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Charlestown limekilns - Harbour Road, Limekilns, Fife

Old money, new enterprises and the building of 18th and 19th century Scotland

As you approach Charlestown limekilns, you spy a masonry structure of impressive scale and quality. But it is not a fine house nor a temple to textile wealth, but part of an 18th century industrial complex begun in the late 1750s to maximise the limestone, lime and coal production of the local landowner of the time, Charles Bruce, the 5th Earl of Elgin after whom the village and lime kilns are named. The limekilns at Charlestown were once the largest in Scotland and may arguably have been part of one of the biggest complexes of its kind in the UK. It produced one of the most important commodities of the 18th and 19th centuries in Scotland - lime.

Lime has been used in the construction of buildings, bridges and cities for millennia. From the 18th century lime was widely used by farmers as a soil improver. There was also building boom due to, amongst other things, the Act of Union (1707) which meant that there was an increase in demand throughout the 18th century for lime to make mortar (a mix of lime, water and an aggregate) and plaster (interior wall covering made of pure or 'fat' lime, sand, hair and water).

The 5th Earl's industrial complex also included a harbour (inner harbour built 1770, the pier in the last quarter of the 18th century and the outer basin piers added in the 1840s and 1850s) from which ships carried lime from the kilns, limestone for building and conversion to lime elsewhere and coal from the Elgin's Broomhill Estate coal mines to its customers. An extensive horse-drawn tramway (from 1774 on) was built between the limestone quarries, collieries and the limekilns. The Elgin Railway, as it was called, eventually became part of the national railway network. The village of Charlestown was also created to house the workers. This was a massively expensive undertaking and a financial risk that the 5th Earl was obviously willing to take to ensure the success and continuation of his Estate. By the early 1790s the manufactured lime cargoes from Charlestown reached 1300 per year. Coal and limestone shipments were also leaving from the harbour. From the late 18th to the mid- 19th centuries, most of the lime from Charlestown was exported to North East Scotland, Stirling area and the Lothians but rarely to the West of the country. Export to other countries like Sweden and Canada was not unknown.

From about 1815 until the mid 1830s, Charlestown became extremely successful with the 7th Earl making commissioning further engineering work to improve the harbour and the quarrying and mining infrastructure.

The Kilns, Making Lime and Finis

The Charlestown kilns (1759/60 - 1790 and possibly later work) were built into the cliff face to enable the creation of a charging platform from which the kilns could easily be filled or charged with coal and limestone. There are 14 draw kilns with vaulted entrances which when in operation would have burnt continuously during the lime-burning season (March - November). Ten of the kilns have been refaced with a masonry skin or buttress built up against the wall to strengthen the structure possibly because the heat produced during burning may have weakened the masonry. At the east end, a now demolished 20th century stone crushing plant was added.

It is in these kilns that lime was produced. Lime is made by burning layered locally quarried limestone and coal in the kiln to produce a dry material known as 'quicklime' or calcium oxide. Water is added to the quicklime in a controlled process known as 'slaking'. It is this process that produces lime for building works. Un-slaked lime - quicklime - was used as a soil improver.

The lime made at Charlestown had a particular quality resulting from the local limestone. Limestone with a sufficient clay or silica content produces a lime that is 'hydraulic' meaning that it sets under water. Charlestown limestone was sent to Leith Wet Docks (1814) and Dundee Docks (1833) where it was burnt produce quicklime for making mortar on site.

The kilns and quarry were in use until 1935, with parts of the limeworks complex being demolished in the 1960s. The kilns are Category A Listed.

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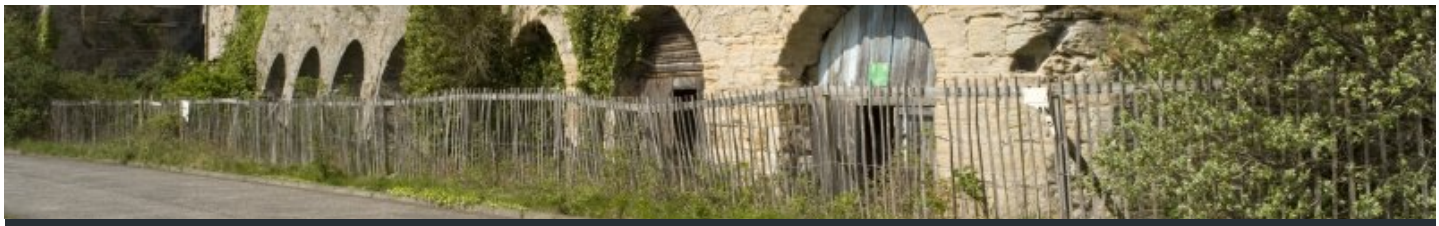

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