

*The Clay Industries of Oxfordshire*

# *Oxfordshire Brickmakers*

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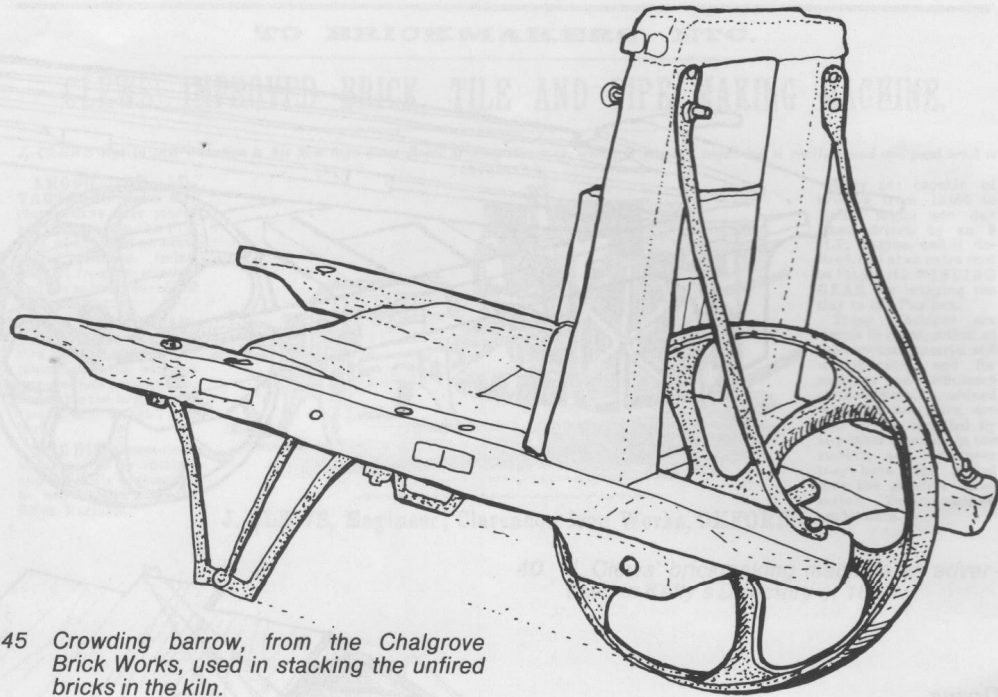


## Firing

The dried bricks would now be taken on special barrows to be stacked in the kiln prior to firing, and considerable skill lay in placing the bricks to ensure a good heat circulation. The earliest type of kiln was the clamp, layers of bricks and fuel being burned together. This surprisingly primitive method seems to have been used at Shiplake in the later nineteenth century, with layers of coal dust and bricks set on edge, covered with old fired bricks, and then set alight. It was left to burn for two or three weeks.

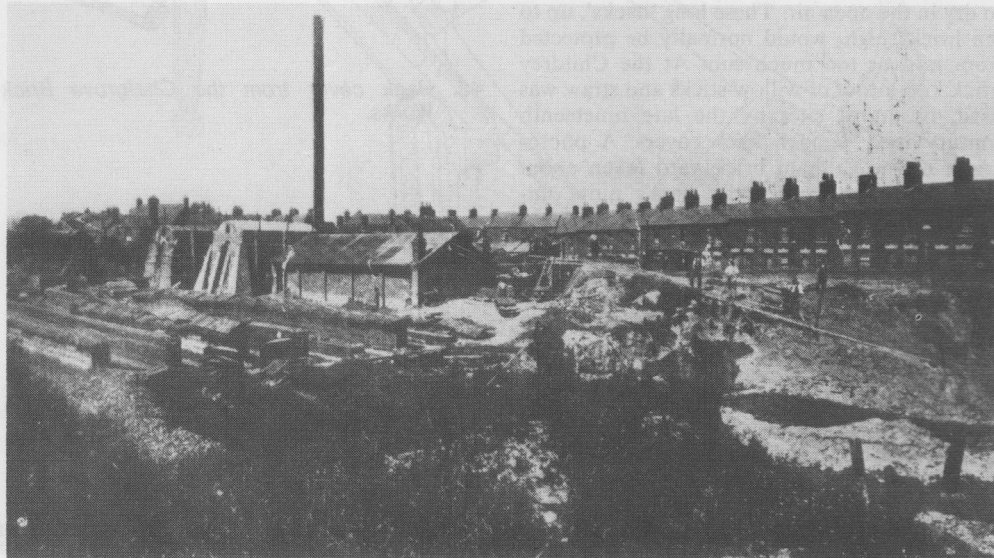
A very considerable improvement was the various forms of updraught kiln. The commonest kiln type in Oxfordshire was the rectangular Scotch kiln, of which some examples survive. The earlier kilns, with fireholes at one end, were loaded through the other end and the doorway then blocked. The hot draught from the fires was drawn upwards through the stacked bricks to holes left in the roof. Refinements on this basic principle may be seen in the surviving though collapsed kiln at Deddington, pre-1898, where the fireholes have been moved to the side walls and increased to fourteen in number, ensuring more even firing. The kiln at Horton-cum-Studley built about 1914 to replace an earlier kiln, probably of simple updraught type, is also a developed updraught known as a Newcastle kiln. There were entrances at each end, flanked by fireholes; fires could also be lit in the entrances, when partially blocked, making six fires in all. Heat was encouraged along internal trenches, by fires lit at the base of chimneys, one in the centre of each side wall. From these trenches, which surrounded and cut across the centre of the platform on which the bricks were stacked, the hot air passed upwards through the bricks to a series of holes in the vaulted roof, which was covered over with soil and ashes. The sides of this kiln slope inwards, being thicker at the base than at the top.

A different type of updraught kiln was the bottle kiln, of which one example has survived and has been restored at Nettlebed. Here the outer brick 'bottle' may be eighteenth century in date, though the internal arrangements are probably later. Both bricks and pottery were fired. The bricks were brought in through the outer entrance and stacked within the square chamber; the entrance was then bricked up. The kiln held about 12,000 bricks. Heat came from below the chamber, from three stoke holes below ground level fuelled from within a brick



45 *Crowding barrow, from the Chalgrove Brick Works, used in stacking the unfired bricks in the kiln.*

46 *Lamprey's Grimsbury Brickyard, Banbury, in 1908.*

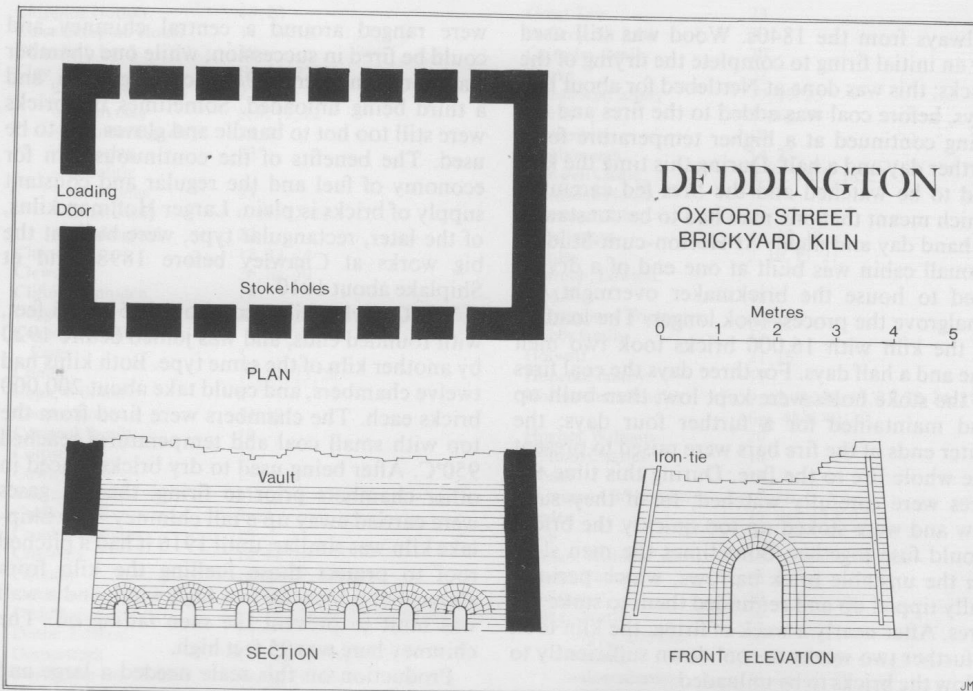


shed built up against one side of the kiln. One problem with the updraught kiln was uneven firing, since the blast of hot air from the firehole had no opportunity to spread before hitting the bricks. It was this defect which produced the blue or grey fired bricks of the seventeenth and eighteenth centuries, which were those nearest to the fire; particles in the clay melted and covered at least one surface with a silvery grey to blue coating. The heads of the bricks, nearest the heat, were normally the surfaces which vitrified in this way, providing opportunities for chequered and diapered effects when used with red brick. It is possible to produce the effect deliberately, by coating the brick with salt, though random blue bricks in some walls suggest it also happened accidentally a good deal of the time. At the Uffington Brick and Tile Works, in the late 19th century, gorse was added to the vent of the kiln during firing to produce a grey brick. Carried to extremes, vitrification could lead to the warping and welding together of the bricks, with great wastage. This was a particular problem with roof tiles, where special care had to be taken with the clay mixture and precautions taken in firing, to protect the stacked tiles from the full blast of the heat by surrounding them with bricks.

The problem of uneven firing was largely solved by the downdraught kiln introduced during the nineteenth century. A kiln of this type built at Chalgrove, though not until 1927, demonstrates the process. The heat from eight stoke holes, arranged down each side of the rectangular kiln, was carried up vertical flues inside the kiln and fanned out over the domed chamber roof, before being drawn down through the stacked bricks to slots in the floor. A tunnel led the heat to a tall chimney, which provided the necessary draught. Lampreys at Banbury had a kiln of this type in 1908.

Downdraught kilns could be circular as well as rectangular in form, as was the case at Uffington, at Culham and probably also at Nettlebed. The hot air was introduced into the chamber at a high level through flues inside, down and out through the slotted floor then up through a chimney.

In the early days of brickmaking wood was the normal fuel, though charcoal might also be used. From the seventeenth century coal became more readily available, though it only came into general use in Oxfordshire with the coming of the canals from the 1770s, and the



47 *The Scotch kiln at the Oxford Street Brickyard, Deddington.*

48 *The Newcastle kiln at the Studley Brickyard, built about 1914.*

