CODNOR PARK IRONWORKS[1]

By K. A. REEDMAN and P. J. RIDEN

CODNOR PARK Ironworks (SK 442514) was established in 1810 by the Butterley Company on the banks of the Cromford Canal about ten miles north of Derby on the borders of Derbyshire and Nottinghamshire (Fig. 1). It originally produced both cast and wrought iron as well as steel. The company, which also owned the nearby Butterley Ironworks and for a time leased another at Silverdale in north Staffordshire, last smelted at Codnor Park towards the end of the 19th century and ceased puddling there in 1965.[2]

By 1971 the forge had been dismantled apart from two single-storey buildings which were probably among the earliest on the site and of which drawings have been made.[3] Both were of local millstone grit with slate roofs supported by cast-iron trusses. The one marked A on Fig. 1 was at one time a rolling mill and that marked B, which was served by a spur of railway, was a machine shop.[4] After the forge closed, Building A was used for some time for grain drying and various alterations were made. During 1972 the buildings began to be demolished.

On the western edge of the site an embankment rising to a maximum height of 30 ft. (9.15 m.) extends almost the entire length of the works and is faced on the south and east with a retaining wall of dressed local freestone (Fig. 2; Plate I). At the southern end of the embankment the truncated remains of two kilns are visible, one of which was excavated in 1971 and a section of the interior drawn (Fig. 3). A considerable portion of Kiln A has been dismantled and of the original only 16 ft. (4.90 m.) remains. The drawhole of Kiln B, which was not excavated, lies about 10 ft. (3.05 m.) below the level of that Kiln A and so more of the structure survives in the embankment. The interior of the excavated kiln was circular above a rectangular lower section and was lined with firebrick. The tunnels leading to the grates of both kilns, one facing south and the other east, are still visible on the outside of the embankment. Fig. 4 shows details of the drawhole and grate of Kiln A. Material excavated from the kiln included freestone and millstone grit building blocks from the embankment, slag, firebrick, small coal, dust and ashes.

The kilns were almost certainly built between 1810 and 1813, at the same time as the first blast furnaces at the works, and were very probably for calcining ironstone in preparation for smelting. They could conceivably have served for limeburning but since the company had a limeworks nearby on a branch of the Cromford Canal this seems most

facing page 164

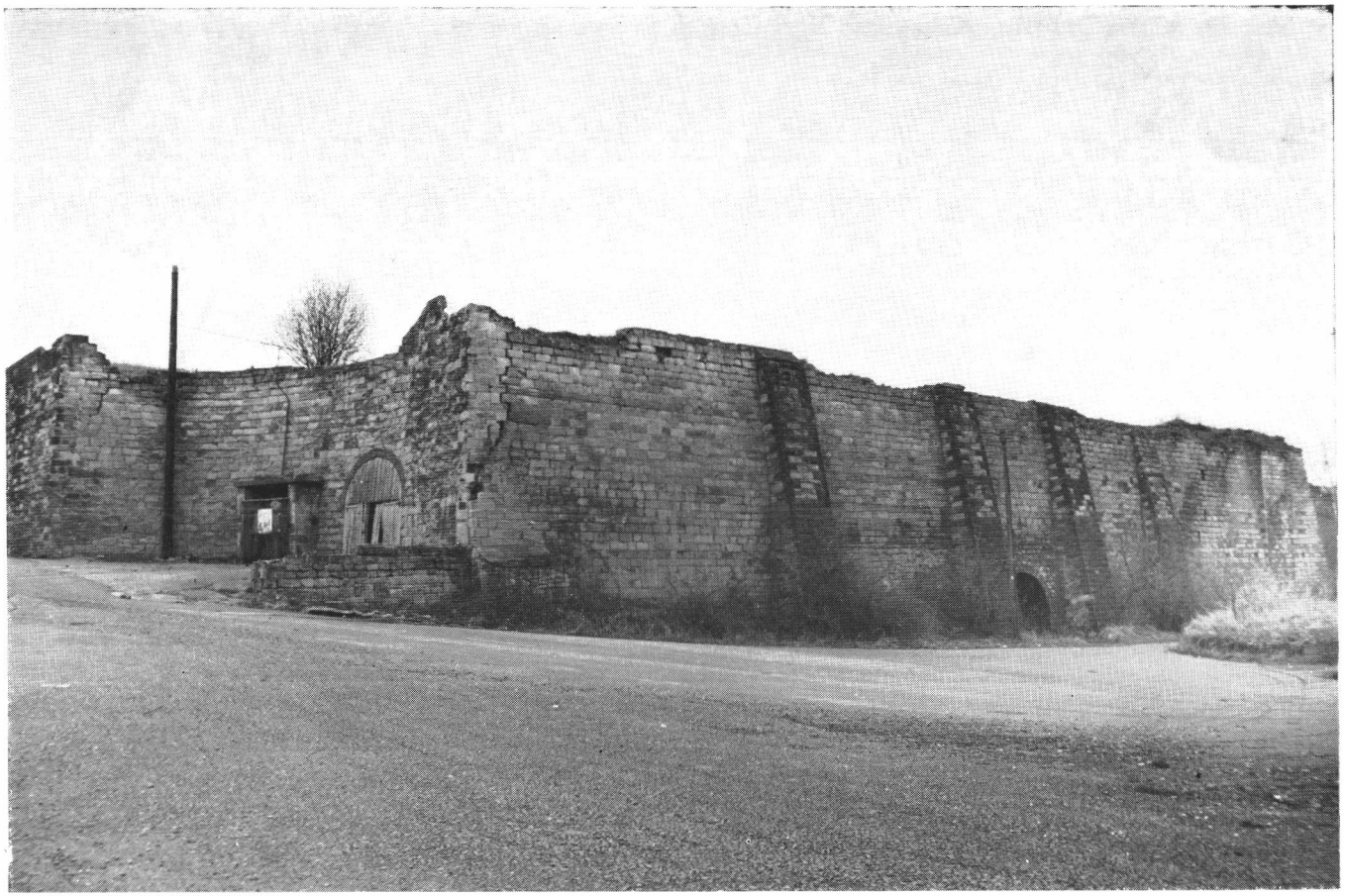

PLATE I. Codnor Park Ironworks: remains of kilns from south-east, 1972.

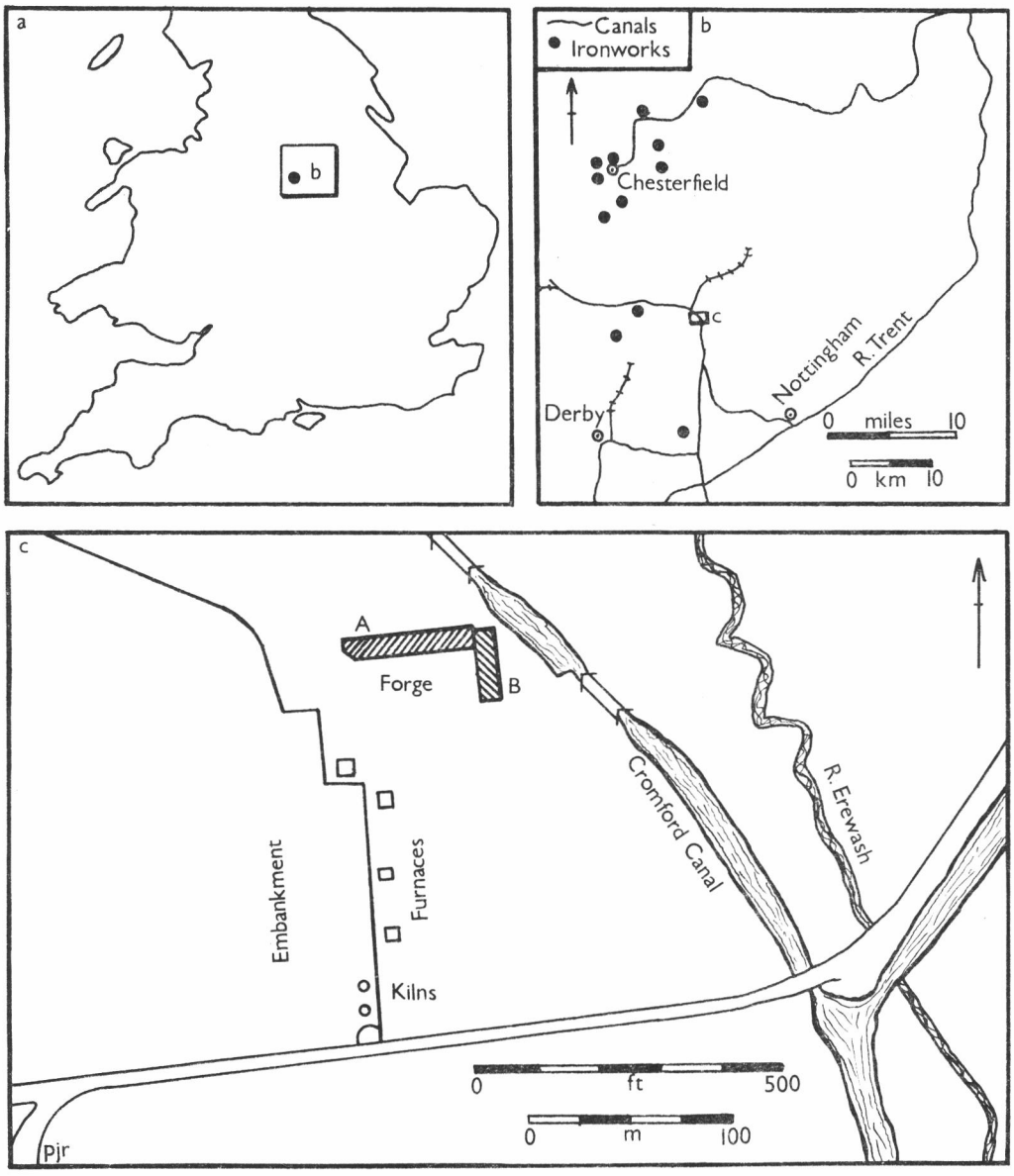

FIG. 1. Codnor Park Ironworks.

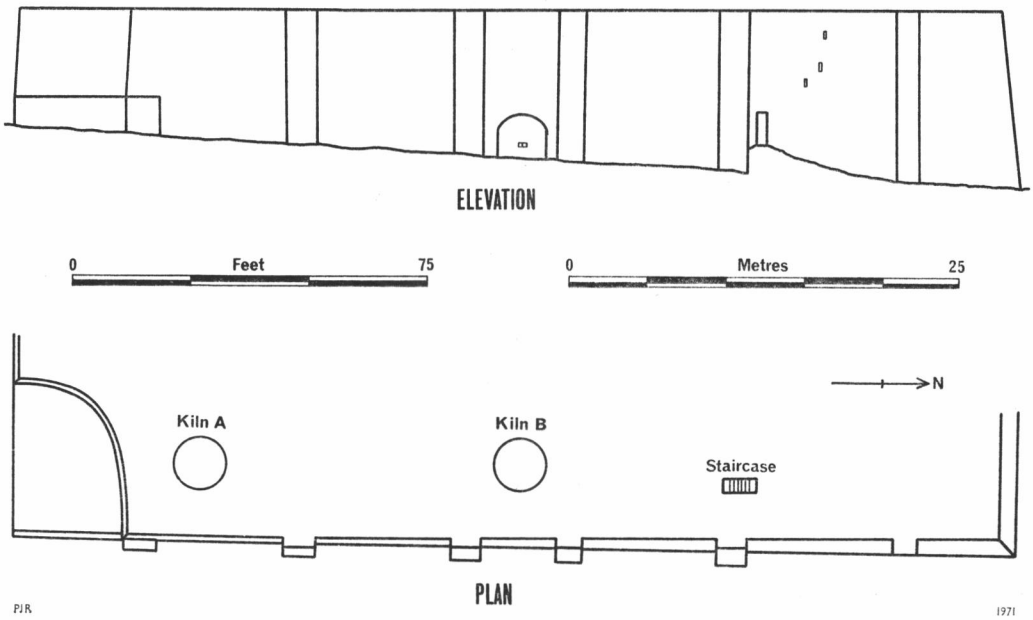

FIG. 2. Elevation and plan of southern end of embankment.

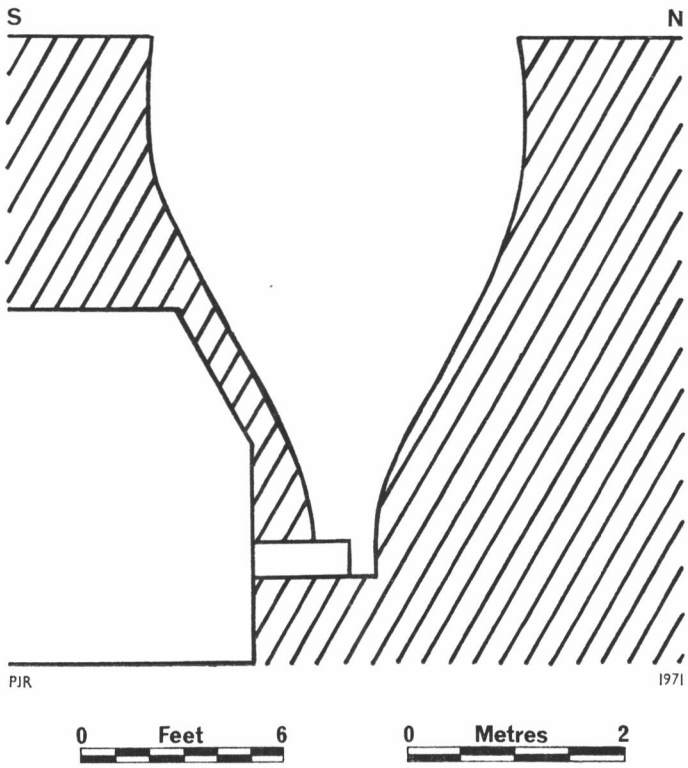

FIG. 3. Section south-north through centre of Kiln A.

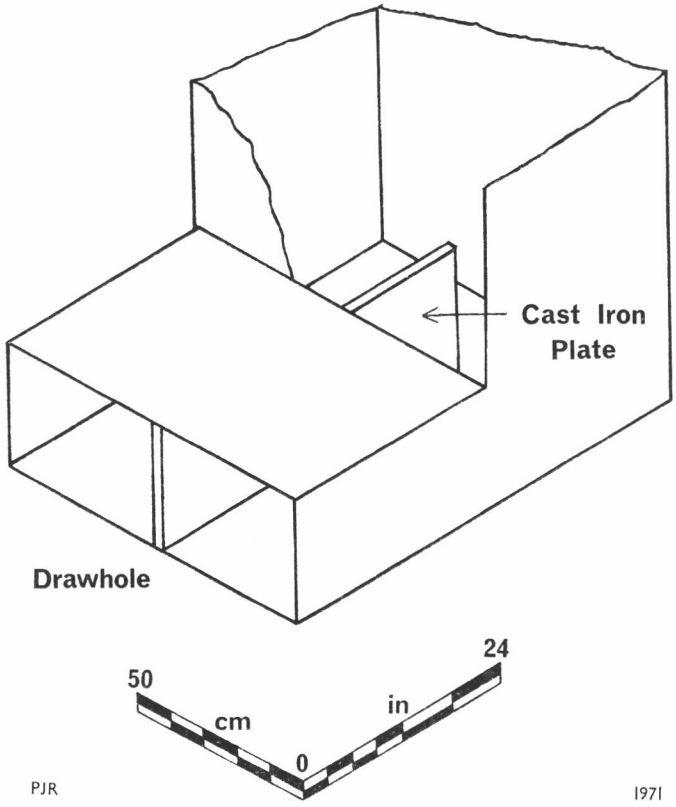

FIG. 4. Detail of grate and base of Kiln A.

unlikely. It is just possible that the kilns at the ironworks were converted for limeburning after the others had been demolished to make way for the Midland Railway's Erewash valley branch, opened in 1847.

The blast furnaces at Codnor Park, of which there were two in 1813, with a third added in 1828 and another between 1850 and 1857,[5] were freestanding structures forming a line running from north to south about 20 ft. (6.10 m.) east of the embankment. No trace of them remains, although a vertical pillar rising the full height of the retaining wall and projecting about 3 ft. (0.90 m.) at the top of the bank probably supported a bridge over which materials were carried to load the most southerly furnace. Between the pillar and Kiln B steps built into the embankment and lit by three narrow lights lead from the foot of the kilns to the top of the bank. There may have been other kilns in that part of the embankment to the north of the pillar which has been much altered, since otherwise its massiveness is difficult to explain.

Although it is impossible to say at present when the kilns were last used it seems unlikely that such early structures would have continued in use until the end of the 19th century, when smelting finally ceased at Codnor Park. After they had been abandoned as such the kilns were converted into hoppers,[6] an operation which involved relining the lower section of Kiln A, and presumably also that of Kiln B, with common brick, which unlike the circular sections shows no evidence of slag deposit. As hoppers the kilns could conveniently be filled from railways on top of the embankment and emptied through the former drawholes. At some stage four millstone grit buttresses were added to the east face of the retaining wall, three of which rose to the full height of the bank, the other to only about 7 ft. (2.15 m.).

In the first generation of Derbyshire coke blast furnaces, built in the last quarter of the 18th century, ironstone was usually calcined in open heaps to remove sulphur, moisture and other impurities, but at the beginning of the 19th century some furnaces began to use kilns, with considerable saving of time and coal. Assuming that the kilns described here were for calcining it is now possible to place Codnor Park alongside Alfreton Ironworks, where Farey noticed kilns,[7] as among those where they were first introduced. Although one would have expected Codnor Park, one of the newer works in the district owned by the largest company in the East Midlands then managed by William Jessop junior, a leading innovating ironmaster, to have been one of the first works to introduce kilns, the discovery of the surviving structures confirms the supposition and is thus an excellent example of the value of archaeological evidence in the study of comparatively recent history. The position of the kilns also adds to our understanding of the original layout at Codnor Park, with kilns strategically placed to receive ironstone brought on to the embankment from pits about half a mile away and to discharge to the blast furnaces a little further east. This is characteristic of the careful planning evident in the design of the works as a whole, in which materials moved steadily eastwards from pits through various stages of manufacture to the canal skirting the eastern boundary of the site. Unfortunately since no other reports of calcining kilns of this period have been published it is not possible to make comparisons with similar structures elsewhere.

REFERENCES

[1] We are indebted to Butterley Building Materials Ltd. for access to the site and to members of Derbyshire Archaeological Society for help with fieldwork. We are also grateful to the Derbyshire Record Office and to the National Coal Board.

[2] Derbys. R.O., D503, Furnace Ledger B, 585; R. H. Mottram and C. Coote, *Through five generations : the history of the Butterley Company* (London, 1950); F. Nixon, *The industrial archaeology of Derbyshire* (Newton Abbot, 1969), 218.

[3] Now at the Derbyshire Record Office, together with photographs.

[4] Information from former employees at the works kindly supplied by Mr. D. H. Burton, 32 Leamoor Avenue, Somercotes, Derbyshire.

[5] Derbys. R.O., D503, 2/30a; *Parl. Papers* 18 (1871), app. 35; National Coal Board, North Derbyshire Area, plan no. 1371 (n.d. but watermarked 1850); *White's history, gazetteer and directory of the county of Derby* (Sheffield, 1857), 253.

[6] Information via Mr. Burton.

[7] J. Farey, *A general view of the agriculture and minerals of Derbyshire*, I (London, 1811), 401.