Stenhouse Pottery

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The first large scale production of ceramics and the beginning of "industrial" manufacture dependent upon an efficient distribution network and long distance monetary exchange - the development of the modern goods-based economy.

Introductory Film: The Stenhouse Pottery

Research shows that the pottery kilns discovered in Stenhousemuir in the 1950s were producing Redware in the 14-15th centuries.

Illus: **Kiln D fully excavated.**

The site was first revealed in the mid-1950s when the Carron Company was quarrying sand from fields to the north of the mansion at Stenhouse (NS 880 831). The discovery was reported by the company to Doreen Hunter, the curator of Falkirk Museum, and with the aid of local volunteers she was allowed to undertake intermittent rescue excavations under rather difficult conditions as the extraction continued until 1962. Further small-scale excavation occurred in 1978 under Marjorie Kenworthy in advance of housing development and again in 2007 by SUAT under the direction of Derek Hall. At least eleven kilns were found by Hunter, though more may have been destroyed without record. Debris in Kenworthy's trench suggested a neighbouring kiln there and two more were found in 2007. This last work produced two associated radiocarbon dates indicating production in the 14th – 15th centuries.

Illus: **Single-handled jug.**

The range of ceramic vessels used in the Middle Ages was very limited and many of

the forms which we are familiar with today were missing. There were very few bowls or cooking pots, and no plates or cups. The majority of the pottery from the excavations is housed in Falkirk Museum, though a sample was given to the National Museum of Scotland. The most common vessel type produced by the pottery at Stenhouse was the shouldered jug with an upright rim and s single simple strap handle, usually finished in a patchy splash green glaze. Their prime function was to contain beverages to be served at the table, though they had other uses. They could, for example, hold milk in a dairy, or be used for washing hands at a banquet. Small jugs were used as drinking vessels, and large ones for transporting water in which case they would be carried on the shoulder or head.

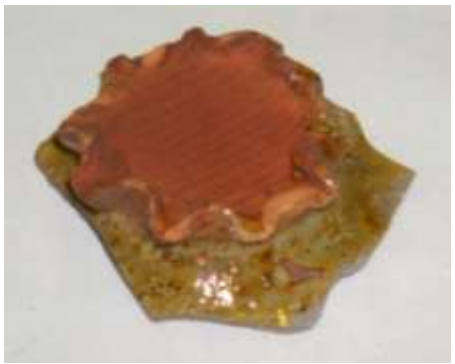
A significant proportion of the jugs made at Stenhouse had distinctive face masks attached to their rims or, less often, to their shoulders. The masks consist of an applied rounded triangular pad of clay with three thumbed depressions – two at the top and one centrally below. The exaggerated ridge between the upper two lobes formed the nose of the face which was made more prominent by two short incised lines for nostrils. To either side of this, in the upper parts of the lobes, are impressed roundels with a central dot for the eyes. The outer edges of the clay pad are prominent; those above the upper lobes suggesting eyebrows and that below the lower lobe a chin. Horizontally across the lower lobe is a straight line for the mouth. Occasionally the ends are slightly upturned but these indicate a neutral rather than a smiling of glum face. The width and depth of these depressions show that the implement used to create them was inserted on the left, as viewed from outside, and dragged to the right, showing that the potter was right-handed. There are, of course, slight variations on these themes and one mask has horizontal slits for its eyes indicating a sleeping person. As they are not formed from stamps each face is individual, though as a whole they are stylistically distinct from those produced in other regions. The most individual part of the face masks is the representation of the facial hair; many have none, some have incised lines only under the 'chin', and yet others radiate off in all directions. One even has the suggestion of eyelashes or a moustache. The incised lines are all quite thick, as if made by a pointed stick, except for one where they are fine and must have been made with a knife. The overall effect is to produce a charming alien face similar to that of ET in the film of that name.

Illus: **Face mask with closed eyes.**

On occasion the face mask is combined with incised decoration on the body of the jug. One has an almost vertical feather pattern placed centrally below the mask, with another to either side that incline inwards slightly to the top. Stamped over the top ends of each is a roundel with a central dot - just as used for the eyes. Similar roundels are used to form other patterns such as crosses and are the only indication of the use of point stamps or *poincons*, presumably made of wood.

Illus:
Conventional face mask on the rim of a jug, with body ornamentation.

Such anthropomorphic features are found throughout Britain in the 13-15th centuries and stylistically the Stenhouse type can be placed in the second half of this period. In the earlier period the mask was usually combined with features on the body of the pot, such as handles, to represent the body and arms of the creature. Those from Stenhouse are simpler and more stylised creating a more endearing result. In the transitional period the beard of the mask is often extended, forming a lug of short handle and a small number of these occur at Stenhouse. Only one other pottery in Scotland, at Coulston in East Lothian, is known to have produced the occasional face mask and these were of this type. They occur most frequently on the rim opposite to the handle and would have been readily noticed by guests when the beverage was poured.



Illus: **The base of a jug with "pie-crust" decoration.**

Most of the jugs have plain rims or a slightly pinched spout, though some have broad bridged spouts fixed to the rim with deliberately prominent thumb marks. Heavy thumbed bases, producing a pie-crust frill pattern, also occur, though again simple flat bases are most common. The decorative version was probably influenced by imported

German stonewares which appear in Scotland from around 1350 onwards.

Small bowls were the commonest drinking vessel for most of the Middle Ages and were usually made of wood. The handful of beakers found at Stenhouse is therefore amongst the earliest appearance of such vessels in Scotland and date to the late 15th century. They were probably copies of imported Rhenish stoneware drinking vessels.

Illus: **A rare early beaker.**

Examples of other forms of pot have been found at the kiln site in Stenhouse, though in relatively small numbers. These include storage jars, urinals, vessels with bungholes for storing liquids, dishes, dripping pans, skillets (frying pans), money boxes (known as pirlie pigs), sugar refining jars and a sugar mould, a candlestick, and even a watering can. The watering can was simply a narrow-necked jar with numerous tiny holes perforating the flat base. The top could be stopped with the thumb or hand to control the release of water. This type was probably destined for the herbal gardens of the Scottish monasteries. In all cases, except the skillets, the pots were wheel thrown.

Illus: **The base of a watering can.**

The clay used for the Stenhouse pottery was fine alluvial clay derived from the flood plain of the Carron Valley. The extraction of this material would have left a typical saucer-shaped depression prone to flooding and may be the origin of the Carron Dams. Once dug out the clay had to be kneaded and matured. This meant leaving it exposed to the elements for a period of time to allow the clay platelets to slide over each other, making it more plastic. The lack of such preparation in the earlier medieval period meant that a lot of coarse minerals or grog had to be introduced as a binding agent. At Stenhouse the clay was well seasoned, but sand was added. Sand was readily available in the field where the pottery kilns stood. The use of such processed clay indicates that the potters at Stenhouse were able to

control the firing conditions in their kilns with some confidence. During the firing process the kilns were left open to the open air and as a result the oxygen in the atmosphere oxidised the natural iron in the clay producing a red colour. Occasionally some of the vessels, such as the sugar jars, were treated differently. The flues of the kiln were sealed off in the latter stages of the firing with the result that much of the oxygen was used up in the combustion and the iron was reduced producing grey or black pots. By the late 16th century black was in vogue.

The kilns were located a little to the south-east of Stenhouse mansion (NS 881 831), near the modern day Adam Crescent. It was also near here that the Roman temple known as Arthur's O'on stood and one of the stones in the kiln excavated in 2007 may have come from an altar there. The kilns had drystone walls, two or three courses high, set in oval pits in the sandy soil. Waste pottery sherds from previous failed firings were placed around them to insulate the firing chamber and to keep it dry. The unfired pottery would have been placed upside down in this central chamber and stacked up on the earth floor with the larger vessels at the bottom. Each pot was carefully placed to make the most of the firing conditions in the kiln and small hollow ceramic props were used to aid circulation (these were shaped like miniature cooling towers). Broken sherds could be used to separate the pots. This is where the skill of the potter showed. At either end of the oval chamber was a short flue where the fuel was placed and burnt (such kilns are known as Musty type 2). The absence of burnt daub in the excavations on the kilns shows that the kilns did not possess clay domes. Instead layers of turf, peat or broken pottery sherds would have been placed over the pots that were to be fired. The open top then produced an updraught which heated the green pots.

Illus: **The stone-lined kiln excavated in 2007.**

By the 14th century wood was relatively scarce and was carefully utilised. Peat burnt at a lower temperature than wood, but was the most common fuel used, and this may be why the kilns had two flues as they allowed the heat to be introduced from both sides and so evened it out. The base of a peat stack was found near one of the kilns. This material too was available locally. Just to the east of the kilns was a large peat bog. The removal of large quantities of the peat also left a water-logged hollow now occupied by a playing field and Dow Loan.

Once loaded the temperature of the kiln would be gradually raised over three to four days to dry the pots out and then harden them. This was probably achieved with the use of peat. Then a final burst of heat was required on the last day to flash the glaze and for this wood was necessary. Fortunately it too was available close by. The foresters of Torwood had managed the trees there for centuries to ensure the sustainable use of them. By the 17th century we have carefully worded legal documents determining how the wood was to be harvested and propagated (Harrison 1999). Even bundles of brushwood were valuable and the pottery would take many. After the glaze had been fused the kiln would be allowed to cool for three or so days before opening.

Firing the pots may have been a seasonal activity and even in a Scottish summer it would have been necessary to shelter the kilns from rain. No direct evidence for these was found at Stenhouse, though gulleys excavated in 2007 would have taken the run-off water. It is hard to estimate the life of such a kiln. Much depends upon usage and maintenance. In more recent times such structures were observed to last for 20 to 30 years if they were fired once a week. Each firing may have contained 50 or so vessels, though this is only a rough estimate.

The only other raw ingredients required were the lead and copper for the glaze. Copper could be obtained from the Ochils on the other side of the Forth, but lead needed to be brought from further afield, though only small quantities were used. Coincidentally, second-hand lead became available with the decline of the monasteries as their roofs were stripped. Locally it is also known that lead sheeting was found at the Roman fort in Camelon. The lead and copper were ground up into small particles and suspended in a paste so that they could be applied to the pot with a brush. Dipping only came about later.

Illus: **Applied decoration on the body of a jug with dipped green glaze finish.**

There is no contemporary documentary record for pottery production at Stenhouse. At the time the estate was owned by the Morham family and then by the first of the Bruces of Stenhouse. There was a connection with the abbeys in that the mill immediately to the south of the pottery had been gifted to Newbattle Abbey in 1246, though it seems to have been returned to secular ownership in the following century.

The location of the pottery just to the north of the River Carron was important. Ready access to that waterway allowed the goods made there to be transported along the east coast and then up the rivers. They were destined for the royal palaces at Stirling, Linlithgow and Edinburgh as well as the many abbeys such as Arbroath, Melrose and Jedburgh. At Melrose Abbey there is a large display of such pottery. The atrocious condition of the roads at the time meant that transport by water was far more practicable than by land for such delicate items - and much cheaper. The products were sophisticated and reached this high status market for well over a century.

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