

# INDUSTRIAL ARCHAEOLOGY NEWS

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## Josiah Wedgwood Bicentenary

*The great potter Josiah Wedgwood died on 3 January 1795, and it is right that the event should be celebrated. But what is it that made him so famous? He certainly revolutionised the manufacture of pottery by introducing new fine wares along with mass production which increased efficiency and reduced costs to provide inexpensive quality pottery within the reach of more people. He was also successful in marketing and was influential in the development of transport systems around Stoke-on-Trent.*

The 'Father of English Potters' was born at Burslem, Staffordshire in 1730, the youngest of 12 children in a family with a potting tradition. After his apprenticeship, he became a partner in 1754 of Thomas Whieldon of Fenton, said by some to be the greatest English potter of his time. Whieldon gave him reign to experiment, but within five years he set up on his own at the Ivy House and Potworks at Burslem.

It is said that Wedgwood's greatest achievement and contribution to the British pottery industry was the development and production in 1762 of the cream coloured earthenware which later became known as Queen's Ware after the unsolicited patronage of Queen Charlotte. Commercialising on this, he was quick to print 'Potter to Her Majesty' on his bill headings. He found that by first cultivating the custom of royalty it was inevitable that the 'middling people' would wish to follow their example. Catherine the Great's famous 'Frog Service' of 1774 was of this type. This enormous dinner and dessert service for 50 people consisted of 952 pieces hand-decorated with paintings of 1,244 different English scenes, with the addition of green enamel frog crests. The bill came to £2,290 12s 4d.

With great patience, Wedgwood experimented with many ceramic bodies, as his notebooks record. His first ornamental ware was developed in 1768. This was Black Basalt, an improvement on the cruder 'Egyptian black' already being manufactured by Staffordshire potters. True to his prediction that 'the Black is sterling and will last forever,' it has remained popular ever since for vases, teawares, busts and cameos. After thousands of experiments over three years, Wedg-

wood perfected his last ceramic body known as Jasper in 1774. This is an unglazed vitreous fine stoneware which can be stained blue, green or other colours as a base for applied white classical reliefs or portraits in the same material. It was prized above all his products and is still a valued ornamental ware of world class. He considered his finest ever achievement was the replica of the Barberini or Portland Vase in 1789. Jasper ware continues to be made today, with its finely detailed bas-relief ornaments still applied by hand.

Cameos in Jasper and Black Basalt wares were produced as jewellery in metal mounts manufactured by, among others, Matthew Boulton at Birmingham. Medallions were produced too, among them the well-known Slave Medallion of 1787 depicting a manacled kneeling slave with the caption 'Am I Not A Man And A Brother?' for Josiah was a campaigner for the abolition of slavery. He was also sympathetic to the American War of Independence and the French Revolution.

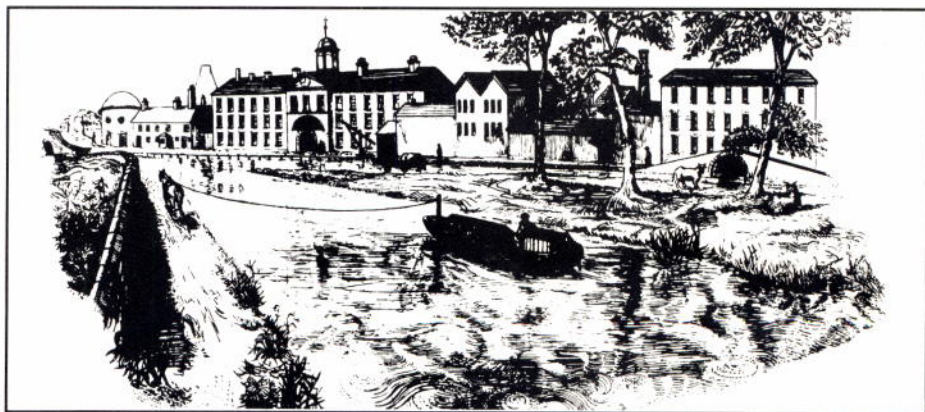
Wedgwood was in partnership with his close friend Thomas Bentley, a Liverpool merchant, from 1769 until the latter's death in 1780. The international success of the firm was undoubtedly aided through Bentley's many contacts, and travellers throughout Europe, and even North America, soon became familiar with Wedgwood earthenwares. Many of the great European potteries were soon imitating Wedgwood's work, which can only be seen as a compliment.



*Josiah Wedgwood I by George Stubbs, enamel on bisque plaque* Photo: Josiah Wedgwood & Sons Ltd

The enquiring and scientific side of Wedgwood turned to matters other than the perfection of new bodies and manufacturing processes. For example, he invented a pyrometer which could measure very high temperatures, valuable in the ceramics industry, and for this he was elected a Fellow of the Royal Society in 1783.

His other key role in the developing Industrial Revolution was his active promotion of transport



*The Etruria factory, Stoke-on-Trent, (1759-1950)*

*Josiah Wedgwood & Sons Limited*

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systems to open up the isolated Staffordshire potteries district, first turnpikes and then the Trent and Mersey Canal, of which he was treasurer. It was Wedgwood who cut the first sod in 1766, but the full 93-mile route was not completed until 1777. He had his own interest in this of course for it reduced transport costs through to Liverpool and Hull, and opened up the continental markets. The waterway facilitated the carriage of delicate pottery products and also allowed for the importation of bulky raw materials such as Cornish clays.

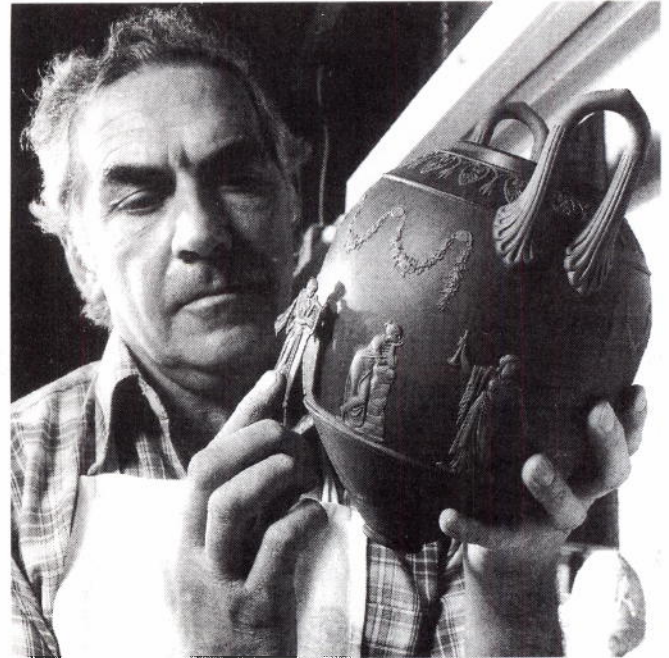
Meanwhile, Wedgwood's manufacturing base had moved first to the Brick House Works (known as the Bell Works because he installed a bell to summon his workers), and then on 13 June 1769 to a purpose-built factory beside the line of the proposed Trent and Mersey Canal. The layout of this Etruria Works is said to have been influenced by Matthew Bolton's Soho Works at Birmingham which was opened just three years before. Wedgwood's famous factory took the name 'Etruria' because at the time there was a widespread belief that the Greek and Italian pottery being excavated at Pompeii was Etruscan. Here, mechanisation was introduced in the 1770s, which increased output and lowered costs. Mass production of ornamental wares was achieved with moulds which could be used by semi-skilled workers.

Around 160 years later, through foresight and at a time of difficulties in the industry, the fifth Josiah Wedgwood purchased a site with room for expansion for a new factory at Barlaston. Production started in 1940 but it was not until 1950s that the old Etruria site was closed.

It is satisfying that unlike so many famous

industrial names, the Wedgwood company, founded in 1759, is still going strong. Indeed the Wedgwood Group includes several famous names, including Coalport China (established c1750) and Mason's Ironstone (established 1795). The headquarters factory site at Barlaston, Stoke-on-Trent, is the most extensive and modern of its type in the world, combining traditional eighteenth century craft skills with the latest technical processes in the manufacture of high quality tableware and ornamental wares in fine bone china, fine earthenware (Queen's Ware), Jasper Ware and Black Basalt.

So 1995, this bicentenary year of Josiah's death, is being celebrated in great style. A major exhibition entitled 'The Genius of Wedgwood' is to be held at the Victoria and Albert Museum in London from 8 June to 17 September. The central attraction will be around 250 pieces of the Frog Service produced for Catherine II of Russia in 1774, sent direct from St Petersburg for this exhibition. Back at Stoke-on-Trent, there will be special exhibitions at the



**Ornamenting:** each bas-relief ornament is applied by hand to Jasper Ware by a method unaltered since the days of Josiah Wedgwood I - not for the sake of tradition but because it is the best way to preserve the clarity of the fine detail

Photo: Josiah Wedgwood & Sons Ltd

City Museum and Art Gallery, Hanley, and at the Wedgwood Visitor Centre and Museum at Barlaston (☎ 01782 204141). Gallery, Hanley, and at the Wedgwood Visitor Centre and Museum at Barlaston (☎ 01782 204141). □

## Limekilns and typologies

Geoffrey Starmor

*Typologies have long been an important tool of mainstream archaeology, and last year's AIA affiliated societies weekend at Ironbridge examined their use in industrial archaeology. Different industries were discussed, eg. malting (see a summary of Amber Patrick's paper in IA News 91), but a major part of the weekend concentrated on limekilns. The following account summarises the proceedings.*

Midland limekilns were taken by Marilyn Palmer as a particular case for typology. She re-emphasised that typologies provide a theoretical basis for tackling huge banks of data but they had to take into account regional variations. Using some splendid slides to illustrate the main points, Marilyn considered three aspects when studying limekilns:

- Physical content
  - What is the local geology?
  - Is it burning local limestone, (a) for local use, or (b) for export elsewhere?
  - Is it importing stone for use in its hinterland?
  - Is it along a line of communication, such as a canal or railway?
- Spatial distribution
  - Is it a single, isolated kiln?
  - Is it a battery of kilns?
  - Is it a group of kilns in close proximity (as at Calke Abbey)?
- Type of kiln
  - Intermittent or flare kiln?
  - Continuous or draw kiln?

The interpretation of the physical remains to determine whether a kiln has been intermittent or continuous required detailed consideration of the features. Marilyn referred to the excavations by the Leicestershire Industrial History Society at Calke Abbey where the shape of the hearths could be used as a basis for classification. Because burnt lime had to be kept dry, there was a need for storage space close to the kiln, and some kilns incorporated large arches for this purpose.

In conclusion, Marilyn proposed stages in the methodology for establishing a typology:

- Construction of a spatial map of sites
- Interpret the physical evidence on each site, in relation to landowners, topography, geology and communications
- Develop a working hypothesis as to which kilns are intermittent and which are continuous
- Extend the regional hypothesis to a national typology

Subsequent sessions were devoted to shorter contributions from delegates. In Dorset, there were around 80 limekiln sites where enough survives to begin to classify into groups. The classification was based on the draw arch style (see Peter Stanier's accompanying article in this issue). A study of the numerous small farmers' limekilns in the Yorkshire Dales placed great emphasis on the orientation of the draw hole. Of 200 limekiln sites identified in Herefordshire, 59 had remains significant enough to be regarded as buildings, and another 35 were in ruins. A notable regional variation quite unlike anywhere else was found in Norfolk, where nearly all the limekilns were underground, normally with a circular gallery around the central column of the firing chamber.

On the Saturday afternoon, delegates met on the Iron Bridge with the object of gaining experi-

ence in using the AIA-devised Index Record for Industrial Sites (IRIS) forms to record the limekilns in the vicinity. Trying to complete the forms with such a large group was not very successful but the walk to see the limekilns took in the heights of Lincoln Hill above Ironbridge, with unusual views of the wharf warehouse, the Iron Bridge and the power station at Buildwas. The tour crossed the bridge to the less-frequented and wooded side of the gorge where the Bower Yard bank of limekilns was explored.

Some general points about typologies emerged from the weekend:

- Typology is the study of types, which are classes of things having some common characteristics
- Typology is more than merely classification, but is structuring data in sequence by considering changes through time
- Typology is important because it gives order to study it enables groups to be identified in a meaningful way and having identified types, one can choose what to record thoroughly it is a tool in pursuing academic development
- There are possible dangers in using typologies:
  - Typology can cause us to look at some points about a structure and not notice other features
  - Typologies can lead to circular arguments and self-justifying hypotheses, eg. if you say all canal-sited kilns are commercial kilns, then you can show that all commercial kilns are situated on canals.
  - 'Process' is the key to most industrial archaeology but it is easier to base a typology on form, eg. the shape of the draw arch may have no effect on the process of lime-burning.

It was also noted that regional terminology for limekilns causes problems for typology. □

# A suggested typology for Dorset limekilns

Peter Stanier

A survey which set out to establish the age, number, location and survival of limekilns in Dorset gathered enough material to attempt a simple typology based on the draw arch. Although some larger commercial limekilns were operated by lime merchants mostly in the twentieth century, this article is concerned with rural farmers' kilns pre-dating 1900. From over 300 sites, only 71 survive in a condition suitable for making observations on style (for the main results, see *Proceedings of the Dorset Natural History and Archaeological Society* vol 115, 1993).

Each limekiln is so individual that there is little evidence that any two were built by the same hand. Despite this, some general styles can be identified from the most prominent architectural feature, the draw arch. Using this classification, the known limekilns were grouped into five types (with the addition of four others for the commercial-sized kilns). Some regional groupings are suggested when plotted on a map. Type A (round stone arches) are more common around Sherborne in north Dorset. Type B (round brick arches) are common on the chalk areas, where flint could not be used. It was felt initially that Type C (pointed arch) was an early design. This may still be true as these are common in west Dorset, where agricultural writers described early lime-burning in the eighteenth century. However, geology could be a factor, reflecting certain stones' suitability for constructing this simple form of arch. Type D (timber lintels), were cheaper to build in terms of materials. Again, are they an early design? This seems to be evidenced at one site, where a timber lintel was replaced by a brick arch.



above left: Limekiln with round draw arch in stone (type A) at Longburton, North Dorset above right: Limekiln with pointed draw arch (type C) at Loders, West Dorset below: Limekiln with round brick draw arch (type B) at Woolland, North Dorset

Photos: Peter Stanier

Variations include B1 (double brick arch), C1 (pointed brick arch), D1 (double timber lintels) and E (a one-off 'miscellaneous').

It must be emphasised that this is a simple scheme, and the arches vary within each category. The arch feature was chosen as a starting point, being immediately accessible for study, without resort to excavation. It is recognised that the draw arch recess or the draw-hole could be also studied, but the size and shape of the kiln pot is likely to yield most information (except most are infilled and require excavation!). Marilyn Palmer's observations on the shape of the hearth could prove more conclusive when considering the age of the kilns.

