



XI — The entry to the Nash designed Gaol in 1823 (*Rees, 1827*).



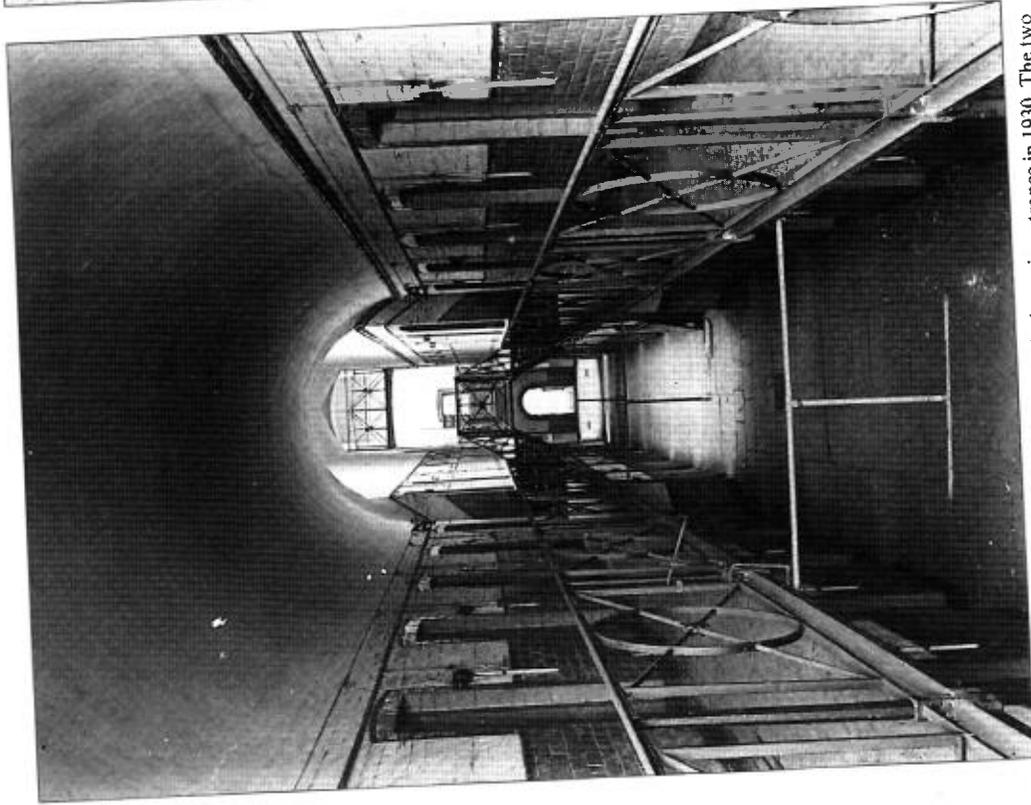
XII — The buttressed wall in the foreground, which was demolished in the early 1980s, was the last surviving part of the precinct wall of the original gaol designed by Nash.



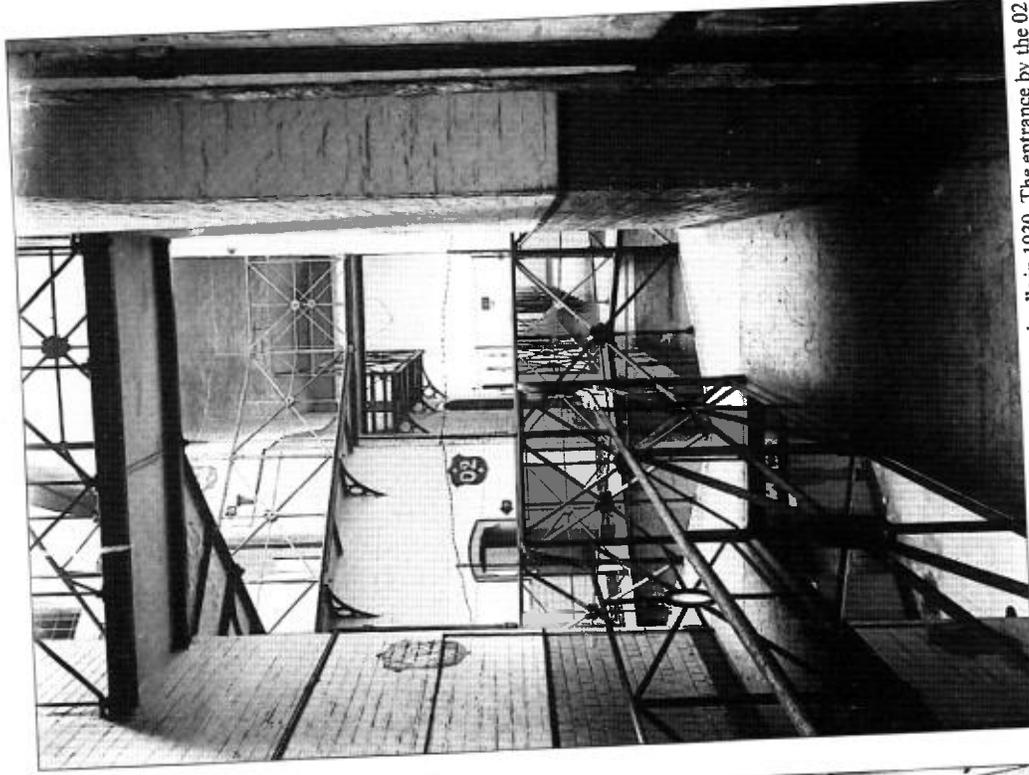
XIII — The entrance wing to the Nash Gaol in 1930. This was originally the gaoler's house but was converted in the latter part of the 19th century to become offices with the chapel above. The main octagon is at the junction of the four wings.



XV — The Commercial Street frontage to the County Gaol in 1930. The alterations to the main entrance (Pl. XI) involving the removal of the steps are apparent but the buttressed brick wall is as built by Nash. The Police Station is just visible on the right.



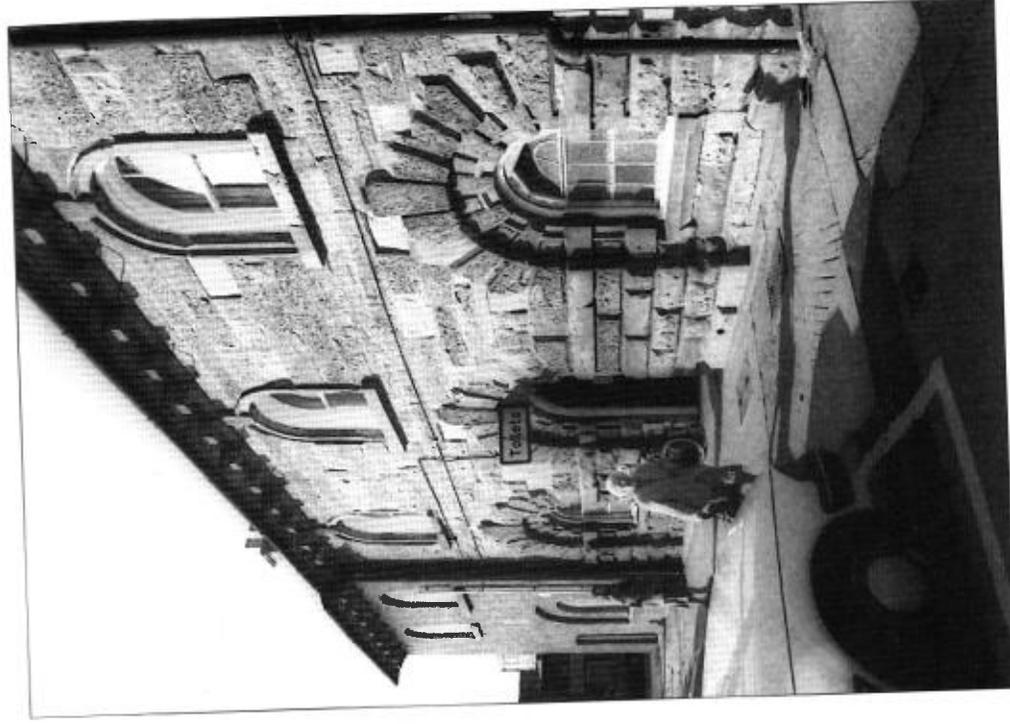
XIV — Inside the south range looking towards the main entrance in 1930. The two distinct periods of construction are apparent.



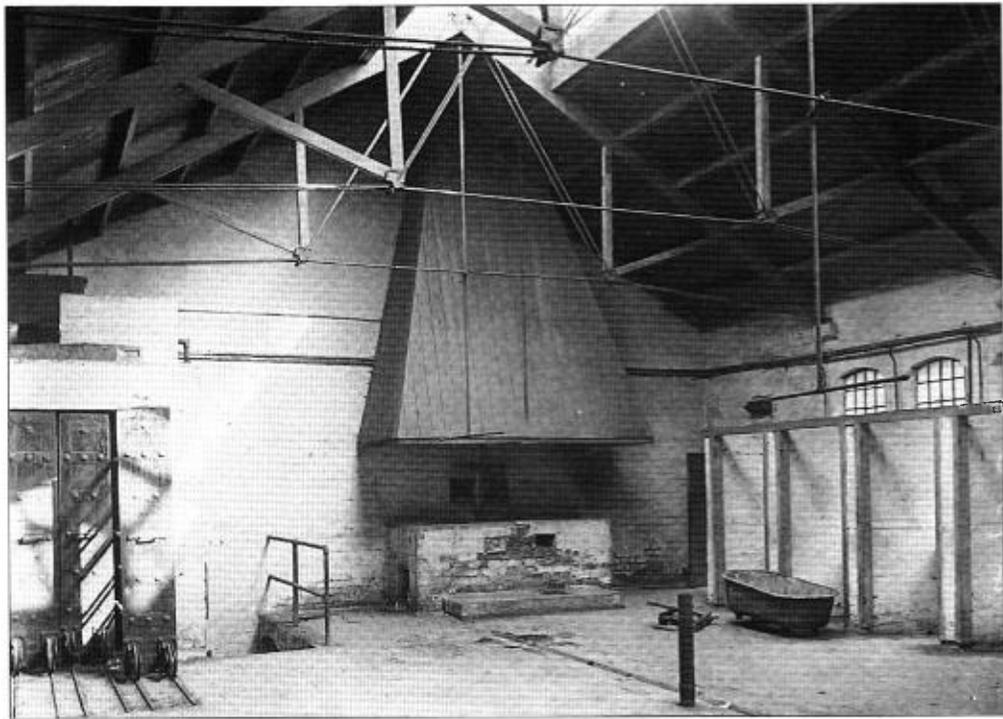
XVI — The central octagon with its inserted cells in 1930. The entrance by the 02 sign led to the condemned cell.



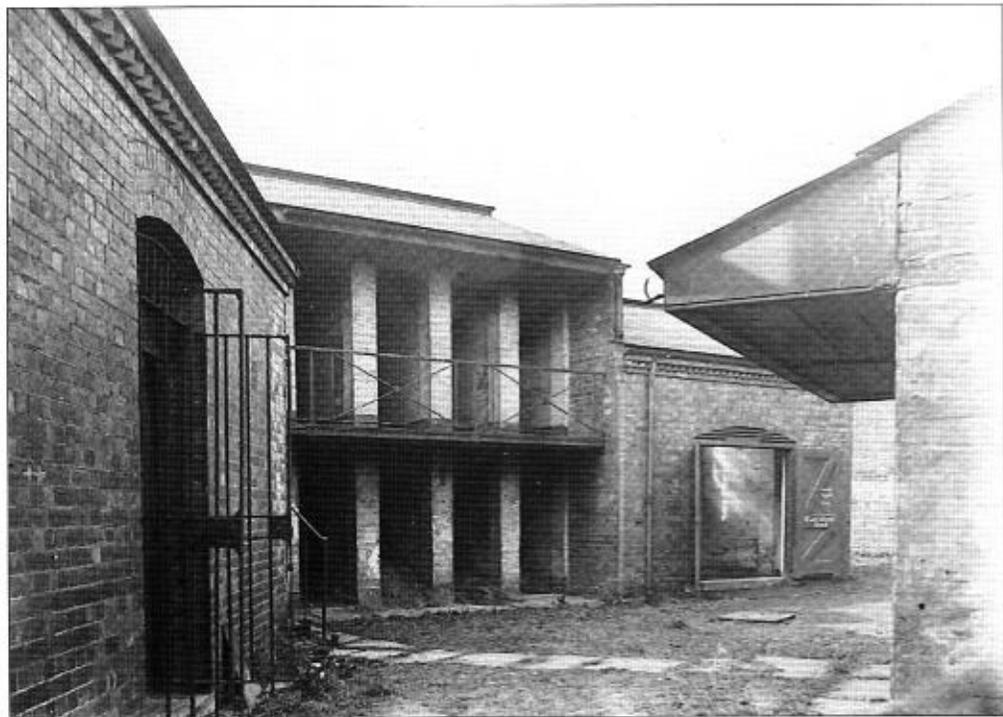
XVII — The entrance to the main prison building in 1930 after the courtyard level had been reduced and steps inserted. Eli Pearson, the demolition contractor is in the centre, and on the left is Macdonald, the clerk. The foreman, George Watkins, standing on the right, died of dysentery during the demolition works.



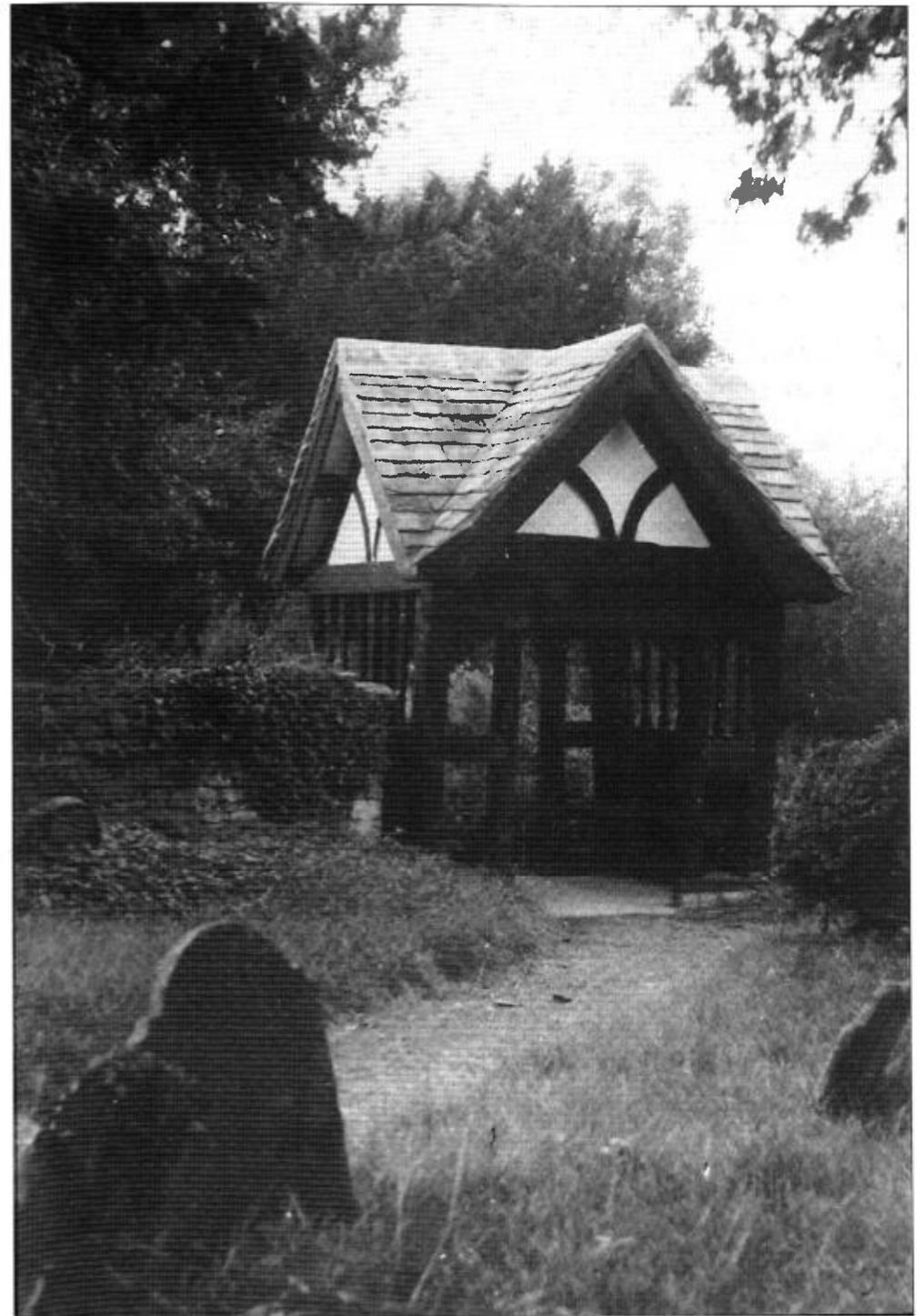
XX — The omnibus station offices in 1992. This was the Governor's house until the Gaol closed in 1929.



XVIII — The interior of the prison laundry in 1930.



XIX — The entrance to the forge house, the oakum-picking cells, and the execution shed in 1930.



XXI — The lych gate at Monnington Church in September 1966. (*Allan Greenhill*).

The sale in 1783 made no reference to the Prison or to the use of the Booth Hall for trading purposes and it is assumed that both these functions had ceased or did cease when Willim bought the premises. Within a few years the Booth Hall had become part of an inn and all its historic features were gradually concealed during a long series of building works.

The Gaol Street Gaol

On New Year's Day, 1838, the Council ordered that Mr. Cam's land in Little Gaol Lane be purchased for £550 as a site for a new City Prison (H.C.C. Minutes, 1 Jan 1838; Collins, 1911, 32). This back lane had previously been known as Grope Lane (Taylor, 1757) but eventually became Gaol Street. Three years later, on 9 November 1841, the Council adopted the report of the Committee for inspecting the specifications and instructions were given to act upon it forthwith (Collins, 1911, 34). The architects were Messrs. Trehearne and Duckham (Collins, 1911, 34) and the gaol was completed by 1844. It was built of rough and uneven stones, which present a striking effect (Kelly, 1885, 1158) (PL. IX; FIG. 4). A large central block was flanked by two two-storey wings. There were a series of exercise yards to the rear, the whole being surrounded by a high brick wall.

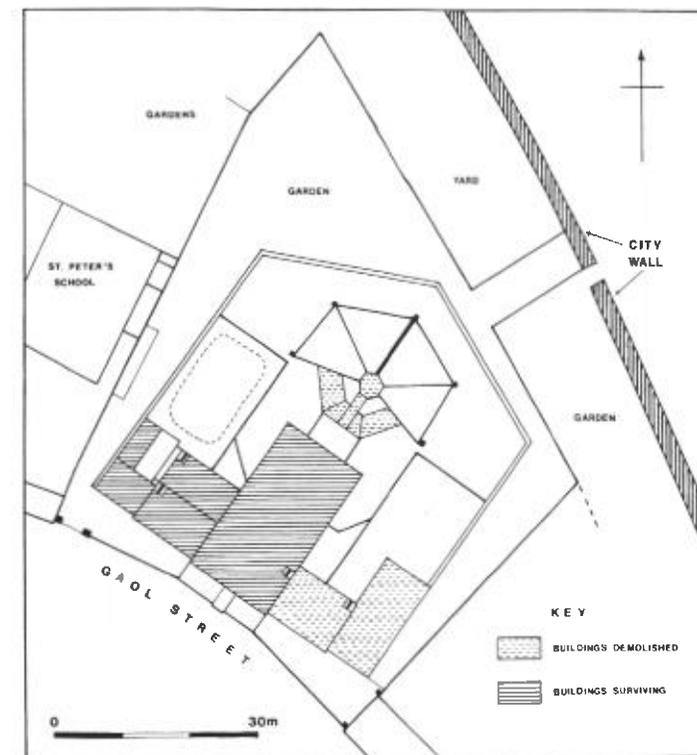


FIG. 4
The City Gaol in Gaol Street taken from the 1858 Curley plan of Hereford.

This Gaol was only in use for a short period for it was closed as a result of the Prisons Act, 1877. It was then re-purchased by the Corporation for the sum of £1,750. The north-western wing and the central portion became the City Police Station, the extreme south-eastern wing was converted into a fire engine house, and a section to the S. E. of the central section was pulled down to make room for a new street joining Gaol Street and Bath Street which was called Delacy Street. The Corporation then built a row of cottages on each side of the new street, at a cost of £1,200, which were used as barracks by the police (Foxton, 1991, 38). In 1911 the police station was considered well appointed with a general room on the ground-floor, an excellent billiard room on the first floor 'surrounded with shelves well lined with books' and well ventilated cells ('a bible was supplied to comfort those in distress'). But traces of the old gaol still survived for

adjoining the Police Station is the old city gaol, covering a substantial plot of land. Internally it is in a state of ruin, and gives one the shivers to think of the uses to which it has been put, even within the memory of the writer. A pity it cannot be converted into a city police court for the trial of prisoners; there is ample room, and it is easy of access to the public, and would save the cost of a police cab

(Collins, 1911, 83)

The ruins of the gaol, the Fire Station and the rows of cottages have since been demolished. A new Police Station was built in 1976 to the north of the older building and only a pedestrian passageway reflects the line of the short-lived Delacy Street. However, the old Police Station - the surviving part of the City Gaol - still remains and is now the Magistrates Court (PL IX).

THE COUNTY GAOLS

Castle Green Bridewell

Although a Bridewell is mentioned on Castle Green in the early 17th century, the use was evidently not continuous throughout the Civil War and the period immediately afterwards. The building, which still stands at the western end of the Green, adjoining the river-bank, is of 13th-century date and may have been the Water Gate for the castle (R.C.H.M., 1931, 126). In the survey of the castle in 1652 it is called the 'Governour's Lodge' and is described as having 'three rooms below stairs and three rooms above, besides garretts and necessary rooms, with two little rooms adjoining to the said house towards the entering into the said castle' (Duncumb, 1804, 286-8). Silvester, in his plan of 1677, shows the building as a dwelling house, and notes that the western part had been burnt (Shoesmith, 1980b, 26). However, the building is shown as the Bridewell on the 1757 map of the city (Taylor, 1757). Documentary sources apparently add to, rather than resolve, the confusion. In 1704 'the house of correction in Castle Green was moved to the Old Bridewell' (H.C.C. Minutes, 1704), whilst in 1731 a committee was appointed to view the 'Old Bridewell at the Castle' and the present Bridewell (H.C.C. Minutes, 1731)! The result of this was that the 'Bridewell, house of correction, and Gaol (were) separated with separate keepers and gardens divided' (H.C.C. Minutes, 1733).

It would appear that during the early 18th century there was a Bridewell adjoining the County Gaol in St. Peter's Square. However, in 1747 it was ordered that 'ye Treasurer do sell the house and garden' (i.e. the Bridewell house and garden adjoining the County

gaol) 'to ye best bidder' (H.C.C. Minutes, 1747). The reorganisation continued in the same year with the letting of land at the (castle) Bridewell for a wharf on the bank of the Wye (a wharf had apparently been built some years earlier in 1724 by Philip Symonds (H.C.C. Minutes). It was not until the early 1750s that the Green itself was laid out with the public walks, which are shown on Taylor's 1757 plan and still exist.

It is evident that the Castle Green Bridewell continued in use throughout the second half of the 18th century, possibly being used by both city and county authorities. Repairs must have been minimal and Howard, in 1782, roundly condemned it as:

not only ruinous, but dangerous: a cross-wall is parted a great way from the wall against which it abutted. In the Day-room there was a large quantity of water from the roof, no fire-place, offensive sewers, no yard, no water, no stated allowance, no employment - Keeper's salary £10. He told me that a little before I came, a Prisoner died after three weeks of confinement. Six Prisoners, whom I saw there at my first visit, complained of being almost famished. They were sent hither from the Assize a few days before to HARD LABOUR (as the sentence usually runs) for six months. The Justices had ordered the Keeper to supply each of them daily with a two-penny loaf: but he had neglected them, they broke out soon after

The Bridewell had relatively little use:

1774 Aug 9	Prisoners 6
1775 Dec 3	6
1776 Sep 9	1

(Howard, 1792)

Possibly as a result of Howard's visit, a scheme was proposed to extend the Bridewell in 1788. A plan survives which suggests that a split-level layout was under consideration (H.R.O., AE 13/1) (FIG. 5). It appears that the proposals included a new balanced facade to the building with a central doorway leading to a hall. On either side of the hall kitchens were proposed for men and women prisoners and the first floor would have contained the keeper's accommodation. A new extension on the riverside would have included a central room for the keeper and two flights of stairs leading down to two lower level courts, each flanked with cells and providing full separation for men and women. A riverside wall would have provided proper security and the keeper, from his central room, would have had a full view of both courtyards. These proposals were not implemented, probably because plans for a new County prison were by then under consideration.

Mr. Blackburne, who was involved with a scheme to build a new County Gaol, examined the Bridewell in 1790 and also considered it to be inadequate for the purpose as there was insufficient security and poor separation (*Hereford Journal*, 3 Feb. 1790). A 1798 water-colour which includes the Bridewell gives more an impression of a private house than a gaol (PL X). The Bridewell buildings were sold to a Mr. H. Hawkins for £500 in 1800, after the prisoners had been transferred to the new County Gaol. (Collins, 1911, 110).

The old Bridewell building still survives as a private house, Castle Cliffe. The building which adjoins it, facing onto the Green, was built as a museum early in the 19th century. It was the meeting place for the Hereford Natural History, Philosophical, Anti-quarian and Literary Society, until that organisation was absorbed by the Woolhope Club in 1852. The building was then used as a reading room and private baths until 1860. It eventually became the Science and Art School of the Technical College and the basement is now used as a canoe centre.

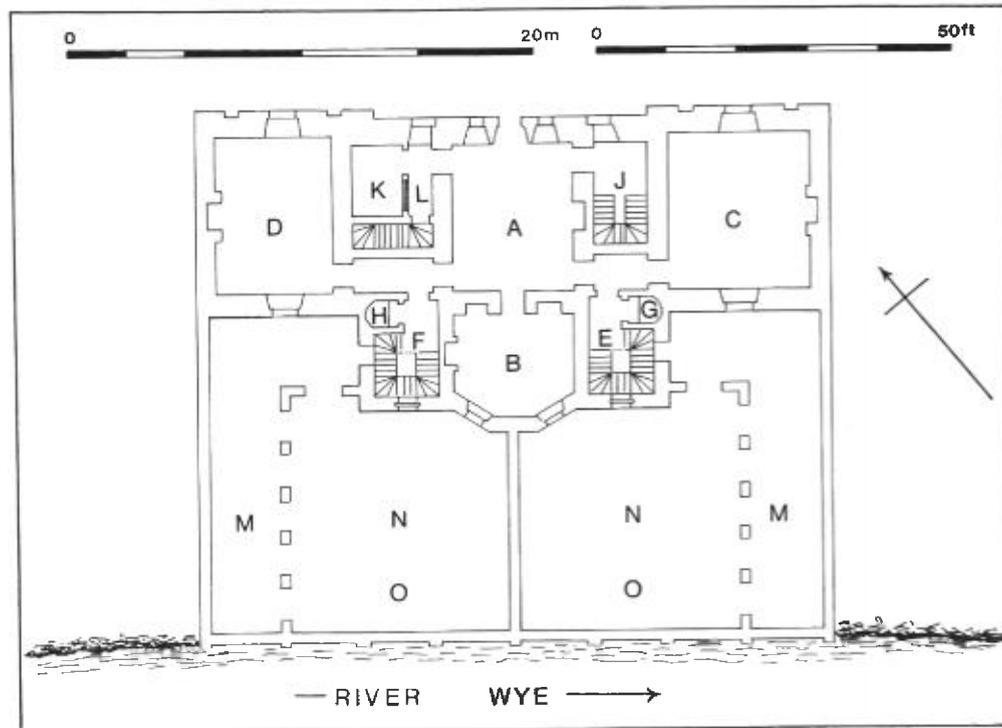


FIG. 5

Copy of a plan drawn by Thomas Symonds probably about 1788. It is inscribed *A plan designed for an addition and alteration to the present Bridewell*. The plan includes two different levels - the courtyards next to the river being at a lower level than the remainder of the building. The main block included accommodation for the keeper on the first floor (not shown).

The key from the original plan (with comments in italics) reads:

- A Hall or kitchen
- B Keeper's room (*with windows overlooking both courtyards*).
- C Kitchen for the Men prisoners.
- D Kitchen for the Women prisoners.
- E, F Stairs (*for male and female, leading downwards*) to the Chambers and to the Courts.
- G, H Bogs, one on each floor (*ie ground floor and courtyard level*).
- J Stairs (*leading upwards*) to the Keeper's Chambers.
- K Pantry.
- L Stairs (*leading downwards*) to cellar.
- M, M Apartments for Labour (*the partitions are not shown*), over them Store R (*ooms*).
- N, N Basins of water, 10 feet in the Clear.
- O, O Courts.

St. Peter's Square Gaol

The County Gaol is shown on the 1757 plan of the city (Taylor, 1757) to the E. of St. Peter's Church, where the Shirehall now stands. The date of its construction is not known, but it must have been in use throughout the 18th century, for in 1729, after recording 'great sickness amongst prisoners' the City Council were petitioned by prisoners in the County Gaol 'for an enquiry into the treatment by the gaoler' (H.C.C. Minutes, 1729).

In 1757 St. Peter's Square presented a much more cramped appearance than it does now. Buildings adjoined the church on both the S. and E., thus considerably restricting the width of what was then The Gaol Lane (now Union Street) in front of the Gaol. Grope Lane (now Gaol Street) was no more than a narrow entry to the N. W. of the Gaol, there being additional buildings on the northern side (Taylor, 1757).

The Gaol buildings were set well back from the road, as is the present Shirehall (FIG. 6). In such a populous neighbourhood a forecourt of this size must have appeared a little incongruous, especially as the buildings were apparently not originally intended as a prison. However, the forecourt may have been surrounded by a high wall with no more than a gate leading from it into the Square.

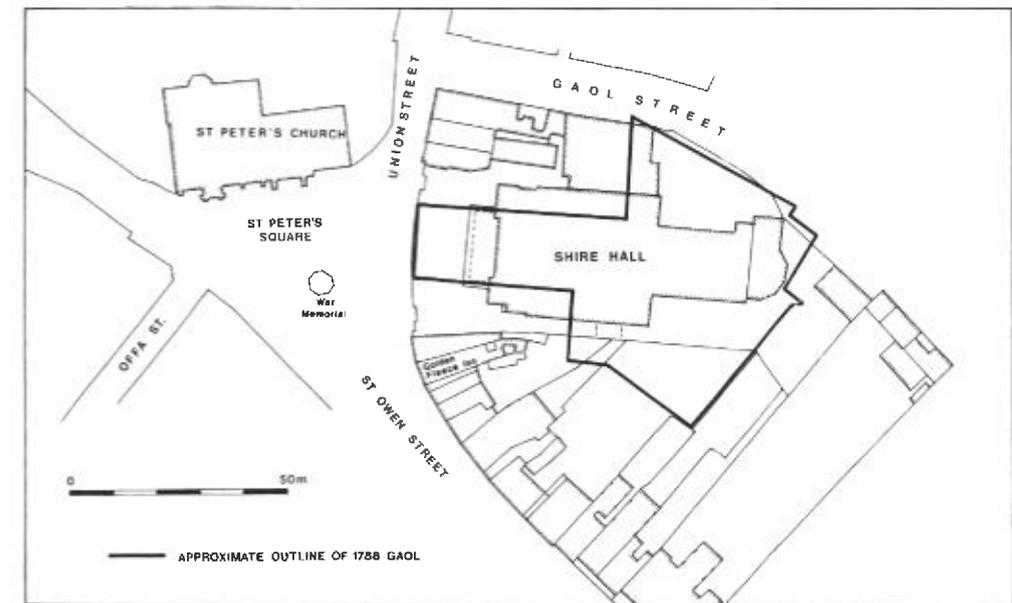


FIG. 6

The extent of the St. Peter's Square County Gaol and its grounds in 1788 superimposed on a modern plan. The details of the gaol are shown on Fig. 7.

The City Council minutes refer to this forecourt in an oblique way which suggests intriguing possibilities. In 1733 it was 'ordered immediately to set about the repairs of ye pavement over the vault and that a contract for proper workmen to make good ye pavement . . . to keep out ye water' (H.C.C. Minutes, 1733). This was apparently in front of the Gaol. There is only one other mention of vaults in 1758 - when it was 'ordered that Mr. Irland be paid the sum of 5 guineas for building a vault for liquor in the County Gaol' (H.C.C. Minutes, 1758). It must be assumed that this was for the benefit of the gaoler!

Some years ago, when a trench was being dug underneath the pavement in front of the present Shirehall, the workmen broke through into a vaulted chamber underneath the

forecourt of the Shirehall (where cars are now parked). Apart from noting the footings of the memorial to Sir George Cornwall Lewis (who died in 1864), which apparently cut through the vaulting, the chamber was not examined and was rapidly blocked up (pers. comm.). It would seem that much of interest still remains hidden underneath this area in front of the Shirehall.

The St. Peter's Square Gaol was examined by Howard as part of his countrywide survey (Howard, 1792). In his report he noted that the gaoler, Thomas Ireland, who had been there forty years, had no salary but received fees. However, Rev. Underwood, the chaplain, received £40 per annum, half of which was a result of a legacy, and the surgeon, Mr. Thomas Cam, received £20. There was no allowance for victuals for debtors, but felons had a 3d. loaf each, every other day. In 1774 there had been fourteen debtors and twenty-nine felons; and in 1782, twenty-three debtors but only six felons. Howard also noted that felons were not separated from debtors and that drink was available 'as if in a common ale-house.'

The Justices and Aldermen in County Sessions did not want a new gaol if the old one could be restored, rebuilt or altered and in 1785 they commissioned Thomas Symonds to prepare plans and estimates for repairs and new buildings. Three years later, in 1788, further plans were prepared for the improvement of the gaol by John Nash, then a relatively unknown architect. Yet another plan of the gaol (FIG. 7), also drawn in 1788, gives a reasonable impression of the layout (H.R.O., AE13). The main house faced the gaol court and had a central passageway leading through to a rear courtyard. The ground-floor rooms were part of the prison, including the kitchens and a chapel, and it is assumed that the gaoler lived on the upper floor(s). The rear courtyard was surrounded by cells with little more than a fence, including a communal pump, separating the men from the women. There was a separate felons' court with its own cells which appears to have been an extension to the original gaol. The 1788 plan proposed an additional and separate court for women. This would have made use of a small part of the gaoler's garden, but as these gardens occupied more than half of the whole site, it would not have been too serious a loss. As with the city gaol, the debtors had preferential treatment with rooms in the gaoler's house.

The various proposals were apparently unacceptable, for in 1790 the Board of Magistrates decided to take further advice. They contacted Mr. William Blackburne an architect of 42 Blackmore Street, Southwark, London. Blackburne had won the first premium offered by the Commissioners appointed to erect prisons under the Penitentiary Act 1779 (for improved designs of prisons). Subsequently he designed and built gaols at Oxford, Bristol, Gloucester etc. He was a friend of John Howard and reputed to be the only architect the latter trusted (Colvin, 1978; Summerson, 1980, 14). As a strong believer in the Howardian ideals, his gaol plans met with much favour. Blackburne was also a friend of John Nash and was a witness at the latter's marriage to Jane Elizabeth Kerr in 1775 (Summerson, 1980, 6).

Mr. Blackburne's report was advertised in the *Hereford Journal* in February 1790. He noted that the prison was in a populous neighbourhood and overlooked by the windows of adjoining properties, that the buildings were not originally intended as a prison

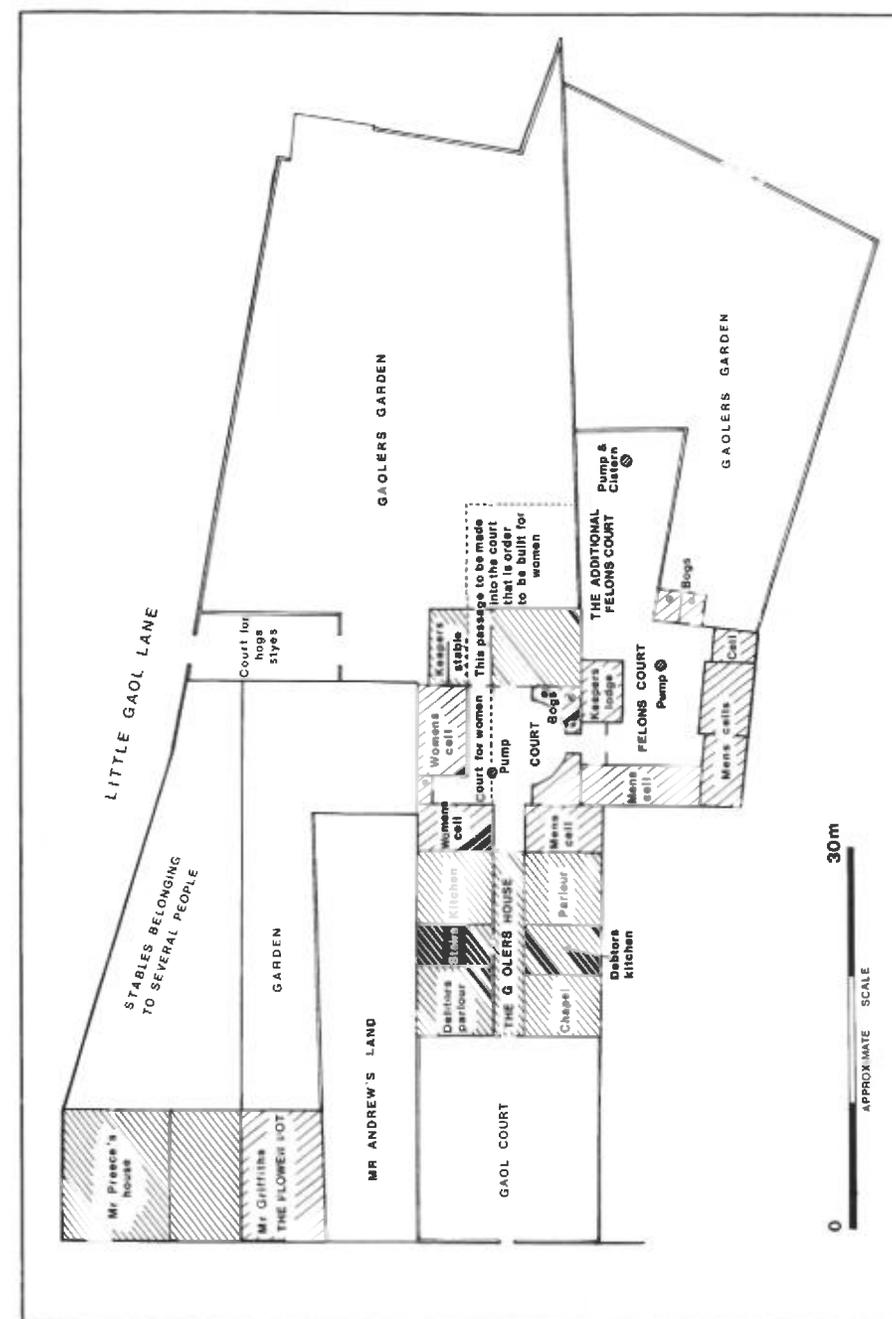


FIG. 7
The St. Peter's Square County Gaol and the surrounding properties re-drawn from an original plan dated Jan. 15th 1788. The differential shading indicates the two colours used on the original plan. The position of the gaol is shown on Fig. 6.

and were inadequate, facilitating escapers. He was also concerned about the lack of space, the poor drainage and the water-supply. Additionally he noted that 'an improper means of communication between the Keeper's house and an adjoining house' allowed the introduction of spirituous liquors. Mr. Blackburne concluded that it would cost more to reconstruct the existing gaol than to build a new one. (*Hereford Journal*, 6 Feb. 1790).

The adjoining house belonged to a Mr. Sylvester and was known by the 'Sign of the Fleece.' In December 1787 it suffered 'a most dreadful fire' which entirely consumed the building and its contents (*Hereford Journal*, Dec. 1787). Although a new county gaol had been completed by 1797, the old gaol must have continued in use as the 'Fleece' was rebuilt and in July 1804 it was ordered 'That the window - opened (*sic*) into the first Court of the Old Gaol from the Fleece be stopped up and notice given for that purpose.' Mrs. Sylvester, presumably now a widow, stood up for her rights, for at the next Sessions: '27 October, Mrs. Sylvester of the Fleece to be allowed to open the window but to sign an acknowledgement that it is done by leave of Sessions - No Liquors may be conveyed through the window to persons in the yard' (H.C.C. Minutes). The inn still survives, close to the present Shirehall, as 'The Golden Fleece.'

The ultimate penalty for any common criminal was, of course, execution by hanging. In the latter part of the 18th century this was the penalty for housebreaking, sheep and horse stealing, and even setting fire to a barn, as well as the capital crime of murder. The executions, which had apparently at one time taken place in High Town, were usually at the aptly-named Gallows Tump on the southern boundary of the city. However, there was at least one exception, the execution of William Jones (alias Watkins) and Susannah Rugg on 1 August 1790. Jones was a native of Clodock and the pair had conspired together to poison Jones's wife at Longtown by the use of arsenic. The report goes on to say:

They were executed in St. Owen's Street, where the City Machine now stands, and opposite to where the old County Gaol stood. The body of Jones was taken and hung in chains at Longtown Green, near to his former residence and to where the deed was committed.

(Broad Sheet, 1856)

As late as 1813 the quarterly General Sessions held at the Committee Room at the New Gaol ordered the treasurer to pay William Preece, mason, for work at the New Gaol £5. 5s. 3d. and for work at the Old Gaol £12. 3s. 9d. (County C. Minutes). Later in the same year is the first mention of the possibility of a new Shirehall. Early in 1815 a survey of the area was undertaken, and an Act of Parliament (55 Geo. III) for the erection of a Shirehall, Courts of Justice, and other buildings received Royal assent on 23 March in the same year (Collins, 1911, 37).

The Shirehall was designed by Sir Robert Smirke (then Mr.) who was later to design the British Museum. The outline of the new building is very similar to that of the old gaol (FIG. 6) and it may be that some of the foundations were re-used. Certainly, demolition of the Old Gaol must have proceeded apace for the foundation stone of the Shirehall was laid on 13 July 1815, the building being completed by 1817. We can only wonder why the Old Gaol continued in use for some eighteen years after the new County Gaol was built.

The New County Gaol

It is apparent that the Acts of Parliament of 1774 and 1777, Howard's visits to Hereford, and Blackburne's report on the Old Gaol and Bridewell in 1790, were together sufficient to persuade the County authorities to take resolute action.

Mr. Blackburne was commissioned to establish a suitable site for the new prison and was clearly influenced by Howard's ideals, for in his report he considered the essentials to be:

1. An elevated airy situation, dry, with good drainage
2. As near as possible to a river, brook, or running water
3. Well supplied with good water
4. Sufficient space for airing grounds, not overlooked
5. In a neighbourhood sufficient to assist upon alarm
6. Clear from the smook or ill smell of manufactures
7. At an easy distance, or as near as may be to the Assise hall.

In addition to the above, Blackburne pointed out the desirability of 'the building being made a feature in the country where it may be placed.'

(*Hereford Journal*, 3 Feb. 1790)

The potential sites visited by Mr. Blackburne give a graphic picture of the state of development in Hereford towards the end of the 18th century. The whole city should still be grateful that his most favoured site was not chosen - this was Castle Green, now one of the most important open spaces in the centre of the city and an area of great archaeological importance (Shoesmith, 1980a). Other sites considered by Blackburne included the Barbigan (presumably close to the river (Tonkin & Tonkin, 1973, 20)) which was enclosed by neighbouring houses, the cattle walks, and high ground, deficient in water and damp; whilst the Miller's Meadow, apparently close to St. Owen's Gate, had similar problems, was overlooked by Dr. Cam's Walks and by houses, and in addition was a long way from the Assise Hall. A site between the Bye Street Gate Gaol and the Wall of the City would have needed a writ to close part of the highway to make sufficient space. Sites close to Eign Gate and Friars Gate were considered to be inappropriate, and a site at Monks Moor (where Safeways's supermarket now stands) was described as inferior.

Mr. Blackburne's second choice was the one which was eventually considered to be most suitable. This was a piece of land outside the Bye Street Gate known as The Priory (Shoesmith, 1984). Mr. Blackburne thought this was suitable apart from its distance from the Assise Hall, and providing the buildings were kept at a sufficient distance from the 'Monks Morass.' The Committee appointed to view all the sites reported later in February 1790 that 'The spott of ground called The Priory recommended by Mr. Blackburne in his report that having reviewed it did approve of it for the above purposes.' At the same Sessions William Symonds, Esq., proprietor of the above 'spott' having signified his readiness to accommodate the County, the bargain was struck and the architect was instructed to prepare plans and estimates before 1 July of that year. The plans were produced and approved on 21 October and Mr. Blackburne was instructed 'to get on with it' (*Hereford Journal*, 15 Dec. 1790). This was not to be for, at the Epiphany Sessions, 11 January 1791,

it was ordered that Mr. W. Hobson be appointed architect for the New Gaol 'in the Plans of Mr. Blackburne, deceased.'

Although Hobson's drawings were completed by July, 1791, and deposited for inspection by the Justices of the Peace (*Hereford Journal*, 20 July 1791) there was little progress during the remainder of the year. However, in January 1792 at the Sessions, the Clerk was instructed to write to Mr. John Nash in Carmarthen that Mr. Hobson had been appointed to finish Mr. Blackburne's plan. It appears that John Nash had approached the Sessions independently and the Clerk had asked him to send his own plan and estimates 'as he proposed,' both to be taken into consideration on 24 June. It is not known if Mr. Hobson had been found unsatisfactory in any way, but on 26 June the minutes record that 'It is ordered that Mr. Wyatt desired to inspect Mr. Blackburne's and Mr. Nash's plans and to make his report of their respective merits and report in writing to the next Sessions.' James Wyatt, by then a well-known architect, was in Hereford in connection with the Cathedral repairs after the fall of the western tower and part of the nave in 1786. His report has not survived but a minute of the Trinity Sessions for 10 July 1792 provides the result, for it was agreed that 'This Court taking into consideration Mr. Blackburne's and Mr. Nash's Plans do approve of Mr. Nash's Plans.'

John Nash was at that time about forty years old and had had a somewhat tumultuous career. Due to an extravagant wife and his failure to sell some houses he had designed in London, he had been declared bankrupt in 1783. Although discharged in 1784, he decided to leave London and fled to Wales. Here he was responsible for designing a new gaol at Carmarthen (Summerson, 1935, 35 & illustration; Summerson, 1980, 9). The old gaol, which was in the shell of the castle, had no water and the cells were small and damp (Howard, 1792, 408 & Howard, appendix, 1779, 189). The new gaol was commissioned following the Act of 32 Geo. III and completed to Howard's recommendations and Nash's plan in 1792 (Spurrell, 1879, 51; Suggett, 1995, 25-8). It was demolished in 1938 (Summerson, 1980, 14).

This success led to Nash being commissioned to design a new gaol for Cardigan after Howard had condemned the old building as waterless, verminous and filthy (Howard, 1779, appendix, 189). Nash's new building, which was completed in 1793, has been demolished for many years but illustrations suggest that it had basic similarities in design to the later one in Hereford (Summerson, 1935, 37; Summerson, 1980, 15 & illustration). From Cardigan, Nash moved to Hereford where, in addition to working on the new gaol, he carried out several other commissions. These included work at Foxley, the remodelling of Kentchurch Court, and the new Market Hall at Abergavenny (Summerson, 1980, 192). It was after he had completed his work in Herefordshire that he returned to London to become one of the most important of the Regency architects.

In the first instance, the Sessions ordered Benjamin Hallows the Clerk of the Peace to 'contract with William Symonds Esq., for the purchase of a house and plot called the Priory situated without Bye-street Gate for the sum of £2,200' (H.C.C. Deeds). The land not required for the prison was eventually re-sold by auction for £1,330, which sum went towards the cost of building the new Gaol. A further part of the money had evidently to be borrowed as an advertisement in January 1794 indicates:

Any person willing to advance the sum of £1,500, or any part thereof, on the security of the County Rates of the County of Hereford, for building a New Gaol and secured by an Act of Parliament passed in the 24th year of his present Majesty's reign are desired to inform Mr. Hallows, Attorney at Law, in Leominster, thereof . . .

(*Hereford Journal*, 22 January 1794)

The County Gaol at Hereford was to be one of the many built throughout the country during the latter years of the 18th century 'on the plan of solitary confinement recommended by Mr. Howard' (Duncumb, 1804). Work was certainly under way in February, 1794, when a fence encircling the site was required by the Clerk of Works for the project (*Hereford Journal*, 12 February 1794). The main building work was apparently completed by the summer of 1796 (Broad Sheet, 1856). With various items of additional work, furniture etc., the total cost of the project amounted to £18,646. 16s. 3½d. Nash's statement of account was as follows:

ABSTRACT
of the
EXPENCE OF BUILDING AND FURNISHING
HEREFORD COUNTY GAOL

	£	s.	d.
Contracts for oak and for timber scaffolding, and carpenters' and joiners' work, done in London	3,553	0	10
For stone and carriage of stone, ditto	1,998	9	6
For iron grating, gates, iron-work, chevaux-de-frize, and for iron-work and ironmongery, done in Hereford	1,074	11	2½
Contract for masons' work	1,978	4	2
For carriage, ditto	13	18	3½
For lime and sand, ditto	730	10	0
For bricks, ditto	2,443	10	10
For slating, ditto	584	11	8½
For colours, and for painting, ditto	149	14	2½
For plumbing, and glazing, ditto	212	12	0½
For bricklayers' work, ditto	851	17	10½
For sawing, ditto	143	8	10
For digging, ditto	71	14	4
Small bills for sundries (collected)	306	5	8
For plastering	51	18	4½
For day-work to labourers, bricklayers, masons, carpenters, and other artificers, as per day-book vouchers, &c.	1,881	0	0
Commission paid the architect,			
as liquidated on the above sums	£720	0	0
His journeys	£340	4	0
Clerk of the works salary, &c.	£327	12	0
	1,387	16	0

Furniture, and alterations made since the Gaol was finished as above	784 15 10¼
Probable expence of the works in hand	428 16 0

No. 28, Dover-Street, July 1797

JOHN NASH, *Architect*

£18,646 16 ¾

(Duncumb, 1804, 425)

THE NASH GAOL

The design of the new Hereford Gaol was apparently similar to that built by Nash in Cardigan (Summerson, 1980, 15) but was derived ultimately from the plan of Newgate Gaol, built by George Dance in 1769 (Whitehead, 1983, 110). The main buildings were laid out on a cruciform shape, the whole being surrounded by a high brick wall. The only entry was from Bye Street Without, now Commercial Road. Here, the massive door was approached by several steps from the street, and the entrance building included heavily rusticated stonework with chained columns and semi-circular griled openings on each side of the doorway again echoing Dance's famous device at Newgate (PL. XI).

There are no plans which show the gaol as it was designed and built by Nash. Throughout its life, there were many additions and alterations made to the buildings but sufficient evidence survives to establish the original configuration with a fair degree of probability. The main sources are the various descriptions published in the early 19th century which, although somewhat contradictory in parts, give an indication of the general arrangement and working practices within the gaol.

The earliest reference consists of correspondence dated 1803 and published in the *Gentleman's Magazine* in 1808 when the new Gaol was described in glowing terms (Neild, 1808). A little later, a description of a tour around the gaol in 1816 was included in the Report of the Committee appointed to inspect the state of the prison (Committee Report, 1816). In addition to these early records, the plans, elevations and sections produced by the County Surveyor in 1925 (FIGS. 13-17) and the excellent series of photographs taken by F. C. Morgan just before demolition (including PLS. XIII-XIX) provide the necessary corroborative evidence. From these sources it is possible to reconstruct the general layout of the Nash building (FIG. 8).

It is apparent that the original gaol was smaller than that shown on the earliest of the detailed plans of the city made in 1858. However, this plan (Curley, 1858) includes the various parts of what had been the original southern boundary wall which still survived at that time. Indeed, one section of this original wall survived until the early 1980s when it was photographically recorded prior to demolition (PL. XII). Additional evidence was obtained during archaeological excavations in 1986 and 1987 when stretches of the foundations of this boundary wall were exposed in several places (Thomas, forthcoming). It is clear that the original precinct wall was built of locally-produced bricks (as indicated in Nash's account) with shallow, broad buttresses at regular intervals along the whole of its length. It stood some 7.3 m. (24 ft.) high and had massive stone foundations. Apart from the area close to the gaol entrance, the wall was separated from all the internal buildings.

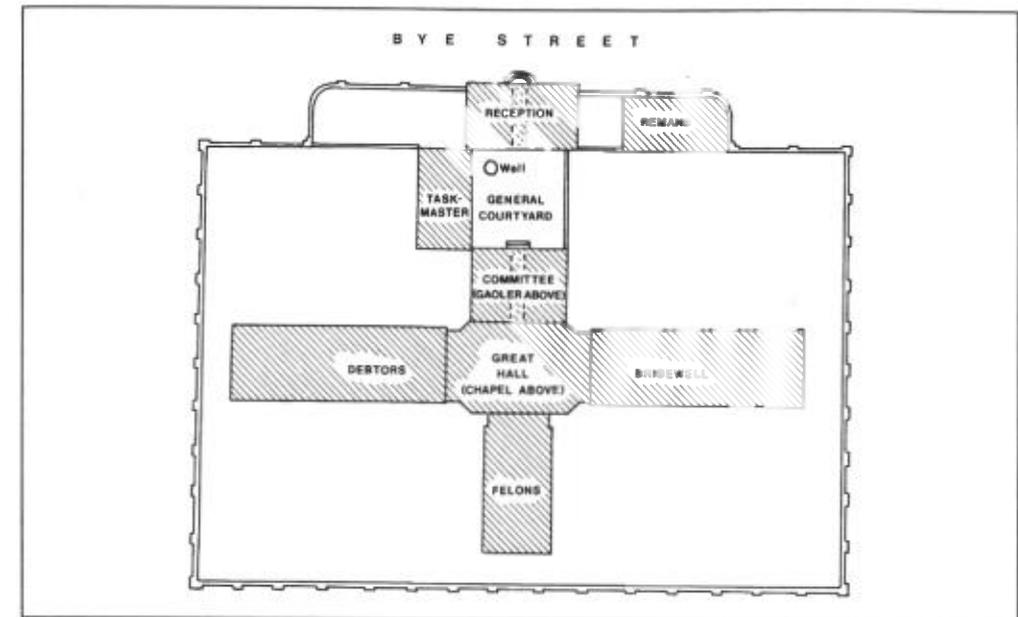


FIG. 8

The extent of the County Gaol in Bye Street as designed and built by John Nash in 1797, based on contemporary descriptions and recent excavations.

A careful examination of all the available evidence has led to the conclusion that, at the beginning of the construction works, the ground level over the whole of the site was between one and two metres above the general level of Bye Street (Commercial Road). This was probably due to the debris which would have been left behind when St. Guthlac's monastery was demolished, partly after the Dissolution in 1538, and partly after the Civil War (Shoesmith, 1984, 328-30). Rather than move this considerable overburden when the gaol was built, the problem was resolved by constructing a flight of five steps from the road into the entrance building (PL. XI). Some disturbance of the monastic levels must have occurred, presumably during the original construction, for it was recorded that 'stone coffins and other relics have been found at the rear of the gaol' (Caldicott, nd., 30). It is presumed that these burials came from within the monastic church as the general burial ground for the religious community has been established much further to the S.E., outside the area used for the gaol (Shoesmith, 1984, 341).

The entrance or reception building was designed to appear strong and impressive from Bye Street, although it was only one storey in height. Above the entrance was a flat roof which was designed to be the place of execution by hanging. This was first used in August, 1796, when the *Hereford Journal* recorded that 'On Saturday last was executed on a drop erected over the lodge of our new County Gaol, John Phillips, convicted at the last assizes of stealing twenty-one sheep' (*Hereford Journal*, 10 August 1796). By 1816 this platform had been partly concealed by an ornamental cupola and parapet wall (PL. XI). The Gaol Committee strongly recommended that these be totally removed:

in order that future executions may be fully exposed to the general view of all spectators without the walls, and of all the prisoners within, who should be ranged round the general court for that purpose - and in the hope of preventing crimes by making a due impression on all who witness these melancholy examples.

Executions continued to take place on the flat roof from time to time, some twenty people having been hanged there by 1864. After this date executions were held within the prison. (Caldicott, *nd.*, 30). An area towards the rear of the prison was apparently reserved for the burial of inmates who died or were hanged. However, 'Some doubt exists as to the precise number of criminals buried within the precincts of the prison as the relatives had the option of claiming the bodies, except in cases of murder, when they were invariably handed over for dissection' (Broad Sheet, 1856).

A passage ran through the middle of the entrance building with, on the left, a warm and cold bath and an oven to 'fumigate and purify' the prisoners' clothes. This was the reception area for prisoners entering the gaol, and adjoining it was a small courtyard that, in 1816, was called the 'Penitentiary Yard.' This contained several cells that were originally designed for prisoners on remand. However, by 1816 this yard also included a hand-mill for grinding or cutting corn (it needed six persons to operate it and required much strength) and was used for 'the confinement of persons committed for offences against the Game Laws, Misdemeanors in Husbandry, Cases of Bastardy etc..' The Committee were unhappy with this courtyard which, in addition to containing heaps of mortar, rubbish and other nuisances, had projections on the side of the mill building which 'affords in its present state, a facility for the escape of prisoners confined here.' On the right hand side of the passage were two other receiving cells and a second small courtyard 'having no buildings.'

The passage led into the general courtyard which was flagged and contained an engine house and the well by which the whole prison was supplied with water. On the right of the courtyard was a house for the taskmaster with a shop underneath for the articles manufactured in the prison. This building may have been a secondary feature to the original design but was certainly completed by 1808.

Across the general courtyard was the entrance to the main prison building, also rusticated and with a pediment. This wide, arched entrance was originally at the same level as the general courtyard but at a later date the courtyard was lowered and the approach was then up a flight of eight steps. This wing was two full storeys high but may have had additional rooms in the roof space (PL. XIII). It was designed as the gaoler's house but also included, on the ground floor, the Magistrates' Committee room. A passage led through this building, at ground-floor level, to the Great Hall or Inspection Room which was at the centre of the cruciform. The entrance wing and the Great Hall are the parts of Nash's building which suffered most from the many radical changes which took place throughout the life of the prison, but an attempt can be made to describe the Hall as it was originally built.

The Great Hall was actually octagonal but appeared almost circular and was about 15.2 m. (50 ft.) in diameter. It was the most important part of the whole prison concept for it included windows in each of the four angles which, apart from providing good illumination for the Hall, allowed the gaoler to see into each of the main courtyards. The Hall also

had complete command of all the wings of the gaol. These wings each contained cells on two levels with separate stairs and a gallery access to the upper level. There was an iron gate separating each wing from the Great Hall. The Hall was described as being 'large and airy' and was three storeys in height. It would appear that the main hall was two storeys high without an intermediate floor and that above it, effectively at second-floor level, was the prison chapel. This was arranged with separate sections of seating for each class of offender. All the sections of the chapel were connected by different staircases leading down to the several departments of the gaol. There may have been a central glass dome or some other roof surmounting the chapel.

The three prison wings which led from the Great Hall each had a different function: to the left of the Hall was the Bridewell; to the right the Debtors Prison and straight ahead the part reserved for Felons. The central passages, which ran the full length of each wing, were open to the roof. They were sufficiently wide to allow galleried passages, 1.2 m. (4 ft.) wide, on each side leading to the first-floor cells (PL. XIV).

Both sides of the Bridewell wing had nine cells on each floor. One side was for male prisoners and the other for female. It appears, however, that some of the cells were soon used for other purposes. On the male side, in 1816, there was a room for shelter (from the cold?) with a fireplace, a room with a cistern, and a room with a wheel for supplying water to the establishment. This wheel was 16 ft. in diameter and needed the labours of one man during the whole of each day to procure the quantity of water consumed. The practice was to use each prisoner in turn for about quarter of an hour in the wheel and repeat as necessary. The male cells had windows towards a spacious courtyard, and the prisoners were allowed the use of it during the whole day.

The ground-floor cells of the female Bridewell had a variety of used including a dairy and a series of shops for making shoes and mops, for spinning, winding yarn and wool, etc. In the courtyard attached to this part of the establishment was a general wash-house for the whole establishment, a building for the women whilst working, and a distinct apartment for female convicts. These latter buildings were probably additions to Nash's original plans, built during the early years of the 19th century and are not shown on FIG. 8.

The Debtors prison, to the right of the Main Hall, was designed to balance the Bridewell, although there were several differences in design which reflected the special status of debtors. There were two rows of seven cells on each side of the passage, each cell being 3.8 m. by 2.7 m. (12 ft. by 9 ft.). This compared favourably with those in the Bridewell (2.8 m. by 2.7 m. (9 ft. 3 ins. by 9 ft.)) and those in the Felons prison (2.4 m. by 2.1 m. (8 ft. by 7 ft.)). Each cell also contained a fireplace, although Debtors were apparently not allowed coal or any other fuel until 1812. It appears that there was usually a preponderance of male debtors. Thus, in 1808, there were twenty cells for male debtors, ten below and ten above, whilst the women had eight rooms, four below and four above. By 1816, the male side had been increased to fourteen above but still ten below and all were in use. The female side had been decreased to four rooms, all empty. The Debtors could have their rooms furnished with beds and bedding by the Gaoler at 1s. 6d. or 2s. 0d. per week each, but if they were too poor then the County 'humanely provided an iron bedstead,

sacking bottom, a straw bed, two blankets, and a coverlet as they did with other prisoners.' The occupants were each provided with one pound of bread per day.

The Debtors wing also included the Infirmary, which had four rooms on the top floor. By 1816 this establishment had been improved by the addition of a private staircase to allow those with the fever or other contagious diseases to take air and exercise in the courtyard without using the general staircase. The final room on the top floor, beyond the Infirmary, was used in 1816 for the storage of ammunition for the local Militia - there must have been no fear of a breakout by the prisoners!

The male and female Felons occupied the wing running straight ahead from the Great Hall. Within it, for each class (male and female), was a day-room and twelve cells, six below and six above (PL. XIV).

Every section of the gaol had its own courtyard for recreation. Each of these courts had a sewer in it and was well supplied with water. Apparently the prisoners had the benefit of using the courtyards throughout the whole day, although the Inspecting Committee in 1816 thought this was excessive and that 'the period of prisoners remaining in them might be abridged without endangering their health.' In several of the courtyards vegetables were grown for the use of the prisoners.

LIFE IN THE NEW GAOL

In 1808 the administration of the new County Gaol was described in glowing terms. The 'humane surgeon' inspected prisoners upon admittance, they were bathed and provided with bedding, free if necessary, and attended daily services performed by the 'exemplary chaplain.' The Rules and Orders, which were hung in every lobby, included:

Any person wishing to work may have raw materials of the Keeper, who will dispose of the work on the best terms he can: and, after deducting the prime cost of the raw materials, pay the remainder to the Prisoner who performed the work; except one fourth thereof, which is to be reserved for the County. Any person to whom work is refused, or whose money is kept back, or has suffered any imposition from the Keeper, or his Servants, is particularly enjoined to make complaint thereof to the Magistrate at his next Visitation.

(Neild, 1808)

The Gaol had been designed with the employment of prisoners in mind and suitable premises were included within the perimeter by 1808. At that time they were described as:

A house for the Manufacturer or Task Master, and a very neat shop for the articles manufactured in the Prison viz. shoes, slippers, gaiters, stockings, gloves, garters, flaxen-yarn, and nets of all sorts; the sale of which is promoted by advertisement at the County expence.

There was an ominous rider later in 1808 when it was noted that 'the working system is in a great measure discontinued.' It would appear that the problem was that of the absolute value of the work produced and the proportion it bore to the maintenance of the worker. It was suggested that 'if it were an indispensable rule that every prisoner must work, those who are to bear the expence would soon find means to make that turn to account' (Neild, 1808).

However, the 1816 report (Committee Report, 1816) found conditions to be generally satisfactory. In this report it was accepted that the articles produced by prisoners,

although generally of good quality, cost more than their worth when manufactured. The establishment of manufactories which would produce a supply of articles consumed in the gaol was recommended by the Committee, even though a deficit could be anticipated. The Howard ideals of 'the acquisition of a trade and of habits of industry, restoring the prisoner to his proper character' (Howard, 1792) were well to the fore.

The main recommendations of the 1816 report were twofold; that the various classes or categories of prisoners should be better separated, and that they should perform appropriate work as follows:

The first class should consist of prisoners committed but not tried. These should have opportunities afforded them of working at any trade to which they may be competent, and should be rewarded in proportion to the value and quantity of the work performed.

The second class should comprise those committed for bastardy, disobeying orders of filiation, offences against the game laws, misdemeanours in husbandry, and runaway apprentices. These should be confined in the department called The House of Correction and should be employed six hours daily, in grinding corn, picking and carding wool, making mops, or any useful articles.

The third class to include prisoners sentenced to hard labour, who should tread the waterwheel during a quarter of an hour at two periods of the day - assist in turning the corn-mill during two hours (with intervals), and beat hemp - remove cannon-balls and other weights from one place to another - weave, or manufacture useful articles for the consumption of the gaol, or perform other hard labour.

The fourth class to comprise the women, who should be employed in washing and mending for the whole establishment, - in spinning and winding flax - making shirts, beds and sheets - carding wool and knitting stockings.

In all cases it was stipulated that there should be proper intervals for instruction in reading etc. The work was to be organised and supervised by a Taskmaster at a salary of fifty guineas per annum. The Taskmaster was responsible to the Visiting Magistrates and 'in all his communications with the prisoners, should have their reformation in view; be guarded in his manner and language; neither use nor permit profane swearing, nor strike a prisoner except in self-defence.

It is apparent that prison reform was of prime importance to the County Council in the early years of the 19th century, but it is equally obvious that these ideals were not always accepted by the staff of the establishment. Although in 1827 the prison was described as 'strong, clean and well-regulated,' by 1829 conditions had changed. A typical pamphlet of the period, written by 'four debtors,' and published locally by J. P. Ellidge, names the outer turnkey, Jones, as being oppressive, and asks 'Has the gaoler of the Hereford County Gaol ever reported the inhuman negligence of the surgeon or the repeated irregularities of the chaplain? Does the gaoler pretend to be ignorant of either? Does not the gaoler connive at the irregularities of the chaplain, because he is one of the gaoler's bondsmen? and at the negligence of the surgeon, because in his substitute (a druggist) he anticipates a matrimonial connection for his own family?' The authors of the pamphlet also insist that the Rules of the Prison are oppressive and impose regulations outside the relevant Acts of Parliament. (Four Debtors, 1829).

A poem published in the same year labelled Turnkey Bennett as:

'Our captain Gaoler, heartless lout,
Rum, gin and women's toys.'

and in a footnote comments:

'This brute, we suppose, will shortly apply for a pension; we should advise the visiting magistrates, before they dip their hands into the county purse, to inquire a little more strictly how Smallman and many others have escaped, and measure the pension by the results of such inquiry. They might also, with great benefit to humanity, ask a few questions respecting the extremely humane manner in which Smallman was treated.'

(Anon, 1829)

The effect that these and other anonymous publications of the same nature had on the day-by-day running of the prison (and on the pensions of the turnkeys!) is unfortunately unknown.

THE FIRST SEVENTY YEARS

It is apparent, reading the Report of the Inspecting Committee, that there had been quite a few alterations to Nash's Gaol during its first twenty years. Additions and alterations were to continue throughout its life; some are apparent on the several plans available and others are mentioned in contemporary documents. An attempt is made in the following paragraphs to describe these changes within broad periods although in many cases it must be appreciated that the dating is uncertain.

The first period to be considered is from the foundation till shortly after 1858, the date when Curley's plan of the Gaol was produced. This plan includes a walled extension of the main gaol area to the S. thus increasing the total area by about a quarter. The extension included two additional courtyards, separated by a new two-storey block of cells built on to the end of the Felons wing (PL. XIV). In one of the courtyards was a 'Bank mill for pumping' and a new well; the other was split into two parts by what appears to be a row of sheds. These new courtyards were separated from the original ones by the high, buttressed, brick wall of the original Nash gaol (FIG. 9).

Small extensions were built on to the ends of the Bridewell and the Debtors wings, joining them to the perimeter wall. The eastern end of the Bridewell was then connected with a new wing which occupied most of the E. side of the prison. This wing was built against the eastern perimeter wall and thus decreased the size of the original courtyards. The new wing was two-storied, with a single row of cells on each floor facing the courtyard and a galleried passage next to the perimeter wall.

The original Nash Gaol had been faced with well-squared blocks of stone with the lower parts of the walls rusticated. The new extensions were of well-made local brick with small, rather ugly window openings which contrasted with the carefully arched design of the Nash windows. Internally, both periods of building had brick dividing walls, the Nash bricks appearing a little more irregular than the later ones (PL. XIV).

Smaller alterations during this period included extensions, probably residential, to the rear of the Taskmaster's house, and the consequent loss of part of another courtyard. Curley's 1858 plan, the first detailed plan of the whole city, was produced as part of the scheme for mains sewerage. The original draft of the section of the plan which includes the prison complex shows the proposed drains leading from the various courtyards. We must suppose that, before the middle of the 19th century, either the whole complex was served by a series of cesspits or the sewage was piped into the nearby stream.

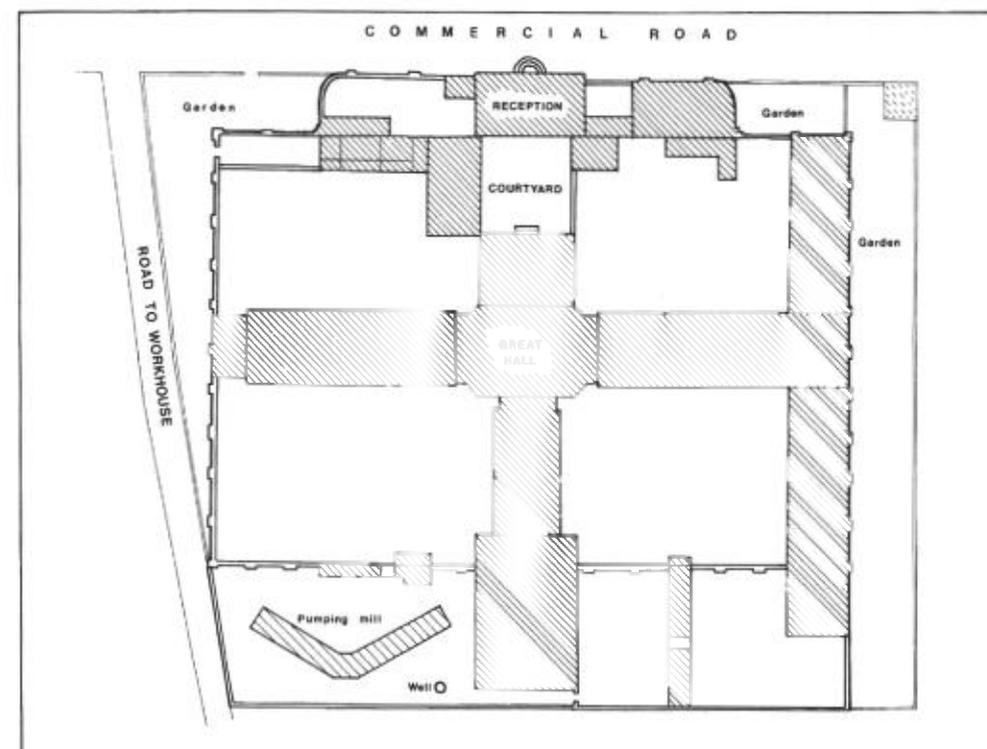


FIG. 9

The extensions and alterations to the County Gaol during the first half of the nineteenth century based on contemporary descriptions and Curley's plan of 1858.

The main alterations and additions described above were probably carried out in 1819, when twenty cells were added (Jakeman & Carver, 1890) (one half of the new eastern wing would have held twenty cells), and in 1843, when there were further additions (Littlebury, 1876).

Although the gaol was strongly built, there was nearly a catastrophe in 1863 when, at twenty-past-three in the morning on Tuesday the sixth of October, there was an earthquake. As a whole it had little effect in the city, but in the County Gaol 'the arched roof of the corridor on the female side was so shaken that a fissure which had been closed was reopened and carried to the length of 27 yards. One of the chimney-pots belonging to the matron's apartments was thrown down, with some bricks, and the iron braces which tie the sides of the corridor together were so moved, that it seems probable the whole corridor would have fallen if it had not been recently repaired and braced with iron' (Isbell, 1864, 348).

THE LATE 19TH CENTURY

It seems that Hereford County Gaol then entered a period of stability for which there are few records. A booklet published in 1866 lays out very detailed rules and regula-

tions for warders and prisoners and specifies exact diets for each category of offender (H.R.O. C76/1). Captain Edwin Cowtan was the Governor of the Gaol for a considerable length of time during the 1860s and 1870s and some of the changes which occurred may have been a consequence of the improvement in his status as compared with that of the early Gaolers (Kelly, various).

Edwin Cowtan was still the Governor when the City and County Gaols were united in 1877 as a consequence of the Prisons Act of that year. A report published in 1871 (H.R.O. AK68/1) had already indicated that there was sufficient room in the County Gaol to take all the prisoners, there being then 132 separate cells. The five-year averages of prisoners were:

County Gaol: 77 prisoners (64 male and 13 female)

City Gaol: 33 prisoners (22 male and 11 female)

The prison was transferred from the County Council to the Government on 1 April 1878 (Jakeman & Carver, 1890) and this may also have been the occasion for alterations. A reasonably detailed plan of the gaol was prepared in 1880 and this, together with a plan of the eastern side dated 1885, is included in the deeds (H.C.C. Deeds). They indicate that several significant alterations had been carried out between 1858 and 1880, with consequent changes of use of some of the original parts of the prison (FIG. 10). By this time the strict segregation of the various categories of prisoners had ceased and as a whole there was just a simple division between male and female inmates.

The area occupied by the prison had again been increased with the incorporation of a triangular patch to the W. of the gaol which was shown on the 1858 plan as a garden. This extended the prison boundary to the edge of Union House Walk, the private roadway which led to the Hereford Union Workhouse, built shortly after the Poor Law Act of 1834. A long strip of ground to the E. of the gaol, which had also been a garden in 1858, was also purchased.

By the latter part of the 19th century it would have been unacceptable for the Prison Governor and his family to be accommodated within the confines of the gaol itself. He would have expected to have a house provided which was adjacent to the gaol but not part of it. The problem was resolved by converting part of the prison to provide him with a reasonably large and separate dwelling with a coach house, stables and gardens. The grounds of this new house occupied the western part of the original prison complex, including the new triangular piece of land.

The basis of the new house was the western section of the Debtors wing, and the small extension to it which had been built a few years previously. It included three bays of the Nash Gaol. The extension was demolished and replaced with a larger block, slightly wider than the Debtors' wing, which cut across the line of the Nash boundary wall. The new extension copied the shapes of the windows and the rustication which had been used originally. The Nash section was then completely gutted of its central passageway and twelve cells, and a wall was built across the wing to separate the house from the gaol. The interior was then redesigned to provide the reception rooms, bedrooms and staff quarters appropriate to the Governor's status. The bars were removed from the windows and the sills were deepened before they were fully glazed.

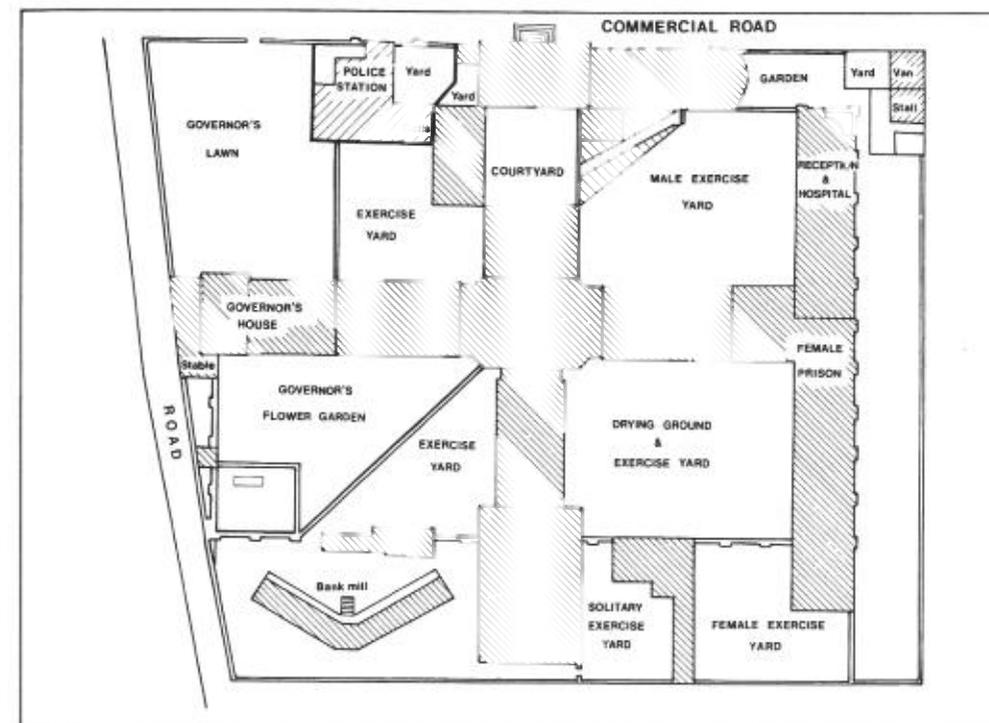


FIG. 10
The County Gaol in the 1880s showing the extent of the Governor's House, the Police Station and the re-arranged access.

To the W. of the house were the stables and coach house. The Nash boundary wall on the Commercial Road side of the house was totally demolished and replaced with a garden wall which ran along Commercial Street and up the side road (now Union Walk) to the stables. This low wall enclosed the Governor's lawn which was separated from the prison by a new, high wall. At the rear of the house was the Governor's flower garden which was triangular in shape. Unfortunately for the Governor, this area was overlooked by the prison cells on the S. side of the old Debtors' wing.

Although the section of the prison wall in front of the Governor's house was replaced with a garden wall, the remainder was retained. However, a police station was built to the W. of the main entrance block, incorporating the earlier extensions at the rear of the Taskmaster's house. It was slightly set back from Commercial Road from which it was separated by a low wall and railings (PL. XV). The two-storey police station, of brick with a slate roof, included a cell block from which an archway led into the rear of what had been the Taskmaster's shop. The construction of the Governor's house and the police station apparently took place during the 1870s.

The purchase of the strip of garden along the eastern boundary of the prison in 1885 was followed by the erection of a new boundary wall along its perimeter. The old Nash

boundary wall was not affected for it had become the eastern wall of the long, E. range. The purchase of this strip, apart from improving the general security of the prison, allowed a long-standing problem to be resolved. Up to this time prisoners being delivered to the gaol arrived by van in the street outside the main entrance. Here the van was unlocked and the prisoners had to walk up the steps into the gaol in full view of the public and with some possibility of escape. The solution was to provide an access from Commercial Road into the new strip of ground on the E. A Prison Van House and stable were built just within this entry.

Prisoners could now be unloaded from the van within the security of the prison wall. The old reception rooms adjoining the main entry were abandoned and the northern part of the E. wing was converted to become a new reception area, immediately adjacent to the arrival point. At the same time the cells on the first floor above the new reception area were altered to become the prison hospital. The earlier hospital, at the end of the old Debtors' wing had been lost when it was converted to become the Governor's house. The rest of the E. wing then became the female prison, the remainder of the gaol being for men.

It was probably about this time that fundamental changes were made to the old Gaoler's house and to the Great Hall. The ground floor of the Gaoler's house became offices, and all the internal walls and ceilings in the first floor were removed to make one large room. This then became the chapel, replacing the one on the upper floor of the Great Hall (PL. XIII).

The Great Hall was then completely opened up by removing the chapel floor. The glass dome above could have been built at this time or could have been an earlier means of illuminating the chapel. New internal walls were then built within the Hall to create a smaller diamond-shaped central area open to the dome. The new walls formed three levels of irregularly-shaped cells in three of the corners of the old Great Hall; the fourth corner, to the N.E., incorporated a staircase and entry to the chapel. The new central hall was then provided with tiers of galleries which gave access to the new cells and connected to the existing galleries in the various wings (PL. XVI).

The loss of twelve cells due to the construction of the Governor's house was partly balanced by these new cells and by 1891 there was sufficient accommodation for 129 prisoners, all coming from Herefordshire and Radnorshire (Kelly, 1891).

Several minor changes were made in the internal layout of the various exercise yards which were by now considerably smaller than those originally provided by Nash, although the number of prisoners had substantially increased.

THE FINAL FIFTY YEARS

We now come to the closing years of the Prison's life - the period up to the demolition in 1930. A series of plans, sections and elevations were produced by the County Council in 1925 (FIGS. 13-17) and from these, from the plan produced by H.M. Office of Works in 1929 (H.C.C. Deeds), and from F. C. Morgan's excellent photographs, it is possible to identify many of the later alterations (FIGS. 11 & 12).

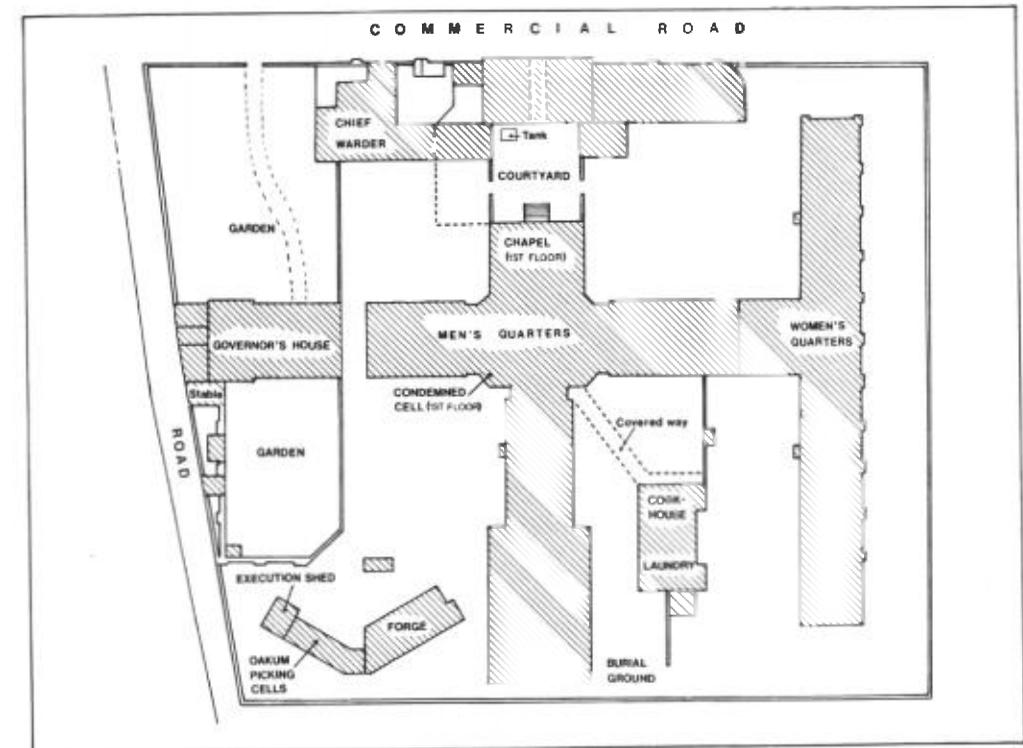


FIG. 11

The County Gaol at the beginning of the twentieth century showing the re-designed main entrance and the uses of the main parts of the building.

The triangular shape of the Governor's flower garden as shown on the 1880 plan, although separated from the exercise yard by a high wall, was still overlooked by the windows of the cells in the remaining part of the W. wing. The house was also in direct contact with the wing, and both these factors would have been objectionable to the Governor and detrimental to the security of the gaol as a whole.

To resolve these problems, one complete bay of the W. wing was demolished, leaving the Governor's house free-standing with a blank wall towards the truncated wing (FIGS. 13 & 14). Most of the diagonal wall enclosing the flower garden was then demolished and a new, high wall was built southwards from the corner of the house to join the remaining part of the diagonal wall. Although the area of the garden was reduced in size, it was completely private and not overlooked from any part of the gaol.

It appears that the new entry and reception area, which had been created in the N.E. corner of the gaol, was not as satisfactory as had been hoped. The old entrance, with direct access to the main part of the prison, had been much more convenient apart from the small size of the opening and the approach up a flight of steps. The problem had been

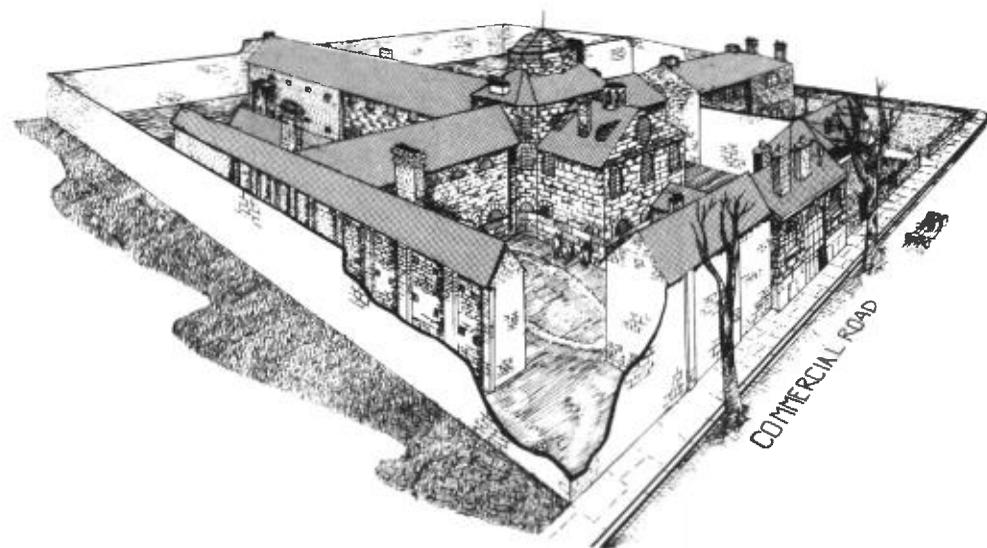


FIG. 12
An artist's impression of the gaol shortly before its demolition in 1930.

caused by the height of the whole prison site above the level of Commercial Road. The entrance building and general courtyard had been built on this higher ground with the external flight of steps compensating for the rise.

The solution was radical. It involved lowering the ground level throughout the whole of the general courtyard and the entrance passage to that of Commercial Road. The reception rooms, on either side of the entrance passage, were left elevated with internal flights of steps leading up from the passage. A new flight of eight steps was needed in the general courtyard to the old entrance to the main prison building (PL. XVII). The old Taskmaster's house was demolished and high walls, each containing a wide, gated opening, sealed off the entrance courtyard from the exercise yards. The surface of the courtyard was re-laid with bricks and the newly-exposed lower parts of the side walls of the reception buildings and the front of the main prison building were faced with cut stone but without rustication.

The Commercial Road facade of the reception building also suffered a radical change. The whole central bay, including the chained columns, was demolished and replaced with a new, higher and wider opening (PL. XV). This was designed to be in keeping with the surviving parts of the Nash facade and included a rusticated arched head. It may have been at this time, or possibly earlier, that the two windows on each side of the entrance had their sills lowered, presumably to provide additional light in the reception rooms. A ramp was constructed over the double-stepped pavement in front of the gaol entry and, at last, the prison van could gain entry to the general courtyard and from there to the rest of the prison yards.

The van house and stables in the N.E. corner, which may well have provided a possible means of escape, were demolished leaving the whole of the eastern boundary wall clear of obstructions. Was it then, or earlier, that the old Nash boundary wall, which had become the E. wall of the eastern range, was pierced with windows to provide better illumination for the passage and gallery within that wing?

The police station was eventually closed and the buildings were then converted to become a residence for the deputy Governor of the gaol. It appears that several of the dividing walls which had separated the various exercise yards were also demolished and a single-storey lean-to of uncertain purpose was built against the N. side of Nash's E. wing and the E. side of the old Gaoler's house (PL. XIII).

New buildings were erected in the courtyards, apparently replacing earlier ones. One, in the larger of the rear courtyards, was of substantial size. Although only single-storey, it had high brick walls and roof-lighting. The northern part was used as a cook-house, with a covered way leading to the mens' quarters in the main building, whilst the southern part was used as a laundry. The internal photograph (PL. XVIII) vividly portrays the spartan nature of the building with its semi-basement stoke-holes for the heating system.

The Bank Mill, in the second of the rear courtyards, being no longer needed for the water supply, was converted to become a series of oakum picking cells and a forge house. The most remote part of this range became the place of execution with a pit, covered with a trap-door, under the gallows (PL. XIX). Apparently the condemned cell was one of the irregularly-shaped ones which had been carved out of the original Great Hall. It was on the first floor and through the window the prisoner would have had a direct view of this execution shed.

Henry Thomas Pearce was the last Prison Governor and would have been responsible for the transfer of all the prisoners to Gloucester Gaol in 1915. The Old County Gaol then became a house of detention for soldiers, presumably mainly deserters (Collins, 1915, 117), a use which continued until its final closure.

The gaol was closed in 1929 and the whole site was purchased from the Prison Commissioners by the City Council in February 1930 for £4,100 (H.C.C. Deeds). Whilst the City Council formulated their plans for the area, there was a short period when the public were invited to visit. There was even an advertisement in the Hereford Times:

Visit Hereford's Old Gaol Before Demolition

Open Daily 2pm - 9pm Until further notice

Admission 6d.

1/3 of proceeds to Herefordshire General Hospital

(Hereford Times, 3 May 1930)

Above the main doorway in Commercial Road was a large notice:

SEE THE OLD GAOL

before demolition

Try going to gaol of your own accord.

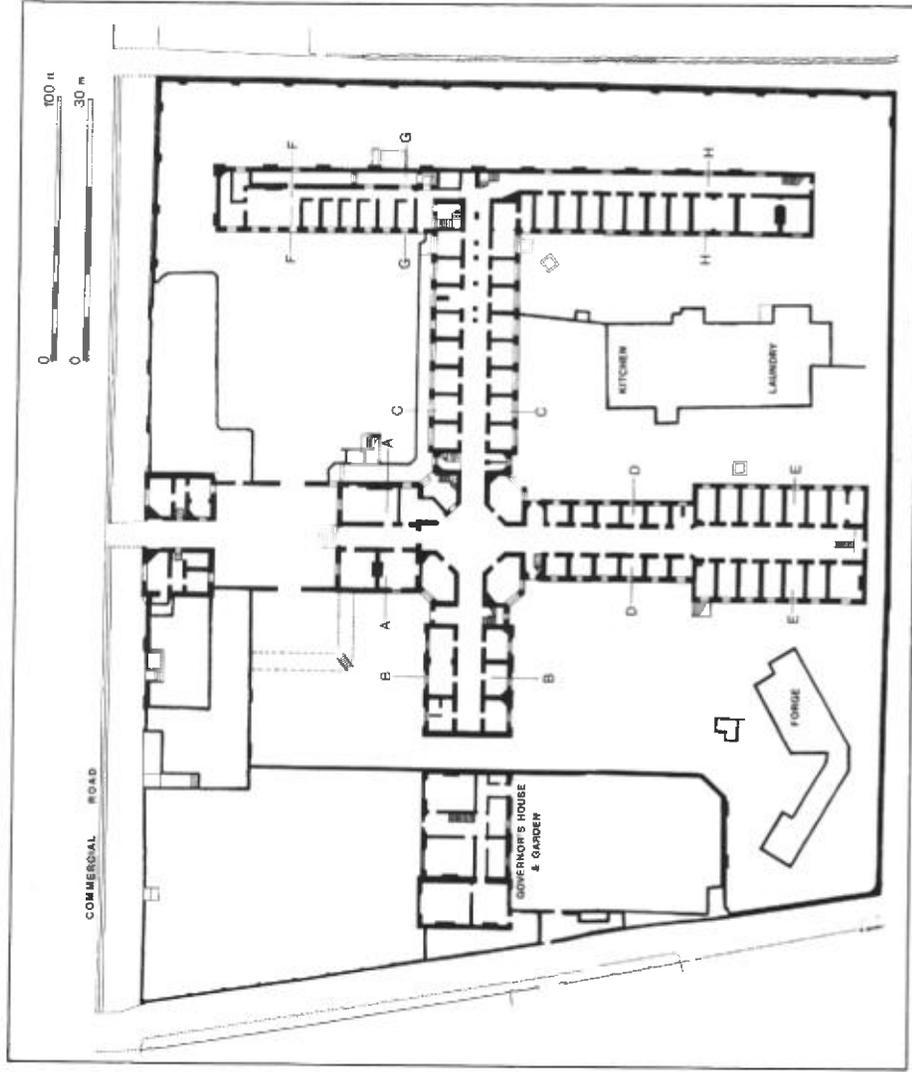


FIG. 13
A detailed ground-floor plan of the prison prepared by the County Surveyor's Department in 1925. The Governor's House - the part which still survives - is on the left in its own grounds. The cross-sections are shown in Fig. 17.

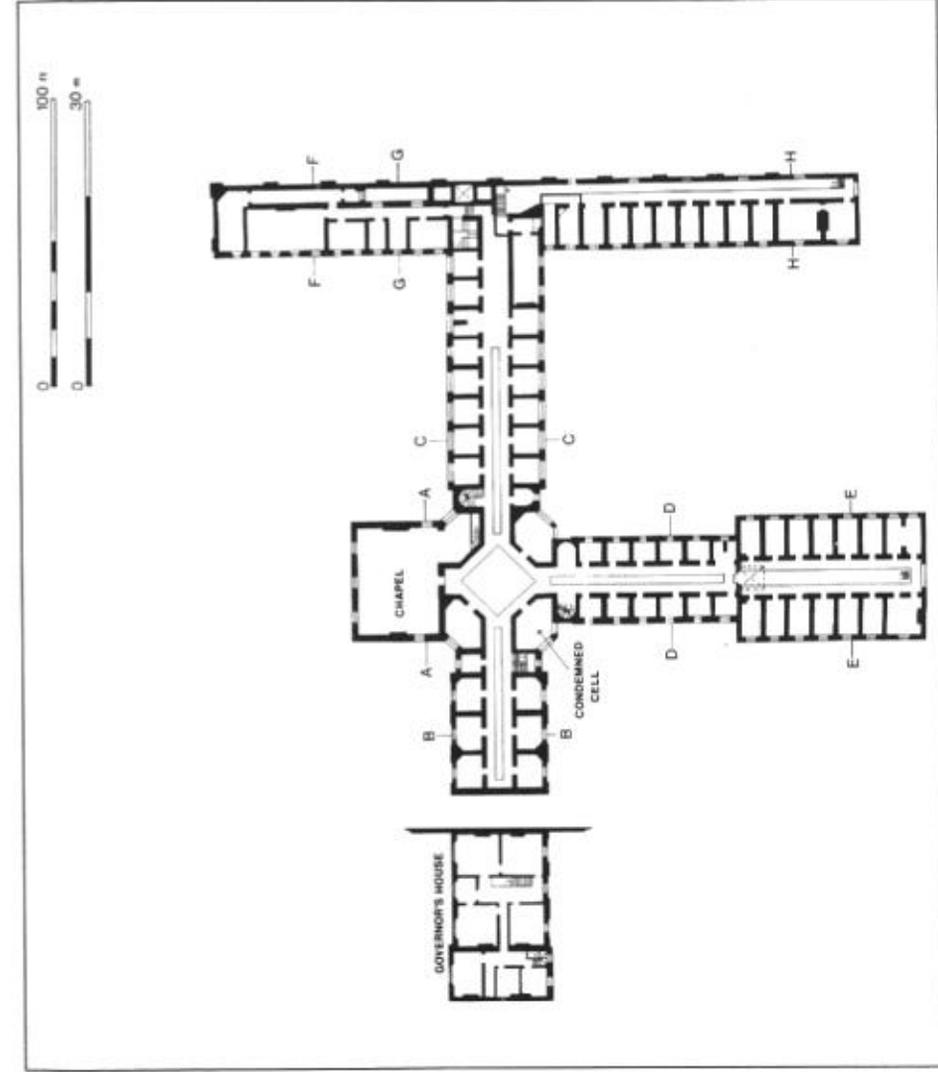


FIG. 14
The first-floor plan of the Prison in 1925. The cross-sections are shown in Fig. 17.

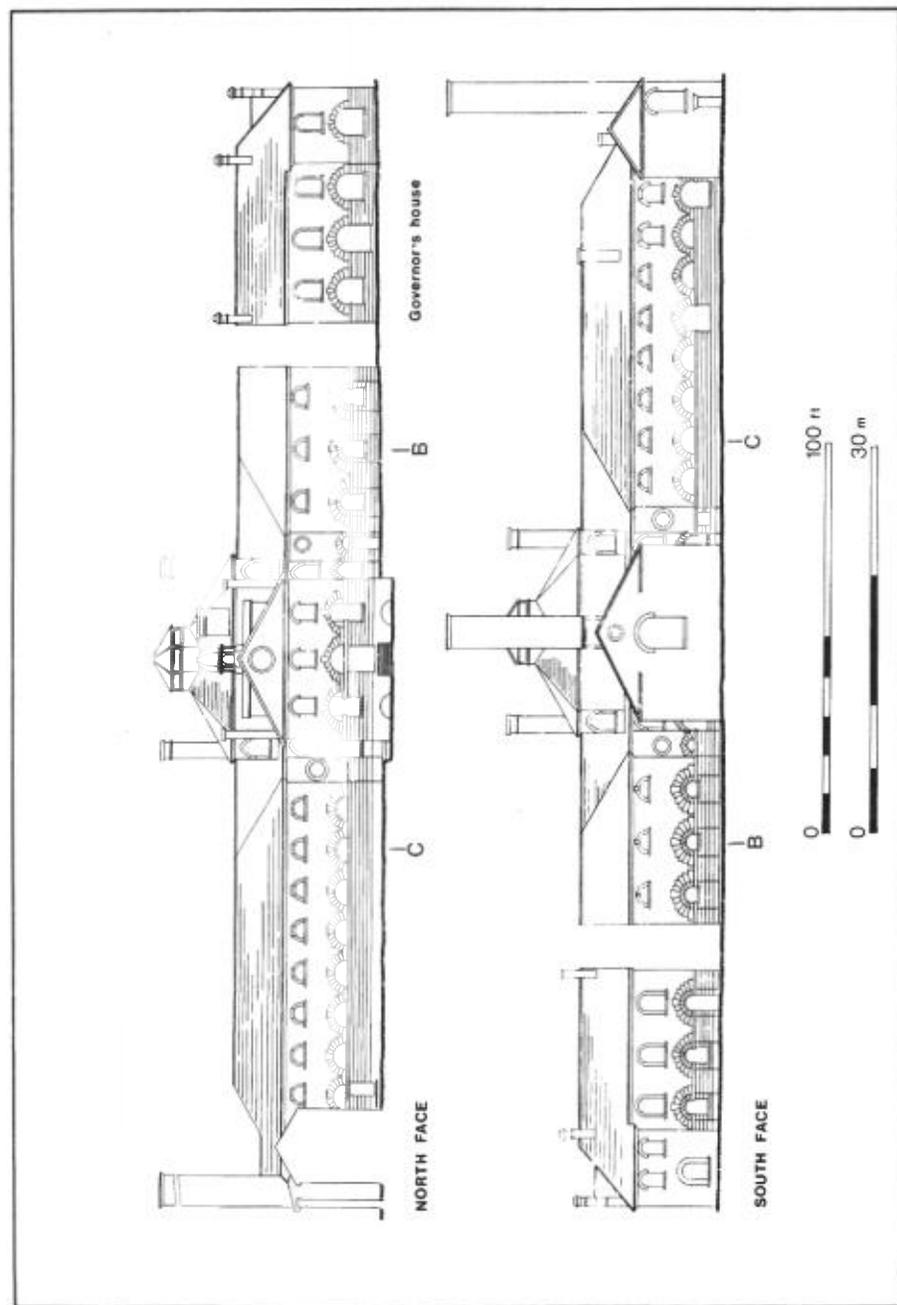


FIG. 15
The front and rear elevations of the central range of buildings parallel to Commercial Road in 1925. Most of these elevations are as designed by Nash. The cross-sections are shown on Fig. 17.

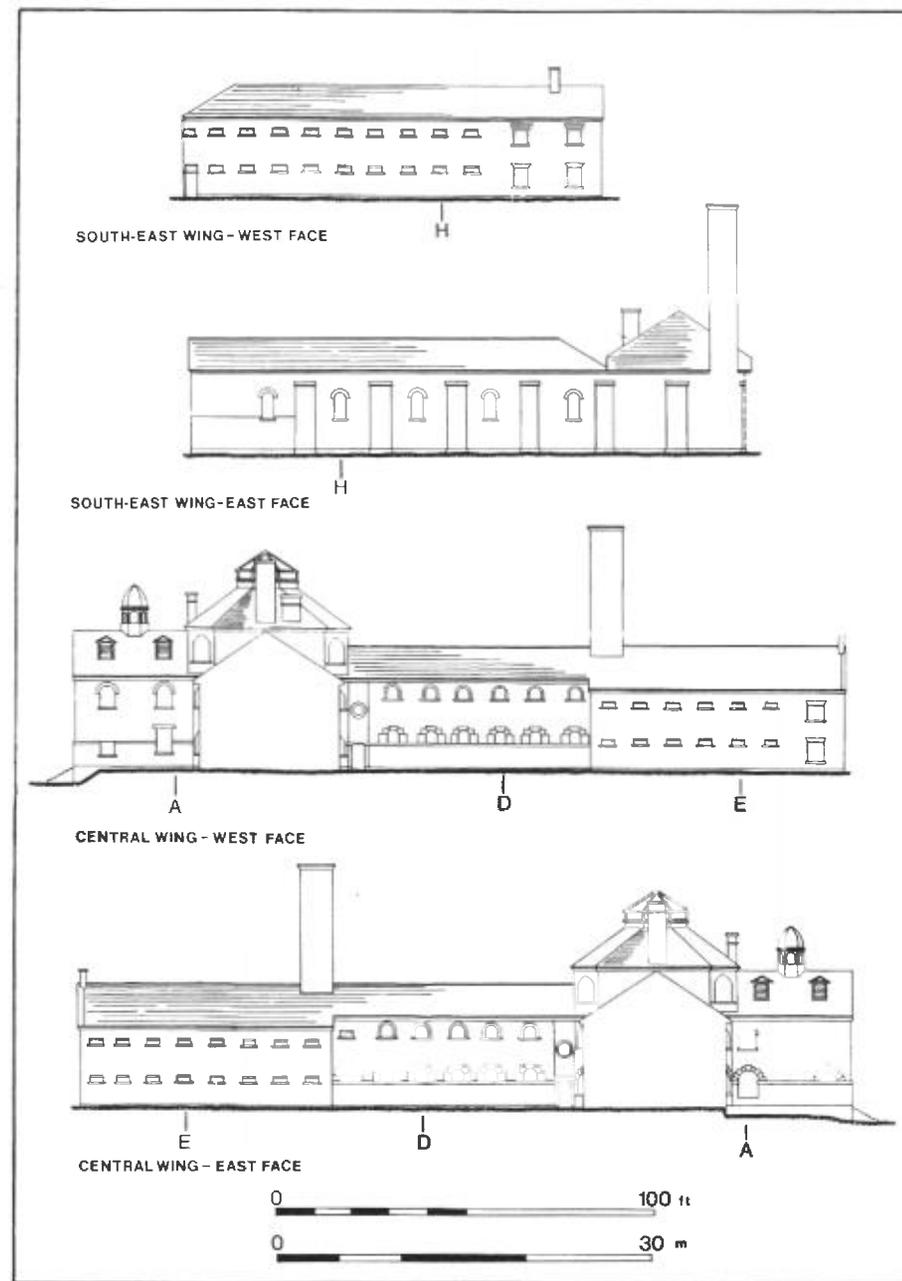


FIG. 16
Elevations of the two ranges of buildings which ran at right angles to Commercial Road. The northern part of the central wing, including cross-sections A & D, is the part designed by Nash. The cross-sections are shown on Fig. 17.

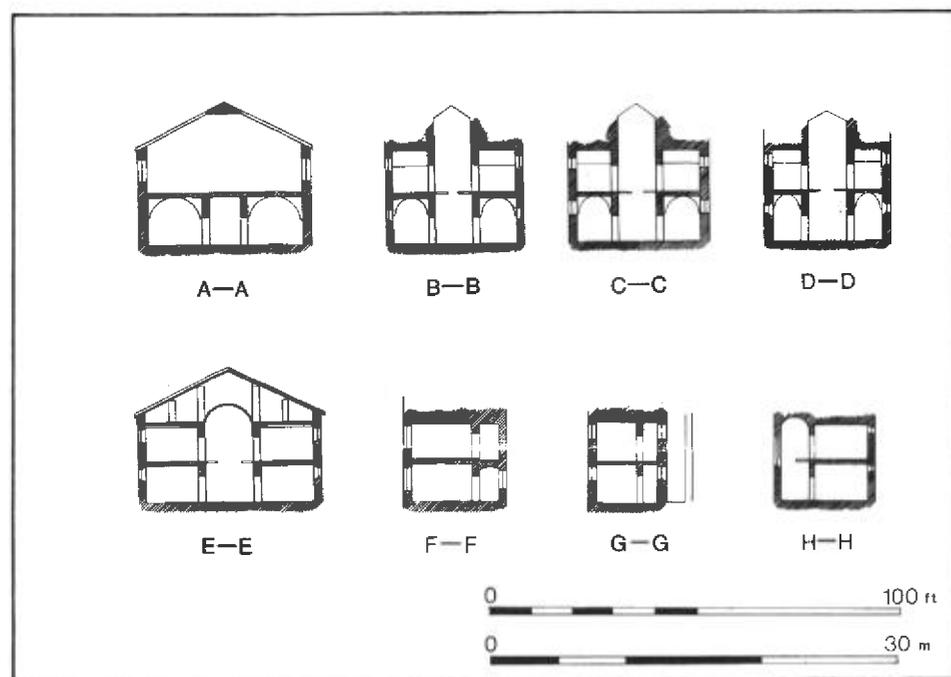


FIG. 17

Cross-sections of various parts of the Prison - the positions are shown on Figs. 13 to 16.

It was during this period that F. C. Morgan took his excellent series of photographs.

The contract for demolition was let to a Mr. Eli Pearson of Coventry and demolition started after the May Fair (PL. XVII). Pearson apparently made use of the local unemployed to chip mortar off bricks at a rate of five shillings per 1,000 bricks (*Hereford Times*, 17 May 1930). By June the demolition was well under way and Pearson was advertising:

FOR SALE - all classes of building materials, bricks, slates (all sizes), timber, tiles, sinks, cisterns and W. C. fittings, stone or crazy paving, baths, concrete, rubble, grates. Principals suitable for garages; also stone suitable for Rockery work.

(*Hereford Times*, 28 Jun 1930)

Eventually all that was left was part of the high boundary wall, the Governor's house and the walls of his garden, and the deputy Governor's house. The latter apparently had a sitting tenant, but it was only a couple of years before it too fell to the demolishers' hammers. The whole area was then laid out as an omnibus station; the Governor's house was converted to offices and public toilets (PL. XX), and his flower garden was roofed over to become a bus garage (the latter being demolished in the early 1980s). It was not long before the street frontage adjoining Commercial Road was sold to become the site for a new cinema - the boom business of the early 1930s.

CONCLUSIONS

It is now over half-a-century since anyone has had to 'Go to Gaol - in Hereford' but the memories remain. The public hanging place on the flat roof of the entrance building and the forbidding high wall which separated the County Gaol from Commercial Road have long disappeared. But the boundary wall still survives on the S. and E. of the bus station, and the Governor's House, now a listed building, is the only part of any of the Gaols designed by John Nash to survive.

The heavily rusticated building along the aptly named Gaol Street which was part of the City Gaol is also a listed building. It is now used as the Magistrates Court but still preserves the aspect of a prison with its small high windows.

There is also Castle Cliffe, used as a Bridewell for many years but never designed as a prison. Its history goes back 700 years or more, to a time when Hereford was a royal city and being sent to gaol was a fate close to death.

The Club is much indebted to the Hereford City & County Archaeological Trust for the grant towards publishing this paper.

ACKNOWLEDGEMENTS

The authors would like to express their appreciation to the City Council for allowing them access to the deeds of the bus station site; to the Hereford branch of the County Records Office for much help with documentary sources, permission to copy FIGS. 5 and 7 and to use PL. X; to the Hereford branch of the County Library for help with elusive references and illustrations; to the City Museum for assistance with illustrations and in particular for permission to use PL. VII; to the City of Hereford Archaeology Committee for providing information about excavations in advance of publication; to the anonymous donor of the 1925 plans of the Commercial Street Gaol; and to John Smith, who produced the excellent birds-eye view of the County Gaol (FIG. 12).

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Reports of the Sectional Recorders Archaeology, 1994

By R. SHOESMITH

THE CITY OF HEREFORD ARCHAEOLOGY UNIT

The last twelve months have been a very busy period for the city archaeology unit. At the beginning of the year two additional members of staff were appointed - Adrian Griffiths as a project officer and Brian Byron as designer and illustrator. Adrian is assisting Richard Morriss in the research and eventual production of a volume on the timber-framed buildings of the city of Hereford, whilst Brian is producing the drawings for this volume and a second one which is designed to present the results of twelve years research which the Unit has carried out at Goodrich Castle. Both volumes should be published in 1998/9 in the English Heritage Research Report series. Work is also in the final stages on the publication of a popular report about the excavations which took place in advance of the new building to house the Mappa Mundi and Chained Library - this should be published in the summer of 1995. The Unit took on one more member of staff during the year, albeit part-time. Dr. John Eisel is now the Unit Administrator.

The Unit continues to be involved in a wide variety of projects, quite a few of which are well outside the county boundaries. The involvement in religious buildings has continued to increase and during the year the Unit undertook an evaluation excavation at Brecon Cathedral in advance of the construction of a new Visitors centre. At Gloucester, the Unit was employed by English Heritage to carry out an enhancement of the photogrammetric survey of the guardianship monument of the church of the Greyfriars during repair works. At Tewkesbury Abbey, the Unit was responsible for recording part of the S. transept apsidal chapel and also provided an outline analysis of the gatehouse, which has been recently converted for use as a holiday home by the Landmark Trust. At Hailes Abbey, also in Gloucestershire, the Unit produced a short report on the chapter-house bases.

In Herefordshire, the Unit has also had an involvement with religious buildings. It has continued its survey work at Craswall Priory, following the consolidation work in 1993, with work in the nave and chapter-house. Watching briefs were undertaken at Eardisley Church and at Monnington Church when new drainage trenches were being excavated and, at the latter, a detailed survey of the timber-framed lych gate was provided in advance of the repair works. (PL. XXI).

In the city, the Unit provided a desk-top analysis of the Blackfriars monastic precinct. This has since been followed by a ground radar survey which, hopefully, will provide details of some of the positions of the long-lost buildings of the priory.

The Unit has been involved in most aspects of the extensive renovation work which has taken place at All Saints' Church. Apart from providing stone-by-stone drawings of

the spire, the Unit organised an evaluation excavation adjoining the tower in an attempt to establish the cause of the prominent lean to the N. More recently, staff of the Unit have provided detailed drawings of the W. window of the nave, which has had to be almost totally rebuilt, and have produced all the necessary archival drawings of the twenty-eight trusses which make up the roof of the S. chapel.

In Worcestershire, the Unit has been involved for several years at the ruined mansion of Witley Court, where English Heritage is involved in long-term consolidation and repair works. In 1994, the Unit provided detailed surveys of the S.W. wing and of the link block which joins the main house to the impressive baroque church. In addition, an archival survey was made of the area to the N. of the Court which had, at one time, been part of the grounds of the Court. This survey followed detailed documentary research, commissioned by the Unit from Dr. Pat Hughes of Worcester.

The National Trust asked for Unit help at Lower Brockhampton, near Bromyard. Extensive renovation work was being carried out in the mediaeval great hall and the S. cross-wing and the Unit provided an outline analysis of these sections of the building and the extent of previous renovation works. A watching brief was also undertaken on drainage trenches leading from the building towards the moat.

The City of Hereford Archaeology Committee is the Investigating Authority for the Hereford Area of Archaeological Importance. On behalf of the Committee and in some cases for developers, the Unit has carried out a series of watching briefs on several sites in the city in advance of development work. These include sites at 7 Cantilupe Street, 118 Widemarsh Street, the Sack Warehouse in Wye Street, 14 Church Street, and the East Street car park belonging to Welsh Water plc. In the last site traces of the tail of the Saxon defences were observed. The Unit has also been involved in various small developments on the County Hospital site, originally part of the precinct of St. Guthlac's Monastery. There could be further involvement in this area should plans for a district general hospital materialise.

One of the more unusual projects in the vicinity of the city was on the Lugg Meadows, where Richard Stone provided archaeological assistance to the Herefordshire Trust for Nature Ltd. With the assistance of Stratascan, a firm specialising in ground-probing radar, buried boundary markers associated with the strip field-system were revealed. This area could, of course, be affected by the proposals for a Hereford by-pass.

HEREFORD AND WORCESTER COUNTY ARCHAEOLOGICAL SERVICE

The County Sites and Monuments Record has continued to grow and now registers nearly 22,000 sites, buildings and findspots. The strategic management projects of the Central Marches Historic Towns Survey and the Marches Uplands Survey have produced a vast amount of new data, contributing to the massive increase in sites registered on the SMR since 1992. In order to improve the management of this data, and allow a more flexible response for information, the information has been transferred to a new computer system. The possibility of networking the SMR throughout the county via the Libraries Service computer terminals could allow a limited direct public access to the system in all

Herefordshire Libraries and is seen as having particular potential in helping to develop school projects.

An aerial photographic assessment for the county was carried out on behalf of the Royal Commission on Historical Monuments. This project was designed to establish the number of aerial photographs with potential archaeological application that exist for each area. A total of over 20,000 aerial photographs has been indexed, a significant proportion of which are stored in the Sites and Monuments Record. A database will provide access to this information, which will be of use in planning future surveys, and to researchers wishing to consult aerial photographs.

The Central Marches Historic Towns Survey began in 1992 and will be completed in 1995. By conducting an assessment of available information, the survey hopes to define the archaeological resource and justify the archaeological potential of the smaller towns. The aim of the project is to improve management of the archaeology of these small towns, in cooperation with curatorial archaeologists and local planning officers. The project includes twenty-two Roman, mediaeval and post-mediaeval urban sites in Herefordshire. It does not include Hereford, which will be the subject of a future survey.

1993 Fieldwork

Watching briefs were carried out at Abbey Dore sewage works (HWCM 4201), The Steppes, Bishopstone (HWCM 950), near the site of Collington Church (HWCM 6679), and at Widgeon Hill, Leominster (HWCM 3870) but no significant archaeological features were noted.

A watching brief at Nunwell Surgery, Pump Street, Bromyard (HWCM 15648) produced finds dating from the 13th/14th centuries, while another at 9 High Street, Ledbury (HWCM 15955) identified portions of original timber-framing and wattle-and-daub construction. Remains of a mediaeval stone-built oven structure were identified during a watching brief at the rear of the Old Vicarage, Leintwardine (HWCM 10863), while at 5 Broad Street, Leominster (HWCM 19713) deposits and a sunken, stone structure of probable mediaeval date were observed. Also in Leominster, salvage recording in the Greyhound Yard in Rainbow Street (HWCM 12449) indicated the survival of a considerable depth of mediaeval and post-mediaeval deposits. Mediaeval pottery was also found during an evaluation excavation at St. Peter's School, Bromyard (HWCM 11501).

A field visit was made to St. James' Church, Cradley (HWCM 3812) to look at the timber-framing in the tower, and another to Ivington Court, Leominster (HWCM 5191) to record the drains found in front of the house. As part of the Marches Upland Survey, a joint survey was undertaken of a farm at Craswall with the Farming and Wildlife Advisory Group and the Herefordshire Nature Trust.

Full building recording of the surviving structure took place at the old church of St. Giles' at Downton-on-the-Rock between October 1992 and February 1993; the process of decay over the last 100 years is well documented photographically.

Salvage recording was undertaken in Weston-under-Penyard on two sites. A new sewage transfer pipeline trench revealed further evidence of the Roman town of *Ariconium*

outside the scheduled area, and included several deposits of the Iron Age period (HWCM 6097). Excavations in Wig Meadow (HWCM 840) for bases of overhead power lines noted features which were interpreted as the surface of a Roman road and an occupation layer which were discovered during excavations in the 1950s. A fifth season of salvage recording at Wellington Quarry (HWCM 5522) revealed a range of prehistoric and Roman deposits.

1994 Fieldwork

Several evaluation excavations took place during the course of the year. At Ballhurst, Bromyard (HWCM 16042) evidence of pottery production between the 17th and 19th centuries was found, while at Kingdom Hall, Leominster (HWCM 19524), twenty-five grave-cuts of the Quaker burial ground were encountered. At Buckfield Farm, Leominster (HWCM 20622) evidence was found of mediaeval ridge and furrow, while at Oldfields Close, Leominster (HWCM 8906) an evaluation excavation disproved a 1973 suggestion about the line of the western arm of the Leominster mediaeval defences, although at the Kwik-Save site in Westbury Street (HWCM 8904) salvage recording identified the N. edge of the southern arm of the mediaeval town ditch. However, no archaeological features were found on a raised platform at Howton Farm, Kenderchurch (HWCM 7149).

Watching briefs took place on a wide variety of sites. At St. Michael's Church, Dewesall (HWCM 6846) any archaeological deposits had been destroyed by previous underpinning, and at Ford Street, Stapleton, near Presteigne, little evidence of mediaeval activity was found. Blocks of masonry of perhaps 12th- or 13th-century date were found in a series of post-mediaeval deposits at Chapel Farm, Wigmore (HWCM 1678), while at the Old Barn, Kings Pyon a Bronze Age pit was recorded which included a rare assemblage of charred environmental material. The limited pottery evidence suggests a 13th-century date for the cruck barn, which was dismantled.

Salvage recording at Clifford (HWCM 21244) revealed evidence of mediaeval ridge and furrow, and well-preserved mediaeval deposits of the 12th to 14th centuries were found on a site at Castle Farm, Eardisley (HWCM 20661). The sixth year of salvage recording at Wellington Quarry (HWCM 5522) revealed a natural pond with a timber and stone causeway running into it. A carbon-14 dating is awaited. Fieldwork undertaken during the construction of a British Gas pipeline from Lugg Bridge to Withington found scatters of Neolithic/Bronze Age material, and also a mediaeval site to the W. of Eau Withington Court.

Surveys took place at The Castle, Mynydd Brith, Dorstone (HWCM 1241), to establish the changes since a previous survey in 1952, and at Rowe Ditch, Pembridge (HWCM 12679), to establish the extent of the earthworks surviving to the N. of the Scheduled Area. An assessment of the type and extent of the erosion on Offa's Dyke was undertaken on behalf of English Heritage.

Botany, 1994

By PETER THOMSON

Using records held by the B.S.B.I. Recorder for Herefordshire

The *Atlas of the British Flora* by Max Walters and Franklyn Perring was published in 1962 on the basis of records collected mainly in the 1950s. In it each species of plant has a separate dot distribution map and each dot represents the presence of the plant in a 10 km. x 10 km. square. Originally intended as a study of plant geography the Atlas has also been used as a source of data for conservation decision making.

In 1977 *The British Red Data Book of Vascular Plants* (R.D.B.) by Perring and Farrell was published listing the rarest plants of the Atlas. The 321 species in the R.D.B. were those which occurred in from 1 to 15 10 km. squares and conservation measures have been taken, as far as possible, to protect them and their habitats. A revised R.D.B. was published in 1983 and a further revision is currently being undertaken.

The only R.D.B. species in Herefordshire are:-

<i>Buxus sempervirens</i>	Box
<i>Epipogium aphyllum</i>	Ghost orchid
<i>Sorbus eminens</i>	a Whitebeam - endemic to the Wye Valley and Avon Gorge
<i>Ranunculus tripartitus</i>	a Water Crowfoot - mainly of S.W. Wales and W. Cornwall

The figure of 15 10 km. square records to include a plant in the R.D.B. was arbitrary and omitted many plants only slightly less rare but none-the-less endangered. With this in mind a fresh category of scarce plants was recognised as those occurring in 16-100 10 km. squares.

In 1994 the *Scarce Plants in Britain*, compiled by A. Stewart, D. A. Pearman and C. D. Preston, was published jointly by the Botanical Society of the British Isles, the Institute of Terrestrial Ecology and the Joint Nature Conservation Committee.

Of the 254 plants in the current scarce plants list, 54 have been recorded in Herefordshire, 29 of them since 1970. These are as follows:-

<i>Aconitum napellus</i>	Monk's-hood
<i>Allium schoenoprasum</i>	Chives
<i>Campanula patula</i>	Spreading Bellflower
<i>Cardamine impatiens</i>	Narrow-leaved Bitter-cress
<i>Carex digitata</i>	Fingered Sedge
<i>C. humilis</i>	Dwarf Sedge
<i>C. montana</i>	Soft-leaved Sedge
<i>Centaurea cyanus</i>	Cornflower
<i>Cephalanthera longifolia</i>	Narrow-leaved Helleborine
<i>Dianthus deltoides</i>	Maiden Pink
<i>Epipactis leptochila</i>	Narrow-lipped Helleborine
<i>Euphrasia rostkoviana ssp. rostkoviana</i>	an Eyebright
<i>Fritillaria meleagris</i>	Fritillary
<i>Gymnocarpium robertianum</i>	Limestone Fern

Helleborus foetidus
Hordelymus europaeus
Hornungia petraea
Meconopsis cambrica
Oenanthe silaifolia
Orobancha rapum-genistae
Pilularia globulifera
Potamogeton trichoides
Potentilla neumanniana
Ranunculus tripartitus

Sedum forsterianum
Sorbus porrigentiformis
S. rupicola
Tilia platyphyllos
Ulmus plotii

Stinking Hellebore
Wood Barley
Hutchinsia
Welsh Poppy
Narrow-leaved Water dropwort
Greater Broomrape
Pillwort
Hairlike Pondweed
Spring Cinquefoil
Three-lobed Crowfoot - formerly an R.D.B. species, now scarce
Rock Stonecrop
a Whitebeam
a Whitebeam
Large-leaved Lime
Plot's Elm

Of these the most distinctively Herefordshire plant is *Campanula patula* as most of its locations are in the county. Brambles are a significant feature of the Herefordshire flora and 62 species are mentioned in the index of Purchas and Ley's 1889 *Flora of Herefordshire*. Two new species are described in the *Transactions of the Woolhope Club* in 1894: *Rubus ochrodermis* (now *R. babbingtonii*) and *R. acutifrons*. Now, a century later, four more have been described in *Watsonia*, the Journal of the Botanical Society of the British Isles, Vol. 29, Pt. 2, August 1994, 133-41. In a paper: New species of *Rubus* L. (Rosaceae) from Wales and the Welsh Marches, A. Newton and M. Porter give detailed accounts and name the new species: *R. ariconiensis*, *R. tenuiarmatus* in the N.E., *R. iscanus* in the S.W. of the county and *R. vagensis*.

Interesting plant reports during the year include:- *Spiranthes spiralis*, autumn lady's-tresses, *Triglochin palustris*, marsh arrowgrass and *Epipactis palustris*, marsh helleborine were all reported from a damp meadow in the Burrington area. *Monotropa hypopitys*, yellow bird's-nest, was found at a new site on the Great Doward by a member of the Wild Flower Society group who spent a week-end in June looking at Herefordshire flora. *Kickxia elatine*, sharp-leaved fluellen, and the blue form of *Anagallis arvensis*, scarlet pimpernel, both weeds of cultivation were found on arable land near Staplow. *Lepidium heterophyllum*, Smith's pepperwort, described by L. E. Whitehead 1976 as uncommon (and even more so now), was reported by Mark Lawley from the Adforton area. He also reported *limosella aquatica*, mudwort, from near Criftin's Ford Bridge. This is one of the scarce plants, but this record was found too late to be included in the Scarce Plants volume. It was recorded by Purchas and Ley as uncommon and this is the first record for this century. As its name implies it grows on exposed mud beside pools and quiet backwaters. It is small and does not necessarily appear every year in the few places in which it is found.

Fungi have always been a concern of the Woolhope Club and the county fungus records are now being systematically kept by Mr. E. Blackwell of Orleton. I am greatly indebted to him for these notes. The following are species of special interest recorded from the sites named in 1994.

Fishpool Valley and Croft

Strobilomyces floccopus, *Ramaria formosa*, *Pistillaria pusilla*, *Russula chloriodes*, *Lactarius pterosporus* and *Cyathus striatus*. The oak powdery mildew, *Microsphaera alphioides*, which is very common on sapling oaks and which normally does not produce fruit bodies except after very hot summers was found to have produced them in Fishpool Valley.

The Flits, National Nature Reserve

Uloporus lividus, an uncommon bolete growing in association with *Alnus glutinosa*, alder, was found. Dr. Roy Watling comments (*British Fungus Flora* No. 1. H.M.S.O. 1970) 'Infrequently collected because of habitat but may be generally distributed although rare.'

Some miscellaneous interesting finds include:- *Ramaria pulchella*, found by Cherry Greenway in her garden at Birchwood. This is a delicate little clavarioid fungus which is not common. A smut on *Tragopogon pratensis*, goat's-beard, was pointed out by Stephanie Thomson near Burrington and is not often reported, and *Rhamphoria seperata*, found on a Botanical Society visit to Crow Wood, Turnstone, is thought by Dr. B. Spooner to be probably new to Britain.

Buildings, 1994

By J. W. TONKIN

This year the Old Buildings Recording Group worked in Leominster and the Wolphy Hundred to the S.E. of the town where it had last worked ten years and eighteen years ago 1984 and 1976 respectively.

Two week-end schools with the writer as tutor were based on Ross-on-Wye.

In the notes below information in the R.C.H.M. Inventory has not been repeated, though in some cases the two need to be read together.

AYMESTREY

AYMESTREY COURT. SO 426651 Tithe No. 513

This house is not mentioned either in the R.C.H.M. inventory published in the early 1930s or in *Herefordshire* by Pevsner in the Penguin 'Buildings of England' series. The former set out to record everything pre-1715; so quite rightly the house does not appear in it, but the barn across the lane should have done. On the Tithe Map of 1842 both house and barn are mentioned.

At the time of Domesday Aymestrey was one of the sixteen members of the great manor of Leominster Priory which had been Queen Edith's land pre-Conquest. Also Ralph de Mortimer held a hide there. This is usually one good farm of about 120 acres. Thus there could have been a farm-house on the site from Saxon times.

The present house may well occupy this site, but there is no evidence at all of the earlier house. The present building is a typical gentleman farmer's house of the third quarter of the 18th century. It is of the double-pile type of building having two separate roofs running parallel in a N.-S. direction. This type of building was fashionable from c.1680 onwards through the 18th century and sometimes into the 19th, but always presented the problem of rain, or snow, lying between the roofs above the central wall.

It is built of local Silurian limestone rubble and the quoins are of red sandstone. Both stones are obtainable quite close by.

Though clearly the house of a well-off farmer it has none of the stylistic features of the Georgian period during which it appears to have been built, nor of the Regency which prevailed for a time in the early 19th, c.1800-37. Also it shows nothing of the Romantic Revival work which was going on at Shobdon in 1773 and at Downton Castle 1773-8. As it was the property of Lord Bateman, who was the owner of Shobdon this seems to be surprising, but he did not apply any of it to his own house, Shobdon Court, which was demolished in the 1930s.

The roofs over the two parallel sections of the house are identical. Both have heavy squared through purlins resting on heavy principals in the typical fashion of buildings along the Marches. There are no carpenters' assembly marks on them, but in the third

quarter of the 18th century it is quite common to find roofs not marked. Unfortunately it is not possible to see the apex to see what style of carpentry was used in it, though I would expect a through ridge purlin resting on a V in the apex.

There are very few features by which to date the house. It would have been built at almost any time between about 1750 and 1840, but the early part of the Agricultural Revolution, 1760-80, seems most probable.

The modillioned brick cornice on the back of the house would also tie in with this dating.

One very interesting feature is the fireplace in the northern bedroom on the front of the house. It has 'Dale Co' on the bottom of the iron surround which means it was made at the famous Derby foundry at Coalbrookdale. I have only found one example farther S.W. than this and that is at Pembridge.

The front of the house has a big chimney projecting in the centre just to the S. of the front door. This is an unusual feature for this area, being found on the N. coast of Cornwall and Devon and on the Gower peninsula and Pembrokeshire in Wales. The semi-circular hood over the front door is a feature which is found from the late 17th century onwards.

The bay windows either side of the chimney with their sloping semi-conical roofs seem to be additions. Normally one would expect these to be a Georgian or Regency feature, but the carpentry seems too heavy and they must be a later addition or replacement of earlier ones, quite probably from this century. It may well be that the chimney was also added at the same time, presumably when a room inside was divided into the present smaller two rooms.

Presumably the house which it replaced would have dated from the 'great rebuild' of 1570-1640. On the other hand it could have been anything up to about seventy-five years earlier, for this seems to be the date of the barn which still remains across the lane. The carpenters' assembly marks on the trusses in the barn are among the longest I have seen and I feel they must date from early in the 16th century or even from the late 15th. Certainly some agricultural building went on in that early Tudor period before the upheaval of the Reformation in the 1530s and 1540s i.e. between c.1485 and c.1535. The N. end of the barn has some external carpenters' assembly marks which must date from the late 17th or early 18th century, c.1685-c.1715. It was perhaps added about that time, or some major alteration took place. The barn is twenty-two square panels long by three high, at least 70 ft. by 11 ft. to the wall-plate and the plinth (about 12 ft. 6 ins. in all). The height up to the apex will about double this. The panels are now infilled with brick, but this has almost certainly replaced wattle and daub.

The undercroft or cellar in local limestone at the N. end may well have been for cider-tramming, the timbers on which the barrels were stored.

Opposite is a cart shed or shelter shed, basically timber-framed, but quite late, probably a 19th-century replacement of something earlier.

There are no stone or clay tiles anywhere in the grounds, though a house of this size would not normally be thatched. Usually some of the tiles are left around, often stacked neatly against a wall. It is quite possible that they have been used on another house in the area.

The barn may have been thatched though often roofs were hipped or half-hipped at the end if thatch was used, especially in outbuildings. There are still thatched houses in the village and occasionally quite big houses were thatched; so it is possible that all the buildings in this complex were thatched. The roof coverings today are almost certainly 20th century. I would have thought it possible that the house and barn were stone-tiled, but the tiles would have had to be brought some distance.

There are still the remains of a mill-lead between the house and the river. Whether this would have been a mill for the farm or a manorial mill it is now difficult to say, but probably the former.

Thus we have a typical well-off farm complex almost certainly on a very early site with evidence still remaining from the 15th century onwards.

EWYAS HAROLD

HILL FARM. SO 374280 R.C.H.M. 6 Tithe No. 43

This house appears to have been built in the later 17th century as a two storied, two-celled, timber-framed building with a big local sandstone stack at the E. end with a gable entrance to the S. of it and a newel stone stairs on the other side. A bay was added to the W. in local sandstone, and at some time, probably early in the 19th century, the front was cased in stone, the straight joints with the original stack and the western addition still showing very clearly. These walls of flat, local sandstone slabs are about 2 ft. thick.

The original timber-framed western gable wall and N. wall still show inside. The latter is hidden from the outside by a typical continuous lean-to with a dairy on its eastern room, a feature found in hill-farming areas from W. Cornwall to Cumbria.

A stable was built in the angle between the lean-to and the western addition, projecting to the N. and W. of the former.

The carpenters' assembly marks are about an inch long and punched, typical of the late 17th century. The purlins are now on edge in the 19th-century fashion, but were flat with holes for pegging the rafters to them. There is a ridge purlin and two side purlins, trenched into the principals.

The stone newel stairs have timber treads laid on them. The gable entrance doorway has a shaped head of the type found in the S.W. of the county and in Breconshire and Gwent.

The beams have a 2 in. chamfer with plain diagonal stops, typical of the mid-17th century.

The landing is divided from the S.E. bedroom by a post-and-panel screen which seems to be 19th century, but still following the earlier traditions.

The stone slab was recently removed from the dairy.

The added room on the W. on the first floor can be approached from inside or by a curved external stairway from the W. and was no doubt a granary. Adjoining it on the N. is a stable.

HOPE-UNDER-DINMORE

HOPE COTTAGE. SO 507524 R.C.H.M. 27 Tithe No. 125

This L-shaped box-framed 17th-century house has an extension on the S. on the same front as a big outbuilt stack and although not a lot later partially hiding a dormer window.

LEOMINSTER

30 BROAD STREET. SO 496592 R.C.H.M. 51

Although dated to the 17th century in the R.C.H.M. it seems possible that the house has a medieval core which has been very much altered.

In the roof the part nearest the street and parallel to it is of king post construction with the principals carried on the struts of the king posts. The principals appear to be re-used from a medieval roof and carry two laced, butt-purlins on each side. The bottom of one of the re-used principals appears to have been re-used from a wall and still has the peg-holes from its earlier use.

The roof running at right angles to the street is of later construction, probably 19th century, but has re-used some earlier rafters, one having a 17th-century carpenters' assembly mark VII, the figures being deeply scratched and about 3 ins. long.

In the centre part of the roof above a curved ceiling there is another king post with heavy principals and little struts coming down from some of the common rafters.

In the outbuilding on the burgage plot at the rear are some quite long carpenters' assembly marks on a re-used 16th-century timber.

6 CORN STREET. SO 496590 R.C.H.M. 119

This house occupies the front of a typical burgage plot in Leominster on the S. side of Corn Street. Thus it lies along a N.-S. line with the back to the S.

There are four unequal bays in a house 12 ft. wide and almost 27 ft. long, giving the feeling that there has been considerable alteration over the centuries. The longest bay is the third, being 11 ft. 4 ins. between posts with three studs between. The bay in front of this is only 5 ft. 8 ins. between posts and the front bay only 4 ft. 6 ins. The rear bay is only 4 ft. but it looks as though it may have been shortened, for on the ground floor there is a spine beam and the rear wall does not look original.

It is of timber-framed construction two storeys in height except for an attic over the front which has a window with horizontal sliding sashes. The posts vary from six to seven

and half inches in width and are rather deeper than this with heavy, squared, jowled heads carrying the tie-beams and wall-plates. The carpenters' assembly marks are of the scratched, late-16th-century, Marcher-type and are differenced with an extra scratch to indicate the various levels.

The typical, heavy, Marcher-type trusses have V-struts from the tie-beams to the principals just above the through purlins. The latter are trenched into the principals, which are about 10 ins. by 8 ins. and surprisingly short, covering a bay only, with those from the next bay being trenched separately an inch or so above or below. The ridge purlin is trenched into the apex. The timbers are quite heavy, but there is only a single peg at the apex and at the foot of each strut where it is mortised into the tie-beam. The principals are double-pegged into the tie-beams and the struts are double-pegged into the principals.

At first floor level the floor-boards are a foot wide. These are carried on heavy transverse beams about a foot square.

As mentioned above there has been much alteration and some of this would no doubt have been done when the two diagonally-set fireplaces were inserted back to back on the E. side of the house c.1700. As there is no evidence today of an earlier fireplace it is possible that they replaced a big, lateral fireplace of about a hundred years earlier.

The narrow front bay may mean that there was a 'selda' or stall in front of the original house which was taken into it and built over sometime between the original building and the insertion of the diagonally-set fireplaces.

The attic is unusual, for normally attics run the full length of the house, but this one is built up in an unusual fashion in front of those same fireplaces. It may date back to that period, but it is so unusual that I suspect it is probably a 19th-century alteration when extra space was needed. The horizontally sliding sashes of the window probably confirm this date, for these 'Yorkshire' sliding sashes were quite late in arriving in this area.

Thus here we have a typical town house with a shop or shop and workshop in front built about the end of the 16th century, much altered and 'improved' about a hundred years later and altered in more minor ways with changes in social conditions on at least one occasion since, but probably more. The alterations have perhaps been quite drastic in some ways and yet the story of this four-hundred year-old house shows through them.

LEOMINSTER OUT

BROADWARD HALL. SO 497572 Tithe No. 682

This fine Georgian brick house has a pediment over three of its five bays with a good Venetian window, but is worth noting for its garden wall with its Chinese Gothic, or as Pevsner calls it, Chippendale, wooden fencing.

LITTLE HEREFORD

BROOK HOUSE, MIDDLETON. SO 546695 Tithe No. 70

This house is not mentioned in the R.C.H.M. inventory, but contains work which is certainly in the period with which the investigators were dealing, i.e. pre-1715. The front

and gable adjoining the yard are of brick with a plat-band and elliptical-headed windows. The latter could well be 18th or even 19th century, but the former could be of any date from late 17th century through much of the 18th. The back is of square-panelled timber-framing with short diagonal braces and appears to be of two builds the smaller panels dating probably from sometime in the period 1600-70 and the bigger panels most likely from the last twenty or so years of the 17th century. There is a single-storey porch giving entrance to a lobby entry.

Internally, the hall has beams with pyramid stops, usually in this area a sign of late medieval work, but being used again for a short period in the last quarter of the 17th century; so quite possibly contemporary with the later 17th-century work externally. There is a good fireplace of the same period with a pyramidal stopped lateral beam running into the wall above the lintel.

STOKE PRIOR

THE HEATH. SO 532557 Tithe No. 535

A brick house running down the slope of the hill with a long stair window in a stair-well at the uphill end of the front. There is a porch more or less central on this face of the house. From the exterior the building is difficult to date, but there was a good dating feature on a post in the attic. These were long, scratched carpenters' assembly marks on a beam of the type normally found in the second half of the 16th century. The post into which the beam was tenoned had even longer marks when the timber was stacked for export and imply that it could well be imported Baltic timber. Thus it seems that this house has a 16th-century origin, but was very much restored in the early part of the 19th century.

Again it is not mentioned in the R.C.H.M. inventory, but certainly has some evidence of coming into the period covered by it.

WEOBLEY

MAYFIELD, HEREFORD ROAD. SO 403515 R.C.H.M. 47 Tithe No. 621

This house has moulded beams and in the roof are cusped wind-braces which appear to be 15th century. The moulded beams are presumably of the same date.

During the year fifty-three planning applications concerning listed buildings were received. This year all were for comparatively minor additions or alterations. None warranted objection or serious comment.

As in the past my thanks are due to a number of people, especially those who have drawn my attention to buildings and those owners and occupiers who have invited me to come and look at, and those who have allowed me to wander round, their houses and out-buildings.

Geology, 1994

By P. CROSS

THE SILURIAN ROCKS OF NORTH HEREFORDSHIRE AND SOUTH SHROPSHIRE: A NEW DISPLAY

'Reading the Rocks', Ludlow Museum's new geology display, celebrates Ludlow's contribution to international geology. The scene is set with a mural depicting marine life in the Silurian sea.

A geological section across the Anticline was produced by Roderick Murchison to illustrate a lecture he gave in Ludlow in 1852. This section has now been fully restored with financial help from the Woolhope Naturalists' Field Club and other organisations and is on display.

One section of the display deals with the part played by the Reverend T. T. Lewis, Curate of Aymestrey, who introduced Murchison to the geology of the Ludlow area in 1831, taking him to places where rock faces were visible and showing him the sequence of rocks and fossils which had helped him work out the local stratigraphy. Murchison published his book describing the Silurian System in 1839 but many thought due recognition was not given to the Reverend Lewis's work.

There is an excellent display of fossils. Colour coding links the specimens with rock beds and past environments.

Among the selected geological highlights illustrated are the Ludlow Bone Bed, the origins of the first fish and the recent discovery of the world's first land life at Ludford Corner (previously mentioned in these *Transactions*).

Dr. Jane E. Mee, Curator of Natural Sciences at the Ludlow Museum, kindly provided notes concerning the display.

Herefordshire Field-Names, 1994

By GRAHAM SPRACKLING

The highlight of the year was the successful entry by the Herefordshire Field-Name Survey Group, for the prestigious Pitt-Rivers Award; a competition of national renown, for projects related to archaeological research. It was with great pride that we made the journey to York on 23 November to collect a special award called The Graham Webster Laurels. Presented by Lord Montagu of Beaulieu it included an inscribed plate, a British Archaeological Awards Certificate, and a cheque to be used for aerial photography.

This is the first time in Europe that an archaeological award has been given to a project involving the study of field-names.

Full details will be given in the 1995 Archaeological Research Section Report at the Winter Annual Meeting.

With the first part of the survey successfully completed there is now a need to concentrate our attention more on part 2 involving older pre-tithe map field-names. Any one who wishes to contribute material for future publication, or has access to maps or documents which contain older field-names should contact me as Herefordshire Field-Names Recorder.

Contributors will be provided with an instruction sheet to help them to arrange their lists of field-names in the standard format required.

The published parishes produced in Part 1 of the survey are an essential part of any effort to locate and identify these older field-names.

PART 2 FIELD-NAMES FROM OTHER RECORDS

Parish Name: ROWLESTONE

Contributed by Graham Sprackling

TITHE NO.	FIELD-NAME	DATE	SOURCE
154	Sayers Meadow	1744	1
	Sares Field	1769	5
266	Cae Mawr	19th cent.	2
234	The Cwm	" "	2
	Grove in the Cwm	" "	2
233	Croft-y-Cwm	" "	2
165	Cae-dyn-y-Coed	" "	2
79	Cae Gros	" "	2
271, 294	Randyre ycha	1652	3
265	Cae issa	1652	4
76	The Lakes	1769	5
104, 74	Near Great Pasture	"	5
110	Kae Mawr	"	5
112	Green Way or Oils	"	5

108, 148	Piece next to Coedback	"	5
107, 150	Quarry Field	"	5
106	Twelve Acres	"	5
182, 185, 186	Trees Field	"	5
145	Backsides Meadow	"	5
145 (part)	Island & Moat	"	5
146	Upper Orchard	"	5
101	House Great Meadow	"	5
67	Great Kae Brean	"	5
78	Little Kae Brean	"	5
	Little Cae Brane	"	14
118	Lower Pasture	"	5
100	Old Pasture	"	5
119	Mutton Piece	"	5
147	Rough Pasture	"	5
410, 415	Wigga	1629	1
	Y Weega	1641	6
86	Pulch yr Hoot	1750	19
28	Lady Stokes (near Stokes Lane)	"	19
237	Penyworlodd	1830	20
168, 173	Bethel, Tir y Bethel	1767	24
	Bethel a Tee	1748	23
	The Bethel a Tee	1767	24
82	Parsons Hill	1749	17
		1776	18
83	Cay yr Pistil	1776	16
304	Gworlod Dan y Tee	1788	16
	Gworlod dan y tye	1711	7
57?	Cae Porking	1690	15
		1709	14
288	The Vedowe	1727	13
134	Cae Pulth	1767	13
	Cae Pwlth	1769	12
11	Phillips Meadow	1767	19
34	Tir pen y lan	1748	11

Rowlestone Parish - Mr. Jennings Farm, in a book of the Estates of Thomas Edwards Esq., mapped by E. Thomas 1776.

TITHE NO.	FIELD-NAMES	STATUTE MEASURE			
		A.	R.	P.	
64	House, barn & field adjoining	P	2	0	1
43	The field under the house	M	4	3	23
65		A	6	1	9
80	Seven Covers	A	5	2	13
82	Parsons Hill	P	5	0	17
83	Cae Pistil	P	7	1	11
84	Pound Meadow ... watering	M	5	1	36
92		P	4	0	15
91	Field adjoining Lansillo Road	A	6	2	24
128	The Copse	Copice	2	0	27
127	Field by Grist Mill	P	3	0	11
			52	2	27

NOTE

Gone before 1793

Source No. 17 HRO AJ89/9. Edwards Farm: Mortgage repayment.
Thomas Jennings to Thomas Edwards dated 1749.

SOURCE

National Library of Wales, Aberystwyth. Prints and Maps Department.
Vol. 28, 71-2.

A further list of field-names for Wigga Farm in the parish of Rowlestone.

Some of these names cannot be located on the tithe map.

Indenture dated 1702. William Parry to John Gwillim, lease for a year, 29 acres lying in the parish of Rowlestone, late in possession of Thomas Maddocks in consideration of the sum of 5s.

signed J. Rogers (of Llandinabo)

W. Parry

A. Jennings

Wm. Parry Release in fee of a messuage at Rowlestone for
to a sum of 87 pounds. 29 acres. 6 June 1702.
J. Gwillym

TITHE NO	FIELD-NAME	DATE
	Car yr Lloddige	1739
278	Car yr Dorwyn	
182	Car yr Skibbor	
134	Car yr Pull	
	Gworlodd Vaugh	
79	Car yr Gross	
	Car yr Ffynon	
	Gworne Bolls	
	Car yr Skonnoll	
	Coyde Bar	
	Gworlodd Nowith	
	Ynis Barthe	
	Gworlodd	
	Gridoll	
	Car yr Croft	

SOURCE

Deeds, Indenture and Lease 1701-43 in private possession of George Watkins, Wigga Farm.

UNIDENTIFIED	DATE	SOURCE
Gworlodd y Vigin	1661	9
Gworlod y vegin	1641	6
Cay y dynteer	"	6
Caer Thainter	1661	9
Gworlod y Prior	1641	6
Cae yr woyme	1641	6

Cay-y-Pytwalle	1641	6
Gworlod y ffwrn	1652	3
Wigga Wood	1661	9
Gworlod-dan-ir-Egloose	1705	10
Hen-dye-Boethe	1711	7
Gworlod Newith	"	7
Gworlod Serth	1641	6
Cae yr woyme	"	6
Hen Dye	1718	8
Booth Gworlod	"	8
Ton Bach	"	8
	1711	7
Fields between rough & Gorsty Piece	1769	5
Gosty Field	"	5
Kae Ceathlog	"	5
Top of the Hill	"	5
Meadow at Old House	"	5
Slep	"	5
Little Enclosure	"	5
Meadow under Pound	"	5
Great Meadow	"	5
Catack	1830	20
Meadow called Gworlodd Quarry	1749	17
Plockin bach	"	17
Cay yr quarrell	"	17
Cay yr pont	"	17
Cay yr Jack Couch	"	17
Cay yr firad	"	17
Gworlod yr firad	"	17
Gworlod Evan	"	17
Gworlod quarry pond	"	17
Cae yr Graban	1788	24
Kai yr Graban	1767	17
Cae Bach	1749	17
	1770	11
	1750	19
Tir Konnell	"	19
Hortons	"	19
Tire Shanney	1767	19
Tir Shaynor	"	19
Teer Shaynor	"	23
Gay Tree	1750	19
Lower Cae Park	1767	12
Cae Harry Howell	1769	13
Porva Newith	1709	21
Porfa Newith	1755	22
Porfa Newidd	1769	21
Ynnie dean	1686	25
The plotte beneath the Land	"	25
PEN-Y-WORLODD FARM	19th cent.	2
Old Orchard		
Cae Rough		
The three acres		

The six acres
Barn Meadow
Heavy John's Meadow
Cow Pastures
The Eight Acres

KEY TO SOURCES

1	NLW	Baker-Gabb Papers 24		14	HRO	M26/19/8
2	HRO	Kentchurch Court Papers	957	15	HRO	G87/33/10
3	HRO	"	"	16	HRO	AJ89/10
4	HRO	"	"	17	HRO	AJ89/9
5	HRO	"	"	18	NLW	(Prints and Maps Dept.)
6	HRO	"	"	19	HRO	M26/8/132
7	HRO	"	"	20	HRO	T24/6
8	HRO	"	"	21	HRO	M26/4/123
9	HRO	"	"	22	HRO	M26/22/6
10	HRO	"	"	23	HRO	M26/4/134
11	HRO	M26/22/12		24	HRO	M26/22/12
12	HRO	M26/19/6		25	HRO	AN 80/1
13	HRO	M26/19/7				

ACKNOWLEDGEMENTS

Thanks are due to George and Hilda Watkins of Wigga Farm, for access to deeds.

Industrial Archaeology, 1994

By JOHN van LAUN

This recorder has pointed out elsewhere¹ the need to be vigilant in allowing piecemeal changes to our townscapes.

The past decade has seen the privatisation of a number of utilities such as water, gas and telephones. This has led to changes in the way these are displayed to the public. Particularly noticeable is the change in telephone kiosks from the thirties pattern 'red' enclosed box (for example the type K6 at the intersection of King Street/St. Nicholas Street/Bridge Street Hereford now a listed building) to British Telecom's open, transparent type. Less noticeable is the change in manhole covers at street level. These can tell us a considerable amount about the changing ownership of utilities and may be datable. There is certainly a case for the statutory protection of some of these examples and a representative list follows for Hereford.

1. Circular drain cover for mains sewage c.1855.

St. Martins Avenue. The surface is covered with high and low grounds. The high grounds are approximately three-quarters of an inch across whilst the low grounds between are approximately one inch across. The purpose of these may have been to admit cart-wheels.

2. Circular coal hole covers c.1850 in St. Martin's Street.
3. Rectangular cast-iron cover inscribed 'T & H Carless Hereford' St. Ethelbert Street.
4. Rectangular cast-iron/concrete manhole inscribed 'Electricity Supply' Berrington Street.
5. Rectangular cast-iron/concrete manhole inscribed 'Post Office Telegraphs' Bridge Street.
6. Rectangular cast-iron/concrete manhole inscribed 'Post Office Telephones' x 4 Bridge Street.
7. Rectangular cast-iron/concrete manhole inscribed 'GPO' St. Martins Street.
8. Cast-iron stop cock inscribed 'HCWD SC' St. Martins Street.
9. Cast-iron stop cock inscribed 'HCWW' 'WM' Berrington Street.
10. Cast-iron stop cock inscribed 'Herbert & Young Ltd Meter Cinderford HWB' Berrington Street.
11. Cast-iron hydrant inscribed 'HCWW HYDRANT' King Street.

Other parts of the streetscape which are subject to change, often without notice, include shop fronts and the other etceteras of our streets. Although statutory protection may not always be practicable systematic photographic recording should be axiomatic. What Ruskin wrote about 12th and 14th centuries' architecture might be extended today to include the miscellanea of our streets 'I would particularly desire to direct the attention

of amateur photographers to this task; earnestly requesting them to bear in mind that while a photograph of landscape is merely an amusing toy, one of early architecture is a precious historical document.²² Some of the following representative items for Hereford have been included in the statutory list but nevertheless one soon appreciates that they are there for their early interiors rather than industrial archaeological significance.

12. The old Anglia Building Society No. 53 Broad Street. A blue granite slab (part of the whole shop front) with a Coat of Arms engraved in black as follows:

Supporters two royal lions rampant holding escutcheons the field of one with a rose the other a horseshoe. A Tudor rose in the middle base point. At the honour point a castle with keys to dexter chief point and sinister chief point extending to the base. The whole surmounted by a helm with a griffin crest. Motto beneath 'Stability.'

13. The Mansion House (Black's; formerly Higgins Pork Butchers) Widemarsh Street. Ceramic butcher's display c.1928 inside S. doorway containing approximately 112 six-inch tiles (0.15 m. square) in green, white, blue and black showing pigs grazing in a field near a stream. Lozenge beneath inscribed 'H & Co.' Noted in listing (683-1/6/337) as 'C20 tiles with rural scene.'²³
14. Imperial Widemarsh Street. Art Nouveau hanging sign c.1901 possibly by George Herbert Godsell approximately 1.22 m. x 0.6 m. in gold relief on a red field inscribed 'IMPERIAL' with four spades above extending from four streamers starting from the left of the sign, three roundels beneath.
15. Butter Market near Widemarsh Street entrance. Yellow enamel sign c.1940 approximately 0.4 m. x 0.2 m. inscribed in black 'AIR RAID SHELTER'. This presumably came from 'Basement-Shelter N. Other basements abutting on High Town entrance through No. 5, Widemarsh Street.'²⁴
16. Curb protectors - Gwynne Street (stone 0.18 m. x 0.20 m. base). South side of Wye Bridge - Barlow rail from Newport, Abergavenny Railway of 1854 12 inches across (0.3 m.).
17. Green Dragon Hotel Broad Street. Cast-iron pedimented canopy with glass roof with 'GREEN DRAGON' on glass sides with 'GDH' in pediment surmounted with an acroteria. Noted in listing (683-1/2/68) as 'later cast-iron canopy.'²⁵
18. Philip Morris Widemarsh Street. Bowed shop front in red with central doorway with diamond fanlight; 'P MORRIS & SON' over. To left and right windows containing twenty lights in each surmounted with 'GUNSMITH' to left and 'IRONMONGERS' to right. Slender restrained Greek pilasters with flat, lightly-moulded arches over frame the whole effect. A light bowed entablature embraces the whole front. A picture of c. 1915⁶ shows the front as very similar to today except the word 'GENERAL' stands in place of the present 'GUNSMITH.' Shop front referred to in listing as 'C19 bowed shop front' (683-1/6/333).

REFERENCES

- ¹ John van Laun 'Industrial Archaeology', *Trans. Woolhope Natur.Fld. Club*, XLVI (1988), 107-18.
² John Ruskin, *The Seven Lamps of Architecture* (1890), Appendix I.
³ Department of National Heritage, *Revised List of Buildings of Special Architectural or Historic Interest City of Hereford* (1994), 279.
⁴ Pers. comm. Ron Shoesmith and 'HEREFORDSHIRE COUNTY COUNCIL/AIR RAID PRECAUTIONS/LIST OF PUBLIC SHELTERS IN HEREFORD CITY' Shirehall, Hereford, April 1940.
⁵ Department of National Heritage, *op. cit.* in note 3, 50. See David Whitehead, *Yesterdays Town: Hereford* (1983), 75 for changes.
⁶ Derek Foxton, *Hereford in Old Picture Cards* (1982), photograph 96.
⁷ Department of National Heritage, *op. cit.* in note 3, 276.

Ornithology, 1994

By BERYL HARDING

January was fairly mild and damp but with some days of cold winds. In the S. there were only seven nights of frost. Two wrens started courtship display in Llanwarne by the end of the month and over-wintering blackcaps were seen and heard during December and January. February was wet and cold with snow falling by 14 February in the S. of the county. The fieldfares at last settled to serious apple feeding. The month ended with heavy rains and it was now mild enough for frogs to be spawning.

Being so wet, river valleys and water meadows provided abundant feeding for large numbers of water birds. Flocks ranging from 50-105 mute swans were seen on the Fownhope Wye and up to sixteen Bewick's at King's Caple. Maximum sightings of up to 125 widgeon and 55 pochard were seen at Bodenham Gravel Pits, 75 mallard at Marden Gravel Pits and 40 teal at Combe Moor. Large flocks of golden plover were noted, up to 200-300 at Milton Cross - and in February one was seen in full summer plumage - also flocks of up to 500 lapwing at Milton Cross, 600 at Glewstone and another 600 on a flooded football pitch at Stoke Prior, joined by two dunlin.

More siskins returned than in the previous year and small flocks of redpolls were seen in Dinmore Woods and at Bodenham. Some were noted on the birches in the city with three in Gaol Street car park on 9 March. Small groups of crossbills were seen in Haugh Wood and Wapley Hill.

Rarest duck of the winter was a male scaup, also seen at Bodenham Gravel Pits, which arrived to moult and left by 22 January with a completely grey back. These birds are normally sea ducks in winter seldom coming inland. Another rarity was a female pintail seen on 27 February.

Bodenham Gravel Pits is the best birdwatching site in the county with the largest area of standing water, varied shorelines and both surrounding meadows and woodland - 130 species have been recorded with 70 breeding species. There is a small colony of common tern over-wintering there which would have been unheard of thirty to forty years ago. A further highlight of the spring was the arrival of five black terns on 11 May which spent several hours there. They were a small part of the huge nationwide influx that day. It is a pity that these gravel pits cannot become a nature reserve with appropriate management.

March was fairly dry - windy with some bright weather and few frosts. By 2 March goldcrests were heard singing in Llanwarne with skylarks on the 9th and the chiffchaff back by the 18th, two days earlier than last year. Warblers were also returning at that time and curlews calling from 10 March.

Cormorants are regularly seen along the Wye and the winter roost on Carey Island still has 40-50 birds - these breed at Steep Holm or along the W. coast of Wales, some have attempted to breed inland. Although fully protected since 1981, M.A.F.F. granted fifteen licences in March to shoot cormorants and goosanders. These were given to landowners with fishing rights who claim that the birds damage the salmon fishing.

Protests have been made by the R.S.P.B. and other ornithological bodies, especially as it is by no means proven that either bird causes economic damage. Each bird eats two to three lbs. of fish a day which will not necessarily be salmon and trout only but also their predators. The shot birds will have their stomach contents examined to see if the controversy can be resolved before the too easy granting of further licences next year.

April was colder than normal with northerly winds but became milder towards the end. These winds delayed the arrival of later migrants but most had returned by the end of the month. The general impression seems to be that there were fewer house martins and that they and the swallows flocked earlier for departure. Most raised two broods successfully but one pair in Llanwarne rashly started a third and finally threw out the two fledglings before leaving at the end of September.

The general rule for bird feeding used to be to stop at the end of March and start again in early October. It is now realised that it should continue during spring and early summer. The seed eaters are not likely to find much food until July, so this period could cause maximum mortality. It helps parents who still preferably feed insects to their young but use up to 15% human-fed food as a valuable supplement, especially in cold periods. Feeding in spring and summer also benefits those young as yet unskilled in food searching and generally gives a good start for the following winter. Late September and early October is a time of plenty so feeding is not necessary.

The H.N.T. nest box results for last year, 1993, show that recording took place on twenty-six Herefordshire sites, of which fourteen are on Trust reserves. 817 boxes were recorded with 65.2% used, one by a wren, one by a tree sparrow and one by a redstart but no young were fledged in these. The population of pied flycatchers, blue and great tits rose after a two-year decline due to better food supplies.

	1992	1993
Pied flycatchers	667	875 fledged
Blue tits	1276	1479 "
Great tits	615	708 "

At the two sites cared for by us in 1994 the results were:-

Woodside (HNT reserve) 30 bird boxes, 10+ dormouse boxes - two used by blue tits.

	Used boxes	Eggs	Fledged
Blue tits	9	49	43
Great tits	4	24	16
Pied flycatchers	1	7	7
Nuthatch	1	5	5

Welsh Newton 12 bird boxes, 4 dormouse boxes - 1 used by blue tits.

	Used boxes	Eggs	Fledged
Blue tits	6	38	35
Great tits	3	19	17
Pied flycatchers	1	7	5 (success after 4 years failure)

The coloured or patterned gape of fledglings usually provides sufficient stimulus to the parents to repeatedly feed them but when food is scarce young tits can make a lot of noise to attract the attention of distraught parents, unfortunately also attracting the attention of predators. Grey squirrels enlarge the hole to reach the young and woodpeckers more usually drill lower down the box at nest level.

May started wet and cool with a continuation of northerly winds later improving into a warm June, July and August. A wet September ended in an Indian summer.

Kingfisher sightings are still increasing with one seen last June over Safeway's car park, following the course of the Widemarsh Brook - underground at this point! Red kite are gradually spreading eastward with sightings over Weobley, Brampton Bryan, Ewyas Harold Common and Garway Hill. So too are ravens, seen at Merbach Hill, the Woolhope area and Aconbury.

The R.S.P.B. is committed to try and raise the barn owl population by 20% overall which in Herefordshire will bring it back to 40% of the 1930s population. The county will be divided into thirteen random tetrads with a search for potential nest sites in barns, tree hollows etc. These will then be visited by licenced observers to check for breeding so that it can be determined whether the population has stabilised yet, or even increasing. Notification of known nest sites by Woolhope members would be welcomed by the Recorder.

Strong winds can bring unexpected arrivals into the county. In May a collared pratincole was watched at length on the Upper Lugg flats. A few others were noted in the county but this one was recorded and confirmed as a rarity - only the fourth or fifth sighting in the whole country. It is 10 ins. (25 cms.) in length with a conspicuous throat ring, tern-like in flight but wader-like on ground, it runs rapidly with the body held horizontally. It is normally a summer visitor to the extreme S. of Europe. A desert wheatear was also seen, a very rare visitor in autumn, breeding in N. Africa. This was also a record. Brought in on the November winds, a little auk reached Dilwyn in an exhausted state only to be killed by a cat. It is the smallest (8 ins./20 cms.) diving seabird.

November was very mild - the 13th was the mildest night on record. Many plants were flowering again, some hazel catkins were out, frogs were croaking and some hedgehogs put off hibernation. Redwings and siskins had returned earlier than usual. With the increasing spread of a fungal 'phytophthora' root disease affecting alders siskins will lose a large part of their food source. The incidence of the disease is high in the Wye and Lugg Valleys, which are mostly flanked by alders, and could rival the Dutch Elm disease in spread and devastation.

The pied wagtails left their city roosts in mid-February. There were reports of small summer flocks in several places and they returned in mid-November to High Town and between Bulmer's and Sainsbury's, where they also roosted last year. Both sites contain some 400-500 birds. A mandarin drake has been on Castle Pool for the last few months - the female nests in holes in trees.

The year drew to a close after much rain with some snow after Christmas to the N. of the county.

Errata - These *Transactions* 1992, Ornithology Report, p. 264 Pied flycatcher numbers for 1990 blank space should read 790 fledged.

City of Hereford, Conservation Area Advisory Committee: Report of the Club's Representative, 1994/5

By JEAN O'DONNELL

The Three Crowns - Eign Gate. HC/940083. 15 March.

The loss of another pub, and one which was once owned by Watkins Hereford Brewery, was deplored by the committee especially as it was a fine example of a Victorian town pub. Its change to an amusement centre was condemned as unwelcome and the application was refused by the City Council only to be allowed on appeal by the Inspector after an inquiry.

The Governor's House, Union Walk. HC/940132. 10 May.

The old public toilets, uniquely part of John Nash's building, were to be changed to offices with flats above them. These proposals were welcomed, particularly the exposure of the cast-iron columns in the waiting room. As the only remaining building of the County Gaol (1798) it is of special architectural and historic interest.

Former Hartford Motors Site, Commercial Road. HC/940072. 24 May.

This plan was to demolish existing buildings now in a derelict state and to erect a retail food store and filling station together with additional developments. The committee expressed concern about the approach to the City from Aylestone Hill and the loss of street-line frontages. The proposals were thought damaging to the townscape. This area needs to be redeveloped in a sensitive manner and as the Hospital Trust has not finalised its plans the whole enterprise is in abeyance. It is important that buildings, roads, and hospital are planned as one integrated scheme, sympathetic to the City.

49 Commercial Street. HC/9402181. 21 June.

The application referred to replacements to existing sash windows by two casement windows, the removal of a rear wall and stack on the ground floor. It was noted that this had been the premises of the first dispensary and offices of The Hereford Society for Aiding the Industrious. It was also noted that whereas this is a listed building the adjacent soup kitchen by Nicholson is not. It was recommended that the replacement windows should not be allowed. There were two fine Victorian fireplaces in situ.

Diocesan Office, Bishop's Palace. HC/940288. 21 June.

After a site visit it was noted that alterations to the office would mean the removal of an 18th-century staircase with moulded nosings. It was possible for it to be used elsewhere in the building although ideally it should be retained in position.

Redcliffe Gardens, Castle Street. HC/940368. 14 September.

This application was to remove the bandstand, water feature and the reinstatement of the ground. It was felt that the importance of the site as that of the motte and keep of Hereford Castle required careful treatment relating to its historic significance. The bandstand, a recent feature, had become an eyesore in recent years because of vandalism.

The Fosse, Castle Green. HC/940365. 14 September.

This gem was built in 1823 by Sir Robert Smirke. After remaining empty for some years its purchase and refurbishment was welcomed. An application to insert a new window facing the courtyard was agreed. New railings were to be modelled on previous ones. There was some concern that the glazing of the outer front door was inappropriate to the design which required the outer doors to be kept open during the day while inner glazed doors were closed.

78, 81, 83 Widemarsh Street. HC/940444. 23 November.

It was proposed to demolish these buildings which included the original offices of the Hereford Electricity Company. As such they were good examples of a late Victorian building. The proposals for their replacement by twenty flats were felt to be inadequate for the present streetscape. This project was refused by the City Council.

All Saints' Church HC/950054. 28 February.

The existing gable wall is to be re-erected with the W. window of the S. aisle including a new parapet. The aim is to strengthen the window with a higher gable and to stabilise the W. end. There has been investigation of the sub-strata and it is now considered to be stable.

The City Conservation Award for 1994 was given to Lloyds Bank in High Town for the restoration of the interior to a banking hall of great splendour and the reinstatement of the original windows at the front.

Archaeological Research Section, 1994

By MEMBERS OF THE COMMITTEE

Pride of place this year must go to the *Herefordshire Field-name Survey* team who achieved the distinction of winning a British Archaeological Awards Certificate and were finalists in the Pitt-Rivers Awards, winners of the Graham Webster Laurels. The judges, Mike Rumbold and Kevan Fadden (Secretary of the Council for Independent Archaeology) met us in the Woolhope Room on the 12 September and saw the parish by parish publications of the field-names; discussed with Geoff Gwatkin his method of making all the maps; saw some of the ongoing work of analysis; examined some of the artefacts recovered from sites located by their field-names; and questioned us on our plans for future work.

The presentations by Lord Montague of Beaulieu took place in York on the 23 November when the team's driving force, Ruth Richardson, was presented with the Graham Webster Laurels 'For the entry which best serves education in archaeology for the public.' In addition to this handsome inscribed plate and the B.A.A. certificate, we were presented with a cheque for our Pitt-Rivers Award by the sponsors, the Robert Kiln Trust. Eleven members of the Club were present.

Sue Hubbard of the Hereford Record Office has kindly agreed to allow the Graham Webster Laurels plate and the British Archaeological Awards Certificate to be kept on permanent display in the Record Office where all the work of collecting the field-names and making the maps for the Herefordshire Field-Names Survey had been done.

Membership stands at 121 this year. Two indoor winter meetings were held and eleven field meetings; eight of them scheduled and three unscheduled. All the meetings are fully reported in the *Herefordshire Archaeological News*, which is published in the spring and autumn and also reports on work and research of local archaeological interest done by individual members. Three other meetings took place - the A.G.M. and dinner in Hereford in December; the summer garden party and the sixth annual Shoveller's Shindig. This year the Shindig was hosted by GADARG, the Gloucester and District group who have joined the original triumvirate of Monmouth, Herefordshire and the Forest of Dean, and so was held in Gloucester.

In January Richard Morris of the City of Hereford Archaeology Unit gave the Section an evening talk called 'Behind the Facade.' He showed slides of some of the architectural surprises they had found in a variety of buildings.

For our February meeting we joined with the Main Club to hear the F. C. Morgan lecture by Chris Musson of the R.C.A.H.M. (Wales) on 'Peep-holes on the Past,' a fascinating account of archaeology revealed by air photography. His slides included one of a cropmark in the ripening corn at Blackbush Farm, Abbeydore which looked like part of a Roman fort. Members of the Section later confirmed this by finding 1st-century Roman pottery of early types which, in this area, are only found on military sites.

FIELD MEETINGS

Our first Field Meeting was in March when we looked at some de Braose castle sites; two in Eardisland and another in Kingsland. We also went to Pembridge to investigate the moated mound at Court House next to the church. Here the mound still rises steeply about 16 ft. on average above the water level. Another point of interest in Pembridge is the well known detached belfry of the church. The dating of the massive corner posts to the 12th century led to some interesting speculation about its possible origins. Part of the interest of our field meetings comes from the stimulation provided by speculation and argument.

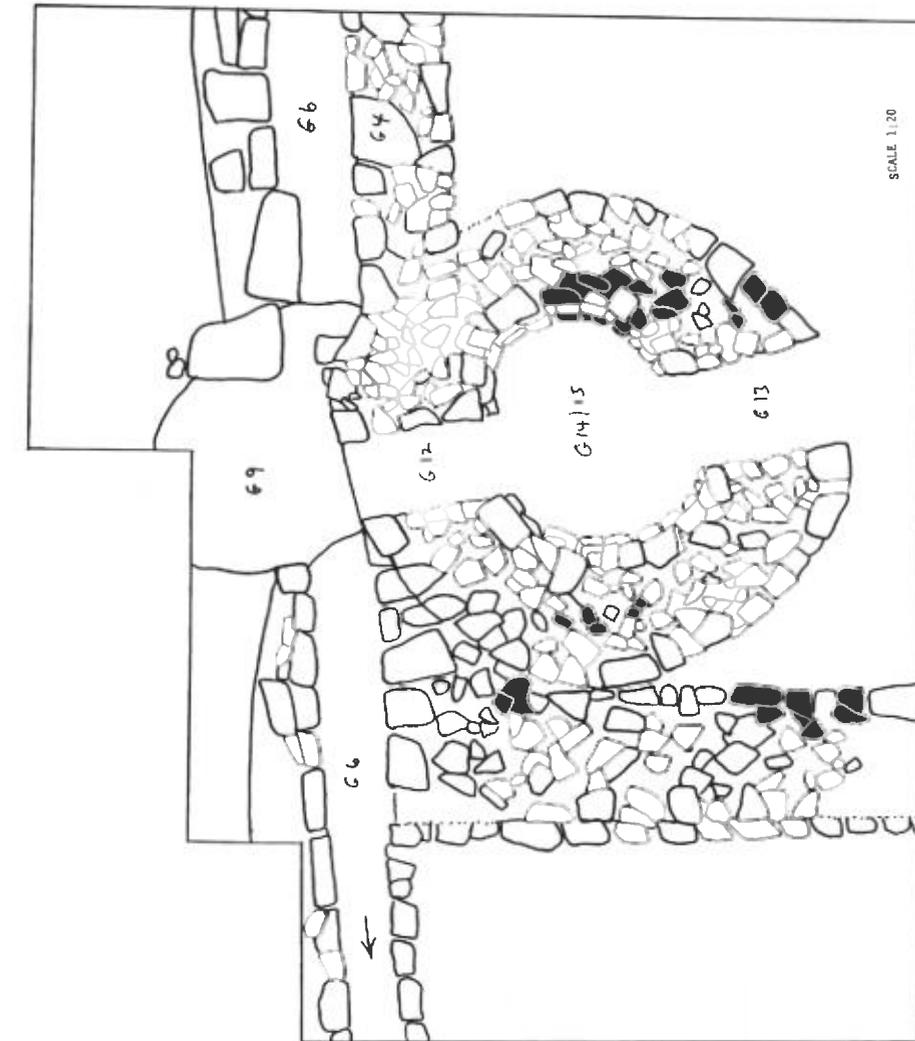
The April meeting found us in Garway where we were met by Dave Jemmett of Monmouth who has been doing some exploratory excavation on land near to the churchyard. The foundations of several buildings have been found which almost certainly belonged to the Preceptory of the Knights of the Temple, or to their successors the Knights Hospitaller. We were shown a plan of the, now back-filled, medieval lime-kiln which Dave excavated two years ago. It is the only one which has been found in Herefordshire and is one of only about fifty medieval lime-kilns to have been discovered in the whole country. The few that have been found elsewhere have often been in association with building work and were obviously used for making mortar and perhaps plaster. Valerie Goodbury points out the striking resemblance to the 13th-century lime-kiln at Cilgerran Castle, Dyfed.

The kiln may have provided lime for mortar used in the building work which was probably done by the Knights Hospitallers after they were given possession of the former Templar Preceptory.

The kiln was built inside the remains of an earlier building and incorporated one of the walls. Each of the courses of stone round the open circular area G14/15 can be seen to be set back. This shows that the charge hole, where the alternate layers of limestone and wood were burnt during the calcining process, must have been cone or funnel-shaped. The G12/13 N. and S. flues provided draught and were used as draw-holes for raking out the burnt lime. Outside the N. wall of the earlier G4 building, the drain G6 which pre-dated the kiln, had been cut through by the shallow G9 feature which had probably been in use with the kiln.

Apart from lumps of lime there were no finds associated with the kiln. Its type and its context show it to be medieval and its very existence indicates fairly major building work taking place. Garway continued as a separate hospice and preceptory after its transfer to the Hospitallers and 'it was responsible for the upkeep of its own buildings.' The survey made in 1338 details the numerous staff of officials and servants and reflects a busy and active community. We were also able to look at the well known dovecot with its inscription over the door saying that it was built in 1326 by Brother Richard. We were told that there are 666 dove-holes in nineteen rows.

We later visited Pembridge Castle in Welsh Newton which got its name through being in the custody of several generations of the de Pembridge family. It was built around 1200 by Matilda de Braose for her own use, on land rented from the Templars at Garway.



Medieval lime-kiln at Garway Preceptory

In May we crossed the county boundary to see the castle at New Radnor and two castle mottes at Evenjobb.

June found us in Brinsop where the church of St. George stands on a very interesting looking site in the middle of a complex of earthworks. The church has some remnants of 12th-century carved stonework in the Kilpeck style, including a tympanum now set into the N. wall showing St. George on horseback. The interior of the church is full of things of interest including two fine cross slabs and some fixtures designed by Sir Ninian Comper including windows commemorating William Wordsworth and his family who were frequent visitors to Brinsop Court. The Court is a largely 14th-century manor-house which has been sympathetically restored in several stages over many years. We were privileged to be shown part of the interior including the 14th-century first-floor hall with its crown-post roof - one of the only two domestic buildings with crown-post roofs in Herefordshire. We also found time to visit another castle site at Mansell Lacy.

Also in June we made an evening return visit to Gamage Farm in Much Marcle to see the progress made by the Bournemouth University training excavation team under Professor Tim Darvill. This year the excavations were on a field away from the Neolithic and Bronze Age settlement area which we saw last year. Although artefactual finds were few, the team is building up unexpected information about soil deposition and lynchets. We were very impressed by the competent way last year's first-year students were able to explain the various techniques to us.

Once again, Tim Darvill very kindly examined and identified collections of flints for us. This time we had a Mesolithic to Bronze Age collection from Minster Farm in Much Birch. This included twelve beautiful barbed and tanged arrowheads. Perhaps the most important item in the other, Late-Neolithic and Bronze Age collection from Woodland Farm in Harewood was part of a Neolithic axe from the Langdale axe factory in the Lake District.

In July we visited Netherton Farm in Pencoyd, a fine timber-framed building with an early 17th-century porch with pargetted panels and a chamber over. The R.C.H.M. gives a 16th-century date for the main block and the E. wing, but there is a medieval cruck truss in the E. wall. We also visited Gillow Manor in Hentland, a moated house with an embattled gatehouse; owned in the 14th century by the Pembridge family of Pembridge Castle. The gatehouse and the block on its left are the earliest, late-14th-century parts of the building. Some members visited Hentland Church which even in the time of William the Conqueror was described (in the *Book of Llandav*) as 'the old church of St. Dyfrig and St. Teilo in one cemetery.' The figures on the rare 14th-century four-sided canopied cross in the churchyard are sadly weathered but look no worse than when Alfred Watkins photographed the cross in 1917.

Also in July, the Section joined with members of the Monmouth Archaeological Society to see the second year's work done by Professor Nick Barton and his students from Lampeter. They have been excavating rock shelters in the vicinity of King Arthur's Cave on the Great Doward and across the river. Paleolithic finds and two mammoth teeth dating from 36,000 years ago have been recovered. At the back of a second rock shelter a vertebra dating from the Bronze Age was discovered with a goat or sheep skull placed on

top of it and a 12,000 year old reindeer bone was found in a hearth dated by accelerator mass spectrometry. One of the students had picked up a Mesolithic microlith from the King Arthur's Cave spoil heap and it is hoped to cut a section through the heap next year.

In August the Section does nothing more strenuous than enjoying itself at our annual garden party in Llanwarne thanks to the kindness of Beryl and John Harding, but we had two meetings in September. We visited castle sites and churches at Stowe and Hewelsfield in the Forest of Dean and went to St. Briavels Castle where we were shown around inside.

The other September meeting took us to Old Radnor where Roger Pye showed us the interesting church with its medieval floor tiles and the massive font made from a glacial boulder. The bowl is 4½ ft. in diameter, standing on legs and is carved from a single stone. The area is rich in barrows and we were taken to see two very different ones and the standing stone group known as the Four Stones. Roger had found a perforated axe-hammer of the Early Bronze Age in the roots of a blown down tree on one of the barrows near the Knapp Farm. We joined the Radnorshire Society in the afternoon on Hindwell Farm where Dr. Gibson of the Clwyd - Powys Archaeological Trust was directing the large complete excavation of a Bronze Age barrow. Dr. Gibson told us that no burial had been found but the barrow had been made on top of a settlement with many pits containing fragments of Neolithic Grooved Ware pottery and we saw the stakeholes of a round-house with a hearth. Mesolithic flints had also been found.

Industrial archaeology among the lime-kilns occupied our October Field Meeting. The Woolhope/Fownhope area was one of the most productive lime-producing areas of the county in the late 18th and earlier 19th century. Our acknowledged lime-kiln expert, Valerie Goodbury, showed us four kilns in varying conditions and situations and explained their features, working methods and means of transporting coal to, and lime from, the kilns. This meeting attracted an unusual number of members who do not normally attend meetings. It is always a pleasure when this happens and sometimes members with detailed local knowledge can contribute a great deal to the success of the day.

The last field meeting of the year was held in Pencombe where we looked for features suggested by field-names. We finished the November day with a visit to Risbury Hillfort.

¹ Wm. Rees, *History of the Order of St. John of Jerusalem in Wales and on the Welsh Border* (1947), 51-2.

Natural History Section, 1994

By BERYL HARDING

21 April. The Annual General Meeting held at the Friends Meeting House was followed by refreshments and then a short talk by Peter Thomson on 'Volcanoes - their origin' and then another short talk by Estelle Davies on their 'Present Plant Life' and illustrated by slides. A popular topic so the meeting was well attended.

10 May. A visit was made to Lower House Farm, Preston on Wye, by invitation of the owner, Mr. Mike Williams, to see how farming and conservation can be carried on in harmony. The farm won the F.W.A.G. award (Farming & Wildlife Advisory Group) a few years ago.

Of the 300 acres, thirty are farmed organically with a further twenty-five under the Countryside Stewardship Scheme. Another twenty were organically farmed but are now an intensively managed cider orchard. Even so, the headlands around this are two m. wide giving rough grass which can harbour the predatory insects of orchard pests. The trees are sprayed carefully to allow the drift to move centrally and they are planted further apart than normal to allow plenty of air circulation. Overall, hedge trimming is not frequent so they have enlarged in width and height and act as a buffer against pesticides and chemicals where used, also providing a good nesting environment for hedgerow birds, further enhanced by the use of nesting boxes. A new woodland of seven acres has also been planted with ash, oak, bird cherry, lime and alder.

The Countryside Stewardship Scheme requires that land under grass should not be grazed too intensively and not until June so benefiting ground nesting birds.

To become 'organic' the soil must be free of all chemicals for two years. On this particular farm such land is put down to clover ley for three years and rented out for grazing. This is then followed by an arable phase with potatoes in the first year, with the heavy use of farmyard manure, then other crops including wheat are grown for the next three years giving a seven-year rotation. Clover is planted in with the wheat, growing at the stem bases and providing nitrates; small weeds die off as the main crop grows and docks and thistles are pulled out by hand as no spot killer is allowed. Since using this system on these thirty acres there has been neither crop failure nor any outbreak of pest diseases.

The minimum wheat yield when grown intensively is three tons per acre and when grown organically starts at one-and-a-half to two tons per acre. Prices are usually more favourable for organic crops and the costs for tractor fuel, labour and time are less with no costs on chemicals. Thus, their production should be economically competitive with intensive farming.

In the afternoon a visit was made to the pond by Moccas Church which was restored privately a few years ago. It had previously been a farm drinking pond dammed at one end and part of a two-pond, stream-connected system which flows into the Wye. Tufa deposits are visible in the lower stream. The pond is believed to be part of fish-ponds orig-

inally associated with the monastery of the pre-Norman church. When dredged it was found to be two m. deep with a cobbled base.

After reclamation it was left to mature into a typical Herefordshire pond with no animal life introduced. Marginal water plants were given, or bought through a fund arranged by the Nature Trust. The object of this grant was to stock the pond with oxygenating plants such as hornwort and water milfoil so that once these were thriving any surplus could be used for restocking other new or restored ponds. The most interesting plant there is perhaps *Lemna gibba*, or fat duckweed, with its markedly swollen but tiny oval fronds 1-3 mm. diameter. (Rootless duckweed, 1/2-1 mm. across, is the smallest European flowering plant). A very careful watch is being maintained for *Crassula helmsii*, a mossy stonecrop introduced from abroad and sold in water gardens still, which is an extremely invasive pest turning a pond into a swamp.

Sweeps were made at the surface and among plant margins producing abundant snails and zooplankton as well as a mixture of the expected aquatic larvae and adults. The pond is known to contain many smooth and crested newts but only one youngster was found that day. The marginal water-plant count totalled forty-four species. The Nature Trust has been asked to take over the long-term management of the pond which is thriving and has won the Parish Pride Competition as well as several other awards.

15th June. A visit was made to the new H.N. Trust Reserve at Michaelchurch Escley called the Christopher Cadbury Reserve in recognition of the financial help given by him towards the purchase of this and other reserves. It consists of 12.24 acres in the foothills of the Black Mountains, sloping down to the banks of Escley Brook with two leats across its breadth, originally connected to a tributary of the Escley. These were made in the 15th-16th centuries to allow nutrient-rich waters to flood the meadows and advance the growing season, so giving an increased hay crop. It was claimed that Rowland Vaughan of the Golden Valley invented this system in the 1580s but this claim has been antedated according to Oliver Rackham in his *History of the Countryside*, (1986).

The reserve contains two herb-rich water-meadows on soils derived from the Old Red Sandstone and the old method of irrigation is still visible. The meadows have not been 'improved' and cropped continuously for hay, certainly for the last sixteen years. They are typical of many that were to be found in the lee of the Black Mountains and now in decline. Six species of grasses were identified with some thirty-six flowering species, plus the common spotted orchid. Other orchid species are known to grow there but were not in flower.

The Escley Brook is unpolluted and provides a rich haven for aquatic plant and invertebrate species and consequently for birds such as kingfisher, dipper and heron. In the woods opposite buzzard, warblers, redstart, all three species of woodpecker and the pied flycatcher are found. We were lucky enough to see tree-creeper and pied flycatchers.

21 July. A follow-up visit after three years was made to Gilfach Farm, a hilly reserve owned by the Radnorshire Wildlife Trust, lying between 600-1300 ft. The whole site is an S.S.S.I. of 418 acres. During the next thirty years it is planned to reduce the hard outline of the coniferous plantation with deciduous trees. Some conifers obviously need to be kept

for the goldcrests and crossbills, as well as for the goshawk that nests there. Felling is discriminate with the proceeds paying for replanting. There is an established protection corridor of trees for woodland birds by the river Marteg.

As the steep upper slopes to the N. of the river were over-grazed in the past only selective grazing is now allowed so that the heather and bilberry can recolonise. Unfortunately, bracken tends to smother these so that expensive helicopter spraying is required on the open, flat areas of the upper hillsides merely to keep it under control. These areas are then chain-harrowed by hand, as it is too steep for tractors, otherwise the dead debris build-up will further increase soil acidity. With reducing grazing rowan seedlings are appearing in numbers which will shade out the heather and its companion plants. Thus, it is difficult to maintain a balance between grazing and plant succession - perhaps the only answer is a return to shepherding!

The mid-Wales railway ran along the embankment above the river Marteg and the hard base remains providing areas of poor drainage with small pools in which water crow-foot can grow. The tree corridor shades the embankment, discouraging bracken growth, so that grass and wild flower growth is lush. The 300-yard tunnel provides hibernating roosts in winter for five species of bat - the noctule, Daubenton, natterer, whiskered and pipistrelle. Tunnels have to be partially blocked at both ends to reduce the draught as well as having a protective grill. Cut into friable Llandovery shales the tunnel was brick-lined and the decaying mortar now provides crevices and footholds for the bats.

The Marteg is a fast-flowing tributary of the Wye passing through rich water-meadows and then through a narrow section with waterfalls and rock pools. The water can rise another 8 ft. during the winter in this section before continuing to the Wye some two and a half miles N. of Rhayader. Betony, globe flowers and bitter wood vetch grow on these upper banks - it is hoped to establish colonies of the latter two elsewhere on the reserve. Otters have not yet used the artificial holt made for them but their spraints are frequently found. The current is too fast for frog spawning but the embankment pools provide enough water to maintain the population.

The 17th-century Welsh longhouse with its timber-framed gable end has been restored since our last visit and will be made into an interpretive centre and also provide accommodation for conservation workers.

11 August was a revisit to *Titley Pool* after eight years for a bat watch on an ideal warm evening. The pool of fifteen acres is one of several in the Kington-Mortimer's Cross area found lying in hollows and amid glacial deposits.

The lake was enlarged in the early 18th century by the building of a dam at one end as part of the landscaping schemes of the earl of Oxford at Eywood House. Consequently, the slightly calcareous pool is one of the largest areas of open and slowly moving water in the county and fringed by alders. Over 100 species of birds have been recorded, including wintering fowl such as teal, widgeon, and tufted duck with the greater crested grebe breeding there in summer.

Ten years ago a bat survey was made using mist nets which showed that five species were to be found - the pipistrelle, the noctule, the brown long-eared, the whiskered and the Daubenton. At rest a bat emits squeaks at the rate of ten per second which can often be

detected by humans. In flight this increases to thirty-plus, usually too high for the human ear. A bat detector is a small hand held device which picks up the emitted bat sounds at different frequencies measured in kilohertz and renders them audible to us. It is now known that some moths and lacewings are capable of picking up these frequencies so that they can try to escape. The tiger moths have evolved a system of high frequency clicks when under attack which causes the bat to abandon pursuit.

As soon as we moved out of the wooded car park on to the edge of open fields we were able to pick up the clear signals of the noctule, or large bat, in the frequency of 20-5 kHz and could see them swooping with a quick dashing flight above our heads. They take larger insects cramming themselves for an hour in a dusk and again in a dawn bout consuming up to one-fourth of their body weight at one meal. They are among the first to come out at dusk vying with any late swifts. Their head and body length is 4½ ins. with a tail of 4 ins. and a wing span of up to 15 ins. and their broad shouldered body is covered in a rich chestnut fur.

The brown long-eared bat is often called the whispering bat as it feeds directly off insects on leaves using its tongue and making little sound. Consequently, it is difficult to locate even with a bat detector. It is one of the commonest species with the head and body of 2 ins. plus a 2 in. tail and a wing span of 10 ins. (the average bat size). Its ears are half the body length.

The pipistrelle, or common bat, was detected in numbers among the trees at the water's edge at 45-60 kHz. it is the smallest bat with a head and body length of 1½ ins. plus a tail of 1 in. and a wing span of 5½-6 ins. It has been recorded that each takes 3,000 insects per night, amounting again to one quarter of body weight, in bouts of feeding activity.

Over the lake the Daubenton, or water bat, was located in numbers at 45-55 kHz but giving a deeper note than the pipistrelles. Those nearer the bank were visible in the torch-light with their pale under surface - so too were the enormous numbers of insects! The Daubenton was once considered to be one of our rarest bats but is now known to be well distributed and plentiful. It flies in circles very close to the surface dipping its muzzle into the water to collect aquatic insects as well as using its feet to trawl for low flying insects. It is of average size and can sometimes be seen flying in daylight.

The rich protein diet is necessary to fuel bat's high energy output with their rapid flight, high heart rate and continuous emission of sound in flight through the nose or mouth. Different species can co-exist harmoniously when hunting as they use different habitats and different air levels. Between their bouts of activity, which is related to the flying times and habits of their specific insect prey, they will rest hanging in trees but the nursing mothers need to return to their daytime roosts periodically to suckle their young.

These daytime summer roosts are usually communal with the bats using crevices in walls, roofs and trees. Bat boxes, with their narrow slit entrances at the base can provide shelter when placed well up trees in threes or fours so that the bats can crawl from one to the other if it becomes too warm. They use different roosts for winter which are cooler to allow undisturbed hibernation.

12 September. A geological field trip to the Shelve area in Shropshire was planned but was rained off on two consecutive Thursdays and abandoned for the time being.

22 October. This was a woodland walk looking for tracks and signs as well as helping to check dormouse boxes in the Lea and Paget's reserve.

Footprints of fallow deer in the soil were obvious after the previous very wet week. As well as the rutting calls of the stags echoing through the woods a party of seven hinds crossed the path. Badgers live there but no tracks were visible beneath the increasing layers of wet leaf fall.

Very obvious were the tiny pinky-cream oak spangle galls among the dead leaves. 3-4 mm. across they contain the developing larva of the gall wasp surrounded by the gall tissues grown by the leaf in response to the irritation caused by the larva. In winter the galls separate from the fallen dead leaves until spring when the insect hatches out as females only to commence the second part of their life cycle, laying eggs on oak leaves which cause the currant gall, from which emerge gall wasps of both sexes which breed and lay eggs causing the spangle gall again within the one year. The fallen galls are not a food source for other insects or birds as they taste unpleasant.

Nuts and acorns were strewn about bearing the tooth marks of mice and voles. Those made by dormice have a distinctive smooth inner rim with teeth marks at an angle to the hole quite different from other nut eaters.

The deciduous ancient woodlands of Lea and Pagets and Leeping Stocks on the Doward are both recognised by English Nature (ex. N.C.C.) to be prime sites in Herefordshire for dormouse populations with their rich diversity of tree and shrub species which provide both cover and food for dormice. They feed on pollen and flowers in early summer, fungi and insects later and on nuts and berries in autumn to fatten them up for their hibernation which lasts for six months.

The optimum area for a breeding population is fifty acres, or twenty hectares. Both these reserves are approximately this size. However, Coughton Marsh Reserve near Ross, which is the only wet plateau alder woodland now remaining in the Wye Valley, has a very diverse mix of trees and shrubs thus providing a variety of food materials and can support a dormouse population although only three acres. It is being carefully monitored at present to see whether this population is on the increase or decrease in such a unique site.

In Herefordshire the dormouse is at the western edge of its range. Populations tend to be isolated and its decline overall is due to the loss of hedgerows and woodland corridors. Unlike wood mice it tends to use trees and thin branches as aerial routeways (its feet have tiny suckers to increase its grip) and thick, well linked shrub cover to find food and winter nest sites when it does touch ground. Most mice (MIRIDAE family) live up to one year having 6-7 litters with 5-8 young but dormice (GLIRIDAE family) can live up to three or five years with 1-2 litters of 3-6 young each year, giving birth in late summer depending upon weather conditions and consequent food supplies. Delayed breeding obviously reduces the chances of survival for the juveniles as they will be too underweight to complete hibernation.

Some 117 dormouse boxes have been erected in Lea and Pagets wood, similar to bird boxes but hung at an angle to the trees with the entry hole at the back. Before hibernation these are checked for a population estimate with the number of adults and young recorded, plus their sex and weight. Many of the boxes contained summer nests as each dormouse has several. These are beautifully made with a central cavity inside a ball of moss, fern fronds and leaves all bound together with strands of chewed honeysuckle bark and more leaf cover on top. Used in summer for breeding they are abandoned in early November for another to be made under thick cover in a bramble patch in which they hibernate until April. After which they will return to one of their summer nests to rest during the day, so saving themselves the effort of further nest making when the search for food is of primary importance.

Eleven boxes with dormice were found. The adults weighed 15-25 gms. and those juveniles still with their mothers averaged 8 gms. One female weighed 30.5 gms. - a record for this reserve! These juveniles may not survive the winter unless they can build up more weight, which is possible if the November nights are mild and dry. 1994 certainly had mild nights that month but they were far from dry.

Weather Statistics, 1994

<i>Month</i>	<i>Max. temp. shade °C</i>	<i>Min. temp. shade °C</i>	<i>Nights air frost</i>	<i>Rainfall mm.</i>	<i>Max. rainfall in one day mm.</i>	<i>Days with rainfall</i>
January	12.0	-1.5	3	72.5	11.0	21
February	13.0	-3.5	11	74.2	14.2	16
March	19.0	-1.0	1	43.7	10.2	17
April	25.0	0	0	34.2	6.6	15
May	30.0	4.5	0	67.0	not known	not known
June	32.0	5.0	0	14.1	6.4	8
July	36.0	9.0	0	18.9	12.2	5
August	32.0	7.0	0	68.8	19.5	11
September	26.0	3.5	0	121.5	37.7	18
October	24.0	0.5	0	83.3	12.5	16
November	17.5	2.0	0	56.8	17.2	13
December	Not recorded					

Highest temperature 19 July 36.0°C
 Lowest temperature 13 and 20 February -3.5°C
 Total rainfall 11 months
 January to November 655.0 mm.

Recorded by E. H. Ward at Sunnybank, Leadington.

