

Lyminge, Kent.

Assessment of Ironwork from the Excavations 2007-2010.

Patrick Ottaway

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1. Introduction

There are c. 800 iron objects from the 2007-2010 excavations at Lyminge. For the purposes of assessment they were rapidly inspected and c. 260 (33%) were selected for X-radiography. Objects were selected on the basis of whether:

- their identity was obscured by corrosion products;
- it was thought they might exhibit surface treatment, notably non-ferrous plating;
- an X-ray might reveal metallographic structure (principally knives).

The condition of the objects is standard for a non-waterlogged site. Corrosion products cover all surfaces, but are rarely thick and the form of objects is often perceptible, although exact identification may be problematic without an X-ray.

The corrosion has been removed or partially removed from a small group of objects by students of conservation, but no X-radiographs or conservation notes accompanied them.

2. Factual Data

2.1 Provenance and Dating

The ironwork derives from excavations primarily concerned with a monastic landscape of the Middle Anglo-Saxon period (c. 650 – 850), although there is also some evidence both for occupation of the late fifth –early seventh centuries, in the form of sunken-featured and other buildings, and of the Late Anglo-Saxon and medieval periods.

Iron objects are often not very closely datable on typological grounds, but of those from Lyminge to which a date range can be assigned, the majority would not be out of place in the Middle Anglo-Saxon period. Particularly diagnostic of the period however, are four keys (07.25, 09.24, 09.110, 09.570). A few objects could be Late Anglo-Saxon, principally two pivoting knives (08.235, 08.389) and three blades with pierced ends (08.158, 08.159, 09.265) – probably carpenter's draw knives. Considered individually, many of the c. 40 tanged knives could also be Late Anglo-Saxon, but the group, considered as a whole, can be assigned to the Middle rather than Later Anglo-Saxon period on the basis of a number of criteria (see Ottaway 2009a, 202-15). Firstly, angle-backed blades make up about 30% of the group whereas in later groups the percentage would usually be markedly lower. Secondly, apart from one inlaid blade, the only decorative features are simple grooves along

the back of the blade faces; there are no examples of the other features which commonly occur on Late Anglo-Saxon / Anglo-Scandinavian knife blades (Ottaway 1992, 579-82). Thirdly, there are only one or two heavily worn cutting edges whereas in a later group, after the introduction of new approaches to blade manufacture which allowed greater wear, one would expect them to be much more numerous. Finally, there are no knives from Lyminge with tangs as long, or longer, than their blades, a development of the mid-ninth century.

Amongst the objects from the sunken-featured buildings there is a pair of shears (2.215) which is of Early Anglo-Saxon form, but otherwise there are no obviously early objects. Only a medieval horseshoe (10.53) and post-medieval boot plate (10.50) need necessarily be post-Conquest.

Finally, a number of absences or near absences from the Lyminge ironwork of types which would become common after the mid-ninth – early tenth century suggest that the assemblage belongs largely to the Middle Anglo-Saxon period, rather than one which is later. For example, there is little in the way of door or window furniture, except for one hinge pivot (08.138) and one small U-eyed hinge (09.155). There is no riding equipment (spurs, stirrups etc) and the only weapons are an incomplete seax blade (08.375) and a fragment of a spearhead (08.12); there are no arrowheads, common finds in later assemblages.

2.2 Range and Variety

Neither the range nor the variety of the Lyminge ironwork is as great as in the larger Middle Anglo-Saxon assemblages from Flixborough and Hamwic (Southampton) or, as one would expect, in an assemblage of similar size from the Late Anglo-Saxon period. However, this may be because the ironwork derives from a period before many of the innovations in the smith's repertoire of the mid-ninth – early tenth century (discussed in Ottaway 2009b).

The principal uses for the Lyminge ironwork would have been in craftworking, in the household and garden, and as fittings for minor structures and furniture.

The crafts include metalworking, represented primarily by a group of punches (08.382, 09.88, 09.468, 09.583) and two reamers (09.482, 09.486), the latter are tools used for widening punched holes. There are also a number of bars and strips which may, in some cases, be broken objects which are no longer identifiable, but are likely, in others, to be offcuts discarded during forging. Their distribution in relation to any slag may indicate areas or structures used for blacksmithing.

As on almost every Anglo-Saxon site, textile working is suggested by a number of the teeth used in combs for preparing wool or flax for spinning, and there are one or two possible needles. Also related to textile working are the pair of shears from one of the sunken-featured buildings (2.215) and two pairs of tweezers (08.160, 09.160). Awls (08.219, 08.347) may indicate leatherworking, although these thin tools with two pointed ends could have other craft uses. Woodworking is represented by a tanged drawknife (09.497) and three elongated blades pierced at each end (08.158, 08.159, 09.265). They are also probably drawknives with wooden handles which, on basis of examples from elsewhere, were secured by nailing, although the form of the

handle is unknown. A small but robust piece of iron which tapers to a point at each end (09.369) may be a mill pick, It would have been gripped by a handle in the centre and used for giving a pecked finish to millstones or querns.

Craft, domestic activity and, possibly, combat and hunting are represented by the tanged knives. They are a varied group with, as already noted, both angle-back blades and those of other blade back forms, primarily that in which the back is straight before curving down to the tip – the commonest in Anglo-Saxon contexts. The knives also vary considerably in size with, for example, lengths ranging from c. 70mm to more than 160mm. Decorative treatment is confined to narrow grooves along the back of the blade faces with the exception of an angle-backed blade (09.241) with an elaborate pattern of non-ferrous wire inlay on the back of one (if not both) of the blade faces. There is an unusual knife with an iron tang / handle (08.198) similar to one from Flixborough and possibly a medical implement (Ottaway 2009a, 215). Two pivoting knives (08.235, 08.389) probably represent some specialist activity, but in spite of the type being common in Middle and Late Anglo-Saxon contexts we remain no nearer to knowing what this might be.

Specifically from the household are a pot hook (09.13) and three small vessel handles (08.293, 09.550, 09.615) 08.304 is a small candleholder. Gardening or horticulture is probably represented by a small billhook (09.562) and by what is usually described as a weed hook (09.101). There are two small clappers from bells (09.454, 10.1.323) probably used either in religious rites or for cattle or sheep.

Amongst the structural ironwork there are, as one would expect, numerous nails and staples. In addition, there is a range of straps, usually incomplete, probably from brackets, bindings and hinges. There are also some small hinge straps (e.g. 08.80), but none which obviously comes from a large chest. Of greater interest is a range of small fittings, strips and plates, usually pierced for attachment, which would have served as bindings, brackets or simply as decoration on boxes, caskets or minor structural items (e.g. 07.38, 09.102, 09.173, 09.219, 09.529). Some bear relief work and non-ferrous plating. Particular attention may be drawn to 08.66 which bears an incised cross potent (i.e. with small cross-bars at the ends of the arms).

The use of numerous, relatively large pieces of iron plate pierced for attachment, usually incomplete and often of irregular shape, is difficult to determine, but they may have come chests or doors or perhaps from vessels. Of particular interest, however, is a group of pierced iron plates slightly curved in section and curved over along the edge (08.75, 08.285, 08.321-2, 09.213, 09.272, 09.553, 10.53). Most of them have one or more nails still set in the piercings with the head projecting from the plate's concave side. The complete form of these plates may be represented by 09.147 which is a roughly U-shaped object with a narrow slot between the arms. These plates were clearly for some distinct, but as yet undetermined, function as a binding or shodding of some sort and are reminiscent of some similar, if rather smaller, and equally enigmatic, items from Flixborough (Ottaway 2009a, 167-8).

There is a probable fragment of a padlock case (08.93), but, surprisingly, perhaps, locks are otherwise represented by only one bolt (10.31) to set alongside the four keys. Three of these are of a simple form with a tear-drop shaped bow. The other

(09.224) is L-shaped, the shaft having a looped head; the bit is obscured by corrosion.

Iron dress fittings (especially pins, brooches, buckles and garter hooks) are a well-known component of Middle Anglo-Saxon contexts. However, from Lyminge there were only four pins (08.55, 08.72, 09.461, 1.55) and two buckles (07.23, 08.137). One of the pins comes from a sunken featured building (1.55). Horse equipment is represented by a complete snaffle bit (09.25) and three links (08.119, 08.146, 09.362). They are of the simple form common throughout the Anglo-Saxon period. Weaponry is represented by the tip of a spearhead (08.12) and part of a large single-edged blade, or seax, which is pattern-welded (08.375).

2. Research Potential

From a site specific point of view the ironwork from Lyminge clearly offers a wide range of information on the character of activity and daily life at the site which can, no doubt, be enhanced by integration with evidence from other artefacts and the features, spaces and structures from which they came. The ironwork, therefore, has the potential to contribute to the overall project objectives as set out on the project web site, in particular:

Determine the spatial organisation of monastic life by examining what activities took place in different parts of the precinct and how space was zoned according to social access, everyday activities, and conceptions of sacredness.

Elucidate the role of monastic settlements as territorial centres in Anglo-Saxon Kent through a detailed consideration of the monastic economy covering food provisioning networks, the conversion of raw materials, craft production and the consumption of imported commodities

If the ironwork from Lyminge is considered in a wider context it can be characterized, for the most part, as a well-dated, medium-sized assemblage of the Middle Anglo-Saxon period. It may, therefore, be usefully set alongside a number of other assemblages of similar size, or larger, which, in the last twenty years or so, have opened up an important area of research into the craft and technology of ironworking and of manufacturing in general in the period. These assemblages are fairly widely distributed in southern and eastern England, but Lyminge gives us the first from Kent. Notable others come from Brandon (Suffolk), Flixborough (Lincs.), Hamwic (Southampton) and Thwing (East Riding), although only Flixborough is fully published (Ottaway 2009).

Inter site comparisons at the level of individual artefact types and of assemblages as a whole have the potential to address a number of research questions relating to typology, approaches to manufacturing, and the relationship between use and discard - i.e. questions such as why certain categories of object, including knives, are much more commonly found than others. As important bodies of Middle Anglo-Saxon ironwork, such as that from Lyminge, come to hand in different parts of England we are offered a potentially rich research dividend.

3. Recommendations for further work

In order to maximise the research dividend from the Lyminge ironwork it is recommended that a full catalogue of the objects be produced on the basis of which there should be a research report. This would address the topics referred to above along with others which will, no doubt, be prompted by the work of other specialists.

Before the catalogue is prepared it is recommended that there should be a programme of further selective X-radiography and conservation in order to:

- Establish the identity of objects obscured by corrosion;
- Reveal details of the form of objects (whether already identified to type or not);
- Reveal and analyse non-ferrous platings and inlay.

In addition there would be research value in a selective programme of metallography of bladed or edged tools. A number of patterns have begun to emerge in the smith's approach to selection of raw materials and methods of forging in the Middle Anglo-Saxon period as a result of metallographic investigations of artefacts, principally knives, from Flixborough, Hamwic and York. Further enhancement of the data base in order to test the validity of those patterns would be of considerable interest. The X radiographs suggest that many of the Lyminge objects have sufficient metal surviving to give good results in metallographic analysis.

4. References

Ottaway, P. 1992. *Anglo-Scandinavian Ironwork from 16-22 Coppergate*, Archaeology of York, **17/6**

Ottaway, P. 2009a. Contributions to D. H. Evans and C. Loveluck (eds) *Life and Economy at Early Medieval Flixborough c. AD 600 – 1000: The Artefact Evidence*, Excavations at Flixborough, **2**

Ottaway, P. 2009b. *The Products of the Blacksmith in Mid-late Anglo-Saxon England*, on-line at www.pjoarchaeology.co.uk/academic-consultancy/anglosaxon-ironwork.html