

Kilns from Excavations at West Cowick, East Yorkshire, 1999.

There are a number of ways in which archaeologists date the sites they excavate. Aside from the broad sequence of events provided by the stratigraphy of successive deposits, this might for example be achieved via a scientific method such as radiocarbon dating or through documentary evidence, which may provide an absolute date. More typically though it is through the medium of artifacts, e.g. coins of a known monarch, shoes or other objects of a known and datable style, that relative dates are reached. Of this latter group of artifacts it is pottery that forms the most commonly employed element. However, the datability of pottery is itself dependent upon other factors, a number of which have already been cited above; documentary evidence of production, its previous finding in association with objects or deposits of known date, etc. Best of all though, are scientifically derived dates from the kilns that produced the given type of pottery.

It was with some anticipation then, that in the bleak January of 1999 the usual suspects from the excavations department set out for the village of West Cowick, near Snaith, in East Yorkshire, a known production centre of pottery within the medieval period. Documentary sources indicate pottery production taking place within the environs of the village since at least 1322, when payments for clay are recorded. Records also show that the industry was active until at least the 16th century and suggest that peat was used as a fuel in the kilns. Solid archaeological evidence for the industry had previously been provided by field walking in the area, which had detected surface scatters of pottery wasters and kiln debris. In the early 1960's a kiln was excavated on a nearby site — though it still awaits publication. Recent limited evaluation trenching had even taken place on the site of the Trust's excavation, which was located behind the Ship Inn (closed during the daytime!) on the village's main road. The site occupied a large plot of ground whose existing boundaries are likely to follow those of a medieval burgage plot. Rarely, for these days, the area to be excavated was of some size, in excess of 450 square metres, and incorporated a substantial part of the rear of the plot.

The earliest (Phase 1) activity at the site was represented by a series of soils overlain by structural components of a later phase. The presence of pot sherds throughout the full depth of these soils suggests that they had been worked, probably through agricultural activity.

Subsequently (Phase 2), in the extreme south of the site, a post-hole arrangement was constructed of which a portion in a 90 degree pattern was observed within the trench. At least one of the postholes within this group is believed to have been completely removed by a later pit. It is unlikely that this arrangement formed part of a fence-line as the size and spacing of the postholes is in accordance with medieval building practice. It is probable therefore that part of a building is represented (Structure 1). Given the location of Structure 1 in the central area of the burgage plot, together with the absence of any sort of prepared flooring, the structure is likely to have related to industrial or agricultural usage rather than to that of domestic occupation. A ditch, generally around 1m wide by 0.4m deep and aligned nearly parallel to the back lane at the extreme north of the site, appears to have formed an early northern boundary to the property. Pottery from the ditch indicates that by an early date the feature had already been backfilled and gone out of use. The absence of a later boundary within the excavated area suggests that any subsequent property demarcation on this side lay further north, perhaps in the position of the existing hedge. Whilst the dating of this phase of activity has yet to be fully refined it appears to lie within the 14th century.

Phase 3 was marked by the construction and operation of a pottery kiln (Kiln 1) in the south-western part of the trench; approximately half of the kiln lay within the limits of excavation. The kiln was of the multi-flue type, similar to that of the example excavated in the village during the 1960's, in which a series of flues radiate out from a centrally located oven. The base of the oven occupied a shallow cut and was constructed of clay tempered with straw and built upon a bedding composed largely of pot-sherds. No indication was found to suggest the presence of a raised floor within the oven and it appears therefore that pots would have been stacked for firing directly on the upper surface of the oven floor. The flues, which channeled heat to the oven, were constructed of the same materials as the

oven. The fires that provided the hot gasses to the oven were located in pits near the ends of the flues, and each pit contained ash rich fills. Small quantities of misfired pottery (wasters), kiln furniture (used to assist with pot stacking in the kiln), and burnt clay, the latter derived from the fabric of the kiln itself, were also present within the fills. From these inclusions we can surmise that at least part of the fills are resultant from the raking out of the kiln flues, presumably during and after firing. A series of ten postholes were associated with the earlier usage of Kiln 1, though their function is not easily interpreted. During the later usage of the kiln these postholes were overlain by a thin, patchy surface of small cobbles which appears to form a contemporary working surface. A scientifically derived archaeomagnetic date was obtained from the oven of Kiln 1 and provided a date for the last firing as occurring between 1405–1425, with a central value of 1415 – the year of Agincourt! Pottery recovered from the flue pits indicates that Humber wares were fired in Kiln 1.

A second kiln (Kiln 2) was located in the north-eastern corner of the site; the construction and usage of this in conjunction with other contemporary structures forms the Phase 4 activity. Kiln 2 was exposed in its entirety and like Kiln 1 was of the multi-flue type. Evidence was found for a shallow construction cut provided for both the oven and seven flues. As with Kiln 1, the oven and flues of Kiln 2 were built of straw tempered clay and displayed colour banding caused by differential heat exposure. Again, flue pits were present at the ends of each flue and were seen to contain similar fills and inclusions to those of the earlier example. A feature not seen on Kiln 1 (but probably present beyond the trench limits) was a flue and flue pit on the southern side that was larger than the other six flues. Such large flues are known from other multi-flue kilns and are referred to as stacking flues. As their name suggests, it is generally held that it was through this aperture that the oven was both stacked and emptied of pots, before and after firing. Of some interest were quantities of partially burnt peat and twigs recovered from the Kiln 2 flue pits. This appears to bear out the documentary references that point towards peat being used as a fuel. Small quantities of coal were also recovered from the pits and raise the likelihood that coal may also have been burnt in combination with peat. A contemporary working surface of dirty clay was seen to survive around parts of the kiln. An archaeomagnetic date from

the oven of Kiln 2 demonstrated that it was last fired between 1455–1480, with a central value of 1468. Pottery recovered from the kiln and flue pits suggests that both Humber and Purple glazed wares were fired in Kiln 2.

On the grounds of spatial arrangement, two features adjacent to the kiln are likely to be contemporary with Kiln 2. The first of these consisted of four postholes forming a rectangle (Structure 2), whose alignment was at variance with the known boundaries and structures at the site, but lay broadside onto the kiln. Whilst the evidence for this structure may seem slight, it is suggested that it was the structure itself that was slight, perhaps forming a roofed but open-sided space. Any such structure may have functioned as either a workshop or, perhaps more likely, as a fuel/materials store or drying shed through which a continuous airflow was important. Between Kiln 2 and Structure 2 a pit containing very pure, clean clay was noted. Two suggestions for its function in relation to potting can be made. The first is that it served as a pit in which clay was weathered prior to potting; this is a long-standing traditional practice within the craft. The second, and more speculative, is that it simply served as a receptacle for clay that may have been used in the “operating maintenance” of the kiln in terms of patching and possibly in blocking off of flues during firing.

Sand, as a tempering material, is a common attribute of the fabric of most pottery. What was almost certainly a small irregularly shaped sand quarry was located in the north-west part of the site. The back-fill of a portion of this quarry was excavated and was proven to consist principally of pot-sherds (including many wasters). A substantial proportion of the half tonne of pottery recovered from the site came from this feature. Although at present it is only known that this feature belongs to a period covered by Phases 2–4, further study may help to refine this dating.

The demise of Kiln 2 marks the end of pottery production evidenced within the bounds of the trench. Later activity related to the construction of a flimsy stake-built structure in the western part the site, probably a fence-line (Phase 5), that was subsequently overlain in the 17th–18th centuries by a north-south metalled roadway in Phase 6. During Phase 7 a

series of twenty-one small sand and gravel extraction pits were cut across the site. Finds from the backfill of these suggests a post-18th-century origin. Within the same phase a number of postholes, though forming no coherent pattern, were also cut. Modern Phase 8 features pertain to a series of plough scars that mark 20th century horticultural activity prior to the site being laid over to grass.

The Trust's excavations at West Cowick are important for a number of reasons. All too often excavation at pottery production centres has been centred around kilns alone, rather than around kilns in their broader setting of contemporary related features within a burgage plot. These works also mark the first modern excavation of Humber tradition kilns for which a modern, complete archive is available. Importantly, these two kilns are the only ones within the tradition that are of a proven date. This last fact brings us back to the first paragraph of this article that considered how archaeologists use pottery to date their sites. The two Cowick kilns have provided dates for their last firings, whilst the same kilns and their associated flue pits have provided pottery of the forms and fabrics fired within those kilns. These forms and fabrics are therefore of known date. Given that styles and materials of pottery change through time, the usefulness of this information is readily apparent. Pottery from sites elsewhere that is of the same form and fabric as that from the two Cowick kilns can now be dated with a greater degree of reliability than was previously the case. As such, the significance of the results of the recent West Cowick excavations goes well beyond that of the site itself. The full potential of the Trust's recent work will reach fruition when the short programme of analysis and publication is completed.

Mark Johnson