

## THE FACTORY COTTAGES, LYDNEY

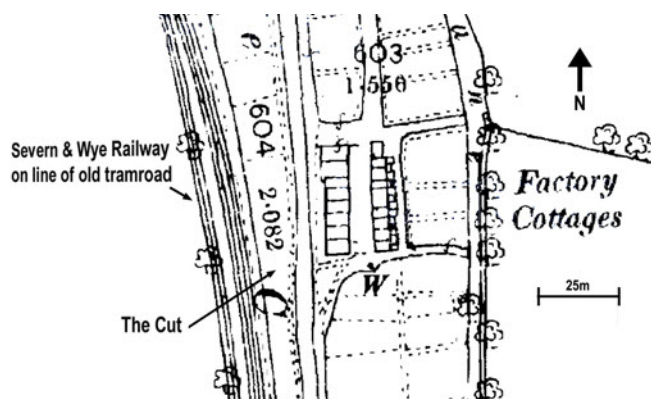
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### Introduction

Factory Cottages, Lydney, was a terrace of small houses, now demolished, alongside the 'Cut' or Pidcock's Canal and situated about 800 m south of Newerne Street, Lydney (National Grid Reference SO 63480295). The canal linked the Upper and Middle Forges in the Newerne Valley with the Lower Forge or 'Tinworks' near the River Severn. The 1880 Ordnance Survey Map of Lydney shows the position of the eight cottages in relation to the 'Cut' (Ref. 1 and Fig. 1). The 1839 Tithe Map shows similarly the eight numbered individual houses within the group beside the canal and a less regular group of buildings opposite which later served as outhouses (2). The cottages have been mentioned in local publications. A photograph of the group of buildings and some of their inhabitants in c.1902 was included in 'A Glance Back at Lydney'. (3) The same photograph is to be found among the Lydney section of the Sungreen website (Ref. 4 and Fig. 2). An aerial photo of 1929 shows the cottages surrounded by their individual garden plots on a washing day (5), and in a 1935 photograph the large chimneys and well maintained roof rise above the level of the railway line from the lower terrace on which they were built (5).

### Description

A row of eight houses faced a row of 'outbuildings' across a narrow court. The houses are separated from Pidcock's Canal to the west only by the 'Cutside' towpath or footpath and narrow yards. A road from Swan Lane, by 1867 known as Factory Lane, served them and the surrounding garden inclosures. On the Tithe Map the houses are numbered (from north to south) 294 to 300, plus 300a, together 8 houses. (2) Each house appears to have had its own small yard, forecourt and facing outbuilding to the east. The Tithe Apportionment (2) shows these houses in the ownership of David Tanner, Trustee Samuel Batchelor, the tenant was Charles Bathurst, by whom the cottages were then sub-let. David Tanner had taken a 99 year lease of the Lydney iron works sites from the Bathursts in 1778 (to 1887). After David Tanner's bankruptcy in 1789 the trustees in bankruptcy are shown to have retained the lease and sub-let the iron works as a means of gaining income to defray some of Tanner's debts. The lease had included the right to build and use the canal. Tanner himself is not known to have begun building the canal but it was the 1778 lease which permitted its building. The name 'Pidcock's Canal' credits Tanner's successors with that achievement. Charles Bathurst appears to have had to lease back his own property. The names of his sub-tenants of the Factory cottages are not given in the apportionment.



From OS 1:2500 map Glos 47.6, 1880

Particularly the name, but also the appearance of the building, suggest that the original use was not as cottages. Examination of the photograph shows that 300a was different from the other seven cottages, being gabled with a different eaves and roof line, resembling a dwelling house at the end of the long rectangular building later divided into the seven cottages. Further examination of the c.1902 photo shows that the main body of the building carries



Photograph from c. 1902 of Factory Cottages Looking South (4)

four short but large chimneys, perhaps better seen in the 1935 photo. The outbuildings, of only one storey, appear to have had similar chimneys. The long front wall of the cottages contained four round apertures below the eaves level which were surrounded by large cut stones, including 'key' stones, at top, bottom and mid sides, significantly contrasting with the rubble stone of the walls. While the chimneys appear to be equally spaced along the roof, the round apertures may be less regularly placed. In the wall of the whitewashed house behind the very large water butt there is a faint suggestion of a wide arch with a central keystone, since filled in and containing the cottage door and ground floor window. It is not clear whether there had been other similar arches. The general impression is of an original long industrial building with four roof top chimneys and four large round apertures providing draught or ventilation, at one end of which was a gabled building of three storeys providing living accommodation for a site manager.

By 1826, at least, the 'Factory' was providing housing for Lydney tin plate works employees, when the first baptism is recorded at Lydney Parish Church of a child whose parents lived at the Factory (Table 1). In c. 1902 the individual houses were identified by varied application of whitewash to the walls. Each house had at the front a rectangular upstairs window, four of them inserted into the circular stone framed apertures, two of similar size inserted at a higher level and the seventh a larger window at a lower level. At ground level each house had a door and window, alternately paired, so that doors are adjacent to each other. There were six roof lights, apparently at or near the junctions between the houses, presumably giving light and air to the roof spaces which must have been used as rooms by the large families known to have been living there in 1841 and 1851 from the census returns.

The outbuildings of one storey appear to be of similar rubble stone to the houses, though the stone above the eaves level may be more regular in shape than that below, and darker in colour, or perhaps only without the remains of whitewash. The chimneys are similar to those of the houses, so possibly original to the factory.

### **The Factory**

Cyril Hart suggested that this might be the site of the 'Chymical Manufactory' intended to be set up by 'Bevington Gibbins of Lydney Chymist' on land next to the canal leased from Charles

Bathurst on 30 September 1814 (6). He suggested that Gibbins may have intended making wood tar for caulking ships, but more ambitiously may have intended making pyroligneous acid with a wide range of possible derivatives. Hart noted that a 'Tarworks' by the canal was converted to cottages by Richard Thomas and Co. but demolished in 1958 (6). As the houses were occupied by 1826 the conversion must predate Richard Thomas's presence which began at Lydney in 1875. More recently Roger Deeks wrote that the works was intended to produce pyroligneous acid and tar, and to process a fine charcoal used in making gunpowder (7). He attributed the short life of 'the Lydney distillery' to the decline in the demand for charcoal for gunpowder at the end of the Napoleonic wars in 1815, implying that the charcoal had been the major product. Neil Parkhouse suggested a building somewhat after 1800 and after the building of the Canal by the Pidcock family of Ironmasters who leased and worked the ironworks from 1790 to 1814. (3). These dates would be appropriate to the 1814 lease of Bevington Gibbins.

### The Lease

The lease of 30 September 1814 of land for the Chemical factory gives more detail of Bevington Gibbins requirements (8). He secured permission for a number of significant actions:-

- to purchase 1,000 cords of wood per annum. from the Bathurst Estate,
- to make and use an iron railway from the land he leased towards the Severn and Wye Railway opposite (a tramroad in 1814),
- to lay iron pipes or vessels necessary for his 'chymical manufactory' in the canal, *liberty to lay iron and other pipes or vessels belonging to the chymical manufactory ..... in the part of the canal fronting on the piece of land .... for the purpose of cooling the said pipes and condensing the steam in them ...*
- *to deepen the canal by his land as much as may be necessary for that purpose.* He must dig out the base of the canal so that boats were not obstructed. The canal water was used to turn the water wheels in the tinworks downstream which might occasionally draw down the canal water to a level where there was insufficient to allow boats to pass above the pipes.
- if necessary, to make part of the canal next to or opposite his land into a reservoir with stop gates at either end to retain the water, provided he dug a ... *channel wide and deep enough for the navigation of such vessels as may be used on other parts of the canal...* and made a tow path on the piece of land he leased to the west of the canal, i.e. an alternative stretch of canal, to avoid experiencing a shortage of water.
- he could build a substantial arched bridge or swivel bridge across the canal, provided it did not obstruct the passage of boats along the canal, to carry his coals, wood or other goods across the canal, in addition to the wooden bridges already erected.
- to dig stone from the Mill Rough Quarry of the Bathursts to build and repair *any houses, buildings or works for the purpose of the said Manufactory* in the plot of land east of the canal, (i.e. where the houses later stood).. Mill Rough Quarry was near Middle Forge so the stone could be brought by canal,
- to use his boats to bring stone or wood along the canal.
- The manufactory was to have Fire Grates *with 'Drafts' above and below for the better consumption of smoke according to the most approved methods used for the like purpose at similar manufactories at Manchester Birmingham and Warwick.*

The principal raw material, wood, the central chimneys, mention of firegrates and the brickwork belonging to furnaces as well as the need to cool the pipes and vessels and the steam in them, all support the interpretation of a factory producing fine charcoal and tar. The circular apertures were probably to help draw the fires and improve the working atmosphere. Hart gives a description of a charcoal gunpowder works which had a brickwork setting along the centre of the building, fires in it at floor level, retorts or cylinders above them in which the cordwood was

placed, with copper pipes at the back to draw off the steam or liquid which was cooled and gathered in barrels. The charcoal from the retorts was allowed to cool thoroughly then ground to a fine powder. Additional buildings would be needed for the later processes. Hart also printed a diagram of a similar distillery which showed the pipes being cooled by a continuous flow of cold water from above, (9). The geographical range of works named as early 19th century distilleries, including the Royal Powder Mills in 1801, Hythe, Fernhurst, Faversham, seven works in Scotland, and those at Manchester, Birmingham and Warwick named in the 1814 lease, show widespread use of the process (8 and 9).

None of these examples mention immersing pipes or vessels in a canal or river. It is likely that Gibbins had to adapt his methods to local circumstances. The canal had two principal uses. First it supplied water which turned the wheels and powered the rolls in the Lower Forge. ... *The iron works (was) to enjoy the full command of the water of the canal...* (8). Next it was to facilitate transport between the Upper, Middle and Lower Forges. Gibbins' Chymical Manufactory might only use the water if these primary uses could still be satisfied. So he must deepen the canal so that boats were not hindered, create a reservoir in part of it only if he cut another by-pass length of canal, and take water from the canal to fill the reservoir but return that water to the canal whenever the water level in the canal permitted. The lease did not allow him to abstract water to run through his buildings.

A document of surrender of the lease by Gibbins to Charles Bathurst is dated 16 October 1816. Rent had been paid up to 29 September 'last', which he requested to be the date of release. The cord wood allocation for the first year had been delivered and paid for. He wished to purchase no more. The lease had lasted almost exactly two years during which the construction and fitting out had occurred and one year's cordwood been used. Gibbins had settled his debts immediately, so had apparently not gone bankrupt. Bevington Gibbins had agreed to remove at the end of his tenure ...*the furnace and the apparatus of the manufactory and the chimneys and all other brickwork belonging to the said furnaces and apparatus, making satisfaction for any damage done thereby to the walls or roof of the building...* He was to surrender to Charles Bathurst all the buildings and erections on the premises, paying Charles Bathurst £160 for the surrender. Charles Bathurst was left with the shell of the factory building, but in good repair. No indication has been found that the canal had been diverted, a reservoir created, or an iron tramroad built.

A letter from Charles Bathurst to John Pidcock mentions the failure of the enterprise and his financial disappointment (10). In 1813 The Pidcock family no longer wished to retain the tenancy of the Lydney Tin works. The furnace had ceased to work by 1810 and a new lease in 1814 was of the works without the furnace (11). A new market was needed for the cordwood off the estate formerly supplied to the furnace and the chemical factory had promised to take that wood.

On October 1st 1814 John James of Redbrook took the lease of the Lydney Ironworks for 21 years, with the intention of transferring his business of tinsplating iron sheet from Redbrook to Lydney (12). By 1826, at least, his workmen were living in the 'Factory.' The earliest so far identified in 1826 was Richard Protheroe born in Newland. William Hazard from Bristol lived at Factory in 1827. He identified himself at his daughter Caroline's baptism at Lydney Parish Church as a shearer at Mr. James' tin works. In 1841 four of the 'Factory' householders had been born outside Gloucestershire. Skilled metal workers were very mobile and iron masters provided housing near their work. As the production of tin plate increased more employees were required and more accommodation, in addition to that already existing at the forges and in Lydney town. Charles Bathurst appears to have converted the Factory shell into houses for

some of those workers. Censuses show that that Factory Cottages were occupied almost exclusively by tin workers until at least 1901, with some families remaining over 20 years. Boys grew up there to work with their fathers, married and shared the house with their parents. Single lodgers and relatives, widowed mothers and brothers came to share in the work and the homes.

## Conclusion

Factory cottages have long gone. The evocative photo of c.1902 is a snap shot near the middle of their life. It is the only photo found of the front of the houses. Built beside the canal and off what started as a track into the fields, in-looking towards the courtyard, it is not surprising that postcard photographers did not reach them. As they survived and were lived in throughout World War II more recent photos may exist and would be welcome, particularly if the stone work can reveal more clearly the original form of the buildings. The documentary evidence of the lease, baptisms and censuses with the c.1902 photograph and more recent studies of wood distillation processes, have enabled a small part of the former Lydney landscape to be better understood. It is difficult now to imagine barges carrying stone, coal and wood drawn by men or animals along the narrow 'cut' next to the tram road or the industrial activity along the banks in the Newerne valley.

## References

- (1) Ordnance Survey, 1:2500 map, Glos. 47.6, First edition, 1880.
- (2) Gloucestershire Archives (GA) Lydney Tithe Map, GDR/T1/117, 1839 (Award 1840).
- (3) Parkhouse, N., *A Glance Back at Lydney*, Black Dwarf, Lydney, 1998.
- (4) [www.sungreen.co.uk/Lydney/SwanLane.htm](http://www.sungreen.co.uk/Lydney/SwanLane.htm) (retrieved 19 August 2011 and used here by kind permission of the site owner, Geoff Davis).
- (5) Pope, I, How, B., and Karau, P., *The Severn & Wye Railway, Vol. 1*, pp. 71-2, Wild Swan, Berkshire, 1983.
- (6) Hart, C., *The Industrial History of Dean*, David & Charles, Newton Abbot, p. 343, 1971.
- (7) Deeks, R., *The Wood Distillation Works and Munitions Supply in the Great War*, New Regard, 6-18, p.8), 2010.
- (8) GA, D421 T79.
- (9) Hart, 1971, pp. 338 - 342, for more detailed descriptions.
- (10) GA, D421 E47.
- (11) Hart, 1971, pp. 93; GA, D421 T105.
- (12) Morris, P. A., Gloucestershire Society for Industrial Archaeology Journal for 2003, pp 3-9.

**Table 1 - Factory Occupants 1826-1842 from Baptisms in Lydney Parish Register**

<i>Baptism date</i>	<i>Names</i>	<i>Occupation</i>
26.2.1826	Thomas son of Richard & Eleanor Protheroe	Labourer
26.10.1826	Mary daughter of John & Anne Jenkins	Scaler
23.11.1827	Caroline daughter of William & Mary Hazard	Shearer
10.2.1828	Jasper son of William & Anne Hazard	Shearer
24.3.1828	Eleanor Anne daughter of Richard & Mary Protheroe	Forgemen
22.7.1834	Alice daughter of Elijah & Eliza Morris	Doubler
7.9.1834	Thomas Edward son of John & Betsy Birt	Doubler
31.3.1836	Hannah Wood daughter of John & Betsy Birt	Doubler
8.5.1836	Christopher son of Elijah & Eliza Morris	Doubler
12.3.1837	Asinath daughter of William & Ann Hazard	Shearer
26.5.1837	Frances daughter of Elijah & Ell. Morris	Doubler
15.9.1837	Samuel son of Samuel & Ann Bennett	Scaler
13.12.1838	James son of William & Sarah Arman	Washman
17.1.1841	Susanna Elizabeth daughter of William & Sarah Arman	Washman
15.3.1842	Thomas son of Samuel & Ann Bennett	Scaler