

## THE FOSSE CROSS LIMEWORKS

David Bick

Lime has been burnt all over the Cotswolds ever since Roman times, yet the subject has never received the attention it deserves.

The last works on any considerable scale were in an isolated spot south of Chedworth, but they have been strangely forgotten, without even a passing mention in several books devoted to the old Midland & South-Western Junction Railway which served them. Few records have so far come to light, and much of what follows are the recollections of old employees gathered over a long period.

### The Pre-war Years

It appears that the Fosse Lime and Limestone Co. was promoted by the late T.F. Coke of Cheltenham, a co-director being his secretary, a Miss Potts. A Mr Pearson was also involved. Previously, Coke had been a director of the Leckhampton Quarry Co., near Cheltenham, an ill-fated venture which attempted to expand a very old industry out of all proportion to the potential. (Its history is described in my book *Old Leckhampton*, 1994). After taking full advantage of Government loans, bankruptcy ensued in 1926, and many years later Coke told me of many bad mistakes which had been made. But much had been learnt in the process, and T.F. COKE & Sons became well-known quarry owners in the locality. They were eventually taken over by Hills of Swindon.

Following the Leckhampton debacle, Coke turned his attention to Fosse Cross, where a long quarry-face alongside the main line and served by a siding already existed. The stone was a very pure white limestone in the Great Oolite formation. The company obtained a lease from the Great Western Railway (who now owned the line) for 21 years from 25th March 1928 with an annual dead rent of £50, mergeable into royalties on the sale of quick-lime and other products. There was also a rental on the railway sidings.

Quite when production began is not clear, but according to Linsdal Richardson the geologist, the plant comprised the following, as well as a 2 ft. gauge quarry tramway:

"Mr. Thomas F. Coke, a Director of the Fosse Lime and Limestone Company, has furnished me with the following particulars of the Plant :-

1. One Lime Kiln of the design of Messrs. Mignon, Roland and Bourgoin of Paris, It is a mixed feed type, the kiln being fed by means of a lift which carries up the trucks of fuel and stone. The Lime is dropped on to a conveying belt which is worked by means of an electric motor, which screens out the smalls which are sent to the Hydrating Plant as described below, and the Lump Lime is picked and dropped direct into the truck. Output capacity 400 tons per week.
2. One Barron Dreadnought Crusher and Mill utilised for making Leckhampton Poultry Grit of which there is a large sale, and which experts say is an ideal grit for birds, also for grinding Ground Oxide of Lime, and lastly for pulverising Carbonate of Lime (CaCO<sub>3</sub>) for the purpose mostly of agriculture. Output capacity 100 tons per week.

3. One Schuteless Hydrator with a K. B. pulveriser for the manufacture of Hydrated Lime. Output capacity 210 tons per week.
4. Power Plant consisting of various Blackstone oil engines which works the whole of the machinery.
5. Quarries equipped with pneumatic hammers, air compressors, &c. The system is to run the skips full of stone into a 100 ton bunker. The outlet of this is on the floor of the pit into Which the lift for the Kiln stands The man stationed there delivers the stone into the skip and sends it up the lift."

These are the basics of the plant as it began, (Figure 1) but for many more details we are indebted to Fred Amor of Cheltenham, who was an engineer on the site before the war. As can be seen from the photographs, (Plates 1 and 2) a cabin-like structure stood above the kiln, with inside a circular 2 ft. gauge railway running round the kiln mouth. Limestone and fuel were automatically tipped into a circulating truck and spread by hand as it went round. This was a dangerous job, where a man often stood in the kiln itself in order to spread the charge more evenly. The high temperatures of about 900 degrees Centigrade, needed to convert the limestone ( $\text{CaCO}_3$ ) into quicklime ( $\text{CaO}$ ), did not extend to the top of the kiln. However, noxious gases including sulphur dioxide, ammonia and much carbon dioxide were continually being released, against which a wet rag was the only protection. On one occasion, a man named Holland was overcome by fumes and killed when the next charge fell on top of him.

Before reaching the kiln, the stone was reduced to a 10 inch cube or less with 14 lb sledgehammers. It was not uncommon to break 30 tons a day, worth nearly a pound in wages which was a good sum at the time. But a more back-breaking job could hardly be imagined. The ratio of limestone to coke or anthracite was 1:7, and very little residue of the fuel appeared in the product. Nonetheless, a big dump of lime-waste gradually formed, some of which was bagged for fertilizer. When engaged in such a task one unfortunate labourer was killed when some of the heap collapsed upon him.

Until about 1934, oil engines driving dynamos provided electricity, but thereafter power was supplied by the Wessex Electricity Co. Probably at this time a second, smaller, kiln was built by a firm from Reading, and trade was clearly improving with 70 or 80 men at work. Although much traffic came and went by rail, road was a more direct route, and Sentinel steam lorries took a lot of lime for export to the East India Docks in London.

Hydrating the quicklime used considerable amounts of water which was piped from springs in Chedworth railway tunnel. It was fed into a brick header-tank and thence pumped to a higher level by a hydraulic ram made by Blakes of Accrington. There was also a supply from Rendcomb, about four miles to the west, and the company supplied various local farmers and landowners with the surplus.

But by the outbreak of war, Fosse Lime and Limestone Ltd was in trouble; on 3rd August 1939 only a few weeks before hostilities broke out, the site came up for auction by order of the Receiver for debenture holders, and much can be gleaned from the sale particulars. (Figure 2) From these, we learn that the kilns gave a total output of 75-90 tons of quicklime daily, by which time the original plant had been in great measure superseded. Conveyors and hoppers etc had been supplied by Hendersons, with roller-crushers by Barron and Edgar Allen. In addition to ground lime and agricultural lime plants, there was also a fitter's shop with a 4 hp

lathe, engineers' stores, a compressor house with a 21 hp Ingersoll Rand compressor, work's office and a timber three-roomed bungalow. Six cottages at Chedworth were occupied by workmen. In short, a very comprehensive and well-equipped establishment, as indeed so isolated a location demanded. It does not appear that the plant was in production at the time of the sale.

As to the social side of the period, we are indebted both to Fred Amor and Mr A.N. Irvine of Cirencester for the following details. When Coke began the project, a number of old hands from Leckhampton joined him. They included Charles Dickings, Danny Tombs, Jim Pearce and Johnny Stevens, and all cycled from Cheltenham for a 7 am start on Monday mornings. This was a journey of some 15 miles, and whichever route was taken, long and steep hills could not be avoided. It must have meant leaving home at latest by 5.30, and during the winter, in darkness all the way. But in those days, work was very hard to get and there was little alternative. Coke however, was popular with the men, and did not mind catching them in an idle moment, but "all hell was let loose if production stopped". For accommodation, the Cheltenham men lived in a pre-fabricated bungalow or barracks looking after themselves, and being single, Fred Amor stayed there all the time.

In the early years a number of unemployed Yorkshire miners came to the works, and how different the lonely Cotswolds must have seemed. The first foreman was Bill Taylor from Monk Bretton Colliery near Barnsley, and other kinsmen were Dick Ellis, Tommy Gosling, George Musgrave and Colin Nixon. Some of their descendants still live in the district.

But it was not all work at the Fosse. Much rabbit poaching took place in the railway cuttings, a favourite trick being to lay down lengths of 5 inch stoneware pipes blocked at one end. The animals bolting into them for cover were an easy prey, and were regularly traded for fuel for the range in the bungalow. In exchange, drivers on the 6.30 a.m. train to Southampton would slow down to 15 mph and throw off lumps of coal as they went by.

### **The War Years**

Whether or not the plant was running at the time of the sale, it was soon at work again. T.F. Coke was still involved and according to his secretary, sold 20,000 tons of stone and lime-waste for the foundations of Castlemead power station at Gloucester at one shilling (5 p) per ton, and did very well out of the deal. How prices have changed! This transaction took place in 1944. Very little else has come to light which can definitely be ascribed to this period.

### **Post-war**

By 1948 the enterprise had been taken over by the Derbyshire Stone Co, of Matlock and various changes were introduced. Dumper trucks replaced the quarry rail system which had been powered by a Lister locomotive, and labour was augmented by Poles from a camp at Daglingworth - a practice which may have begun in the war. Tony Clements of Chedworth Laines worked there as a lorry driver and in other roles from about 1950 to 1952, and we are indebted to him for the following information:

Coke fuel came in by rail, and the products went both by rail and road. As regards the latter, the company used two short-wheelbase and two long-wheelbase Morris Commercial tippers, which were often grossly overloaded. The distances travelled were sometimes very great, involving a 5 a.m. start and not home till midnight. Hydrated and quick-lime went to the Midlands and all over South Wales, even so far as Haverfordwest. The main uses were for

building (plaster and mortar), brick making and agriculture. Lime also went to Salisbury, and to Bournemouth and Poole for brick-works where it resulted in a popular buff colour.

What is surprising in this pre-motorway period, when every town on the way had to be wearily passed through, is how the cost of transport did not rule out such customers, so far removed from Chedworth. More especially is this so, when ample resources of limestone exist much closer to those markets. Was there something special about Fosse lime?

A service available to local farmers was lime-spreading by contract, but by the early 1950s demand for hydrated and quick-lime was falling due to changes in both building and agricultural practice. Ground limestone applied directly to the land had the same results and became cheaper to produce. It was made at the Fosse works for a few years before they finally closed about 1955. However, quarrying for hardcore etc continued on and off for a number of years.

As to personalities, Jim Phipps, who had worked his way up from the bottom, was manager until becoming sacked for being right when his boss was wrong - always a delicate situation. What happened was that a Mr Allcock of the Derbyshire company wanted the kilns forced to produce more output, and Phipps knowing the consequences, refused. As predicted, the experiment proved a failure, which perhaps went some way to soften the bitterness of his fate. Later, Reg Fisher took the job and his brother Don was a maintenance man.

When I visited the site about 1960, the kilns were still standing but not for long. The office had been ransacked with papers strewn all over the floor, and regrettably the only item salvaged was a plan of the works made in 1948, which is in part reproduced here on a reduced scale. The quarry and also the long railway cutting towards Cirencester were important in terms of geological sections and specimens, but both have suffered a common fate, firstly becoming a refuse tip and then a return to agriculture.

The site of the kilns and plant is now occupied by a waste reclamation firm, and the explorer seeks in vain a memorial or relic of any kind to remind him of this once-important enterprise. It is indeed remarkable how an operation on such a scale in so isolated a part of the Cotswolds has vanished like a dream. But not all would regret its passing. In the words of Fred Amor "it was a God-awful place to work, the wind came up the cutting and whipped up the lime-dust, burning your eyes and getting everywhere". Yet, with a wry smile he added, - "its a pity its gone".

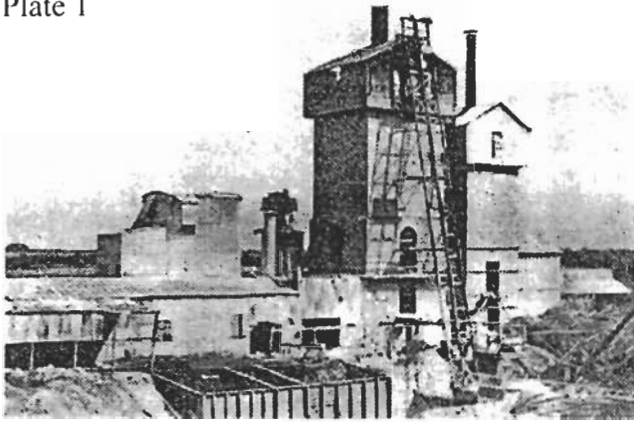
#### **Acknowledgments**

I am much indebted to Fred Amor, Tony Clements, Gilbert Guest and A.N. Irvine for their reminiscences. Dr A.J. Martin has kindly given permission to reproduce the 1958 photograph, and Professor Hugh Torrens has helped with the geological background, not least to drawing my attention to Linsdal Richardson's paper. Thanks are also due to the staffs of Cheltenham Public Library and Gloucestershire Records Office.

#### **References**

- Bick, David, 1994, *Old Leckhampton*, Second edition.  
GRO 4858 2/4 (Particulars of 1939 Sale)  
Richardson, L, 1930, "The Fosse Lime and Limestone Quarry and Works", *Proc. Cots. Nats. F.C.*, 23,

Plate 1



Preliminary Announcement. Sale No. 3437  
 By Order of W. R. Gresty, Esq., F.C.A.,  
 Receiver for the Debenture Holders of  
 Fosse Lime & Limestone Ltd.  
 Gloucestershire.

**FOSSÉ CROSS CHEDWORTH.**  
 13 Miles from Cheltenham. 7 Miles from  
 Cirencester. 90 Miles from London.

**LEASEHOLD LIME WORKS:-**

With an extensive frontage to the  
 Great Western Railway Company's Main  
 Line from Southampton to the Midlands,  
 with Railway Sidings connected thereto.  
 The Property comprises an area of nearly

11 ACRES.

With Extensive Deposits of Superior  
 Oolite.

**TWO CONTINUOUS LIME KILNS**  
 Of Improved French design.

Brick, Timber, Steel-framed, and corru-  
 gated Iron covered Buildings housing  
 the Plant, and forming Offices, Stores,  
 Loading Docks for Road and Rail Trans-  
 port.

THE PLANT is compact and laid out for  
 production of fine Hydrated Ground and  
 Lump Lime, and includes grinding,  
 crushing, separating, conveying, and  
 transporting units, together with the  
 necessary Loose Equipment.

Moderate Rent and Royalties.

Electricity. Water.

To be offered by PUBLIC AUCTION by

G. H. BAYLEY & SONS

At the PLOUGH HOTEL, CHELTEN-  
 HAM, on THURSDAY, AUGUST 3rd,  
 1939, at 4 o'clock, subject to Conditions  
 of Sale.

Further particulars may be obtained  
 from:- W. R. Gresty, Esq., F.C.A., Char-  
 tered Accountant, 97/100 Butts Street,  
 Cardiff; Messrs. Gilbert Robertson & Co.,  
 Solicitors, Butts Docks, Cardiff; or from  
 the Auctioneer at 27, Promenade, Chel-  
 tenham (Telephone 2102).

Fig. 2

Plate 2

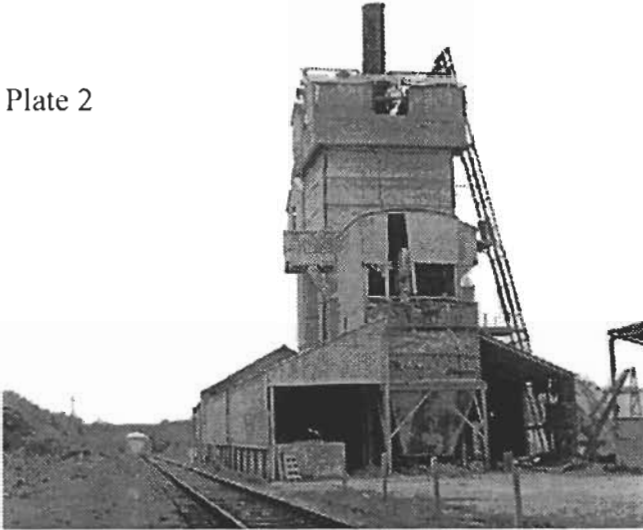


Plate 1 The plant at the time of the sale in 1939. Fuel and limestone were hauled up the elevator to the large kiln. How the small kiln was fed is not clear.

Plate 2 The kilns in a ruinous state in 1958, looking down the main line towards Cirencester.

Fig. 1 Before and after. The 6 in. OS map (1924) shows nothing on the site other than a long quarry siding. But by the next edition (1960) all had come and gone, with only the ruins of a quarry and waste tip remaining.

Fig 2 Sale Notice from the Gloucestershire Echo in August 1939.



Fig. 1

Fig. 3 This plan was surveyed on 20 August 1948 for the Derbyshire Stone Co. From left to right the buildings are - (a) Bagging plant, (b) Oxide grinding, (c) Kilns (shown shaded), (d) Hydrator plant, (e) Bagging plant, (f) Fitter's shop, (g) Compressor house and store.

Further north are (h) a loading shed, (i) store, (j) cabin, (k) office, (l) weighbridge and (m) a winch (for waggon haulage).

