

Assessment of stone quern from Potterhanworth School, Potterhanworth, Lincolnshire (POTT02)

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A fragment of a stone quern found re-used as a packing stone in a posthole during excavations at Potterhanworth School was submitted for identification and assessment.

Petrology

The quern was made from a hard and noticeably dense sandstone. Under x20 magnification the stone was seen to consist of illsorted rounded quartz grains, none of which were either water-worn or wind-pitted (characteristics of the Spilsby Sandstone and Permian sandstone respectively). The largest grains were up to 2.0mm across but most were less than 1.0mm. The grains were mainly cemented with silica but patches of calcareous cement survived on the upper side of the stone as well as pock marks interpreted as areas where calcareous cement had leached away. The stone was probably cut from a single bed of sandstone, at least 100mm thick and there were no signs of bedding or other structure within the stone.

The stone was examined visually by Peter Hill and John Aram, neither of whom recognised it. Therefore, the stone is unlikely to have been a local quarried sandstone. This leaves two possibilities: either it was constructed from a boulder found within a local till deposit or it was made outside of the region and imported to central Lincolnshire. Given that it is likely that the lower stone of the quern would have had to be made from the same sandstone, so as to ensure that wear on the pair of stones was equal, the latter option is more likely.

It is possible that the identify of the rock could be established by submitting a sample to Dr D Williams at the Lithics Laboratory at the University of Southampton, or by submission to the British Geological Survey at Keyworth, Nottinghamshire.

It is possible that diagnostic details of the petrology might be revealed by thin-section, but without access to the comparative material held in Southampton or Keyworth a thin-section alone is unlikely to provenance the quern.

Description

The stone forms about a quarter of the upper stone from a rotary quern. A circular hole in the upper surface of the stone indicates the point at which a handle was inserted in order to rotate the stone. The outer edge has been roughly pecked to shape and the lower face is lightly pecked with some areas of polish, showing that the quern had been used. The upper surface shows few signs of working and might be an unworked stone face. Alternatively, it is possible that the upper face has been eroded since manufacture, since it seems to have coincided with an area of calcareous cement.

Assessment

Rotary querns were introduced in the early Roman period, overlapping for the first two centuries AD with beehive querns. They were then the sole quern type in use until the widespread use of mills in the 11th century. After this time querns were used mainly for specialist grinding rather than production of wheat flour. It is unlikely, therefore, that this quern dates to the same period as the pottery production, evidence for which was found on the same site. However, sherds of Potterhanworth ware were found in the backfill of the posthole, and timber structures with earth-fast posts are not thought to have life-spans of much more than 20-30 years.

It is possible that the stone was a reused piece of a quern of Roman, Anglo-Saxon or early medieval date but it is also possible that hand-grinding of flour was more common on rural settlements than it was in medieval towns, where almost all rotary quern finds appear to be of 11th/12th-century or earlier date.

Without a better archaeological context (ie independent evidence for the construction date of the timber structure, and some idea of its function) there is little further that can be said about this object.

However, it would be worthwhile conducting a survey of quern finds on rural sites in Lincolnshire to compare with that undertaken on the finds from the city of Lincoln. As part of such a survey a catalogue entry for this stone should be made. This would include illustration, the production of a thin-section and consultation with Southampton and Keyworth.