

and for the merchant fleet which supplied England's growing commercial and colonial interests overseas. There was a brief expansion of the industry during the Seven Years' war in the mid-18th century, but from then on decline was rapid due to the introduction of cheaper iron made from coke in other parts of Britain. The last furnace, at Ashburnham, was blown out in 1813, and its forge some 15 years later.



### Mayfield Furnace in the 17th Century

*Showing the furnace and boring mill ponds, the furnace building (top right) and ironworkers' cottage*  
(East Sussex Record Office, AMS 5831/3)

For more about the Wealden iron industry see  
The Wealden Iron Research Group's website:  
[www.wealdeniron.org.uk](http://www.wealdeniron.org.uk)

Artefacts relating to the iron industry can be viewed at  
*Anne of Cleves House, Southover High Street,  
Lewes, East Sussex, BN7 1JA*

Further reading:  
**THE WEALDEN IRON INDUSTRY**  
by Jeremy Hodgkinson  
THE HISTORY PRESS  
Available from bookshops £20.00

**THE WEALDEN IRON RESEARCH GROUP** (WIRG) was founded in 1968 to focus and initiate research into the extinct iron industry of the Sussex, Kent and Surrey Weald. It aims to foster interest in this subject, to work with other groups and institutions having allied aims and, above all, to publish its researches in its annual bulletin, *Wealden Iron*. The group also publishes a twice-yearly newsletter. The standard work on the industry, *The Iron Industry of the Weald*, by Henry Cleere and David Crossley, first published in 1985, contains much of WIRG's research. These publications and other resources are now available on the group's website. In 1981, the group won the BBC's Chronicle Award for Archaeology.

Activities include a Field Group, which organises a programme of archaeological forays, including fieldwalking and surveys, and small-scale excavations. A small team conducts experiments in primitive iron smelting. WIRG holds general meetings with visiting speakers twice yearly, in January or February, and in July.

Membership is open to individuals, families and institutions. Those in full-time education may join at a reduced rate. An application form can be found on the group's website (see left).



Registered Charity no. 281485

*Cover: Cast iron fireback dated 1636 depicting Richard Lenard, founder at Brede Furnace, and the tools and products of his trade*

# THE WEALDEN IRON INDUSTRY



For over 2000 years iron-making flourished in the Weald of Sussex, Kent and Surrey. Using charcoal from abundant woodland, and plentiful clay ironstone, iron production in the region rose to national pre-eminence during the Roman period and, again, at the time of Elizabeth I

‘The Britons wear ornaments of iron at their waists and throats; considering iron a symbol of wealth, they value this metal as other barbarians value gold.’  
Herodianus, *The Roman Histories*

Following his expeditions to Britain in 55 and 54 BC, Julius Caesar reported that iron was being made in the maritime regions of the island. In fact, iron had been made in the Weald from as early as the 3rd century BC, but it was not until the Romans occupied the region a century after Caesar that the Weald began to be exploited widely. Many of the sites from that period are small, but some, like that at Beauport Park near Hastings, were in operation for many decades.



**A Roman tile  
from Beauport  
Park**

*The letters CLBR stand for  
the CLASSIS  
BRITANNICA - the  
British Fleet - which operated  
the ironworks there*

The furnaces used at that time are known as bloomeries, which stood about 4 feet high, and produced a few kilograms of iron after several hours of smelting. Iron ore and charcoal were fed into the top of the furnace, the fire being sustained by pumping hand-powered bellows. This process was not to change for nearly 1500 years. We know little about iron making in the Saxon period and, although it is mentioned at one location in the Domesday Book of 1086, it was not until the 13th century that the Crown began to purchase iron in the Weald. From that period there is evidence of production at a number of locations, particularly in the northern part of the region. In the 14th century water power may have begun to be used to power bloomeries.

At the end of the 15th century, new technology that could produce much greater quantities of iron was introduced from northern France, and the first blast furnace in England was built on land belonging to the Archbishop of Canterbury at Buxted in Sussex. Many ironworkers from the Pays de Bray in Normandy migrated across the Channel to the Weald to provide a skilled workforce for the new industry.



**Iron demi-culverin at Pevensey Castle**

*Cast in the Weald, this is one of two guns originally mounted at the castle; it fired an iron shot weighing nine pounds.*

Blast furnaces differed from bloomeries in their size - they were about 20 feet high - and in their use of water power to operate the bellows. They produced cast iron, most of which needed to be refined in a forge before sale.

After a slow start, new furnaces and forges began to be built, so that by 1540 there were over 50, and within 25 years the number had doubled. By the 1550s the industry was spreading into Kent and Surrey, and into the far west of Sussex. In a significant development in 1543, the first cast-iron

*Master Huggett and his man, John  
They did make the first cannon*

Traditional Sussex rhyme

‘... we that make the great guns ... play as deep as they do at White’s, and there is little difference between standing 50 or 60 pound on a blast of gunpowder, or the cutt of a Card ...’

John Fuller, Sussex ironmaster, 1749

cannon in England was made at Buxted by Peter Baude, a French gunfounder, and Ralph Hogge, a local founder. However, it would be another 60 years before the navy would adopt cast-iron guns for its ships. The 16th century saw a rise in the prosperity of the country, with many new houses being built and towns growing. The bulk of the iron produced in blast furnaces was made into wrought iron bars and sold to blacksmiths, although a useful sideline was the casting of iron firebacks, many of which survive to this day. Until the 1640s, the Weald was the largest producer of iron in the kingdom. However, the establishment of furnaces and forges in other parts of England and Wales, together with the importation of iron from Sweden, began to eat away at the Weald’s markets.

After the end of the Civil War, many forges in the region closed, and the surviving furnaces began to concentrate more and more on casting guns for the navy

## Iron Slag

*Typical examples of material commonly found on iron-working sites*

### Bloomery slag

*Dense and metallic, it may  
contain more iron than the  
original ore; pre-Roman to  
Medieval*



### Blast Furnace slag

*Lighter and glassy, coloured  
from light green or grey to  
black; late 15th to early 19th  
century*

