

As far as ironworking is concerned, I can recommend 'Furness Iron', by Mark Bowden (ed.) published by English Heritage in 2000. Its mostly concerned with C18-C19 blast furnaces, but has excellent sections on earlier bloomery sites in the Lake District. Try also 'The Bewl Valley Ironworks' by David Crossley, a monograph published by the Royal Archaeological Institute in 1975. It covers the archaeological investigation of a pair of Wealden iron furnace and hammer mills of the 13th-18th centuries. These were located immediately below dams across the valley floor of a small stream in Kent – rather like the sites shown on the old maps you showed us the other day.

I think it is quite possible, especially given the place-name evidence, that your valley-bottom mill sites below dams could have been the sites of iron furnaces, probably of later medieval date. You need to visit their sites and look in the stream beds or any other exposed earth for slag (see attached photo), cinders, etc. Absence of these may suggest more prosaic activities such as grain milling, fulling, etc, rather than ironworking, but generally big storage ponds imply the sort of industry which needed a supply of enough water to do activities such as a complete blast, or a lengthy smithing process, lasting up to three days, without running out. You cannot rely on small streams to produce enough water for such a long period, especially in summer – and of course it could be disastrous if it ran out part-way through! The valley bottom sites also mean that it is highly likely that they contain well-preserved timber structures – the Bewl Valley sites both had substantial remains of the lower parts of timber framed buildings and even parts of water wheels surviving in a waterlogged condition. For a feeling of what these might have looked like, the Swedish example you pointed me to is pretty similar.

The slag in the photo comes from a site we excavated in Jersey last summer, which is datable by pottery from c.30BC to c.50AD. It includes 'heavy' purple slag – looks runny like lava and is often pretty weighty owing to having a lot of iron in it. The bubbly greenish-brown stuff is much lighter and has similarities to the greenish stuff in your Swedish photos. Both are waste-products, but sometimes parts of complete blooms, possibly left behind stuck to the bottom of a furnace, are found. We had two of these last summer and they have a rusty, lumpy appearance, are up to a foot across, often with a slight curve to them and are very heavy, due to the high iron content. It was a very wasteful process, and later reworking of ancient slags is not unknown.

As far as dating is concerned, blast furnaces only start to appear in Europe from the end of the 15th century. Water-driven hammer mills and forges for re-heating of blooms of iron appear rather earlier, certainly from the 13th century and probably before. The latter are more likely, especially as you appear not to have documentary references to an iron industry in the late medieval or post-medieval period (you need to check this).

