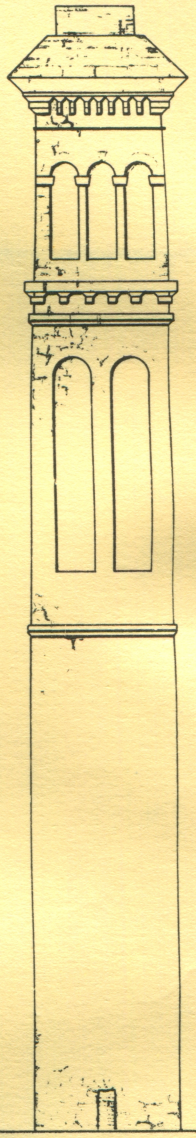
ISSN 0307–1723

# JOURNAL 3



# SIAS

# JOURNAL OF THE SOMERSET INDUSTRIAL ARCHAEOLOGICAL SOCIETY NUMBER 3



**Publications Sub-Committee**
**1980–81**

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The Chairman acknowledges the assistance of D. Greenfield and F. Hawtin in the preparation of drawings and photographs for this issue.

It is hoped that the publication of this Journal will encourage others to contribute to further numbers.

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**Front Cover: The Paper Mill, Creech St. Michael circa. 1900**

**SIAS JOURNAL NUMBER 3**

Published by
Somerset Industrial Archaeological Society
Secretary
C. A. Buchanan
2 Blake Green
Ashcott
Bridgwater, Somerset
TA7 9QF

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# SIAS

JOURNAL
NUMBER
THREE

# SOMERSET INDUSTRIAL ARCHAEOLOGICAL SOCIETY

1981

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# BRIDGWATER GLASSHOUSE

**F. Hawtin and B. J. Murless**

"I have been but ill requited for my indulgence".
James Brydges, the First Duke of Chandos

To the 19th century mariner charting the winding course of the River Parrett from the Bristol Channel towards Bridgwater, the conical kilns of the numerous brickyards along its banks were no doubt welcoming points of reference. The skyline would not have been unlike Bristol a century earlier where Daniel Defoe noted fifteen similar structures. The difference between the two groups was a functional one: those in Bristol were glasshouses whilst their counterparts in Bridgwater were kilns for the firing of the many and varied products of the local brick and tile industry. At Northgate, Bridgwater, one brick stack had in the course of time, performed the dual role of producing glass bottles and window panes and then, at a later date, pottery goods. This particular structure owed its existence to the commerical enterprise of the First Duke of Chandos but in the construction and subsequent patronage of the glasshouse between 1725 and 1734, the Duke was merely adding his own small but distinctive contribution to the history and technology of glass in Somerset during the previous two thousand years.

Although the Iron Age peoples in the lake villages of Glastonbury and Meare knew of glass in the form of beads, it was probably during the Romano-British period that glass was first smelted in Somerset, the remains of a furnace having been uncovered during an archaeological excavation at Ilchester in 1975. Glass production was continued, albeit on a small scale still, by the Saxons at Glastonbury Abbey but for the next millennium there is a noticeable lack of evidence on the subject. Elsewhere the English glass industry appears to have flourished in Staffordshire and in valleys running southwards from the North Yorkshire Moors where vessel-producing furnaces with auxiliary hearths for annealing have been discovered. These date to the 16th century, a formative time for English glass with the arrival of Lorrainers, French and Flemish Huguenot refugees (from c.1557 to c.1622). Simultaneous to this influx of foreign talent was a growing awareness of the need to conserve fuel, the use of non-resinous timber such as ash, beech and oak in some quantity threatening to provoke a Tudor energy crisis. The culmination of this unwelcomed development was an Act of 1615 which forbade the use of timber in the glass industry, a fact not lost on Sir William Clavell amongst whose industrial activities in Dorset (1619) was (sic) "a glass furnace erected in Purbicke for the makeinge of drinkinge glasse wth. Coale, as well for the preservation of wodd as for the more comodious servinge of the seven shires adjoyneinge wth. glasses".[1]

The foundations for the establishment of the glass industry in the West Country were now laid: on the one hand there was the movement of the Huguenots from Kent and Sussex in the 1570s into Hampshire, Gloucestershire and Herefordshire; on the other, the use of coal which enencouraged the building of furnaces close to the sources of supply. The greatest single benefactor appears to have been the City of Bristol and the significance of the industry there has been stressed by Francis Buckley, an authority on the history of glass: "This triumphant progress of the Bristol glass-makers must be borne in mind in order to understand the reason for the melancholy fate of other glass concerns in the neighbourhood of Bristol. The hand of Bristol lay heavy on its minor competitors in the West".[2]

It was against this background that James Brydges, the First Duke of Chandos chose a glasshouse as one of a number of projects which he undertook within the Manor of Bridgwater between 1721 and 1734. That the Duke should have concerned himself with Bridgwater at all is at first surprising given that he had acquired his title and a great fortune as paymaster-general of forces abroad in the reign of Queen Anne. However, it appears that unsuccessful share transactions in 1720 impaired this prosperity and to restore some of his fortunes he took an interest in building developments in Bath and Bridgwater in addition to coal, lead and iron mining ventures. On the surface Bridgwater seemed a sound investment and it should be said that the Duke saw the potential of the town with its water borne connections, his activities anticipating the industrial revolution that was to make its impact upon the area later in the 18th century. There were certain 'fringe benefits' for the Duke: barrow ducks and freshly caught salmon were sent to 'Cannons', his North London home and he had clay pipes, complete with the ducal crest, made in the town. In promoting a glasshouse the Duke had in mind his personal requirements of bottles for his cellars and window glass for his housing developments, products he hoped which would rival in terms of economics and quality those which he had previously bought at Bristol. The Sedgemoor area was geographically suited to his needs: the expertise to build the cone was supplied by John Baker, an established Bristol company, and two glassmakers,

John and Charles Prowse, also came from that city. The Somerset coast near Watchet provided kelp, one of the chemical constituents of glass whilst another essential material, limestone, was close at hand. It is conceivable that the slime from the River Parrett, used a century later in the manufacture of Bath bricks, may have been found suitable by the glassmakers. Bricks for the tapered cone of the glasshouse (Plate 1) were fired locally, probably in the primitive kilns which the Duke patronized at Crowpill and in the bailey of the ruinous medieval castle. The furnace bricks, of Stourbridge fire-clay, could also have readily been transported to the site.

Despite these apparent favourable conditions, events show how sadly mistaken the whole project was. The Duke's greatest failing appears to be his lack of control over his affairs; as far as is known, he never visited Bridgwater but instead left matters of administration to local agents. The result was that those to whom he delegated often took advantage of their position or were incompetent. The Duke's bottles were too large and lacked strength whilst his plate glass squares were too small and green with very thick and hard knobs. The Prowses were declared bankrupt in March 1728, and, to add insult to injury, absconded with most of the stock prompting the remark by the Duke which prefaced this narrative.[3] Apart from the dominance of Bristol, referred to earlier, the construction and maintenance costs were substantial, a repair bill of £1,000 being outstanding after only three years of operation. Against these odds the Duke of Chandos struggled on entering into partnerships with his agents who bought shares in (sic) "All the Stock in Trade money Creditts Utensills and Implements used and Employed in the Work and Buisness of making Glass and Glassbottles in the Glasshouse in Bridgwater".[4]

Although glassmaking had ceased by 1734 when the Duke's Bridgwater properties were sold it is uncertain what use was made of the glasshouse over the next ninety years. John Chubb features the cone in his watercolours and a view from Hamp Fields executed in 1762 shows it out of all proportion to other buildings in the town. Chandos had suggested that the glasshouse could have been converted into a brewhouse but a warehouse is the most probable usage of the structure with perhaps a brief period as a temporary prison during the Napoleonic Wars. By the 1820s local traders were being assessed for poor rates on the premises amongst whom were two potters, James and Joseph Jeboult. Their arrival marks the biginning of the second phase in the active life of the cone, namely in its use as a pottery. It was a

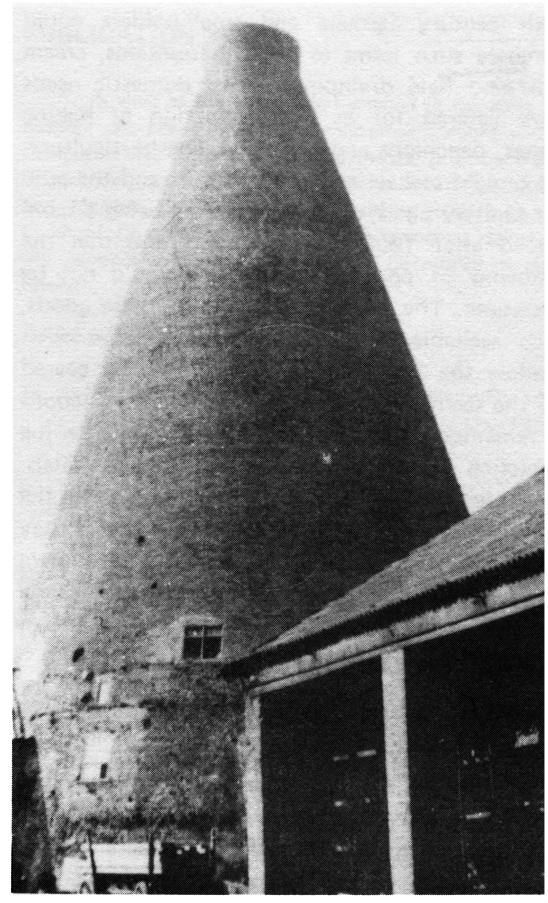


Plate 1.
Bridgwater Glasshouse prior to demolition, 1943.

logical step, the shape of the structure being ideally suited and similar adaptations had occurred elsewhere. By the 1840s the former glasshouse had become part of the extensive group of brickyards controlled by John Browne, a prominent local merchant and politician. Browne had experience of circular kilns and a particularly tall example survived in his Crowpill Works until 1894 when lightning damage precipitated its demolition. Three smaller kilns which functioned in the manner of updraught brick kilns were constructed within the cone. One of these kilns was kept exclusively for glazing, much of the red-firing earthernware fabric being partially coated black, brown or orange by the application of iron or lead based glazes. A building adjoining the cone on its eastern side was reserved for the making of chimney pots and ornamental finials for gable ends, the goods sometimes being freighted out of the yard from a rail siding laid c.1870.

The pottery's history appears to have followed the pattern of other English potteries in its success during the Victorian and Edwardian periods to a decline after 1919 and eventual closure on the outbreak of war in 1939. In the

19th century farmers and small-holders could purchase such items as poultry fountains, cream pans and field drainpipes whilst domestic needs were catered for in the production of baking dishes, panchions and bed pans. The horticulturalist bought seakale and rhubarb pots and the builder sanitary pipes, this latter product being discontinued after 1900 when it was found that the problems of porosity in the clay could not be overcome. The mass production of these goods, each available in different sizes, tends to overshadow the 'art' pottery which probably ceased on the death of J. Nicholls in 1908. Mr. Nicholls is remembered for his sprig-moulded puzzle jug depicting a hunting scene which is in the Glaisher Collection at Cambridge. As a response to the popularity of certain personalities of the day small statues and busts were made. It is not known if any of these survive locally but Queen Victoria and W. E. Gladstone were subjects modelled in this way.

In view of the history of the works at Northgate it is ironical that one of the factors which led to the abandonment of earthenware vessels was the increase in those made of glass. Staffordshire china and enamelled metal vessels were also inexpensive substitutes and the arrival of the motorised delivery vehicle earlier this century eliminated the need for housewives to purchase pickling pans and salters. The final blow to the cone came in May 1943, when the war effort, anxious to obtain hardcore for the airfields at Ilton and Westonzoyland, benefitted by 1,500 tons of brickwork. After over two hundred years resting on the alluvial clay the great kiln was beginning to spread, a fact confirmed by contemporary photographs and demolition was the safest solution to the problem.

**EXCAVATIONS 1976-77 (Plate 2)**

The site is on the west bank of the River Parrett (ST 298375) and when investigations began it was a level area with an upstanding brick wall on its northern side much overgrown with coarse vegetation. The excavations revealed the foundations of a circular wall of hand-made bricks, 4ft. (1.22m.) thick, resting on slabs of blue lias limestone and canted inwards at an angle of 15 degrees from the vertical. This wall was the base of a cone with an external diameter of 64ft. (19.20m.).

The interior circular floor, 3ft. (0.91m.) below the present outer ground level, is of earth in its western half, covered with a 4in. (102mm.) layer of pottery sherds, mainly of glazed redware; the eastern sector has been levelled with a layer of sand on which is a flooring of 1ft. (300mm.) square red tiles. There was no evidence of the annealing furnaces around the circumference which would have formed part of the glass-making workshop beneath the cone.



Plate 2. The first milepost out of Wells on the Western Road (A39).

In the higher northern wall is an opening with an arched head 9ft. (2.70m.) high and 5ft. 6 in (1.65m.) wide, flanked by two smaller openings and diametrically opposite them in the lower south wall are the bases of three similar arches. Aligned on the axis through the central openings are the remains of the original glass furnace, consisting of a flue running approximately North-South across the circular interior. It is flanked by massive walls of 18th century hand-made brick and with a floor in its middle section of blackened earth, soot and ashes. The lack of further structural details from the Chandos era was understandable in the light of the various conversions which had taken place. It is known that c.1842 a fire destroyed the entire premises with the exception of the outside walls.

Many fragments of glass shaft-and-globe bottles were found on the tiles of the eastern floor as well as a few 'crowns' or 'bullions', the centres of blown discs of window glass. From outside the north-western sector of the perimeter wall, where stood the office of the foreman during the pottery-producing period, came a large collection of glass furnace waste with clinker and some distorted bottle remains. Pottery finds (Figure 1) included a cache of twenty-five steens (open-mouthed jars), each 10in. (254mm.) high, lying on their sides against the north-west inner perimeter wall. A vast quantity of miscellaneous sherds were on the western floor some of which can be identified with vessels shown in a catalogue of the Somerset Trading Company (the successors to John Browne). [5]

Since the cessation of archaeological activities the remains, though now scheduled by the Department of the Environment, have been exposed to the elements pending redevelopment of the area. Amongst the glass cones of the Bridgwater type, that is, those which enclosed reverberatory furnaces, the structure at Northgate has a legitimate claim to have once been the tallest in Great Britain. With an estimated height of 110ft. (33m.), the cone exceeded that at Catcliffe, east of Sheffield built in 1740 (68ft.:20.40m.), and an example now demolished at Topsham, near Exeter built in 1696 (94ft.:28.20m.). Bristol glasshouses were about 90ft. (27m.) in height. It would be fitting if the site, with the oldest exposed remains in Western Europe, could be conserved and displayed alongside 'The Lions' and Castle Street as a suitable monument to the Duke of Chandos and his associations with Bridgwater.

## PUBLICATION NOTE

In view of the widespread interest in the cone the authors are preparing a fully annotated account with a comprehensive list of acknowledgements. It is hoped that in addition further information will be forthcoming from San Marino, California, where archives relating to the Duke of Chandos are deposited. A specialist report on the ceramic evidence will probably be published separately.

## REFERENCES


1. Somerset Record Office, Quarter Sessions Records, CQ3/1/35(2)/52. We are grateful to Miss J. Peden for this reference.

2. F. Buckley 'West Country Glasshouses', Trans. Soc. Glass Technology, Vol. 13, 1929, 124.

3. Letter from the Duke of Chandos to John Oldmixon dated 1727 21 November. A microfilm of this correspondence is located at the Local History Library, Taunton.

4. Somerset Record Office, DD/SX9/3(a+b), deed dated 1730 25 July. We are indebted to Mr. R. Bush for drawing our attention to this document.

5. Admiral Blake Museum, Bridgwater, illustrated catalogue, Somerset Trading Company Ltd. (Bridgwater, 1911).


## ACKNOWLEDGEMENTS


At this stage it is necessary to thank S.I.A.S. for the sponsorship of the excavations and its members for participating alongside others from the Bridgwater and District Archaeological Society.

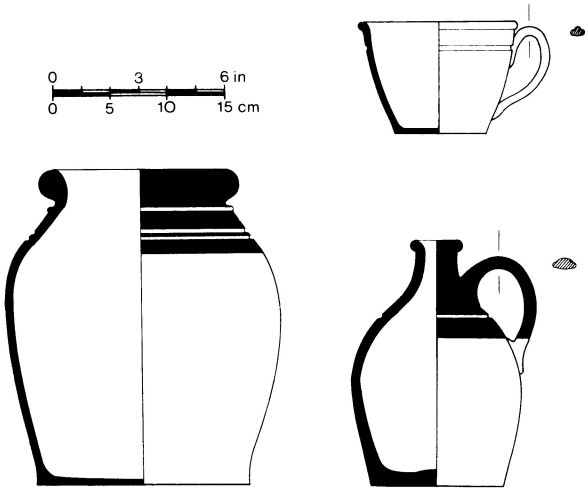




Fig.1

Pottery from the Glass Cone Excavations—left: a steen; above right: a porringer right: a wide mouth bottle. (From original drawings by T. W. Osborn).

# CHIDGEY'S FOUNDRY, WATCHET

**D. W. Warren**


BRASS FOUNDRY, WATCHET, SOMERSET,

To JOHN CHIDGEY,

MILLWRIGHT, MACHINIST, &C.

MANUFACTURER OF NEW AND IMPROVED EXPEDITE WATER MOTOR.

WATER WHEELS, Steel, Iron, or Wood, of any Size or Description.
Flour, Cement, Saw-Mill, Threshing, Chaff-Cutting, and other MACHINERY.
MACHINE SIEVES WOVEN OR REPAIRED. SHAFTING, BEARINGS, PULLEYS, & GEARING. LIFTS & HOISTS OF ALL DESCRIPTIONS.
*Repairs done to all kinds of Implements.* *Steel and Iron Castings supplied for Machinery.*
MILL STONES RE-FURROWED & DRESSED. NEW ONES SUPPLIED & FIXED.
Driving Belts supplied, of all descriptions. -:- Estimates Free.

Figure 1. The heading of an invoice for work completed at Yard Mills, Nettlecombe (ST 060390).

During the 19th Century some rural foundries, machinists and smiths specialised in millwrighting and, in addition to the traditional millwrighting work with corn mills, manufactured and maintained the waterwheels, turbines and associated machinery of the many small local industries and farms which used water power. One such millwrighting firm was John Chidgey & Sons of Watchet in Somerset, (Figure 1) working from 1856 to 1936 and made almost unique by the preservation of all the machinery, tools and patterns of his small works.

## HISTORY

John Chidgey was born on 14th April, 1836, the son of a timber haulier. He spent a short and unhappy spell at sea under an elder brother who was master of a schooner sailing out of Minehead. Afterwards his brother-in-law, the engineer for the Watchet Paper Mills, took him as an apprentice and taught him his trade as a machinist and millwright. In 1856, with a little money left him by an aunt, Susan Perry, the widow of a Taunton boot maker, he set up on his own account as a machinist in Watchet. He was encouraged in this as his only local competitor was a drunkard who in fact ceased trading the following year.

At the start much of his work was with the supplying and maintenance of the iron and brass work of the ships using the busy little harbour at Watchet and making agricultural machinery, carts etc., but soon millwrighting became his main activity. By about 1880 his permises in Mount Pleasant became too small and he moved to South Road, taking over a smith and wheelwrights shop. He extended the buildings to form a machine shop, pattern maker's shop and store and established a brass foundry. Although he made his own patterns all iron casting had to be contracted out —much with Bodley Brothers, of Old Quay Foundry, Exeter; shafting and pulley wheels were bought in from Dening & Company, of Crimchard Works, Chard, whilst millstones were purchased from William Gardner & Sons of Gloucester. Most of his work was local, the large Watchet Roller Mills of Stoate & Sons being a constant customer but his reputation spread and eventually he worked as far afield as the Cheddar Paper Mills, and even over into South Wales. He patented and manufactured a water motor, one of which using a 1 in. pipe from the high pressure town water main, powered his works whilst another worked the organ bellows of the local Congregational Church. (Figure 2). At the turn of the century and at the height of the firm's prosperity, he employed a staff of 8 or 9. Amongst them were John Shute, his smith, two cousins called Beasley as millwrights and William Penny as stone dresser although he, John Chidgey, often did this work. (William Penny was a 'bit of a card' as this story tells: His wife was a notorious scold and one morning after a row he was walking to work when he met the doctor from Williton. Giving him his 5 shilling fee he asked if he would call as his wife had something wrong with her tongue! It is not known what happened afterwards he said it was 5 shillings well spent!)



Plate 1. John Chidgey (seated with beard), Henry Chidgey (in apron to his left), William Chidgey (in apron with a plane in his hand) and staff c.1905. The prefabricated machinery was made for Durleigh Corn Mill (ST 274361).

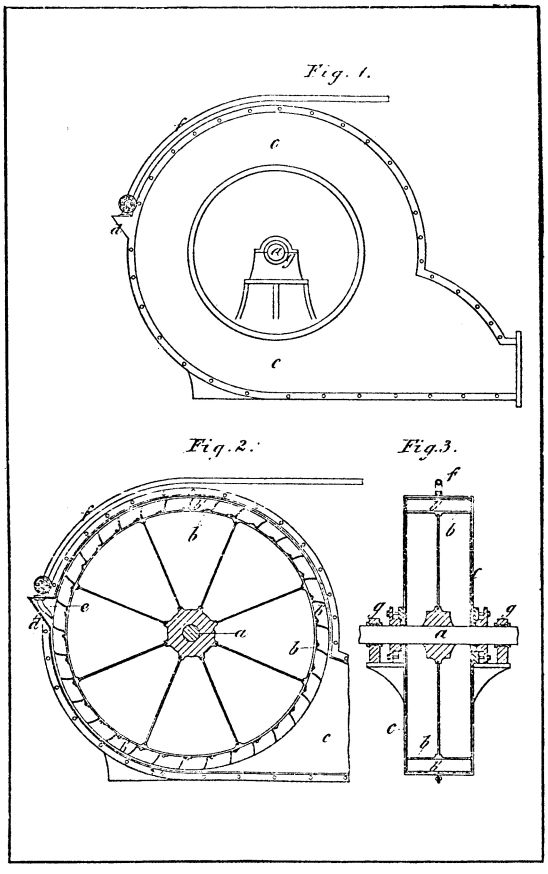



Figure 2. The specification for John Chidgey's water motor patented in 1894. Key: (a) shaft, (b) water-wheel, (c) casing, (d) inlet hopper, (e) inlet nozzle, (f) water supply pipe, and (g) bearings.

In 1860 John Chidgey had married Mary Ann Burge who bore him three sons and two daughters: Henry b. 1861, William b. 1866, John who died in infancy, Clara and Lilly. Both his sons joined him in the business (Plate 1) but with the closure of many local mills and the advent of the oil engine and electricity, trade declined. By 1920 only Henry and William remained, John Chidgey having died in 1915. The firm closed in 1936. A nephew-in-law Mr. S. W. (Bill) Norman had joined them but he concentrated his efforts into a car hire and automobile engineering business and it was for these purposes that the premises were put until 1976. It was then that Bill Norman gave the entire contents of the works to the Somerset County Museum. Fortunately, the five Day Books covering the life of the business have survived more or less intact. Two had been preserved by Mr. Norman and the others found amongst rubbish during the clearing out of the works. They are particularly interesting as many of the jobs completed can be traced and their remains seen in local farms and mills, including a fine wheel at Bridge Farm Mill, Williton (Plate 2).

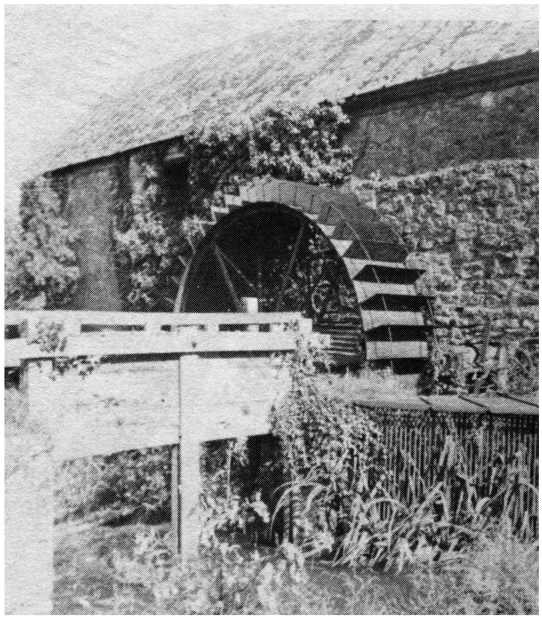


Plate 2. Bridge Farm Mill, Williton (ST 077408). For details of the wheel see the Appendix.

**THE WORKS (Figure 3)**

When the task of clearing out commenced much help was given by Mr. Norman in naming many of the 400 assorted machines, tools and associated paraphernalia which had to be sorted out from the tons of scrap metal and junk which had accumulated over the years. Some of this incidentally including parts of a Model T Ford and a Ruston-Hornsby car. The following is an abbreviated list of material removed and a description of the various shops.

The Smithy was complete, with bellows, (the old 6ft. 5in. x 2ft. 8in. wood and leather bellows had been kept as a 'spare'), anvil, dousing tank, the usual hammers, tongs etc., but many (43) of the tools were specialised for forging nuts and bolts. Adjacent to this had been the brass foundry but the two furnaces had been demolished and the moulding floor concreted over to make a garage. However, crucibles, crucible tongs, crucible harness, ladles, moulding boxes and moulding tools remained.

The carpenter's and pattern maker's shop was complete with fifteen jack, smoothing and chamfer planes (many inscribed J. Chidgey) still in their storage box, and with shell augers, wood chisels, wood and tenon saws, mallets, adzes in their racks over the benches. It was here that there was a tool chest containing many specialised millwrighting tools—thrifts and millbits, a millwright's hatchet for shaping the wood cogs (the blade being a special shape and having the edge only sharpened on one side), augers, a scribe for turning pitchlines and marking off cogs, calipers for taking diameters of wood axles of waterwheels for banding and lignum vitae for footstep (thrust) bearings. There were various jacks for lifting axles, wheels, gears and other mill parts.

The machine shop again was complete. Some of the machines had been in use until then in connection with the garage business and two of the more modern ones were left in use and are not listed. The water motor, although having been replaced, first by an oil engine and then an electric motor, was still in the building, and had worked, via lay shifts and belting, the following machines:

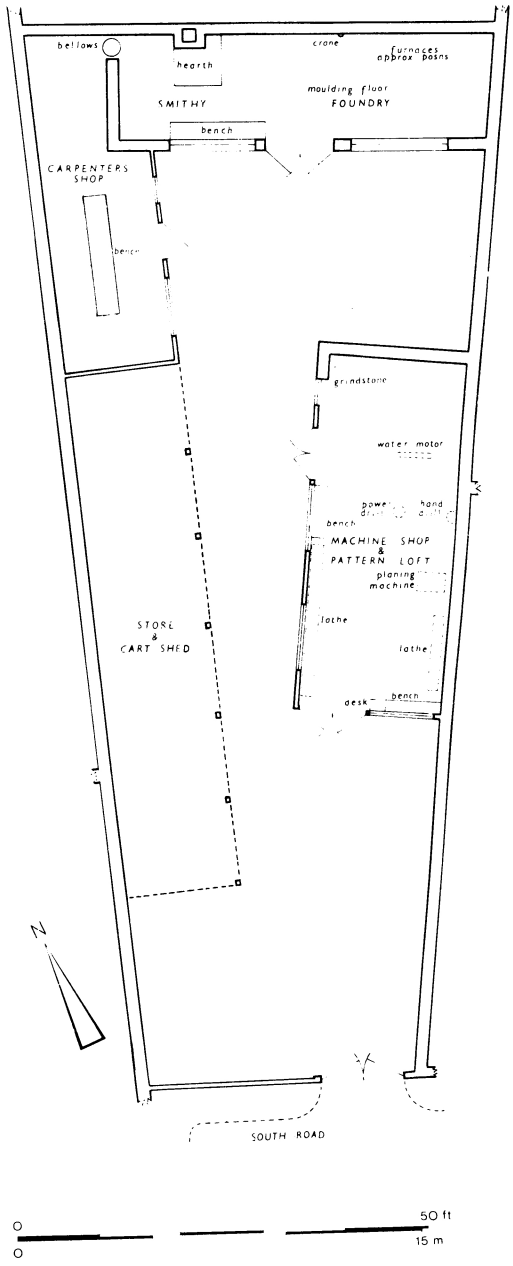



Figure 3

a lathe (15ft. between centres) complete with head and tail stocks, tool holder and tools, a shaping and planing machine C.1860 or possibly earlier (these two machines having been purchased second hand on the move to South Road), a pillar drill and a grindstone. None had any makers name. There was a wall mounted hand drill and on the benches were many mandrels, spanners, hammers, arrowhead and twist drills and screw dies. There was also John Chidgey's work desk. Over the shop was loft in which were stored some 200 patterns many in good condition but some badly affected by woodworm. These included side plates for waterwheels of various diameters, pit wheels, wallowers and other mill parts in addition to the casing for various sizes of water motors and windlasses.

When everything had been rough cleaned and labelled they were removed to store where, with the help of a 50% Grant from the Science Museum and the job creation scheme, they were thoroughly restored under the direction of Martyn Brown, Keeper of the Somerset Rural Life Museum. It is hoped that eventually the works will be re-assembled and exhibited as a whole. The Day Books have been lodged at the Somerset Record Office (DD/X/WRN, Nos. 1 and 2).

**APPENDIX**
**EXTRACTS FROM THE DAY BOOKS**

| | | |
|---|---|---|
| 1881 | Wescott Farm, Luxborough<br>Thrashing machine and fixing | £16 0 0 |
| 1882 | Dunster Castle, (G. F. Luttrell, Esq.)<br>Making and fixing iron water wheel and pit wheel as per estimate | £53 0 0 |
| | Timber for shute and supply water to water wheel and waste water frame and timber | £ 5 3 4 |
| 1890 | St. Audries Farm.<br>Pair French Bur stones | £ 7 10 0 |
| | Carriage for do. | 7 6 |
| 1890 | Bridge Farm, Williton, Estate of late Earl Egremont. New iron water wheel 11ft. dia. by 3ft. 4ins. wide as per estimate | £61 10 0 |

| | cwt. | qr. | lb. | |
|---|---|---|---|---|
| New iron rave | 5 | 0 | 16 | |
| New iron top grating | 3 | 1 | 0 | |
| Two cast iron wall boxes 135 lb. each Bore at ¼ | | | | £ 1 13 9 |
| Making patterns for do. | | | | 10 0 |
| Fixing wall boxes | | | | 5 0 |
| Bolts and clamps for gratins 10lb. | | | | |
| Extra weight of grating | 6 | 3 | 23 at 3½ | £11 7 2½ |
| | | | | £75 5 11½ |

| | | |
|---|---|---|
| | Received old brass 32 lbs. at 4½ | 12 0 |
| | | £74 13 11½ |
| | Cheque on a/c | £30 0 0 |
| | | £44 13 11½ |
| 1893 | From Messrs. Wright, Wheeler and Co.<br>Engineers and Millwrights<br>Brunswick St. Iron Works<br>St. Pauls<br>Bristol. | |
| | New 52 inch water motor delivered on rails to Watchet station | £20 0 0 |
| 1894 | New Water wheel brasses 5½lbs. at ¼ | 7 4 |
| 1896 | F. and H. Strong, Roebuck Farm<br>Making and fixing new iron water wheel, shaft bent and replacing pit wheel with new arms | £60 0 0 |
| 1896 | Capt. A. Nicholas, Schooner, 'Lizzey' Watchet. Repairing windlass | 7 5 |
| 1897 | New Foot brasses 5¼lbs. at ¼ | 7 4 |
| | Boring, turning and fitting do. | 4 6 |
| | New key and fitting | 1 0 |
| | | 12 1½ |
| | Received old brass 2¼lbs. | 1 1½ |
| | | 10 8½ |
| 1897 | W. C. *(William Chidgey)* 1 day about water wheel Bickham Farm, Timberscombe W. Battersby Esq. | 4 6 |
| 1897 | Cheddar Paper Mill<br>W.C. 1 day travelling | 2 0 |
| | " 4 days about mill | 16 0 |
| | " 1 night | 4 0 |
| | " Railway fare | 9 8 |
| | " Lodgings | 2 6 |
| | | £ 1 14 2 |
| 1897 | Roebuck Farm<br>Self 2 days dressing millstones | 10 0 |
| 1899 | Washford Farm, W. Wyndham Esq.<br>Making and fixing horse gear | £ 9 17 6 |
| 1899 | Iron Bridge Mills. Rail fare | 1½ |
| 1902 | Mr. Gooding, Washford Cement Works New iron water wheel and shaft and fixing as per estimate | £56 10 0 |
| 1900 | Marshwood Farm<br>New coggin crown wheel | £ 2 10 0 |
| 1904 | Bridge Farm, Williton<br>Fixing pair fine millstones | £16 0 0 |
| 1905 | Kingswood Mill, Stogumber<br>New cast iron Wallower | £ 3 4 7 |
| 1906 | Pair French Bur millstones 3' 10" dia.<br>Fitted and fixed and set to work | £14 16 6 |

# THE WELLS TURNPIKE TRUST

**C. A. Buchanan**

In 1753 the Wells Turnpike Trust was established by Act of Parliament to improve and maintain the principal roads which radiated from the City of Wells. Initially, these were defined as the Western Road to Pipers Inn, the Bristol Road to Rush Hili (just South of Farrington Gurney) and the Bath Road to White Post (South of Radstock). As with most trusts, the ambitions and fortunes of the Wells Trust varied according to the general prosperity and conditions of the country. In the prosperous years which followed the conclusion of the Seven Years War in 1763, the Trust extended its authority to include the road from Wells to the Beacon—the most direct route to Frome—and from Wells to Shepton Mallet. The latter turned steeply up Dinder Hill and entered Shepton Mallet where the Union Workhouse was to be built 70 years later. The present road through the valley above Croscombe was not opened until 1857.

In 1778 another Act of Parliament gave the Trust control of the Western Road from Pipers Inn to Boroughbridge. Twenty years later this section was surrendered to the Taunton Trust. The reason for this withdrawal was probably the general shortage of investment funds during the wars with France between 1793 and 1815. It was after this period of fighting that the Trust entered a new expansionist phase. Faced with falling receipts, following the development of a new route from Exeter to London via Honiton, the Trust proposed a shorter road to Bath. This proposal involved turnpiking the lanes from Knap House, near Old Down Inn, to the top of Dunkerton Hill via Radford Bridge. Although this route would have saved a little time, the estimated cost of £7,395 proved to be prohibitive. Plans to turnpike the roads from Wells to Axbridge and Cross (on the Bristol Trust's road) and through Wedmore to Woolavington to join the Bridgwater Trust's road, were abandoned in 1803 because of "the present state of public affairs". These two routes were not to be turnpiked until 1841—and then only in part—by the newly-formed Wells and Highbridge Turnpike Trust. The Wells Trust secured permission to turnpike the road from Dulcote to Steanbow, on the Shepton Trust's road into Glastonbury, in 1763. Mr. Atthill[1] has pointed out the significance of the route which used this stretch of road and continued over Pennard Hill to the Fosse Way near West Lydford. The Wells Trust did not appear to attach much importance to this piece of road and it finally abandoned responsibility for its up-keep in 1821.

Although other proposals were explored, and even presented to Parliament for approval, the emphasis of the Trust's work after 1820 was on consolidating its hold over the traffic which used its existing roads. Traffic continued to increase until 1840 when the Trust earned its maximum annual income from tolls—£3,605. It was the gradual establishment of a network of railway lines over the next forty years which irresistably reduced this annual income to £1,412 in the last full year of the Trust's existence. As early as 1842 the Trustees let the tolls for £310 less than they had in 1841 because of competition from the Great Western Railway. The completion of the broad gauge line to Exeter in 1844 must have destroyed the main coach service which used the roads of the Wells Trust. The competition increased with every new railway line. In 1854 the lessee of the tolls, William Forbes, complained that "a great deal" of traffic had been removed from the Trust's roads because of the opening of the railway from Highbridge to Glastonbury. When this Central Somerset line reached Wells in 1862, the Trust had to accept further permanent reductions in its income. The construction of the line from Evercreech Junction to Bath produced a predictable reaction from the lessee of the Trust's tolls even before the official opening in the summer of 1874. Joseph Meek complained to the Trustees that "As the Railway is about to open on the 22 of this month from Bath through Radstock and Binegar to Evercreech and trade being fell off so much during this year the Gates have not yet taken the money by something like £10 per week. I have no doubt but the Railway will make it still worse its bound to take off a great deal of the Brewery Trade and that is the chief thing we have on the roads now[2]....."

The railways helped to reduce the importance of the great annual fairs and it is quite certain that travellers to and from these gatherings made a significant contribution to the income of the Trust. It had been considered necessary to set up a special stop gate across the drove road near Street Inn on three days before and after the fairs held at Westonzoyland, Bridgwater (St. Matthew's) and Glastonbury (Tor) in order to benefit fully from the anticipated increase in road traffic. In 1866 Meek was allowed a £5 per cent reduction in his rental because of "the extraordinary loss" which he sustained when cattle plague forced the closure of markets and fairs. The Trust was obviously failing to compete effectively with rail transport and a Parliamentary committee ordered that the Trust should be terminated on 1st November, 1883. Although the trustees had

not completed their business until April 1884, the tolls were not collected beyond the earlier date.

The Wells Turnpike Trust has left a legacy of roads, buildings and artifacts that certainly deserve the attention of industrial archaeologists. Although it is not possible or even desirable to preserve everything pertaining to the turnpike age, there is an urgent need to identify and record that which remains. The following section is an attempt to identify those products of the Wells Trust which still survive.

## ROADS (Figure 1)

The roads themselves are possibly the most fundamental survivors of the turnpike age. The Trustees of the Wells Turnpikes improved their roads by constructing diversions and re-alignments which can still be traced.

On the Western Road two important changes were made by the Trust. South of Glastonbury, the road climbed up Fishers Hill and over Wearyall Hill to the mill stream at Northover, before the present road was constructed in 1821. North of the town, the road climbed over Windmill Hill to join the present main road immediately South of "Tin Bridge" which crosses the line of the Somerset and Dorset Railway. The present road into Glastonbury from Wells, which keeps on the level under the flank of Edmund Hill was orginally constructed in 1791.

Similar changes were carried out at Chilcompton in 1821 and 1834. The oldest route went through the centre of the village and over Norton Down. In 1821, this road was diverted along the contour below the top of Norton Down and then turned sharply South and uphill from the Redan Inn. The present "high level" route was built in 1834, possibly because the first re-alignment had been described, only three years previously, as "so bad that it is scarcely worthy to be called a Turnpike Road". The changing alignment of the Wells road at Chilcompton has been more fully chronicled by Mr. R. Atthill.[3]

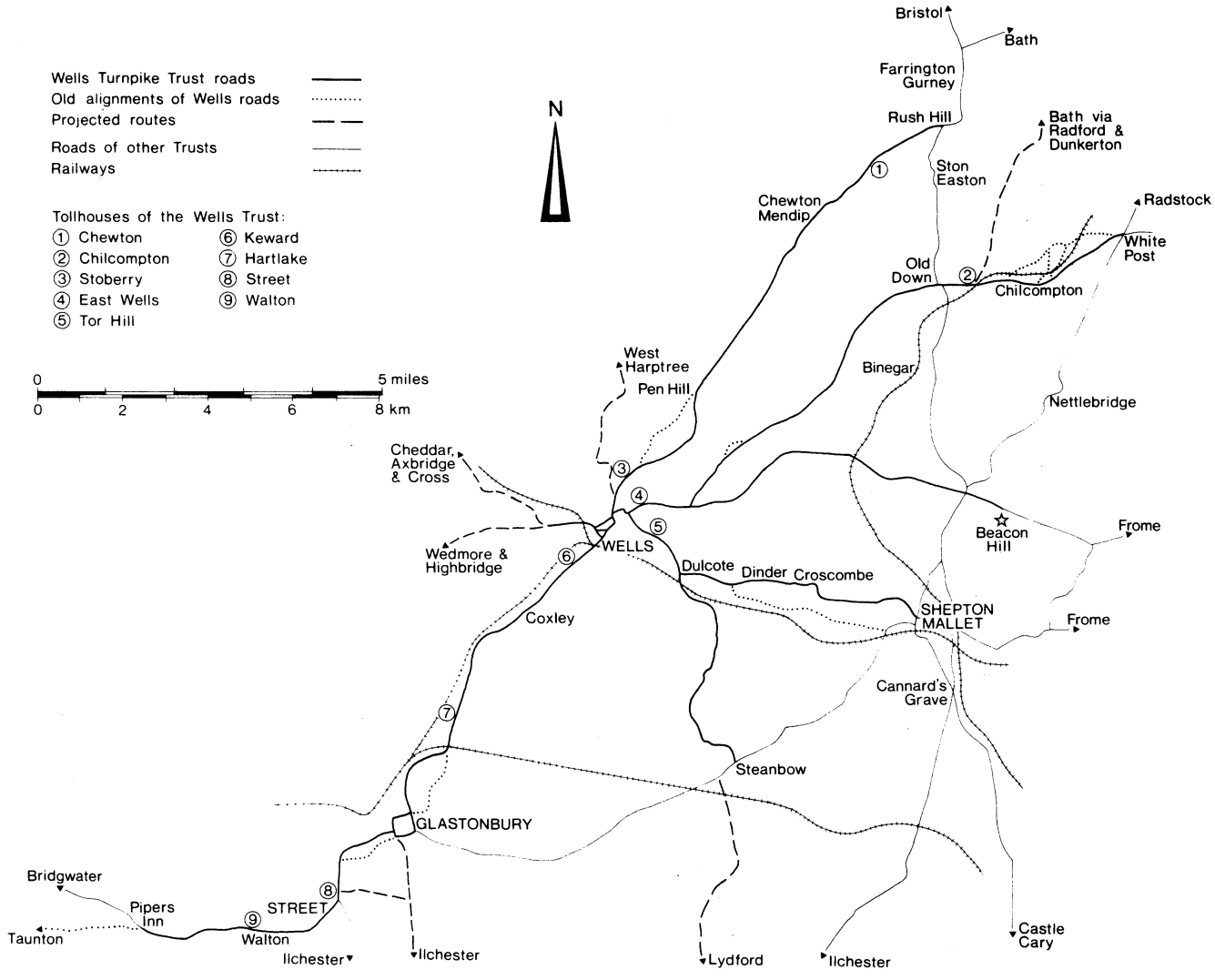



Fig. 1

At least two sections of the old Wells roads have been totally abandoned to vehicular traffic. Even today, the traveller who is not afraid to abandon his motor car may experience some of the pleasures of travel in the turnpike age. The present road to Bath just above the two miles post out of Wells at West Horrington, was constructed to a width of 30 feet clear between the walls in 1821. The original road continues to the West of the Police House, up the steep slope before it levels and rejoins the present road about half a mile further on.

A longer and more impressive section of old road can be walked from the top of Pen Hill, where the present road swings to the East seeking an easier gradient. The old road plunges steeply down the side of the hill to rejoin the modern road at the 1 mile post, above Stoberry toll house. It is difficult to imagine a stage coach using this old road, so overgrown and deeply rutted has it become. However, it was used until November, 1824 when the present road was first declared fit to carry public transport. A contemporary report claimed that the gradient on the old road was a rise of 5 inches per yard, whereas on no part of the new road did it rise by more than 1¾ inches per yard.

**TOLL HOUSES**

The toll houses are probably the most attractive survivals of the turnpike age. The Wells Trust used a maximum of nine toll houses and six of these have survived to the present day. There appears to be no unity of design amongst the survivors. There is some evidence that the original houses were built to a standard pattern but substantial alterations, re-building and even removal have eliminated these similarities. Wells itself was served by four toll houses, one on each of the main routes out of the City. Three have survived. The single casualty was the East Wells Gate, which was built for £30 in 1754. It was demolished in 1883 when the Trust was abandoned. It was situated on the North side of the road to Bath between Beryl Lane and Hawkers Lane (ST 558462). Mr. Atthill refers to a plaque at the end of Hawkers Lane which commemorated the building—but I have failed to locate it!

Stoberry Toll House, the last building on the North side of the Bristol Road out of Wells, (ST 551465) is probably on its original site. A house was built here in 1754 for £30 which was 15 feet square with a thatched roof. Between 1773 and 1802 the only weighing engine purchased by the Trust was sited at this gate. This machine, which cost £76, was sufficient "to weigh Nine Tunns" and was equipped with "Brass Weights so as to weigh a Tun Weight with Seven Pounds". In 1832 the old weighing engine house was demolished and two years later the Trust made alterations to the toll house. In 1883 it was sold to Mr. Tudway for £80. The present building is a colour-washed stone house of two storeys with one wing set at right angles to the road. The stone lintels seem to be of an earlier date than the rest of the house.

The toll house at Tor Hill on the North side of the road to Shepton Mallet was erected after the Trust had secured powers to turnpike this road in 1764. In May of that year a toll gatherer was appointed for the "intended gate to be set up at Torr Hill in the road leading from Wells to Dulcott (sic)". In 1848 the building was put into "a complete state of repair". In 1883 the toll house, "with Gardens, Coach House, and Stables thereto belonging", was sold to Mr. Tudway for £90. The buildings stand today, just East of the entrance to the quarry which once helped to surface the Trust's roads (ST 559455). It is a stone building of two storeys with a red-tiled roof. Like the house at Stoberry, one of the wings of the building is at right angles to the road.

The Keward Toll House which stands on the North side of the A39 towards Glastonbury (ST 542449) was the last to be built by the Wells Trust. It replaced the original house on the Western Road out of Wells which stood at the end of Southover, next to the level crossing and almost opposite the present Sherston Hotel. In 1753 this site was described as being near the Bull Inn below Mill Lane—now West Street. When Priory Road was built in the late 1830s, a new site was sought for this important toll house. In 1842 the gate was removed to Keward and a new house was built. This new toll house was built on a scale that appears to have been little short of extravagant. The outside walls were to be "cased with Ashler 4 inches thick". The parlour, receiving room, back kitchen, lobbies and privies were to be paved with Butleigh Stone. The premises included a coalhouse, stable and gighouse. Immediately after construction the building was insured for £200. The plans for the building survive—which is more than can be said for the distinctive bow front which once graced the roadside. When the building was sold to Mr. Sherston in 1883 for £65, the Wells Highway Board demanded that the bow front should be pulled down. However, the present frontage which is parallel to the main road was tastefully built and there is virtually no external sign of its original shape. Today, the two-storeyed, stone-fronted building provides an elegant introduction to the City for those travellers approaching Wells from the West.

About a mile and a half to the South West, the Trust erected a gate across the lane leading to Burcot from Coxley. This lane emerges on to the main road at the Coxley Pound public house, and the publican of the time, Thomas Fulton, was given the added responsibility of collecting tolls from travellers who passed through the gate.

The next toll house on the Western Road was between Coxley and Glastonbury. In 1817 the Trust proposed the setting up of a new toll gate "at or near a House called or known by the name of the Blue Bowl near Southway". However it is probable that no house was built to accompany this gate. The gate is marked on both Greenwood's map of 1820 and the 1st edition of the Ordnance Survey (1817). In 1833 a gate was erected across the main road near Hartlake Bridge—which presumably replaced the earlier gate at Southway. In the same year, the Trust printed a pink ticket which was to be issued at the Hartlake gate. There is no indication that a purpose-built toll house was built to serve this gate. Although the Glastonbury Tithe Map indicates that a building rented by the Wells Turnpike Trust stood on the West side of the road at its junction with Chasey's Drove, it does not appear to have belonged to the Trust. A commemorative plate, set in a concrete post, indicates that the Hartlake toll house stood at this position (ST 512409) but there is evidence that it was not sited conveniently. In 1873, Joseph Meek, the lessee of the tolls wrote to the Trustees that he had received notice from his collector at the Hartlake gate "to give up unless there is either a new Toll House put up or the Trustees take the new House off Mr. Corp as they say its back behind out of sight of the Gate and they cannot get out to the Gate in time and when it rains it comes in on their bed and they can lay in bed at (sic) look out through the top of the house". Late in September of the same year it was ordered that Hartlake gate be moved opposite the house rented by the Trustees for the occupation of the collector. As this building was only leased by the Trust there is no mention of it when the other houses were sold in 1883—but the gate fetched 15/- in an auction.

The toll house at Street is a two storeyed building of white-painted stone. It is the last house on the West side of the road leading towards Glastonbury from Street (ST 486372). Although the three-sided end adjacent to the road is a common feature of Somerset toll houses, this is the only surviving building of the Wells Trust which has retained the design. When the Trust was wound up in 1883, it was recommended that the porch of the Street toll house should be removed and the road widened. It was probably at this time that the original front door was blocked and a new entrance made on the South side of the building. The house was sold to James Godfrey, the owner of the adjoining land for £60.

The Trust determined from the outset that there would be a gate across the road between Street and Glastonbury, but its original site and that of its accompanying toll house was at Northover—"at or near Pons Perillous Bridge" or "exactly opposite to a Walnut Tree on the way leading from Glastonbury to Street and between the Mill Stream and the said Bridge". It was frequently referred to as the Glastonbury or Northover Gate. This original house was built to the same design as those at Stoberry, Southover and East Wells. Two Glastonbury carpenters, John Ridewood and Richard Smart were commissioned to build a house with external dimensions 15 feet square with a chimney and thatched roof for a total cost of £36.

In time it became evident that the Trust was losing revenue because road users were using the local droves to avoid this toll gate. In 1783 a chain was put across Hulk Moor Drove in an attempt to control this flow of traffic. It is not clear whether this device succeeded, but before the end of the year the Trustees had decided to remove the gate. It was re-sited opposite the Mead where the surviving toll house stands. The original house was sold by auction, and although it survived for some time, nothing remains on the site today. The new toll house and gate did not entirely solve the problem of evasions. We have already seen that the Trustees set up a chain by the Street Inn to collect revenue from travellers when the local fairs increased the volume of road traffic. The route from Street to Glastonbury via Cow Bridge was still siphoning traffic from the Trust's roads in 1861.

It was not until 1806 that a general meeting of the Trust decided to build a toll house "upon and across the present Turnpike Road from Wells to Pipers Inn at or near certain Lanes called or known by names Slade Lane and Sharpham Lane or Sharpham Park Lane". This toll house at Walton was erected between 1807 and 1808 at a cost of £145, which included the gates, posts, and "privy adjoining". Two years later, the toll collector was allowed one guinea towards the cost of sinking a well. This toll house is unusual because it was built as a semi-detached property. The adjoining cottage was owned and let by the Trustees. The whole building is rectangular in plan with a blank wall at ground floor level on the main road side. It is built of local stone with some cement rendering (ST 467364). In 1883 the two cottages were sold to the Marquis of Bath for £70.

Since the M5 was opened the A39 had had to cope with an increasing volume of heavy traffic. The Walton toll house stands at a point where this busy road narrows. A recent housing development to the West and North has left the building more isolated than ever. The cast iron mile post which stood by the road side to the West has already been destroyed and the future of this unusual toll house must be uncertain. A fair amount of effort and ingenuity may be necessary to preserve it for posterity.

Until 1790 Stoberry was the only toll house on the road towards Bristol and Bath via Farrington Gurney. In that year, however, the Trustees decided to erect a "Box and Chain" near Horberry (sic) Corner. Before the end of the year, Mr. York of Chewton Mendip had built a new toll house at "Hoarbury Crossways" for £50. The gate continued to be maintained on this site until the end of the Trust. When the Shepton Mallet Trust was abolished in 1878, the Wells Trust safeguarded its traffic by setting up a side bar on the lane which runs South East towards Ston Easton. In 1883 the house together with small garden and court with a well was sold to Lord Carlingford for £30. After the building was pulled down a plaque was placed in the North wall of Worberry Lane (ST 608539).

Chilcompton or Old Down toll gate was set up in 1753, but a toll house was not built until 1767. This was sited in Broadway Lane East of Clapton Lane (ST 635513). In 1834 a special meeting of the Trustees considered re-siting the toll house "at or near the spot between Old Down Inn and Old Down Toll Gate where such Turnpike Road meets or adjoins the Benagre (sic) Parish road leading . . . to Nettlebridge". Presumably this proposal was accepted because the old toll house was offered for sale in 1835. The new toll house, however, does not appear on the Binegar tithe map which was drawn in 1840. The Trustees were not entirely happy with the new site and in 1858 they even considered removing the gate to the old toll house. They were persuaded to erect a chain or bar across Clapton Lane, at its junction with the Bath Road, and a wooden house was put up at this spot for the collector of tolls.

In 1883 the Old Down toll house was described as standing on the South side of the road and surrounded by a wooden paling enclosing an area of 26 feet against the road and extending 30 feet into the field belonging to the poor of Binegar and occupied by Mr. Porch. The building now acknowledged as the Old Down toll house stands on the North side of the road and it was in this position at the time of the Ist O.S. 6" survey of 1884 (ST 629513). This confusing evidence leaves some doubt about the second Old Down toll house. Its predecessor to the East has disappeared completely. In 1883 the surviving toll house was sold to the Rector, Churchwardens and Overseers of Binegar for £20. Today the square-planned building is two storeys high with a pyramid roof and porch on the road side. Quite recently, the original gothic windows were replaced. A picture of the building with the older windows can be seen in **Mendip—A new Study.**[4]

## TOLL GATES

These essential adjuncts to the toll houses have not survived so well. In 1883 they were all sold by tender for sums which ranged from 15 shillings to £1.15.0d. The latter was paid by Mr. W. S. Clark for the Street Gate (Plate 1). He re-erected it at the Somerton—Butleigh cross roads corner of his Millfield estate. In 1940 it was moved to Gipsy Lane. In 1962 it was set up at the entrance to the allotments North of Brutasche Terrace (ST 485371). Here it can still be seen, although it is removed from time-to-time for restoration work. The brass plate describes its history, although the narrative is not entirely accurate. However, the gate has been carefully maintained and it could now be a unique survival of this particular feature of the Wells Trust.

## MILEPOSTS

The history of the mileposts on the roads of the Wells Trust is as complicated as that of the toll houses. In the early days of the Trust mileposts were set up on the road towards White Post and on that from Wells to Rush Hill. A minute of 1757 stated that each post should give the number of miles to Bath and from Wells. In the following year the Trustees ordered that stones should be set up on the Western Road to Pipers Inn. Morris Lambert of Doulton (Doulting) was instructed to set up ten mile stones along this road at 15 shillings per stone. Each stone was to be five feet long, 16 inches at the head and 20 inches at the foot and squared.[5]

In 1786 the Trustees ordered that "all the Mile Stones be forthwith repaired and faced with iron plates upon the Plan of the First Mile Stone leading from Wells towards Shepton Mallet". This mile stone still stands in the cutting below Tor Hill, leading to Dulcote (ST 561453) but the iron plate has been removed. The same fate has befallen the first milepost on the Bristol Road, which is set in the South wall facing the bottom of the old section of road up Pen Hill (ST 556471). The Frome Road, towards the Beacon, has a number of these stone mileposts on which the cast iron plates have survived. The same style was

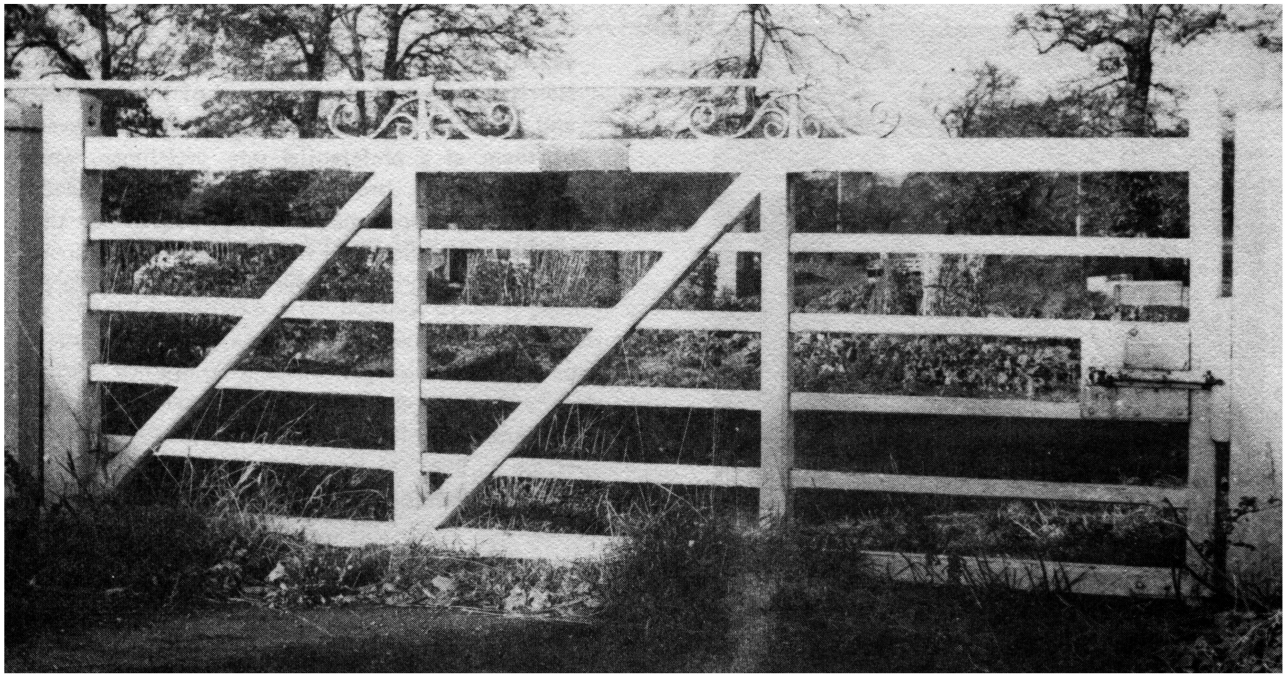


Plate 1. The Street Toll Gate.

adopted on the Frome Trust's road East of the Beacon.

The great majority of mileposts which survive on the Wells roads were made of cast iron in a triangular shape. In 1847 John Kelway tendered to supply iron mile marks at 30 shillings each. Nine were ordered for the Bath Road and five for the Western Road. The former would have sufficed for the entire road to White Post, and the series is complete today with the exception of one which should stand in the middle of Chilcompton. On the Western Road, five posts would only have served the road to Glastonbury. In fact, most of the iron mileposts on this road have survived, although one which stood in Street at the South end of Cranhill Road has disappeared and the post near the toll house in Walton has been destroyed. The first milepost out of Wells on this road is unique for the Trust (Plate 2). Although made of cast iron it is rectangular in shape with a pediment and gives the miles to Wells (1), Glastonbury (5) and Bridgewater (sic) (19). Similar designs were used on the Sherborne and Warminster Trusts. When the new road was built to Shepton Mallet through Croscombe, the Trust ordered that new mile marks should be set up.

Finally, it is worth noting one further complication. The cast iron mileposts which survive do not stand on the same site—in every case—of the older stone posts. The latter, which always gave the miles to Wells, can be precisely placed from the map which was prepared for the Trust in 1820.[6]

## COACHING INNS

The roads of the Wells Trust were served by a number of coaching houses, although there is little in the papers of the Trust to link any particular hostelry with its traffic. Old Down Inn, whose story is told in **Old Mendip**[7] was obviously important, standing as it did at the junction of the Wells and Shepton Trusts' roads. The re-alignment of the main roads at this junction has completely changed the relationship of the Inn to the transport system. The recent collapse of some of the cement rendering in the centre of this building has revealed an older arched carriageway in the stonework.

Several of the hotels which survive in Wells, such as the Star and those in the Market Place have retained the cobbled way which led from the road to the stables behind. The first edition of the O.S. one inch map shows a building at the foot of Wearyall Hill at Northover which is called the New Inn. Once again, recent alterations in the alignment of the old road create problems for identification, but the buildings of this inn appear to survive.

The Street Inn still stands at the junction of the Langport, Somerton and Castle Cary Trust's road with that of the Wells Trust. It existed throughout the life of the Wells Trust and no doubt served those travellers who were obliged to change coach at this point. The Pipers Inn at the western terminus of the Wells roads was also strategically placed. Four Trusts terminated at its front door and there is plenty of evidence that it was a meeting place of some importance in the

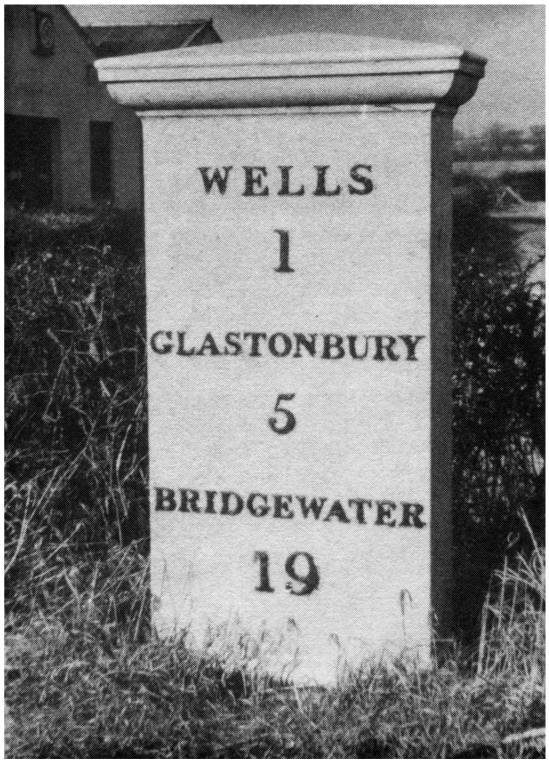



Plate 2
The first milepost out of Wells on the Western Road.

18th century, where visitors could hire post chaises or wait for one of the coaches which stopped there for refreshment. In January 1802 Coleridge travelled by coach along the road from Bridgwater to Bath[8]. It cost him 13s 1½d. to travel from Pipers Inn to Wells—a clear indication that coach travel was beyond the means of most working people. The recent renovations at Pipers Inn have ensured the preservation of at least a part of the old inn buildings which served the needs of travellers for more than two hundred years.

In 1786 the Trust's surveyor was ordered to set up "Uping Stocks" and Watering Troughs at all necessary places upon the roads. There do not appear to be any survivors of this original instruction, although a water trough was incorporated in the wall of the new section of road near the top of Pen Hill.

## POSTSCRIPT

Readers of S.I.A.S. Journal No. 2 may be interested to learn that from December, 1841 until early 1848 the Wells Trust was served by Charles and William Harris in the capacity of joint surveyors. Not only did the brothers serve the Trust well—for which they earned bonus payments from their employers—but they also introduced to the Trust the patent road scrapers invented by John Bourne of Ilchester. Charles Harris was one of the patentees of this machine and was able to supply the Wells Trust with seven of them at a preferential rate. Welchman, who succeeded the brothers as surveyor in 1848, bought two more machines, but had to pay the market price. Some of these patent road scrapers were still being used on the Trust's roads in 1873[9].

## REFERENCES

This article would not have been possible without the magnificent collection of documents relating to the Wells Turnpike Trust which are now deposited in the Somerset Record Office. I am particularly indebted to the staff of the Record Office who have supplied me with a large stock of information which relates to the Wells Trust but does not form part of the main collection. In the interests of brevity I have not made detailed references to the Minute and Order Books of the Trust, which are complete, and which have provided most of the information on which this article is based.

1. R. Atthill, 'Old Mendip', David & Charles (Newton Abbott, 1964) 110.
2. Somerset Record Office, D. T. Wells 6, Wells Turnpike Trust, Minutes and Order Book, 1874 29 June.
3. R. Atthill, op. cit. 136-7.
4. R. Atthill, 'Mendip—A New Study', David & Charles (Newton Abbot, 1976) facing page 96.
5. Somerset Record Office, D. T. Wells 8, 1st Account Book of the Wells Turnpike Trust—at the back.
6. Somerset Record Office, Wells Turnpike Trust, Map of the Roads, 1820.
7. R. Atthill, 'Old Mendip', 139-146.
8. B. Lawrence, 'Coleridge and Wordsworth in Somerset', David & Charles (Newton Abbot, 1970) 62.
9. C. A. Buchanan, 'A Patent Road Scraper', J.S.I.A.S., 2, 1977, 34-5.

# A SOMERSET BRICKMAKER OF 1680

R. J. E. Bush

With a growing interest in the manufacture of bricks in Somerset, the discovery of a 17th century brickmaker's contract is of some significance. The Clarke family of Nynehead seem not only to have purchased bricks but possibly traded in them also. An account book shows them selling bricks to customers at Wiveliscombe, Bradford and (West?) Buckland in 1682, a total of nearly 14 thousand by December 1683 (Somerset Record Office DD/SF 4224).

The contract itself (S.R.O. DD/SF 3960) was with John Kingston of Taunton St. Mary Magdalene who, as a brickmaker, took out a licence to marry Elizabeth Hill of the same parish at Wilton or Bradford on 31 December, 1681. The marriage is presumably that erroneously recorded at Bradford-on-Tone between William Kingston and Elizabeth Hill on 5 November, 1681, although it must be rare to find a retrospective licence so granted.

The text of the contract runs as follows:

"These presents witnesse that John Kingston of Taunton St. Magdalen in ye County of Somersett brickmaker doth hereby covenant promise and agree to and with Edward Clarke of Chipley in ye said County Esqr. to make and burn for ye said Edward Clarke one hundred thousand of good brick after ye rate of five shillings for every thousand to bee paid in manner folliwing, that is to say six pence a thousand ye moulding, and eighteen pence a thousand when ye brick is burnt. The said John Kingston doth covenent and promise to begin to digg the earth within the space of a fortnight after Michaelmas next ensueing and proceed therein till there is enough dugg to make ye quantity of bricke above mentioned, and to mould ye same as soon in ye Spring as ye weather will permitt and to kindle ye first clamm (1) by ye middle of May if ye weather permitt and ye dimensions of ye mould (2) is to bee (3) 10 (4) inches (5) long 5 inches (6) broad, and two inches and haffe thicke and in consideracion of ye punctuall performance of ye premises in all particulars well and substantially and workemanlike the said Edward Clarke doth covenant and promise to find all materialls for ye makeing and burning of ye said brick and to pay for ye same after ye rate of five shillings per thousand in such manner as is above expressed.

September ye 13th 1680 Edw. Clarke
The marke of
John X Kingston"

(1) 'to bee fired' crossed out (2) 'bricke' crossed out (3) 'when burned' crossed out (4) altered from '19' (5) 'each' crossed out (6) 'and a quarter' crossed out.

Variations in the contract are endorsed:

"Md. There must bee about 150 sacks of coale a little before ye clamm is to bee kindled.
Md. The sand must bee brought in a little before ye moulding of ye brick etc.
Mem. That Burt sayes I must make ye frame my selfe, and must stand to ye losse of melting my brick if it runns, and must tell ye brick into ye clamm, and not out of it etc. And that this is ye constant use of ye countrey, and to give five shillings a thousand ye makeing and find all materialls etc.
Mem. To send to him Saturday next to bore[?] and digg ye earth according to ye agreement, or else bee [illegible]."

Also endorsed is a receipt for 18s. as final payment of 50s. for turning the earth for 100,000 bricks, paid on 4 January, 1680/1 to John Kingston jun. and Francis England; and a receipt from John Kingston sen. for the final payment of 50s. on 26 February, 1680/81, with an agreement to supply a further 50,000 bricks at the same price.

## EDITORIAL COMMENTS

The contract is an important find in relation to the history of brickmaking in Somerset. It confirms the known interests of the Clarke family in bricks but for the first time provides detailed information about 17th century clay technology.

The size of the mould, even allowing for shrinkage, is long for that period, the Brickmakers' Charter of 1571 having established the dimensions of the so-called Statute Brick as 9 x 4½ x 2¼ inches. As Edward Clarke was to find the clay it is reasonable to suggest that the bricks were fired from the marl in the Parish of Nynehead but the use of coal rather than coppice as a fuel poses a transport problem: it was probably carried from a convenient point near the River Tone.

# COXS OF TAUNTON AND THEIR PENNY TOKEN

## S. Minnitt

Volume I of the S.I.A.S. Journal used an illustration of Coxs' penny token for the cover design. The foundry from whence it came was very much a family concern, and was established in the early 19th century. The 'Taunton Courier' newspaper for March 29, 1810, records the laying of the foundation stone:

> "It is a circumstance which augurs favourably of the rising commercial spirit of this part of the county of Somerset, that an Iron and Brass Foundry and Manufactory on a very extensive scale is now establishing at Taunton. The foundation stone was laid a few days since, and a very general sentiment prevails of the importance and utility of the undertaking".

Business was underway by the following year when an advertisement appeared in the 'Taunton Courier' for January 10, 1811 (sic):

> "MESSRS. COX beg leave to inform the Public that their FOUNDERY is now at Work, and is ready to execute any Orders in Loam or Sand, at the shortest Notice, and on the lowest Terms".

Although the existence of the foundry is well known its exact location is not. The British Universal Directory for 1793 lists William Cox as an ironmonger. Since it was William Cox who began the foundry he was clearly already running a successful Taunton business. Pigot's Directory for 1822 shows that the ironmongery side had expanded by listing James Blatch Cox of High Street, William Cox senior and George Cox of Fore Street, and William Charles Cox of 32 The Parade. Under the heading 'Iron and Brass Founders' the directory lists William Cox and Company of Tancred Street. This site would seem to be within the area now occupied by Pearsall's silk factory (ST 232246). The names Foundry Row and Foundry Square survived until at least 1888 when the 1:500 Ordnance Survey sheets were published.

### The Token

Obverse (Plate 1): view of an iron foundry. In the background are the furnaces with a gantry projecting between them. In the foreground is a man carrying a bar for tapping the furnaces and at his feet are four bars of pig iron. The legend reads: TAUNTON PENNY TOKEN.

Reverse (Plate 2): this bears the inscription in four lines—A POUND/NOTE/FOR 240/ TOKENS around which is the legend PAYABLE AT MESSRS. COX'S IRON FOUNDRY.

The edge is thread milled. The diesinker was Peter Wyon, one of Birmingham's most important. The engraving of the foundry scene is of

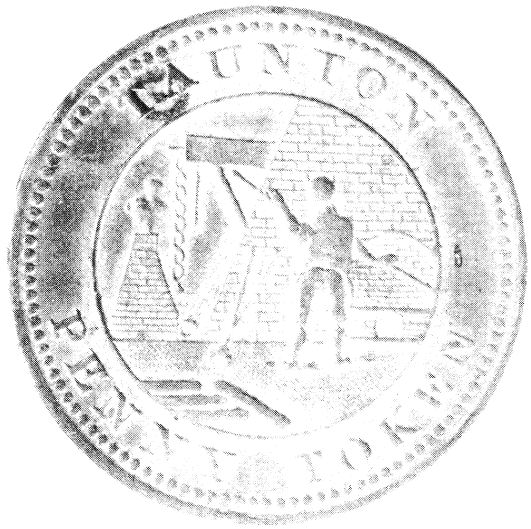


Plate 1. The Taunton Penny Token—obverse.




Plate 2. The Taunton Penny Token—reverse.

good quality but for the head and upper body of the workman which are poorly rendered [1]. Although it bears no date, the token is reliably reported by Savage [2] as having been issued in 1812. This is very much the date to be expected, the majority of 19th century tokens having been struck in the period 1811-1813 with a peak in 1812. This is the only 19th century copper trade token to have been issued in Taunton and one of only a small number in Somerset as a whole. They represent a response by factory owners in particular to a shortage of small change and were used to pay their workers. Although there were attempts to make the use of trade tokens illegal as early as July, 1812, it was not in fact possible to do so until a sufficient amount of regal coinage was being issued and hence did not happen until January 1, 1818.

Amongst a small collection of papers relating to the firm in the Somerset Record Office there is a brief reference to the token having made a loss for the Coxs and it appears in a document entitled 'Proposals offered by W. B. Cox to Messrs. W. & W. C. Cox relative to the former declining to become a partner in a Foundry Concern established at Taunton'. Included in the agreements were a refund of £1,000 of invested money and the repayment, with interest, of a £672 loan, both going to W. B. Cox. The total was to be paid in four instalments over two years and beginning on August 4, 1819. The final point reads "The loss on the Copper Tokens issued to be borne mutually"[3]. Regrettably, no further details are given but the fact that it is included in this document indicates that a significant amount of money was involved. The 1818 Act making the use of trade tokens illegal was unfortunate for those who possessed them and far too often these were the people who could least afford it. It is, therefore, interesting that in this case the issuers of the token made a loss and one which was still very much in their minds over one year later.

Further research is required into the subsequent history of the foundry. Whilst wishing to be disassociated with it, W. B. Cox remained an ironmonger according to the 1822 directory. William C. Cox went on to develop, what Bragg[4] has termed "an extensive general hardware establishment, known by the name of Tangier Manufactory, from its site". Land Tax Assessments suggest that this business had been set up by 1817 and the layout of 'Tangier Foundry' is shown on Wood's Map (ST 224245).[5]

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2. J. Savage, 'The History of Taunton', Taunton, 1822, 120.

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5. J. Wood, 'Plan of Taunton', 1840.


## ACKNOWLEDGEMENTS


Thanks are given to Robin Bush for drawing my attention to the documentary reference, to Brian Murless regarding the location of the foundry and Peter Birch for the photography.





Letter head of 1900

# SILK MILLS CANAL BRIDGE

**D. J. Greenfield**

"Good stone for building may be procured within a moderate distance of the Canal, and in many convenient places good Earth will be procured in, or adjoining the Line for making Bricks. I have, however, designed the Aqueducts, Public Road Bridges and Viaducts for carrying Roads under the Canal, (which may be done in many instances, and prove a great convenience to the Public as well as to the Canal) to be principally of Cast Iron; the cheapness of that Article, its convenience in fixing , and its durability rendering it for those purposes most desirable ...."

Extract from James Green's report to the Committee of Management of the Grand Western Canal Company in March, 1830.

One feature of the engineering aspects of the Grand Western Canal was highlighted in 1977 when road improvements between Bishop's Hull and Silk Mills level crossing involved the demolition of Silk Mills Canal Bridge (ST 206257). This structure was one of only two remaining examples of Green's cast-iron 'Public Road Bridges'. Thanks to the goodwill of Somerset County Council, S.I.A.S. members were able to carry out a photographic and measured survey before and during demolition.

## HISTORICAL BACKGROUND

Although the Holcombe Rogus section of the canal was opened in 1814, the remainder of the proposed line to Taunton was shelved until 1829. At that date a meeting was called to discuss a report by James Green on the extension and Green was instructed to carry out a more detailed survey. Following the approval of his second report in 1830, construction was commenced in a spirit of optimism in 1831. Green, the Engineer for the works, reporting on progress to June 1832, noted that the road bridges at the Taunton end of the line were ready to receive their iron work which was prepared and shortly to be fixed. Problems in the construction of embankments and delays over possession of the land began to affect progress adversely, although by August 1833 the bridges were generally complete. Further delays to the opening of the whole length of the canal were attributed to the novelty of the lifts which were designed by Green and his dismissal followed early in 1836.

In May of that year, the Committee requested W. A. Provis to examine the Taunton—Lowdwells section, and although he was specifically asked to direct his attention to the lifts, he commented on the whole of the works. Regarding the road bridges, he noted that they were "composed principally of Masonry, with in most cases Cast Iron Ribs, etc. to carry the Roadways across the Canal". In general "the Bridges appear to be well designed and substantially executed". After considering Provis's report and recommendations, the Company engaged two more engineers, Thomas Maddicks and Isaac Whitewood, to advise on the completion of the outstanding works, and the line was fully opened, at long last, on 28 June, 1838.

## THE BRIDGE (Figure 1)

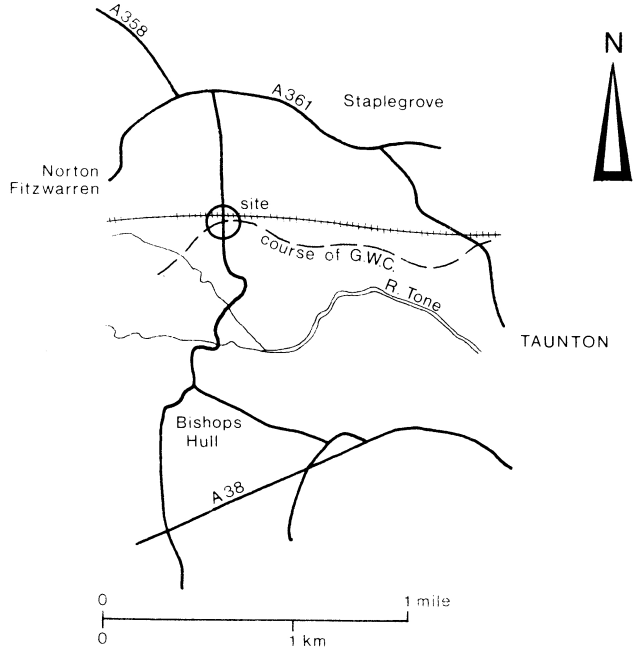
A cursory glance at the exterior of Silk Mills Bridge would have suggested that the road was carried over the canal on a very flat masonry arch. However, the visible masonry arch supported only the parapets: arched cast-iron ribs carried the roadway itself. These five ribs, spanning 3.9m. and spaced 1.25m. apart, were seated on a cast-iron cill beam along the top of each abutment and had bolted on them cast-iron road plates on which the actual road construction was formed. The two outer ribs had extended webs to support the road at the sides. The bridge was built to a skew of about 10 degrees, and the ends of the ribs and their seatings on the cill beam, together with the road plates, were cast to this skew.

The demolition of Silk Mills Bridge leaves extant only one cast-iron road bridge over the line of the Grand Western Canal, that at Trefusis Farm, Bradford-on-Tone (ST 166232). Two other structures containing cast-iron survive which were once associated with the canal. These are the Nynehead Court Drive Aqueduct (ST 144218) and the Tone Aqueduct nearby (ST 147224) which retain their cast-iron troughs in which the canal was carried over a road and river respectively.

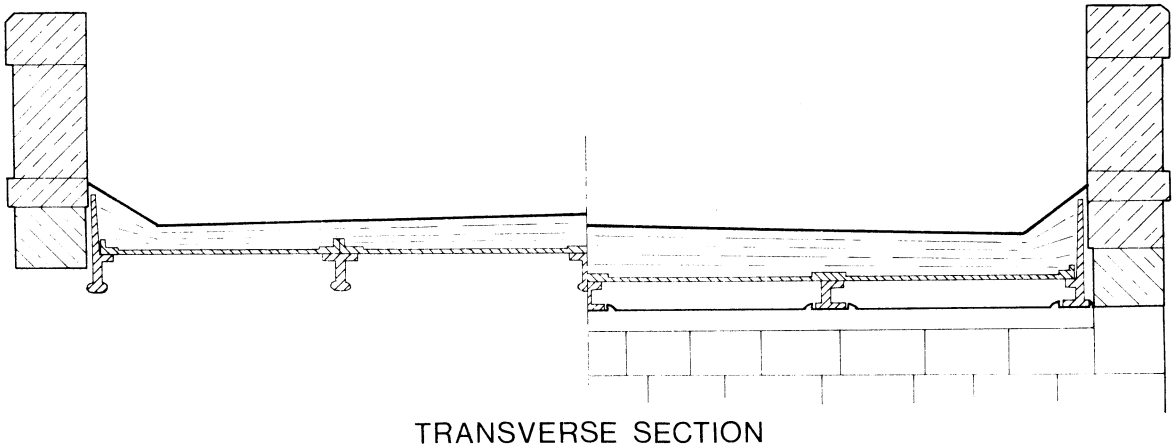
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LOCATION PLAN

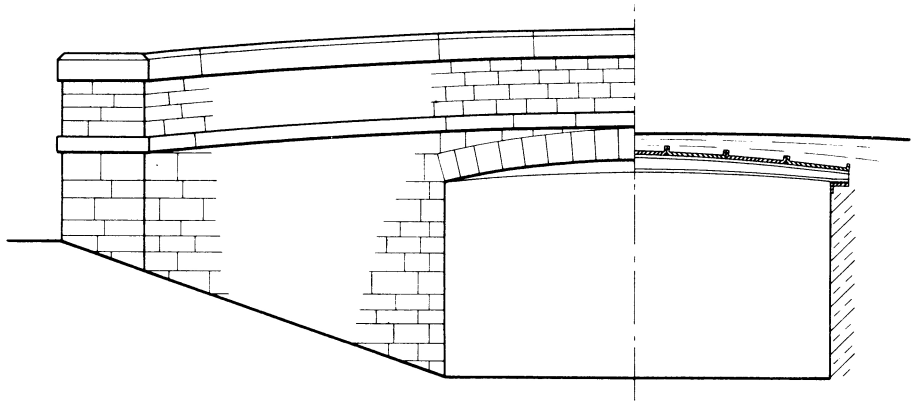


TRANSVERSE SECTION

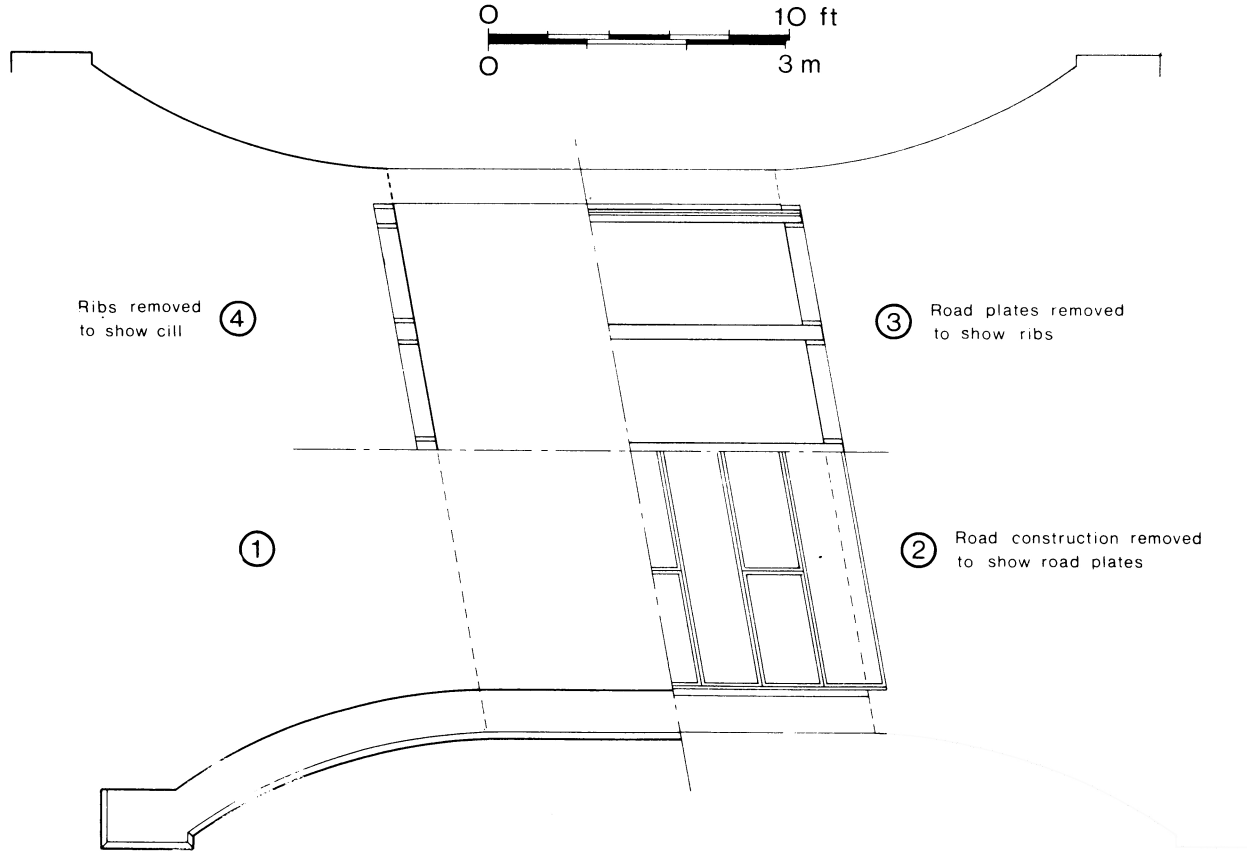
at crown of arch at face of abutment




**Fig. 1**



PART ELEVATION/PART LONGITUDINAL SECTION




SCHEMATIC PLAN

# A CHARD WALK

**D. W. Warren**

Chard can show relics of those industries which would be expected of a small market town but in addition there are two which are not so usual. The lace trade, which brought the flavour and buildings of the north and midlands, and engineering, which although starting with agricultural connections has continued to diversify and expand into the present. Perhaps these brief notes will encourage further research and the walk (Figure 1) stimulate both interest and appetite! If the sites are visited in numbered sequence—the shortest distance—then a walk of just over 4 miles is involved.

1. Guildhall and Corn Exchange (c.1835), an imposing building in the Tuscan style built when Chard was still an agricultural centre but had already seen the blossoming of its industrial future.

2. 11, 12, 14. The Lace Industry. Chard had long been the centre of a flourishing wool trade but by the beginning of the 19th century this was in decline and the town was favourably placed, by virtue of its good water supply and a textile orientated workforce, when the Luddite riots made the lace industry around Nottingham seek alternative centres. By the 1820s the industry was firmly established in the area for in 1830, 1500 people were employed by it in Chard alone. New mills were established, old ones enlarged, those destroyed by fire rebuilt—all utilising steam power. Latterly, however, the trade in plain (lace) net fluctuated wildly and had ceased entirely by the end of the last war. The last extension to built (2) was Messrs. Gifford Fox's 'model' factory (c.1900) whilst their old five storied mill (11) can best be seen from Boden Street. This had a fine mill engine, now in the Henry Ford Museum in America and its once dominating chimney has been demolished. A wood and glass locum survives on the north end. The five storied mill (14) of Messrs. Boden (c.1830) has a very fine porticoed works entrance (12) of later date. The chimney has been truncated.

3. Mitchell & Toms Brewery. Mineral water was also made and there was a large cider factory where the now nationally known cider 'Autumn Gold' originated. The remains can best be seen from the continuation of Duck Lane. To the west of this portion of road and north of the footpath to the collar works was the site of the millpond for the lace works having only recently been filled in and "landscaped".

4. Snowdon Collar Works. It was in operation as such in 1890 and today the last working factory in Chard still connected with the textile industry. At the last stile before reaching this, look east over Chard and one can appreciate the impact the two lace mills make on the town.

5. A unique iron turnstile. No maker's name.

6. Toll House. One of the prettiest in Somerset and built to collect tolls on the Snowdon Hill relief detour for the Chard Turnpike Trust. (1753-1875). Its twin, at Tytherleigh, was demolished in the cause of so called road improvement.

7. Pope's Quarry. Besides limestone for lime burning, fine building sandstone and chert flint was also quarried. The last being knapped into the square flints to be seen built into so many of the older Chard buildings such as Crimchard House, Godworthy House and Chard School.

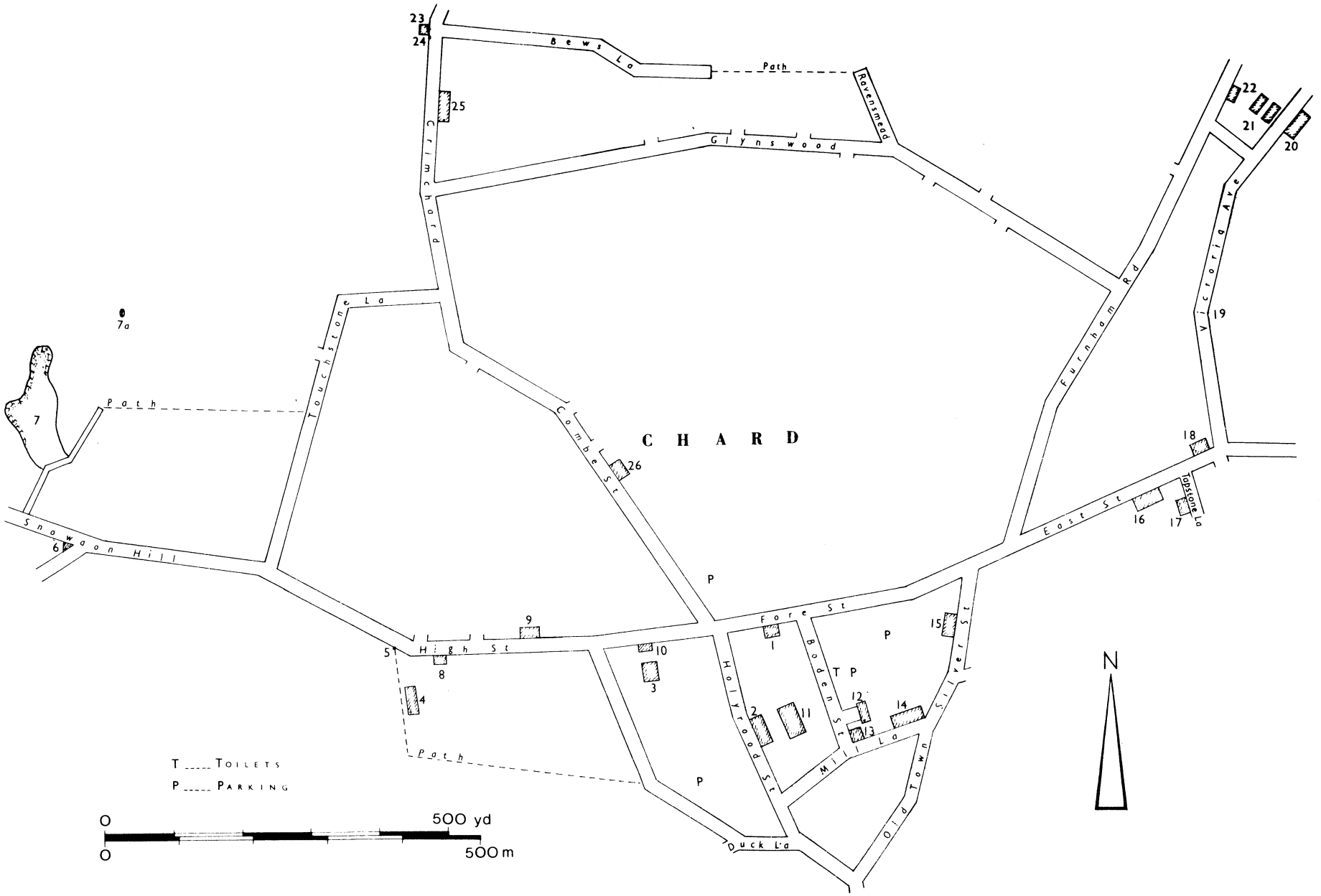
7a. Chard Caves. Part natural but extended in quarrying for flint and sandstone. It was here that Dissenters held their meetings, and there is, reputedly, a tunnel to the Court House. Both 7 and 7a are on private land but the caves are well worth finding.

8. It was behind this house that Stringfellow had his workshop and where he designed and built the first heavier than air flying machine. Although steam powered and only a model, it flew and was shown at the Great Exhibition of 1851. Stringfellow's grandiose tomb can be seen on the west side of the cemetery in Combe Street.

9. Godworthy House Museum. Well worth a visit, especially for the fine horse gearing and exhibits concerning James Gillingham, a pioneer in the making of artificial limbs and surgical appliances, who had his works in Combe Street. There are limited opening times.

10. Brewery House. Note gazebo to the west.

13. As was usual with many 19th century employers much concern was shown to improve the minds of their workforce. This Institute and Club was built by Bodens in 1892 and it is fitting that it now houses the public library. The dwellings in Boden Street and Mill Lane were also built for their employees during this period.


CHARD
Bews La
Path
Ravensmead
Glynswood
Crimchard
Furnham Rd
Victoria Ave
Touchstone La
Combe St
Path
Snowdon Hill
High St
Fore St
East St
Tapstone La
Holyrood St
Boden St
Mill La
Silver St
Old Town
Duck La
Path
T ____ Toilets
P ____ Parking
0 500 yd
0 500 m
N

15. Bonded Warehouse. Still in use as such. When Mitchell, the wine and spirit merchant, merged with Toms the brewer, they blended their own whisky under the label 'Littlemore'.

16. Wool Store. This is the last visual evidence of Chard's connection with the wool trade. E. R. Chaffey, Wool Merchant, ceased trading in the 1920s. This building is now under threat.

17. The office and gatehouse with belfry is all that remains of Station Works, an iron foundry opened by George Hockey in 1879, who manufactured agricultural and lace making machinery. At one stage lace itself was made in the works.

18. Formerly the premises of the Somerset Trading Company—a fine example of tile work as an advertisement for some of their goods.

19. All along the east side of Victoria Avenue are charming examples of cast iron railings—how far sighted of the owners to resist the blandishments of authority seeking scrap iron during the 1939/45 war!

20. Chard Joint Station. Built as the terminus of the branch from Taunton by the Bristol and Exeter Railway in 1866. This was a broad gauge line and in 1891 was the last stretch to be converted to a standard gauge. The link from Chard Road (Junction) to Chard on the London and South Western Railway was built as standard gauge with a separate station at the bottom of East Street. The old L. & S.W.R. Station (now completely demolished) was solely used as a goods station when the two stations were linked, but although the B. & E.R. Station was used as a joint station all services there were duplicated and it was not until 1914 that through services were run from Taunton to Chard Road. The two stretches continued to be operated jointly by the Great Western and Southern Railways until nationalization. The Station finally closed in 1966 although passenger traffic ceased in 1962. A good example of restrained Victorian railway architecture. Notice the fretted foul pipes above the roof.

21. 22. The Chard Canal Terminus Basin. Although many schemes had been put forward to connect Chard to the canal system, amongst them the grand dream of linking The Bristol and English Channels, the Chard Canal was the last major one to be built in England and by the time it was opened in 1842 canals were already being superseded by the railways. It was highly advanced technically, for its size, having four inclines, three tunnels and one lock to raise it the 231 feet in its 13½ miles from its junction with the Bridgwater-Taunton Canal at Creech St. Michael. It was closed in 1866, having been bought out by the B. & E. Railway. The wall surrounding the basin still forms the limits of the modern corn mill whilst one facade of the basin building (22) has been retained on the west side. From the high ground on the west of Furnham Road the hipped roofs of the original basin warehouses (21) can be identified amongst the mill buildings.

23. A most uninteresting toll house. Chard Turnpike Trust.

24. Cast Iron Boundary Post. Put up for the Chard Borough Extension of 1892.

25. Crimchard Works. Originally a rope walk. In about 1880 Dening & Company, engineers and iron founders, wishing to extend, moved their works here from Old Town. Formerly Wightman (1830), then Wightman and Dening, they specialized in water engineering and agricultural machinery which they exported world-wide. Their machinery is still seen in use on many farms. The firm closed in 1937 but the name was carried on until 1950. All these buildings are under threat.

26. Commencing as a foundry in 1839 this later became the Phoenix Engineering Company specialising in the manufacture of tar spraying equipment (Plate 1) for which they were world renowned.

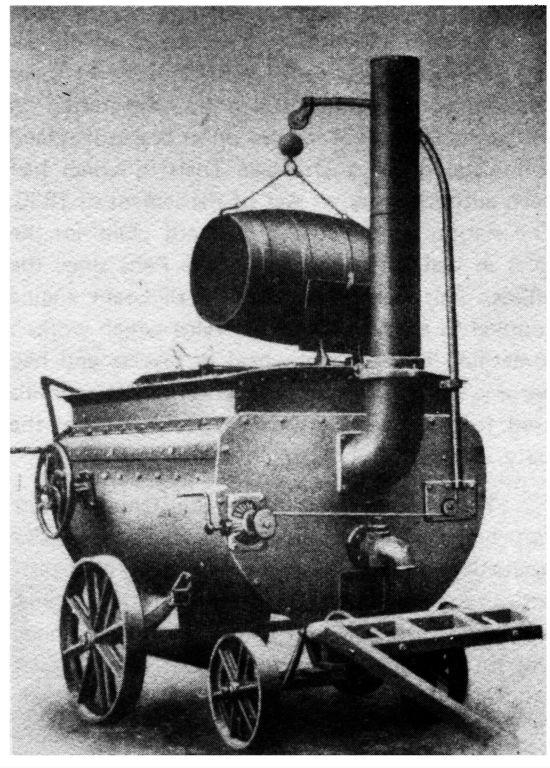


Plate 1. The "Phoenix Rapid" Patent Horizontal Hand Tar-Spraying Machine—a catalogue illustration of 1910.

# WESTONZOYLAND PUMPING STATION

## I. Miles

### Early History

In 1830 buildings were erected on the bank of the River Parrett 1½ miles to the south-west of the village of Westonzoyland (ST 340328) for the purpose of land drainage. It marked the beginning of another chapter in man's attempt to control the tidal waters of the river and to remove the annual winter deposits of fresh water. Operations were probably begun by the Saxons who colonized the area and whose legacy are the local place names. In the following centuries the Abbots of Glastonbury Abbey saw the agricultural potential of the land and a moor-penny rent or *morgabulum* was paid on enclosed and reclaimed pieces. The medieval solution included the construction of artificial barriers to check the flood waters, and Lake Wall, joining the high ground of Westonzoyland with the bank of the Parrett, dates from this period.

The fact that the early drainage schemes failed was not for the want of effort but rather an indication of the magnitude of the problem and the lack of an effective technology. The advent of the Industrial Revolution brought a new stimulus to parochial reclamation measures and Westonzoyland together with its neighbours at Middlezoy and Othery, were in the forefront of these developments. The first steam drainage station on the Somerset Levels was set up at Westonzoyland administered by a Drainage District which had been authorised by an Act of Parliament of 1830. The station contained the standard plant for the time as had been installed in the Fens since the 1820s. This comprised of a small beam engine coupled to a scoop wheel, a device which worked something like a water-wheel in reverse and had become well known in connection with windmills used for drainage purposes in Holland from the early 16th century.

The engine was supplied by James Easton from his foundry in London and he became the mechanical engineer for the Westonzoyland project. James was joined by his brothers John and Abel who were, respectively, the Commissioner and the Surveyor. These three sons of Josiah Easton, of Bradford-on-Tone, near Taunton, mark the beginning of an important family association with Westonzoyland and references to one or other of the Eastons (there were twelve children in all) can be found amongst papers relating to contemporary ventures such as canals and turnpike roads in Somerset. Unfortunately the scoop wheel proved to be very inefficient, having a lift of one quarter of its diameter. When gravity for land drainage was impracticable, it was clearly the only other choice available at the time, apart, that is, from the Archimedian screw pump. Coupling the wheel to a beam engine, so that it was not controlled by the vagaries of the wind, was an obvious improvement but still did not increase the pumping capacity greatly. Not only was the pump too small and the outfall too low but also the cost rendered the whole scheme uneconomic. Initially £4,000 had been spent: £2,600 for the land, buildings and machinery, the remaining £1,400 being absorbed in legal fees particularly in respect of the Act of Parliament. Expenditure in operating the plant totalled £250 per annum including the engineer's salary or, expressed another way, 5s. (25p) per acre. Nevertheless, other districts were encouraged by the activities at Westonzoyland and similar machines were installed at Saltmoor (1837) and Southlake (1845).

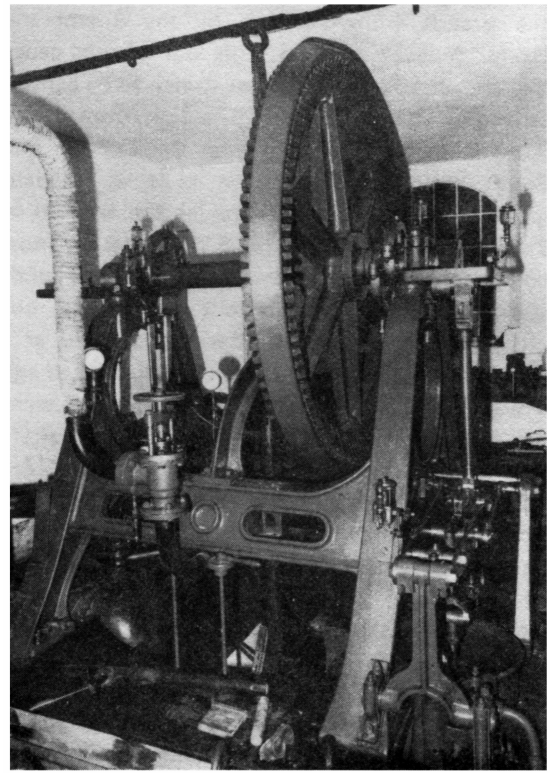


Plate 1.
The Easton and Amos Drainage Machine.

**Easton & Amos Drainage Machine (Plate 1)**

By the 1850s it was apparent that the 27 h.p. beam engine was ineffective for draining the 1,600 acres between Lake Wall and Burrow Wall, one assessment suggesting that a machine of at least 40 h.p. should be used. However, in 1851 a Mr. Appold had invented a centrifugal pump alongside other ingenious devices such as self opening doors and shutters that closed when the gas lights were turned on! A second but quite separate development was the passing of the Land Drainage Act of 1861 which permitted the formation of Internal Drainage Districts. As in 1830 Westonzoyland took the initiative and the beam engine at the station was replaced with Appold's pump and a powerful vertical engine directly mounted over the pump well.

The complete unit, weighing about 25 tons, was manufactured by the engineering firm of Easton, Amos and Sons, the makers of the 1830 engine. Being an integral structure it was reasonably easy to transport and to erect on the site. The pump well is made of cast iron sections and forms a rigid box on which the engine is bolted. This helped to preserve the alignment of the mechanism when settlement took place due to the land drying out with the improved drainage. The engine, which drives the pump through a vertical shaft from a bevel gear on the engine flywheel, represents a type brought into use in the early to middle part of the last century. The design followed on from the beam engine when higher pressures became available from improved boilers. Engineers at the time considered that unequal wear would result in the piston and cylinder if horizontal cylinders were used. This fear was later proved to be wrong and eventually the horizontal engine became standard. The Westonzoyland engine worked from 1861 until 1951 when a General Motors 24 inch diesel pump was installed in a new building alongside. The success of the 1861 drainage machine, as the engine and pump is officially known, led to others, made by Easton and Amos though with modified designs, being used in the other pumping stations on the Somerset Levels. Three of these engines are housed in the Aller Moor Pumping Station at Burrowbridge (ST 358305) and make interesting comparison with each other especially the Aller Moor engine and pump which were erected in 1869.

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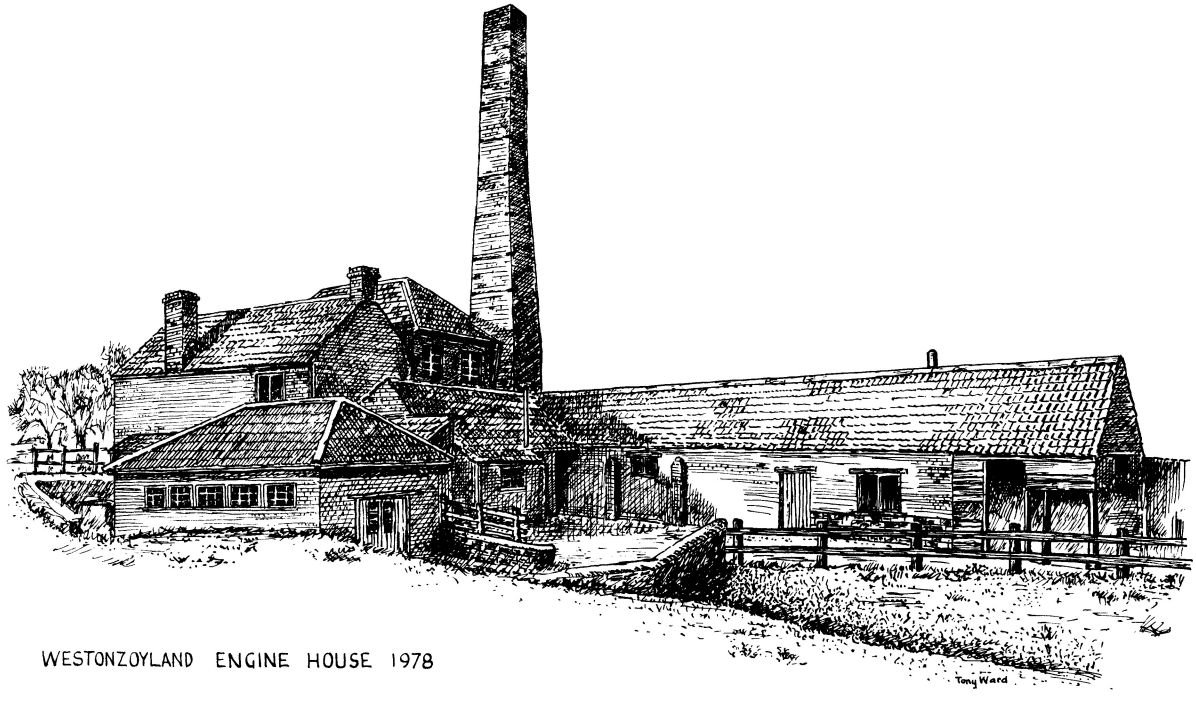

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WESTONZOYLAND ENGINE HOUSE 1978

# TAUNTON BRICKYARDS

**B. J. Murless**

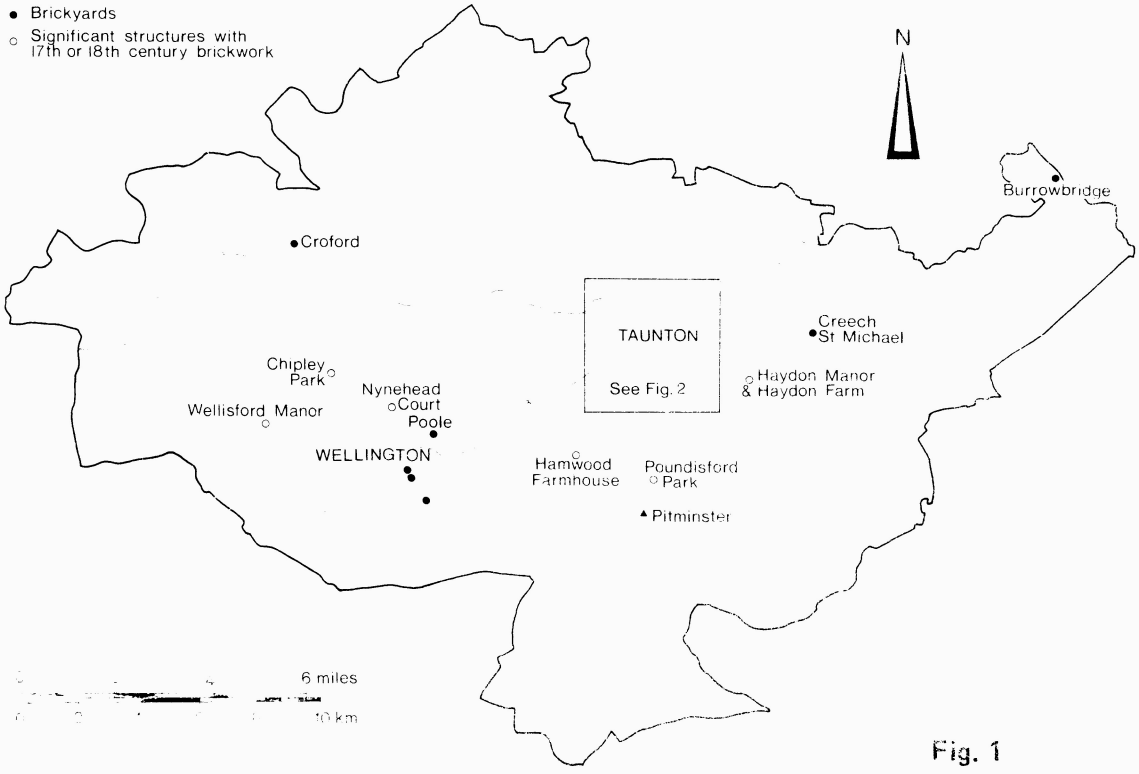



Fig. 1

Any excavation in Taunton Deane, whether undertaken by man or machine, soon establishes the presence of the reddish-brown silty clay, Keuper Marl. This natural endowment has, for at least three centuries, given rise to the manufacture of bricks, tiles and associated products. Within the local authority boundaries of Taunton Deane Borough (Figure 1) some seventeen yards are known to have been in operation but this number, for reasons to be discussed below, does not reflect the extensive exploitation of the marl by the brick and tile makers. Geographically the clay industry, as defined by the location of the brickyards, can broadly be divided into two groups centred around the towns of Taunton and Wellington. Although beyond the scope of this article, the latter group includes the only works now operating in Somerset, that of William Thomas (Wellington Bricks) Limited of Poole, West Buckland.

Before setting down some of the characteristics of the Taunton yards, it is necessary to summarize the problems attendant upon an investigation of the brick and tile industry. A 'brickyard' is generally understood to consist of clay pits, kilns and sheds and at this works the clay is dug, processed and the resultant goods then transported to retail premises or construction sites. However, from the scanty historical evidence available it is difficult to conceive of a brickyard in these terms before the last quarter of the 18th century.

Although certain localities were favoured by brickmakers for the quality of the brick-earth, thus giving rise to the name 'Brickfields' frequently found on estate and tithe maps, the industry, for reasons of economics and transportation, appears to have been local in character. A brickmaker would enter into a contract with another party for a specific quantity of bricks or for his skills to be available for a limited time, brickmaking being a seasonal activity until well into the latter half of the last century. This procedure is well illustrated in documentary evidence relating to a yard at Minehead where the Luttrell family employed a succession of brickmakers from the 1750s onwards. Directly linked to this contractual method of operation is the factor of a mobile labour force, the journeyman brickmaker being

also, in a literal sense, a traveller to the place of his employment. If possible the bricks and tiles were fired on the site where they were to be used and this was particularly the case where construction was on a grand scale such as the building of a large country residence. Crowcombe Court, on the Quantock Hills, and Ven House, Milborne Port, are representative of Somerset brick structures where this practice was carried on in the 18th century. An earlier example, which involved a Taunton brickmaker, is the Clarke's home at Chipley Park, Nynehead. The details from a surviving contract referring to brickmaking are especially illuminating, and its importance is such that the document has been published **in toto** elsewhere in this journal.

The implications arising from this organization of the brick and tile industry for the archaeologist and the local historian are twofold. Firstly, there is a paucity of evidence about early brickmaking in the form of archive material. Secondly, the physical manifestations of the industry are virtually non-existent: clay pits are invariably filled with domestic and other refuse; brick kilns seldom have alternative uses and are therefore demolished, and other structures, such as drying and moulding sheds, are often only temporary in construction. It should also be noted that brickyards have not become the subjects of study by archaeologists in general and there are few references to them in either local or national archaeological journals. The writer is therefore particularly indebted to Taunton Deane Borough Council for an opportunity to investigate a four acre field at South Road, Taunton, known to have been associated with brickmaking. The site was designated the title 'Southfield Brickyard' from its close proximity to 'Southfield', a dwelling inhabited by a local brickmaker during the 1860s.

## SOUTHFIELD BRICKYARD

### History

This yard (ST 233242) lies to the east of the Taunton to Corfe road (B 3170) where Silver Street becomes South Road. The land once formed part of the ancient Manor of Taunton Deane and the area was known as Taunton Fields, which survives in the name 'Tauntfield'. The earliest association with brickmaking that has so far emerged is a deed of 1791 which refers to William Boon, a brickmaker, surrendering one and a half acres of land, forming part of a larger plot of six acres bounded on the west by 'the King's highway leading from Taunton to Orchard Portman'. In 1812 a local newspaper, the 'Taunton Courier', advertised 'A Most Eligible Brick Yard, adjoining the Town of Taunton, in which is a new-erected Kiln, Two neat Tenements, a Coal House, and Two good Linhays, with Six Acres of excellent Pasture Ground'. Despite three sale notices, the property was again on offer during the following year. These latter advertisements contain a little more detail with a reference to an 'excellent Four-eyed Kiln for burning Bricks &c.' The 'eyes' were almost certainly the firing holes, arranged in pairs at the base of the kiln with dwarf walls between them. During the firing process the hot gases would circulate around and between the carefully stacked bricks before dispersing through a temporary roof. This type of structure, often rectangular or square in plan, is known as an updraught kiln.

The picture which arises from this period is complex but it would appear that a number of interested parties were involved with brickmaking in the South Road area. In 1816 Samuel Willment, a timber merchant of Wilton, Taunton, had a brickyard 'in full work' for sale. From evidence such as Poor Rate Books the new occupier was James Lackington Rice of Winterbourne, near Bristol. Amongst others with whom Rice had dealings were a Thomas Moss, mason, and John Pine, builder, both noted as 'Trustees of the Tontine Society held at the Three Tuns, St. James Parish Taunton'. (Tontines were loans raised on life annuities with the benefit of survivorship). There is good reason to suggest that these gentlemen were connected with brickmaking since a brick has been found, the frog or recess on one face bearing the inscription 'MOSS AND PYNE, TAUNTON'. From a description made in 1819 it is known that Rice's brickyard consisted of 'two brick kilns, with extensive tile sheds, drying houses, and other convenient appendages'. Rice himself was a builder, the occupation he gave in 1823 when he was elected to the 'Blackbrook Corporation', a local drinking and dining club.

Using rate books and trade directories it is possible to trace J. L. Rice's involvement at Silver Street from 1817 to 1848. By September, 1837, he had acquired an additional field in Holway Lane (now Holway Avenue) making a total area of almost seven acres. Subsequent history is a little uncertain but the following brickmakers can be attributed to the yard: James Woolridge (1851-2), R. and Spencer Parsons (1859-1865) and Edward Cornish (1874-5). Census Returns for 1841, 1851 and 1871 give supplementary information: for the most part the brickmakers and brickyard workers lived in terraces and the less sanitary courts, close to the yard: Rice had five children, Cornish six, and Woolridge was born at Stonehouse, Devon.

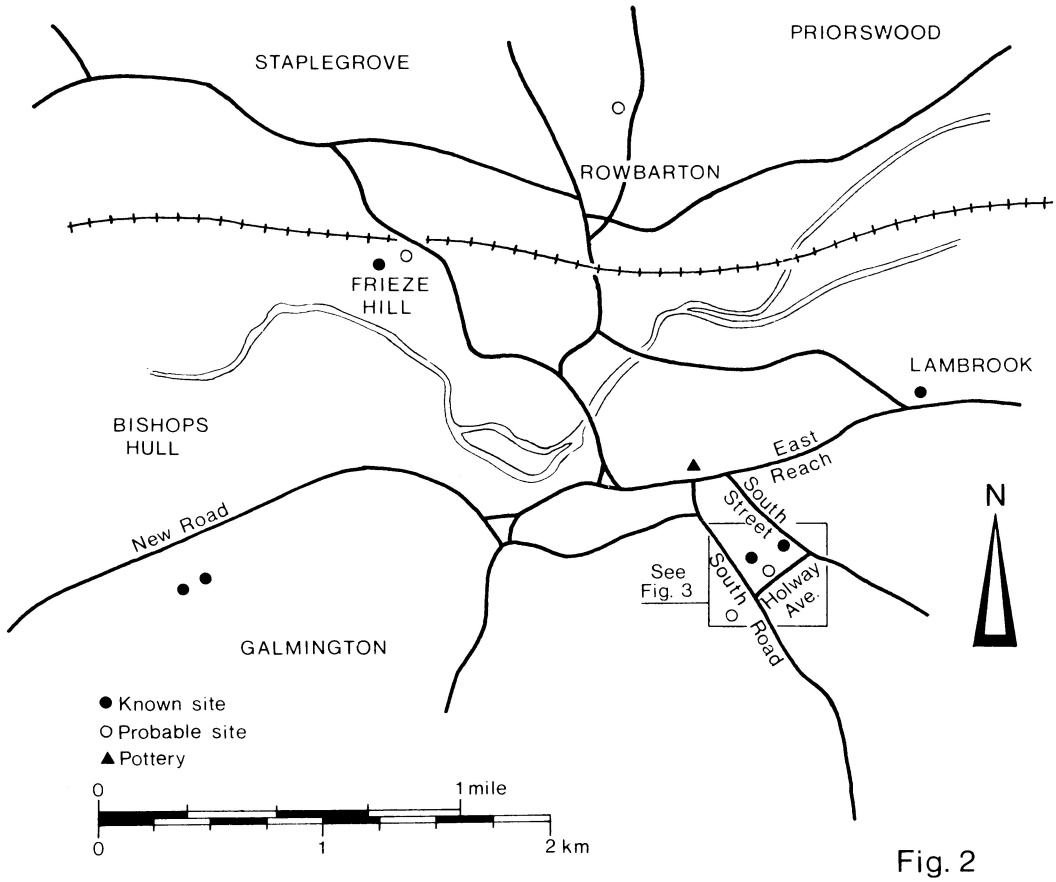


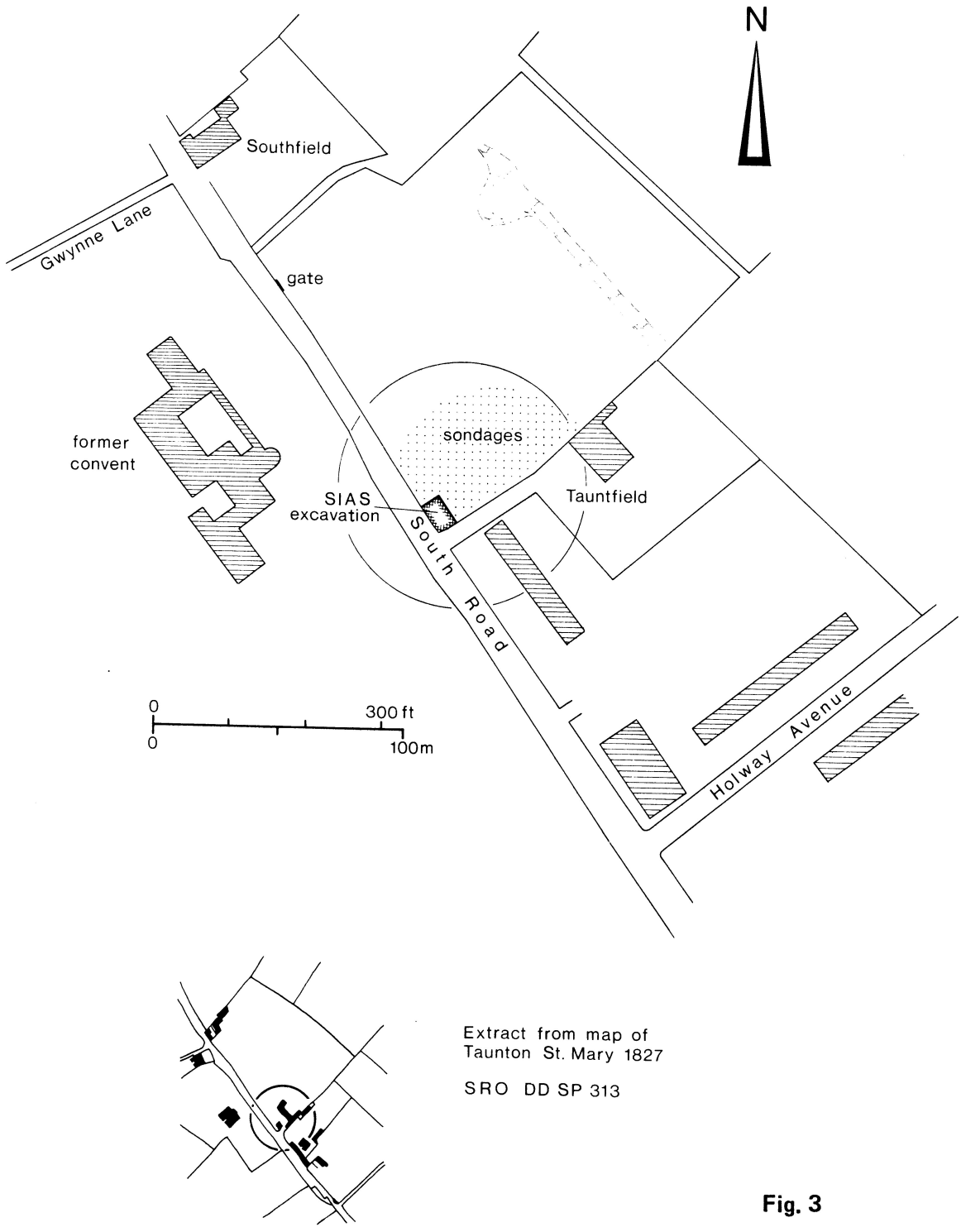

Fig. 2

In 1873, E. Jeboult, the Somerset historian, praised the yard 'for the fine quality of the goods manufactured there' but the 1870s are noted as a period of recession in the brickmaking industry in Britain. The yard was also vulnerable from the development of other brickyards including an adjacent one at South Street and those on the western outskirts of the town at Bishop's Hull. According to 'H.P.' whose reminiscences appeared in 1898, the authorities of St. Joseph's Convent, on the western side of South Road, purchased the yard for reasons of privacy. Any evidence of the workings remained under pasture until 1977 when the South Road field was sold to the Taunton Deane Borough Council, the other field at Holway Avenue having been bought by the Somerset County Council in 1962 for educational use.

**Excavation, 1977-78**

The proximity of Southfield Brickyard to the central area of Taunton has resulted in the yard and the surrounding locality being depicted on a number of 19th century maps. The evidence that these maps afforded was critical to the archaeological excavations which took place and to the subsequent discussion about the findings. Maps of 1809 and 1822 indicate buildings along South Road but are surveyed at too small a scale to be of real value. A Survey of Taunton St. Mary made in 1827 provides more detail with a group of structures shown in the south-west corner of an approximately four acre field at South Road (circled in inset, Figure 3). John Wood's Plan (1840) and the Tithe Map of the same year show a similar arrangement; they also identify the owner as J. L. Rice and the use of the field as a brick and tile works. 'Brick Yard' is marked on a map by Ham and Leversedge (1849) and in the previous year Richard Carver mapped an outline of the buildings. No further cartographic evidence appears to have been made: in 1888, when the Ordnance Survey published their Taunton sheets to a larger scale (1:500) the various structures had been demolished. Closer examination of the maps through comparative alignments of the features suggests that between 1849 and 1888 the carriage drive to Tauntfield House was laid over part of the works and alterations had taken place to the cottages nearby.

The maps were clearly not intended to show the functions of the buildings at the brickyard but mapwork studies of other yards throughout Somerset leads the writer to suggest that a square or rectangular building to the west of the others was the kiln. Whilst it can reasonably be assumed that the adjacent structures were the drying and






Extract from map of
Taunton St. Mary 1827

SRO DD SP 313

**Fig. 3**

moulding sheds no indication is given as to the location of the clay pits. Even on the 1888 sheet no breaks of slope in the ground are marked. Fieldwork and trial excavation during the summer of 1977 had two objectives: to attempt to define the layout of the brickyard from the available physical evidence above and below ground and to determine if sufficient remains existed to justify further investigation. Since the field in Holway Avenue was not scheduled for development, the work was restricted to the other field in South Road. Beyond the fact of ownership by Rice there is no documentary evidence of brickmaking in the former locality. An irregular profile of the field suggests a usage inconsistent with normal agricultural practices but deep excavations for a sewer around the perimeter in 1979 proved negative.

Southfield Brickyard (Figure 3) was situated in a field which dips gently eastwards, the buildings being located on the higher ground above the 27 metre contour. The lowest areas are in the north-west corner where there was an entrance to the field from the road, and along the boundary with the playing field and school access lane where the ground level falls below 23 metres. Three features were noted during a preliminary survey. Firstly, the field entrance retained the gate pillars which were capped with badly fired bricks. Secondly, the low ground to the east displayed a vegetational difference to the remainder in that horse raddishes flourished there. A third but more subtle feature was a shallow bank approximately parallel to the eastern boundary which appeared to connect with an oval shaped depression. These undulations were surveyed prior to the development.

The excavation, by members of S.I.A.S. under the direction of the writer, concentrated on an area, approximately 12.00 x 8.00 metres, on the higher ground close to the junction of South Road with the drive to Tauntfield House. Two trial trenches, cut by the developer's mechanical excavator, in August, 1977, confirmed the remains of a structure in this corner of the field, the position of which corresponded closely to the rectangular or square building shown on some of the 19th century maps. The drive, known to have been constructed by 1882 when Tauntfield House was for sale, limited investigation on the southern side. The western perimeter had also been affected by a relatively new retaining wall built to allow visibility to and from the drive. Nevertheless, sections of earlier brick walling were discovered, that along the northern side of the excavation standing, in part, to a height of eight courses.

The base of the structure had been dug into the marl 1.20m below the surface of the field but at a level which would have allowed direct access from South Road. Three sections were cut across the site in order to examine the material which had been tipped on to the remains following the abandonment of the brickyard. Below the top soil was a band of crumbly brick-red silty clay with fragments of broken brick, tile, glass and mortar throughout. There was considerable difficulty in isolating other continuous layers beneath this since the remainder consisted of irregularly-shaped pockets of brickyard debris such as clinker, vitrified bricks, mis-shapen tiles and more clay, either brown and plastic in consistency or green-grey and silty. Ceramic evidence suggested the likelihood that all the elements in this fill were deposited together rather than at intervals over a long time-span.

Once the nature of the fill had been determined, it was removed to reveal the layout at the base. Within the limits imposed by the walling, both old and more recent, three types of features could be discerned: areas of flooring, drains and linear channels. The flooring, for the most part, consisted of a natural band of green marl which also formed the foundation for the walls. Occasionally there were patches of bright orange or deep red (discoloured) marl and towards South Road the ground had been cut into by a layer of ash and clinker which covered a drain. More substantial flooring, of handmade brick set down in a manner which resembled a paved courtyard, could be seen to either end of the channels. These bricks were not jointed with mortar but were covered by, and were laid upon, a thin layer of ash. This ash extended to the wall on the northern side, the brickwork giving way to an area of fragmented bricks and tiles. The longest of the drains ran alongside the wall in this area before turning at right angles and curving for a short distance whereupon it changed in construction. Formerly it was composed of inverted gutter bricks which are curved in section but across the western part of the site the drain was built of common bricks overlaying two parallel bricks stood on edge with a space between them.

The linear channels lay North-South and the one nearest South Road, appearing more intact and more carefully defined than the other two, was investigated in some detail. This feature, almost seven metres in length, was partly edged in brick and was deeper at the extremities (North: 400mm.; South: 320mm.) than in the middle (70mm.). It pre-dated the floor at the northern end since it widened beneath the brickwork. A variety of material was dumped within the channel including chert, cinder, coal and glass. Enveloping these items was a black bituminuos substance which upon analysis was shown to be a residue from the burning of coal. Amongst the finds in this tacky and pungent fill were both china and earthenware, the earliest sherds in date forming parts of porringers, similar to those made at Donyatt, near Ilminster, in the 18th century.

**Watching Brief**

Resources did not permit an extensive excavation of the field and it was therefore decided to obtain as much information as possible about the remainder through mechanically cut trenches prior to the development as well as observing any work undertaken by the contractor. During the course of the S.I.A.S. excavation an opportunity was taken to open up an area to the east through

a series of sondages. The aim was to uncover other buildings; none were located but a considerable quantity of pottery was found in a disturbed context. In March, 1978, inspection pits were dug by the local authority across the lower part of the field. These established that the area had been filled with brickyard waste and domestic rubbish at some period within the past one hundred years. Below a covering of top soil and re-deposited marl lay brick and tile fragments, clinker, mortar, slate and an abundance of Victorian china, mostly of Staffordshire origin. Removal of the top soil on a large scale began in March, 1979, in preparation for the first phase of the development. This and subsequent excavations by the contractors, such as foundation trenches, provided valuable corroborative evidence about the site. The area around the depression showed 'tip' lines of briquetage, clinker and other material similar to those found in the sections of the S.I.A.S. excavation. These dumps were also visible but to a lesser extent at the old field entrance and probably formed a hard surface for the waggons. The findings in the S.I.A.S. trenches to the east of the excavation site were confirmed, brickyard waste occurring across this area of the field.

### Interpretation

In their working of the yard the brickmakers would have been concerned primarily with the availability of suitable clay and access to the highway for fuel and for transport of finished goods. The results of the watching brief confirmed the layout of the yard as conditioned by these factors. Clay digging appears to have been concentrated on the lower slopes very close to the former pit of the adjacent South Street works. The depth to which the clay was dug was not generally great, in places only 600mm. once the overburden had been removed. The kiln(s) and sheds were located close to the road but the lack of evidence for these buildings was not altogether surprising given the unsubstantial nature of the structures. The spread of the brickyard waste also suggests that the early brickmakers were using primitive techniques such as burning in clamp kilns where the incidence of failure is great and an extensive area is required for operations. The presence of domestic waste in considerable quantities across the field may indicate that the brickmakers were screening refuse to extract coal ash which was mixed with clay to make common bricks, a practice not unknown in the 19th century. One brick fragment recovered contained part of the stem of a clay pipe embedded in it. As to the meaning of the area examined in detail by S.I.A.S., the lack of comparative evidence from sites elsewhere makes any conclusions rather tenuous at this stage. Nevertheless the layout revealed once the debris had been removed suggests a use not incompatible with a fuel store and part of a kiln of the updraught type.

## OTHER TAUNTON YARDS (Figure 2)

### The Mount

An agreement dated 1779 refers to 'a Brickfield called Mount' associated with William Collard, a bricklayer of Taunton, who had lived earlier in the 18th century. William Bailey or Bayly (there were probably two related persons of this name) was a contemporary of Collard and both sold bricks to the Gray's Almshouses Charity at the rate of two shillings per hundred in 1721 and 1741. In that latter year Bailey submitted a specification for 'An Engine for the Making of All Sorts of Bricks and Pantiles made Use of in Buildings'. It is not known how practicable this 'engine' was but in such a concept the inventor was in advance of his time, machinery not being generally introduced into the brick and tile industry in Somerset until late in the 19th century. Although the exact site of the yard is unknown, William Bailey can be identified with land known as the 'Winnards', on or near the former convent in South Road.

### South Road

Buncombe and Pring had a coal and brick business on a six acre site at Tauntfield with access from the turnpike road, the suggested location being adjacent to Southfield Brickyard on its southern boundary. In January 1811, James Pring dissolved the partnership, the firm becoming known as Buncombe and Penny. It carried on until 1823 when it was taken over by Francis Townsend. Joseph Dawe, listed as a brickmaker at Silver Street in 1822, was in fact a mercer and probable owner of the Buncombe and Penny works.

### South Street

During the 1840s Samuel Curry, an established local brickmaker, can be linked with this works. He was succeeded by Robert Herniman, a builder, who employed William Criddle and others to make his bricks. Herniman's business interests ended in 1877 and the yard appears to have come under the ownership of Thomas Penny and Son. Samuel Hawkins is listed as a brickmaker at South Street in 1889 and the large scale O.S. sheets of the previous year clearly show

the layout of the works including a rope walk. The yard was probably closed soon afterwards. The West Somerset Yeomanry used it for an annual rifle shooting competition and the Corporation began filling in the 30ft. pit with household refuse in April, 1917. The clay is described in the Geological Memoir as 'light red sandy marls'.

**East Reach**

This yard was set up by Samuel Curry and George Walker in 1809 on a site close to the junction of Hamilton Road and Roman Road. Control passed to Curry's son, John, in 1815 who with Thomas Curry continued until c.1859. The Tithe Map and Award for West Monkton (1839) shows the brick ground and kilns occupying just over an acre with an almost similar area defined as 'excavated land not restored'. Between 11 and 12 at night on 16th March, 1842, a fire broke out in a shed containing unburnt bricks but firemen from the West of England Office soon 'subdued the mischief'. It is interesting to note that the bricks, which ironically were unsaleable, had already been assessed for duty, a tax imposed on all bricks between the years 1784 and 1850.

**Rowbarton**

A works 'to the north of Taunton Station on the south side of the turning to Staplegrove, in which redeposited red loamy clay overlying gravel was used' is mentioned by geologists in 1908. A suggested location is at Denmark Hill, Cheddon Road, one of several sites where gravel was extracted on a small scale. Alfred Govier is listed as a brickmaker at Rowbarton (1872-5) and advertisements for his bricks appear in the 'Somerset County Gazette' during 1877 which prices the 'best' at twenty-eight shillings per thousand, the seconds selling for twenty-four shillings.

**Frieze Hill**

It is likely that there were two brickyards in operation in this area. One was managed by Henry John Smith, Secretary and Superintendent of the Grand Western Canal. Smith built a house using his own bricks and the canal was convenient for transporting the goods. Unfortunately, Smith only traded for a few years around 1850 and a later brickmaker, Thomas Taylor, had a similar lack of success during the 1880s. 'Old Brick Kiln', which was square in plan, and 'Old Clay Pit' are shown on a number of editions of O.S. maps.

**Bishop's Hull**

The spread of housing and other developments has only recently joined parts of Bishop's Hull to the western outskirts of Taunton. However, the brickmaking ties between the two communities, both social and economic, have always been close as have associations with other Somerset brickyards. By 1851 Robert and William Sharp had a yard at New Road (Wellington Road). Also living there at this time were two persons named John Symons. Later in the 19th century both the Sharps and Symons were involved in other brickyards in Creech St. Michael and Bridgwater, respectively. The Cornish Brothers, who themselves had brickmaking connections with South Road, Taunton and the Warren, Minehead, were operating the New Road yard in 1871. Shortly after this date an adjacent works, owned by William Moss, a builder, began production.

The brick and tile industry was beginning to show signs of change: Moss was able to offer prospective brick moulders 'constant employment all the year round' free from the vicissitudes of the market and the weather. Hand brickmaking machinery and horse-gearing were, at least in part, replaced by plant worked by a 10 h.p. steam engine and in 1883 the kiln was capable of turning out 55,000 bricks at each burning. A 2ft. gauge tramway was laid between the pits and the sheds, a feature unknown at any of the other local yards. There are three elements common to the works at Bishop's Hull. Firstly, both were financially linked to Taunton builders merchants: Colthurst, Small and Company, Messrs. Penny and George Pollard were three firms which advertised wares as being made at their works at Bishop's Hull. Furthermore the land on which the two yards were later built was, in 1843, owned by Samuel Willment mentioned previously in relation to Southfield Brickyard. Thirdly, the businesses of both Moss and Cornishes' were purchased by William Thomas and Company Limited in 1903 and 1915 respectively. The Taunton Brick and Tile Company was the result of these actions but its subsequent history is one of decline and fall following the pattern of other Somerset yards, demolition finally taking place in 1963.

**Potteries**

Most if not all the Taunton brickyards manufactured a range of clay goods including roofing tiles in various forms and probably also ceramic vessels for the kitchen and garden. Because of the close proximity of potteries at Donyatt it is unlikely that earthernware utensils were

produced in any quantity. Nevertheless map evidence shows a pottery at Tancred Street, Taunton, which was in existence during the 1840s.

## BUILDINGS AND PRODUCTS

As the discovery of brickyards and brick-making sites is now the province of the archaeologist and local historian the only evidence visible above ground level is in the form of structures built from locally made materials. Fortunately the difficulties in transporting heavy clay goods for any distance make it fairly certain that a brick which can be dated before 1800 is of local origin. With the availability of other forms of suitable building materials brick does not appear to have been introduced into Taunton until the 17th century. Parts of St. Mary's Vicarage date from this time but a far better example is Gray's Almshouses in East Street (1635-40). In the 18th century brick becomes architecturally acceptable and surviving buildings include the central section of the Market House(1772), Hammet Street (1788) and Paul's Meeting (1795). Other less pretentious structures structures often yield valuable evidence such as the wall bounding Gwynne Lane which contains a variety of handmade bricks in a spectrum of colours. A well uncovered during the construction of a multi-storey car park at Paul Street in 1972 was said to have been built with bricks from South Street, as was another discovered during work at the General Post Office, North Street, in 1934.

Decorated chimney pots in terra-cotta occasionally remain: six particularly intricate examples are at 2 and 3 East Reach with others at 1 and 3 South Road. The stamping of bricks and tiles, carried on after the turn of the 19th century readily facilitates identification of the maker and the casual find should therefore not be ignored. A title fragment inscribed 'CURRY, TAUNTON', was found near Pitminster during the construction of the M5 Motorway whilst a brick boldly marked 'SMITH' was recovered from the demolished remains of the Somerset Sanitary Steam Laundry in Kingston Road. Other factors which assist in dating brickyard products are colour and texture. Bricks made at Bishop's Hull, for example, are mostly red, brindled, yellow or grey with relatively smooth, wire-cut surfaces in contrast to earlier local bricks of variable colour, shape and size often with large inclusions such as pebbles.

Finally, it is salutory to note that despite the growth of brickyards in Taunton during the last century some brickmakers adhered to tradition and continued to seek and burn suitable clay as close as possible to the building site. In 1854, when plans were being drawn up for the construction of the Shire Hall, the County Surveyor suggested that bricks might be made 'from the earth which will arise from the excavation or which can be raised on the premises'. The establishment of this type of brickyard was not without environmental hazards. The residents of Shoreditch Road complained bitterly, in 1866, of 'sulphurous and other gases diffused for a considerable distance around are of a highly offensive character, and pernicious to health'. But they were referred by the Board of Health to the Health of Towns' Act which stated 'An action will not lie for burning bricks for the purpose of building houses on the land which the burning is carried on . . . .'.

## NOTES AND REFERENCES

This account forms part of a long-term study by the writer into the Somerset Brick and Tile Industry. A more detailed report of the excavation at Southfield Brickyard will eventually be deposited. Original manuscripts, mostly from the manorial records of Taunton Deane, have been used, in addition to maps and newspapers, at the Somerset Record Office. Trade directories have been consulted at the Local History Library and in the Library of the Somerset Archaeological & Natural History Society. Further evidence, particularly chance references from unindexed sources, would be welcome.


## ACKNOWLEDGEMENTS

The author would like to thank the following persons and organizations for assistance with aspects of this article:

**Source Material**

The Staff of the Somerset Record Office, Taunton, especially Mr. R. Bush, Deputy County Archivist.
Mr. D. Bromwich, Local History Library, Taunton Castle.
Miss J. Peden, Mr. B. Clist and Mr. R. Lillford for additional references.

**Southfield Excavation**

S.I.A.S. and the Taunton Deane Research & Excavation Committee for financial support.
Mr. A. Walden, Taunton Deane Borough Council, for arranging the trial excavation and his continued interest and co-operation throughout the project.
Mr. J. Allen, Stansell & Son (Taunton) Ltd., for permission to maintain a watching brief.
Mr. A. P. Ward for painstaking labours at the excavation site.
Mrs. M. Newson and Mr. F. Hawtin for section drawings and advice.
Mr. C. F. Clements for skilful operation of his mechanical excavator.
The small but dedicated band of S.I.A.S. members who dug at the site.
My parents for accepting a collection of miscellaneous clay objects and finds from the excavation which will in due course be placed in the custody of the Somerset County Museum.

## OTHERY WINDMILL

Whilst researching his article on Taunton Brickyards, Brian Murless noted several references to a windmill at Othery which became the subject of a legal case in 1810. On 2 January of that year the Taunton Turnpike Trustees

"Ordered that the Surveyor with proper Witnesses attend at the next Wells Quarter Sessions to prefer an Indictment against the occupier of the Windmill adjoining the Turnpike Road at Othery for a Nuisance occasioned thereby"[1].

Four days later Mr. J. Easton, the Surveyor, duly appeared at Wells and obtained the necessary document. This names the miller as George Maker and records the height of the windmill as sixty feet. By operating his mill within eighty feet of the centre of the road

"Horses, Coaches, Carts and Carriages . . . . . would not nor yet can so safely pass and repass in, through and over the common Highway"[2].

The phraseology in the charge is drawn from one of the numerous statutes concerning highways in England and has already been mentioned in relation to Shapwick Windmill[3]. Although the statements from the witnesses are missing from the records of the Quarter Sessions, there is no doubt that the miller had contravened the relevant legislation, the penalty for which was the demolition of the mill.

In this particular case, however, there is a sequel. One year after the indictment had been preferred an article appeared in the 'Taunton Courier' newspaper which provides additional evidence. It remarks that as the Defendant

"purchased the Wind Mill about three years ago, for a term of ninety-nine years, and has borrowed most of the money to complete the purchase, his ruin is nearly involved in the decision"[4].

It seems that George Maker's predicament in having to take down his mill and face possible bankruptcy received a sympathetic hearing. The newspaper columnist endorses a previous suggestion that a subscription should be raised for the unfortunate miller. This proposal may have been common in cases of hardship but may reflect the miller's standing in the local community. Britain was at war with France at this time and the loss of a mill was perhaps keenly felt under these circumstances.

Although the newspaper credits George Maker with having built the mill there are no details about its construction or its location, apart from its proximity to the Wells to Taunton road. If erected in the first decade of the 19th century it seems probable that the windmill had a stone tower and that it was the successor to an earlier post-mill known to have existed in the village (approximate location ST 377313)[5]. Mr. Watts has commented that the stated height of sixty feet is a good deal for Somerset windmills, whether the distance is measured from the ground to the top of the mill or to the tip of the sails. The mill at Othery may therefore be another taller tower mill such as those built at Willtown, Curry Rivel, and Pibsbury[6].

The scenario is, at this juncture, incomplete but there is the possibility of finding other chance references. Nevertheless, the details make a further contribution to the published information on Somerset windmills.

### NOTES AND REFERENCES


1. Somerset Record Office, D/T/ta.8., Taunton Turnpike Trust, 1806-19.
2. Somerset Record Office, Q/SI 430, 1810, Indictment No. 34.
3. C. A. Buchanan, 'Shapwick Windmill", J.S.I.A.S., 1, 1975, 16-17. Later legislation appears less lenient: 5 & 6 Will. 4.c.50 prohibited windmills within fifty yards "from any part of any carriageway or cartway".
4. Taunton Courier, 1811 31 January.
5. A. J. Coulthard and M. Watts, 'Windmills of Somerset' (London 1978)56.
6. M. Watts, private correspondence, 1979 23 April.


## PARRETT IRON WORKS

These works are a rare survival of the type of structures which housed the various operations of the flax industry of central Somerset and the engineering trades associated with it. The following chronology seeks to unravel the inter-related businesses and the personalities which have utilized the site adjacent to the River Parrett near Martock (ST 445187).

1086 Known as Walter's Mill.
18th cent. Had become known as Cary's Mill.
by 1811 A snuff mill was in operation.

1837 George Parsons, born at West Stour, Dorset, in 1807, was farming 300 acres for Lord Portman at West Lambrook. Parsons was one of the first members of the English Agricultural Society (later Royal Agricultural Society). He also managed a flax works at West Lambrook.

1842 Parsons exhibited a patent stack roof at the Royal Agricultural Society's show at Derby, made by his blacksmith William Sibley. Although described as a 'gentleman' Parsons was designing machinery in conjunction with George Lister (possibly of the Gloucester engineering firm), Richard Clyburn and Edwin Budding, the inventor of the cylinder lawn mower. The mowers were made at Earl Dulci's iron works at Uley near Stroud, Gloucestershire.

1847 Uley works closed; the patented machines were now made by many firms throughout England. George Parsons and Richard Clyburn design a threshing machine and a linseed crusher which were made at West Lambrook.

1851 'Yeovil Times' newspaper (issue 10 June) reports a fire at West Lambrook.

1853 8 h.p. high pressure expansive steam engine made at West Lambrook and exhibited at a R.A.S. show.

1854 West Lambrook works burnt out. Parsons bought Cary's Mill, re-built it partly from materials from the 18th century Hele Manor House.

1855-1864 The (re-named) Parrett Iron Works houses two businesses. The engineering products including mining, horizontal, high pressure and condensing engines, traction engines, threshing machines, water wheels, corn mills, flax and spinning machinery, power looms and Parsons Patent iron and wood wheels.

The other sector concentrated on rope and twine manufacture including the celebrated Coker Canvas, sailcloth supplied to the Royal Navy in 1862.

1865 The operations become part of a public company—The West of England Engineering and Coker Canvas Company.

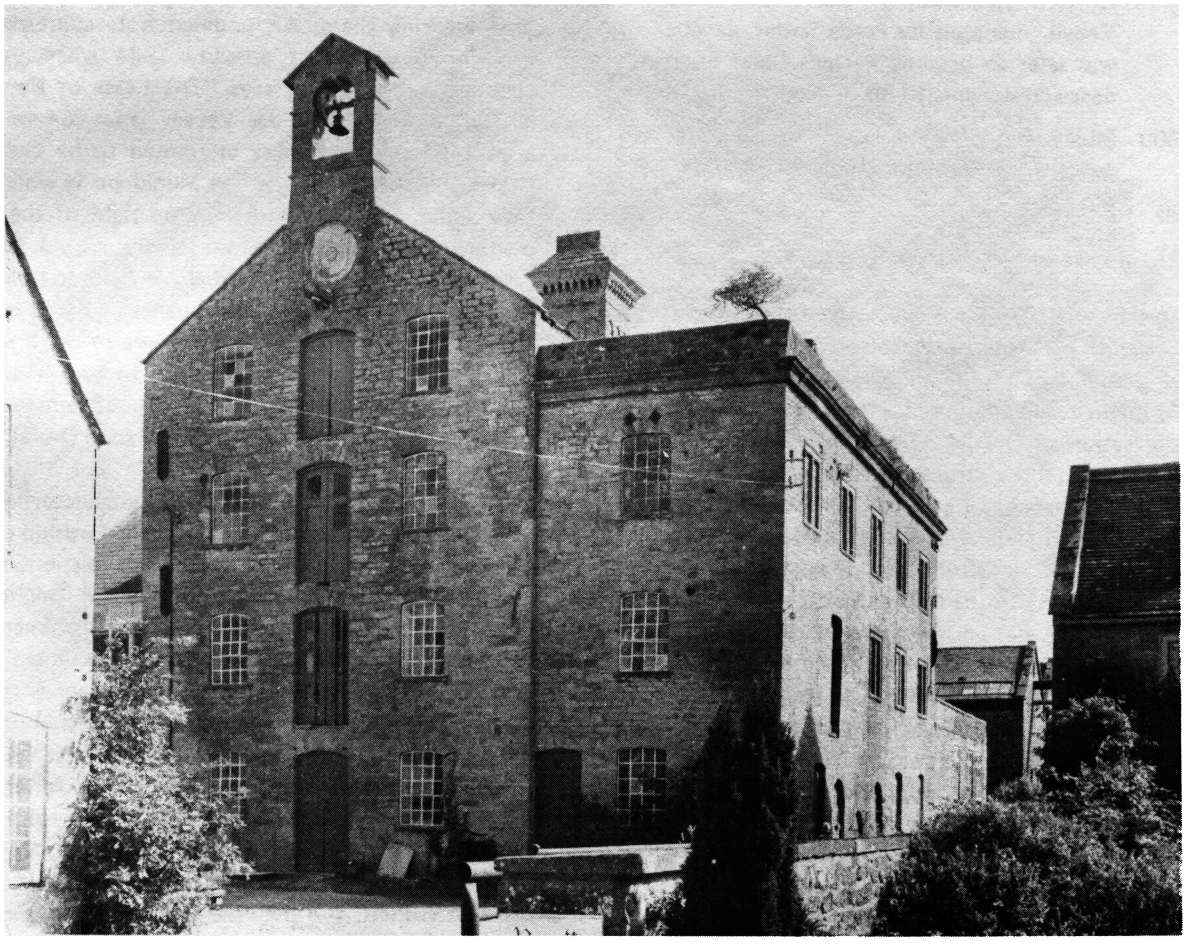


Plate 1. The Parrett Iron Works—the front elevation of the mill with the chimney to the rear, 1978.

1866 A power loom shed is opened, 200 persons being employed in the whole works.

1867 Three members of the Parsons family are removed from the Board. William Sparrow (born in 1833 and in 1851 a millwright of Bourton—probably with Hindly's foundry there) was made manager of the engineering side.

1868 W. Sparrow left to start his own business at Bower Hinton—The Somerset Wagon and Wheel Works, now (1980) W. Sparrow Ltd., Agricultural Engineers.

1869 West of England E. & C.C. Company in liquidation.

1871 Charles Parsons was employing 17 persons and was agent for many agricultural machinery makers.

1875 The engineering was taken over by William Sibley's West of England Engineering Company. They were millwrights, iron and brass founders and became makers of oil engines. The flax side was controlled by George Hedgecombe Smith who made Napier matting, rope and twine, and sash and blind cord.

1894 Benjamin Jacobs left William Sibley's to join the Nautilus Stove Works at Yeovil, managed by Percy Petter. Jacobs was later to become Petter's Chief Engineer and designer of his oil engines.

c.1900 Sibley and Son employed 26 people at an average weekly wage of £1.9.0d.

1928 Sibley's closed.

1941 G. H. Smith closed.

Early in 1978 S.I.A.S. learnt of the impending sale of part of the Parrett Iron Works and, fearing that demolition and/or insensitive alterations might result, mounted a rescue survey under the direction of Derrick Warren. The survey concentrated on three structures: the chimney, the mill and the manager's house, all of which are largely constructed of the local Ham stone. The chimney is an unusually decorated feature and resembles an Italian campanile (see cover illustration). The mill has an impressive northern facade with iron framed windows and a bell tower (Plate 1). Internally it has an iron spiral staircase which also serves as a fire prevention system, the newel being a vertical water pipe with hydrants at each of the four storeys. A water-wheel, 16ft. in diameter and 9ft. 2in. wide, is still *in situ* in the mill and bears the name of its maker, George Parsons. Also within the site exists another water-wheel which worked from the same mill leat. Other iron features such as the roof supports of the mill suggest a local origin.

As a result of the survey by S.I.A.S. members the mill, chimney, manager's house and weir keeper's cottage have been listed by the Department of the Environment as buildings of special architectural or historical interest (Grade II).

## REFERENCES

Dr. S. D. Chapman has taken a particular interest in the flax industry though his research is, as yet, unpublished. There are plans and other documents relating to the Parrett Iron Works at the Somerset Record Office, DD/X/GSN and DD/X/LIV.

## NEWLAND QUARRY

Following the publication of the article by Derrick Warren in Journal Two, Roger Sellick has contributed some additional notes on the subject.

Newland Quarry is linked with the Knights of Exmoor, being part of the Manor of Munkham in Exford which John Knight had purchased in 1824. The abstract of title includes a reference to "Lease of Newland Lime Quarry—from James Veysey to Philip Senge, 20 February, 1790", so that this would seem to indicate the start of lime working there. An undated note addressed to John Knight (but possibly 1834 when the abstract was prepared) says "The Lease of Newland Lime Work from Jas Veysey is no common lease but one which was attempted to be overthrown by the Landowners in Munkham in which they fail'd as they could shew no right of their own to the waste or premises there . . . J. W. Williams of Minehead defended his right to Chidley's House, &c., for the continuance of the Lease which he had purchased". The lessee of the lime works and house therefore appears to have had a good title in his own right, and J. W. Williams was doubtless the John Williams referred to in Orwin[1].

However, in 1845 Frederic Knight succeeded in establishing his father's claim to the lordship of Munkham before the Inclosure Commissioners, and on 20 December, 1845, wrote to John Knight: "Our next step is an action which I have commenced against 2 persons who are working a limekiln in the enclosed lands at Newland". There is no further reference to this in surviving correspondence but in an estate valuation by Robert Smith in 1853 the entry "Lime Quarry, Land & Cottage —£1,100" appears under Exford. The rent roll in the next year gives both as occupied by H. Mathews (the tenant of Honeymead) who paid 6d. per 100 bushels, and gives the address as Newland. The following year the rent is 10s. on the cottage and "Newland Lime Kiln" is a flat £10 per annum.

This kiln is apparently a different one to the main lime works for Robert Smith writes on 20 June, 1852 "I have let Comer the Exford Allott. near his Lime Kiln", and from a letter of 1846 it appears that the Knight lime was always intended to go to Mathews. When Honeymead was divided in 1861, Francis Comer became tenant of the Picked Stones portion and with it the kiln, so he probably used it connection with the lime works. The kiln seems to have later gone into disuse, as a rent roll c.1900 gives John Wescott as tenant of "Cottage & Land known as (sic) Nowland" with a note that "This tenant works the Lime Kiln at Newland".

## REFERENCE

1. C. S. Orwin and R. J. Sellick, 'The Reclamation of Exmoor Forest', David & Charles (Newton Abbot, 1970) 62.

## A LEATHER DRESSING WORKS

In July, 1978, by kind permission of the managing director of Perrin Leather Company Limited, S.I.A.S. members carried out a survey of a structure at Eastland Road, Yeovil (ST 561162), prior to its demolition. The building was an extension to a stone built four-storeyed block (Plate 1) and consisted of a pierced brick gable end wall, and a side wall which was mainly five bays of adjustable timber louvres running the full height of the building.

Although part of the works dates to 1853, it is believed that it was on this site that John Ryall began the first dressing of kid and lamb skins in Yeovil in the 18th century.

## REFERENCE

L. E. J. Brooke, 'The Book of Yeovil', Barracuda Books (Chesham, 1978) 80.

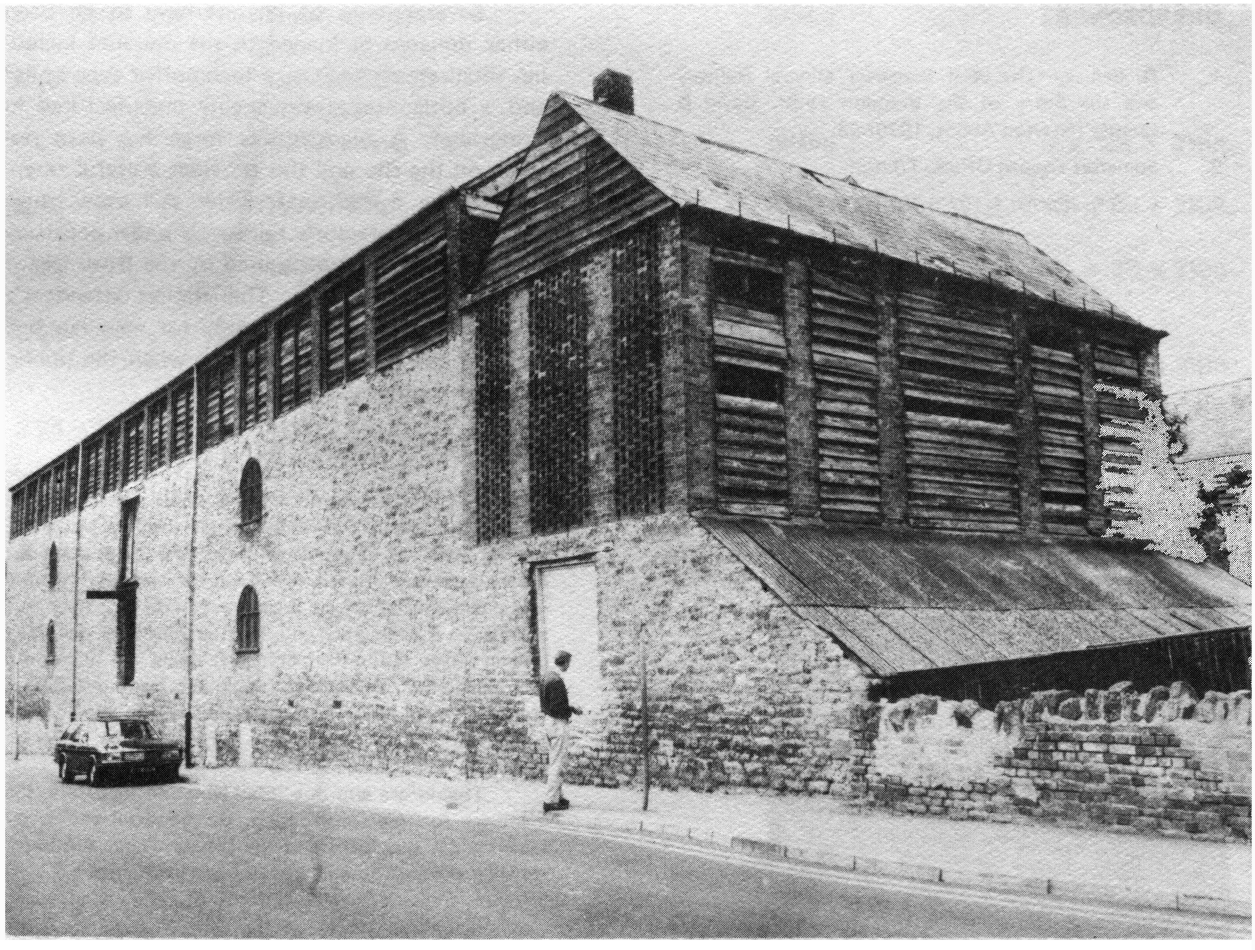


Plate 1. The Leather Dressing Works, Yeovil, 1978.

## KENNISHAM HILL ENGINE HOUSE

This structure (SS 963360) was one of six permanent engine houses of the Cornish pattern on the Brendon Hills. Built in 1873 it housed a rotary beam engine which served the dual functions of pumping and winding in connection with an adjacent iron mine[1]. It was operated by the Ebbw Vale Company until 1883 but during 1978 the Forestry Commission demolished the remains. Before this took place trees in the vicinity were felled allowing an uninterrupted view of the structure. Frank Hawtin made a photograph record (Plate 1) which supplements an earlier measured drawing by Michael Jones[2].

There now remains only one example of this type of building on the Brendon Hills at Burrow Farm (ST 009346)[3]. The Exmoor National Park, through its advisory panel on archaeolo gical matters, is taking steps to secure its preservation and provide access for the public.

## REFERENCES


1. R. Sellick, 'The West Somerset Mineral Railway and the Story of the Brendon Hills', David & Charles (Newton Abbot, 1970) 53.
2. Somerset Record Office, T/Ph/jn.
3. S.I.A.S. Journal 1(1975) 46.




Plate 1. Kennisham Hill Engine House, 1978.

## WESTONZOYLAND ENGINE TRUST

In October, 1977, the volunteer Westonzoyland Engine Group (W.E.G.) was formed to restore to a working condition the retired engine and buildings. This followed a request earlier that year by the Wessex Water Authority to members of the Somerset Industrial Archaeological Society for help in maintaining the disused steam pumping plant. At first S.I.A.S. members were engaged in cleaning and removing the rust from the engine but it was felt that the engine could be made to turn again under steam. Permission was given by the W.W.A. and plans were conceived to create a museum dedicated to steam power and land drainage and open to the public. W.E.G. was set up to organize and control the project which was outside the scope of S.I.A.S.. These efforts culminated in April, 1980, when the Group obtained charitable trust status with a lease of the Pumping Station from the Wessex Water Authority.

Several items of interest have so far been either donated or loaned to the museum including small steam pumps, a locomotive type boiler and a horizontal steam engine manufactured in Bridgwater. A blacksmith's forge has been restored on the site and this provides a useful extension to the workshop facilities. A narrow gauge (2ft. 0in.) contractor's railway is under construction similar to that once used by the River Board for bank maintenance. The station attendant's house has been used not only for meetings but also for the display of exhibits when the public have been admitted to the station.

## ACKNOWLEDGEMENTS


The Westonzoyland scheme would not have been possible but for the forethought of the late Mr. E. L. Kelting who, as Chief Engineer of the then Somerset Rivers Catchment Board, preserved for posterity the premises and machinery at Westonzoyland. Mr. Kelting's actions, at a time when industrial archaeology was in its infancy, have resulted in Somerset being the home of a fine collection of drainage machines from the Easton Works. (The exhibits at Aller Moor can be seen by appointment).

Thanks are also due to all who have helped: to the members for their dedication, the goodwill shown by local people and firms and the Wessex Water Authority for their patience, encouragement and assistance.

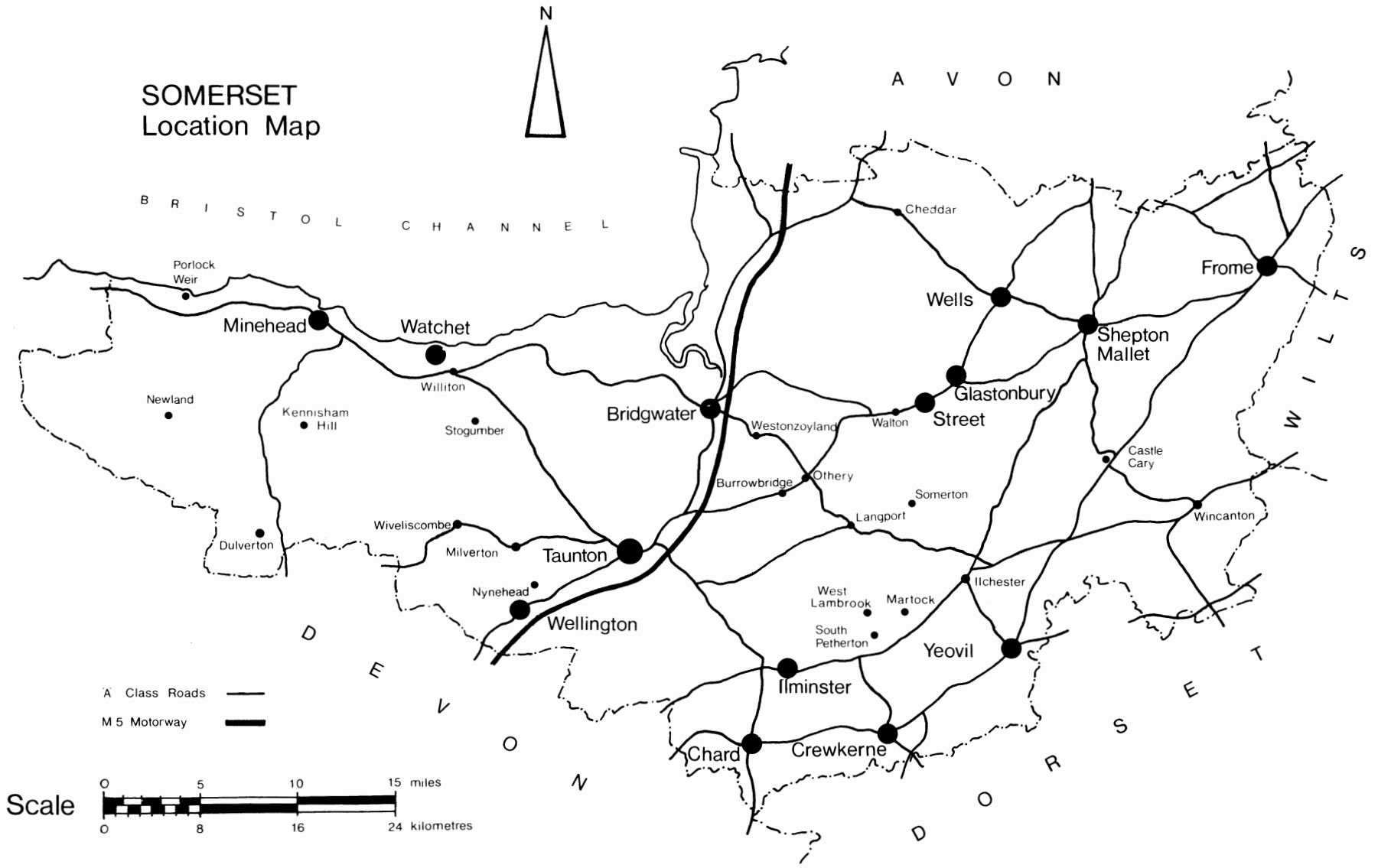

In the brief life of the project steady progress has been made in the fulfilment of the aims and objectives relating to the buildings and plant. Nevertheless, help is needed to supplement the work of the small but dedicated group of volunteers and further details can be obtained from the writer at Brierley Cottage, Lower Durston, Taunton, Somerset. So far only one major cash award has been made, the costs being met by money raised on open days and from members themselves.

## BATH BRICKS

In addition to the lists published in Journals One and Two, Michael Maxwell has supplied notes on Bath bricks which he has collected.

(Asterisks indicate lines of curved lettering).

| | | | |
|---|---|---|---|
| S.15 | COLTHURST & CO.*<br>PATENT | (Plain) | 6¾ x 3¼ x 2in. |
| S.16 | THE PARRETT<br>BATH BRICK CO.<br>LIMITED,<br>BRIDGWATER* | (Plain) | 6¾ x 3¼ x 2in. |
| S.17 | THE PARRETT<br>BATH BRICK CO*<br>LIMITED,<br>BRIDGWATER* | (Plain) | 6¾ x 3¼ x 2in. |
| S.18 | MAJOR LATE SEALY*<br>IMPERIAL<br>PATENT | (Plain) | 6½ x 3¼ x 2in. |
| S.19 | IMPERIAL*<br>PATENT<br>(small letters) | (Plain) | 7¼ x 3¼ x 2½in. |
| S.20 | IMPERIAL*<br>PATENT<br>(large letters) | (Plain) | ? x 3½ x 2½in. |
| S.21 | IMPERIAL* | PATENT | 7½ x 3½ x 2½in. |
| S.22 | IMPERIAL* | (Plain) | 7½ x 3¼ x 2¼in. |
| S.23 | SEALY'S*<br>PATENT | (Plain) | 7¼ x 3¼ x 2½in. |
| S.24 | IMPERIAL*<br>BATH * | (Plain) | 8 x 3½ x 2½in. |
| S.25 | BATH*<br>PATENT* | (Plain) | 7½ x 3¼ x 2½in. |
| S.26 | BROWNE & CO*<br>PATENT<br>BRIDGWATER* | (Plain) | 6¼ x 3¼ x 2¼in. |
| S.27 | (Plain) | (Plain) | 9 x 4½ x 2½in. |


SOMERSET
Location Map
N
BRISTOL CHANNEL
AVON
Porlock Weir
Minehead
Watchet
Williton
Newland
Kennisham Hill
Stogumber
Bridgwater
Cheddar
Wells
Frome
Shepton Mallet
Glastonbury
Street
Westonzoyland
Walton
Castle Cary
Burrowbridge
Othery
Somerton
Langport
Wincanton
Wiveliscombe
Dulverton
Milverton
Taunton
Nynehead
Wellington
West Lambrook
Martock
South Petherton
Ilchester
Yeovil
Ilminster
Chard
Crewkerne
DEVON
DORSET
SOMERSET
WILTS
A Class Roads
M 5 Motorway
Scale
0 5 10 15 miles
0 8 16 24 kilometres

YE OLD GABLED HOUSE,

Establish^d 1798.




Establish^d 1798.

SOLD BY GROCER,

CHARLES LEWIS, WINE MERCHANT &c.

FOR READY-MONEY ONLY.

ROBINSONS BRISTOL

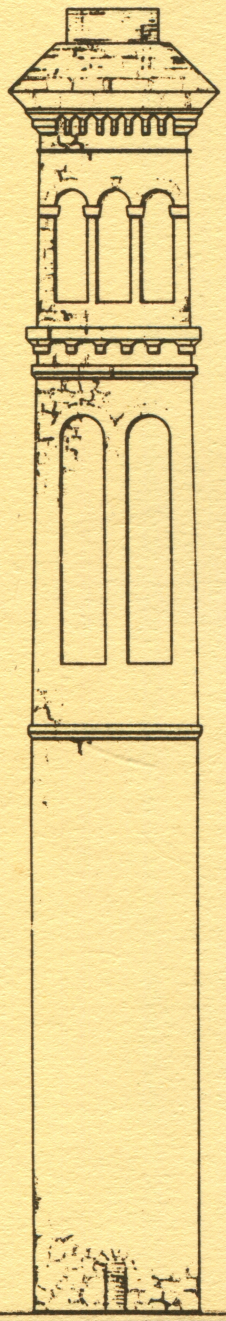
To Mrs Barker Nov^r 16^th 1887

| | | | | |
|---|---|---|---|---|
| 1 lb | Raisins | | | 6 |
| ½ " | Peel | | | 4 |
| 1 " | Currants | | | 5 |
| 12 " | Lump | 2½ | 2 | 6 |
| | | | 3 | 9 |

Paid Rebate

# JOURNAL OF THE SOMERSET INDUSTRIAL ARCHAEOLOGICAL SOCIETY

NUMBER 3



Elevation of the main chimney stack, Parrett Iron Works, Martock