

Chatburn to Downham: 300yrs of Lime Burning

A summary from a talk by Dr David Johnson as part of the PHLP Community Archaeology Forum

A lime kiln produces lime. It's called 'lime burning' but you can't burn physically lime and the correct term is calcining. Lime has many uses (used less now) and has been used in buildings (e.g. mortar, render), in industry, in the rural trades (bleaching, dyeing) and in farming (spreading on pasture, reducing soil acidity and treating various stock diseases).

Records show that Romans introduced lime to Britain, and there is evidence of lime kiln use throughout history, however technology has changed. In the medieval and early post medieval periods sod or sow kilns were used, but after 1660 more masonry built kilns came into favour. These are the ones you can see across Bowland.

Early Evidence – River Stonary along Sabden Brook.

In some cases there is evidence of lime kilns along rivers and brooks, where the source of the limestone comes from river stonary, meaning rights to extract limestone from within the channel were leased out. There are some great examples of this along the River Wharfe, where the river has brought down limestone eroded from further up the dales, and it has formed as cobbles and boulders. This limestone is then extracted and used in the kilns.

There is documentary evidence that this occurred along Sabden Brook, dating back to the 16th century.

Hushing

Hushing is a practice used predominantly for lead mining, however there is evidence that it was used near the Pendle Hill area – from Ickonshaw down to Worsthorne near Boulsworth Hill for limestone. Water was dammed on top of a slope, and then released to flush out limestone cobbles. It is the only place where limestone hushing was used and was underway in the 16th Century.

Parish Boundaries and Lime

Worsaw Hill (in Worston) is a reef knoll in the Worston Shale Group, and the parish boundary between Worston and Downham sits around the base of Worsaw Hill and along Rad Brook. In a map from 1593, there is a 'lyme cote made by one of Downham alleged by the defendant' (landowners in Worston) along with 'Lyme holes made by Worston as alleged by the plaintiff' (Mr Assheton). A lime cote was probably the building where they stored the lime. This boundary dispute alleged each was encroaching on each other's land. So the (current) parish boundary was instated to allow equal rights to both. There are at least 8 sow kilns on Worsaw Hill and lots of shallow delfs.

There was a series of lime pits alongside the modern day Chatburn Road leading from Chatburn into Downham, as well as limestone boulder pits on Downham Green where rights were granted to extract limestone from clay deposits. Some of these pits have been ploughed out; others are clear to see.

In 1593, Richard Assheton of Downham and Thomas Ryley of Chatburn had a dispute about lime kilns and grazing sheep on Downham Green. It was resolved and the parish boundary was changed, giving rights to Downham south of the road, and Chatburn north of road.

As far as the speaker is aware, these are the only 16th century cases of boundary disputes getting to Westminster courts because of lime kilns.

Sow Kilns

Moving into Rimington, there is evidence of sow kilns and delfs in Skeleron Wood. There are 3 sow kilns.

Sow kilns are hollows built into a natural bank by digging out a bowl. The material removed is used to create the bank around the kiln. Base of the kiln can be over 0.5m below the turf. They were clamp kilns: the limestone and fuel mass was domed and sealed with clay or turf and allowed to simmer for as many days as necessary depending on the weather and the time of year.

Post 1660

Structures changed over time and after the Restoration of the monarchy in 1660 there were masonry kilns built. There is a fine example at Smithfield Farm in Downham, and two fine examples in Twiston. The one nearest Twiston Mill is taller, so was more efficient, and the other one in Twiston was much wider, with a quarry nearby to supply the stones. There is also one at Mearley Hall – an impressive (probable) estate kiln.

Bellman Park Lime Works at Chatburn is currently being restored. This is one big kiln with 4 bowls on top opened for commercial use around 1869 and closed 1959/1960. As far as the speaker is aware, there is only one other lime kiln still standing in England (apart from Bellman) which has a rail track going through the interior.

The technology changed over time; however the basic process stayed the same.