



Aldingham Motte,

Cumbria

Finds and Animal Bone Report



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SUMMARY

Aldingham Motte (SD 27795 69876) is a Scheduled Monument (SM 37622), situated on the north-western edge of Morecambe Bay and now partially lost to the sea. Originating as a ringwork in the early twelfth century, possibly raised in 1102 by Roger de Poitou, evidence from the 1968 excavation showed it to have been modified by the le Fleming family in the late twelfth to early thirteenth century by filling in the ringwork and raising a motte above it. The motte was raised again shortly before its abandonment in the late thirteenth century, when the le Fleming family moved to the nearby moated site at Moat farm. After many years in abeyance, this work is now being brought to publication by Greenlane Archaeology.

Oxford Archaeology North was commissioned to examine and report on the finds material stored at Kendal Museum. Examination of the metalwork in March 2013 showed this to have survived in only fair to poor condition, although a range of medieval iron objects remained recognisable, including arrowheads, horseshoes, and possible wood-working tools. The animal bone also proved interesting, with a considerable amount of red deer present, particularly in Period I. Some antlers and sheep horns also showed clear evidence of being worked.

ACKNOWLEDGEMENTS

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1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 In March 2013, Oxford Archaeology North (OA North) was commissioned, by Greenlane Archaeology, to report on an assemblage of medieval and later metalwork and other finds, including animal bone, recovered in the course of excavations at Aldingham Motte, in Cumbria (SD 27795 69876), during 1968.
- 1.1.2 The motte is a Scheduled Monument (SM 37622). Originating as a ringwork in the early twelfth century, possibly raised in 1102 by Roger de Poitou (Kenyon 1990), evidence from the 1968 excavation (Davison 1969) showed it to have been modified by the le Fleming family in the late twelfth to early thirteenth century by filling in the ringwork and raising a motte above it. The motte was raised again shortly before its abandonment in the late thirteenth century, when the le Fleming family moved to the nearby moated site at Moat Farm.
- 1.1.3 The stratigraphic nomenclature used in this report is that of the original excavator (Brian Davison), and is derived from information physically associated with individual finds and the animal bone, and from detailed field records, especially drawn plans and sections, within the archive. Whilst the majority of the features excavated were assigned numerical identifiers, the fills of the ‘ditch at north side of mound’ were only assigned alphabetical identifiers.
- 1.1.4 The archaeological succession had been divided into four successive periods of activity (Periods I-IV), the latter subdivided (Table 1). Broad dating for these periods appears to have been derived from their equation with documented historical events and the dating of associated pottery. Thus, the dating is expressed as ranges.

| Period | Date Range | Contexts |
|--------|---|---------------------------|
| I | Early to mid-twelfth century | 18-27 |
| II | Mid-twelfth to early thirteenth century | 7-17 |
| III | Early thirteenth century | 2-6 |
| IV | Early to late thirteenth century abandonment (and later?) | a, c, lower d, upper d |
| IV b | Modern | Only mentioned in passing |

Table 1: Periods assigned by the excavator

2. THE METAL WORK AND WORKED STONE

2.1 COPPER ALLOY

1.1.1 A small group of four fragments of copper alloy was recovered, all from fill d of the 'ditch at N side of mound', which has been allocated to Period IV, and provisionally dated to the early thirteenth century on pottery evidence. None of the items is complete, or in good condition, and only one can be identified with confidence. A perforated copper-alloy coin (SF 1; conservation number 681815), possibly of Roman date, is reported upon elsewhere, as is a possible silver coin from the same ditch fill (conservation number 681821).

1.1.2 Although the identification is tenuous, object **1** could be the wound wire head of a dress pin, with the head formed by winding several turns of thin wire around the shaft. Such pins were used in great numbers during the medieval and early post-medieval periods to secure clothing and headwear (Oakley and Webster 1979, 261), but their fragile nature means that few survive. The relatively large head suggests a medieval date for this example, although they continued in production well into the post-medieval period (Caple 1983, 260). Object **2** is the pin from a simple circular-framed brooch or buckle, probably dating to the later fourteenth or early fifteenth century (Egan and Pritchard 1991, 57, fig 36). Evidence suggests that these were used with leather belts, worn fashionably low on the hips, during the fourteenth century (see, for example, Mellor and Pearce 1981, 133), or possibly to fix hose at the hips (Howard-Davis 2008, 377, and fig 264). Neither object **3**, nor object **4**, can be identified. The evidence of gilding on object **4** implies that it was part of an item intended to be displayed, but it cannot be attributed to any particular purpose, although it might possibly derive from a decorative element of horse harness.

2.1.3 *Catalogue:*

- 1** Small and poorly preserved sub-spherical fragment. Where the surface is preserved, there appears to be a faint groove around the circumference of the piece, suggesting that this is possibly the wound wire head of a dress pin.
Diam: 4-7mm
Aldingham 68, Period IV, ditch layer d, Bag 7, 201/333, conservation no 681816
- 2** Small well-preserved cast buckle or annular brooch pin, broken at loop.
L: 26mm; Diam: 3mm
Aldingham 68, Period IV, ditch layer d, Bag 12, conservation no 681817
- 3** Poorly preserved fragment of thin sheet metal, only one original edge of which survives.
L: 55mm; Th: <0.5mm
Aldingham 68, Period IV, ditch layer d, Bag 12, conservation no 681818
- 4** Well-preserved irregular perforated fragment. Its shape is reminiscent of a hinged buckle or brooch pin, but the object is so thin that it would not have been serviceable in such use. It appears, however, to have been gilded in part, and was thus part of decorative object.
L: 48mm; W: 8mm; Th: 0.5mm
Aldingham 68, Period IV, ditch layer d, Bag 32, conservation no 681819

2.2 IRONWORK

2.2.1 There is a considerably larger group of ironwork, much of it from the earliest activity on the site (Period I). It is, however, in very poor condition, which, despite the conservation of some items, has been exacerbated by prolonged storage, and many have been reduced to unidentifiable fragments. As a result of this, and in the absence of any x-ray plates taken before this decay, all measurements are approximate, only intended to give a broad indication of the size of the objects as they survive today. As the assemblage contains so few identifiable objects, it is presented chronologically, rather than in functional groups.

2.2.2 **Period I:** several objects were recovered from the Period I old ground surface (or occupation layer), **I8**, dated from the pottery recovered to the early twelfth century. The most easily recognisable object (**5**) is a fragment of 'wavy-edge' horseshoe, possibly with rectangular nail holes (Clark 1995, type 2B). Type 2 horseshoes appear in the mid-eleventh century, and continue in use into the thirteenth century, with type 2B perhaps not being the dominant type until the mid-twelfth century (*ibid*). Objects **6** and **7** are both relatively small rings, the latter with a pin attached for fixing, the other lacking the pin, and both, knocked into wood or plastered walls, could have served a range of purposes. Although in poor condition, object **8** appears to be a small droplet-shaped handle, perhaps with a small suspension loop, its size suggesting that it might have come from an item of furniture. The remainder of the ironwork from this context comprises small or medium-sized nails (**9**, **10**) or other unidentifiable fragments (**11-13**).

2.2.3 Catalogue:

- 5** Fragment of 'wavy-edge' horseshoe with calkin.
L: 80mm; Ht calkin: 14mm; W web: 19mm
Aldingham 68, Period I, OGS **I8**, Bag 30, conservation number 681811
- 6** Small forged ring with pin.
Diam ring: 35mm; L shank: 45+mm
Aldingham 68, Period I, OGS **I8**, Bag 30, conservation number 681813
- 7** Small forged ring or spiral with rectangular section, possibly originally with pin, as break implies an extension at one end.
Diam ring: 40mm; Th ring: 6mm
Aldingham 68, Period I, OGS **I8**, Bag 30, conservation number 681810
- 8** Small droplet-shaped handle or pendant with suspension loop. Object possibly has an hexagonal cross-section.
L: 40mm; W: 22mm
Aldingham 68, Period I, OGS **I8**, Bag 30, conservation number 681814
- 9** Five small shattered fragments of iron, originally recorded as one nail. Not now possible to ascertain dimensions.
Aldingham 68, Period I, OGS **I8**, Bag 36, unconserved
- 10** Nail shank?
L: 76mm
Aldingham 68, Period I, OGS **I8**, Bag 30, conservation number 681809

- 11 Two fragments of strip.
L (largest): 39mm
Aldingham 68, Period I, OGS **18**, Bag 30, conservation number 681812
- 12 Small fragment of corroded iron fused to stone. Probably part of the shank of a nail.
Aldingham 68, Period I, OGS **18**, Bag 33, unconserved
- 13 Two joining fragments. This is possibly a copper-alloy object entirely covered in iron corrosion products. A break shows the rectangular section, but it is not clear enough for valid measurements to be taken.
L: *c* 50mm
Aldingham 68, Period I, OGS **18**, Bag 38, conservation number 681820

2.2.4 **Period II:** all the objects assigned to Period II were from the same deposit, occupation layer 7. Probably the best-preserved object from the excavations is a large scale-tanged knife blade (**14**). In general terms, despite being in use in the thirteenth century (Goodall 1981), the scale tang did not gain popularity until the early fourteenth century (Cowgill *et al* 1987, 25, table 7), somewhat later than the postulated mid-twelfth-century dating of Period II.

2.2.5 There are, in addition, two arrowheads from layer 7, both with very broad date-ranges. Arrowhead **15** is probably Jessop's (1997) type MP1, a multi-purpose form in use from the eleventh to the fifteenth century, and arrowhead **16**, Jessop's type M6, a military type, seems to have been used from the eleventh to the fourteenth century. A very similar example can be seen in a contemporary context at Perth, Scotland (Ford 1987, illus 65, object 63). The latter, a bodkin-type arrowhead, is commonly thought to have developed to pierce metal armour (*ibid*), but this has recently been challenged (Starley 2005), suggesting that it was no more efficient at armour piercing than other types.

2.2.6 A fragment of strip (**17**) was identified in the original archive records as a possible blade, but as the section appears to be a flattened D-shape, rather than the triangular cross-section typical of a knife blade, it seems more likely to have come from metal strip used for reinforcing, for example on a door or box. A second, more robust, piece of strip (**18**) was possibly originally L-shaped, and was most probably part of a strap hinge. There was also a completely shattered object, now beyond description (conservation number 681803), but, again, possibly perforated strip. There were, in addition, three nails (**19-21**), all presumably deriving from woodwork within buildings on the site.

2.2.7 *Catalogue:*

- 14 Large blade with scale tang; nothing remains of the (presumably) organic scale plates. Scale tang in line with the back of the blade, and the cutting edge curves out markedly from the tang, before narrowing rapidly to a point at the tip, making the blade almost lunate in form.
L: 230mm; W: 39mm; Th: 7mm
Aldingham 68, Period II, occupation layer 7, Bag 14, conservation number 681807
- 15 Tanged arrowhead, socket obscured.
L: 71mm; Diam socket: *c* 11mm
Aldingham 68, Period II, occupation layer 7, Bag 10, conservation number 681800

- 16** Bodkin-type arrowhead with round socket and square section at the point.
L: 47mm; Diam socket: 9mm
Aldingham 68, Period II, occupation layer 7, Bag 10, conservation number 681801
- 17** Short fragment of strip, slightly flaring in plan, with a flattened D-shaped cross-section.
L: 61mm; W: 25mm; Th: 3mm
Aldingham 68, Period II, occupation layer 7, Bag 10, conservation number 681802
- 18** L-shaped strip, with one long and one short arm, possibly a strap hinge element. Although it is not clear, there appears to be a single perforation at the end of the longer arm.
L: 140mm; W: 19mm; Th: 6mm
Aldingham 68, Period II, occupation layer 7, Bag 14, conservation number 681808
- 19** Nail, now shattered.
L (largest fragment): c 30mm
Aldingham 68, Period II, occupation layer 7, Bag 10, unconserved
- 20** Nail with large round head.
L: 43mm; Diam head: 22mm
Aldingham 68, Period II, occupation layer 7, Bag 10, unconserved
- 21** Nail, shank only.
L: c 70mm
Aldingham 68, Period II, occupation layer 7, Bag 10, unconserved

2.2.8 **Period IV:** there were no iron objects from features or deposits assigned to Period III. All of the Period IV ironwork came from fill d, within the ditch on the north side of the castle mound. The best-preserved item from this fill (**22**) remains enigmatic. It is a substantial L-shaped bar, with one end broadening to form an irregular triangular terminal. The consistent rectangular cross-section makes it evident that it is not a knife blade, but no other identification can be offered with confidence, although it bears a passing resemblance to a door latch or bolt. Object **23** is a small blade fragment, identified by the typically triangular cross-section. It is effectively parallel-sided, giving no indication of the original shape of the blade. Object **24** could simply be a headless nail, but its flaring shape and larger size suggest some more specialist purpose, and it can be tentatively identified as a small chisel or chisel-like tool, perhaps a small paring chisel. An example from York (Morris 2000, fig 978, no 2143) of similar size, with a narrow triangular blade and pointed tang, is of eleventh-century date, and a larger example can be seen within the contents of the Viking-age Mästermyr tool chest (Arwidsson and Berg 1983, pl 26, obj 29). Undoubtedly, the form of such simple tools was long-lived, and its use in a thirteenth-century context would not seem out of place. Similarly, object **25** has been tentatively identified as a woodworking chisel of a type seen in a twelfth-century context at Coppergate, York (Ottaway and Rogers 2002, fig 1336 obj 11495).

2.2.9 The remainder of the iron artefacts from ditch fill d are associated with building. There are two rove bolts from this, both of similar size, and both were clenched through wood c 40mm in thickness. A relatively large spike or nail (**28**) seems most likely to have been used in building.

2.2.10 Several nails were also recovered from this fill. They include two horseshoe nails (**29, 30**), both of the fiddle-key type used with 'wavy edge' horseshoes, like **5**, from Period I occupation layer **18** (*Section 2.1.3*).

2.2.11 There were also other nails, but not as many survive now as were listed in the original finds record, many having shattered. For instance, 12 nails were recorded in finds bag 32, but only four can now be determined amongst the many shapeless fragments. There were also nails amongst material from finds bag 11, from the same fill, although many of them had also deteriorated badly. Surviving fragments are listed (**31-43**) for completeness, in the groups in which they were originally wrapped. It is assumed that they derive from the robbing, decay, or demolition of earlier wooden structures on the site, but nothing can be said of their dating or relevance.

2.2.12 *Catalogue:*

- 22** Substantial L-shaped bar with rectangular cross-section. One end broadens abruptly to form a triangular terminal *c* 100mm in length, whilst, after *c* 60mm, the other terminal turns at 90°, forming a short, handle-like projection.
L: 160mm; W: 45mm; Th: 12mm
Aldingham 68, Period IV, ditch layer d, Bag 11, conservation number 681805
- 23** Parallel-sided blade fragment.
L: 66mm; W: 18mm
Aldingham 68, Period IV, ditch layer d, Bag 32, unconserved
- 24** Probably small tanged chisel, with the narrow shank or tang expanding into a slightly flaring blade.
L: 84mm; W head: 11mm
Aldingham 68, Period IV, ditch layer d, Bag 32, unconserved
- 25** Tool, possibly a woodworking chisel, with abruptly-angled broad blade and long narrow tang.
L overall: 108mm; L blade: 40mm; W blade: 28mm
Aldingham 68, Period IV, ditch layer d, Bag 11, conservation number 681804
- 26** Bolt with large round head and possibly square rove.
L: 50mm; Diam head: 35mm; Diam rove: 24mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 27** Bolt with large head, much of it now lost, and possibly square rove, also badly damaged.
L: 50mm; Diam head: 41mm; Diam rove: 17mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 28** Spike or nail, no obvious head.
L: 110mm
Aldingham 68, Period IV, ditch layer d, Bag 11, conservation number 681806
- 29** Fiddle-key horseshoe nail. Complete?
L: 37mm; W: 16mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 30** Fiddle-key horseshoe nail. Incomplete.
L: 12mm; W: 17mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved

-
- 31** Nail, head absent, now in five fragments.
L: 65mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 32** Approximately seven nails, heads absent, dimensions of largest fragment given.
L: 125mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 33** Four relatively well-preserved nail shanks, all of similar length.
L: 34mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 34** Nail with large, possibly hexagonal, head.
L: 57mm; Diam head: 27mm
Aldingham 68, Period IV, ditch layer d, Bag 32, unconserved
- 35** Large-headed nail, shank incomplete.
L: 30mm; Diam head: 27mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 36** Two large-headed nails, shanks incomplete.
L: 67mm; Diam head: 22mm
L: 50mm; Diam head: 23mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 37** Large-headed nail in two pieces.
L: 75mm; Diam head: 25mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 38** Four nails shanks, one large-headed nail.
L shanks: 47mm; 60mm; 62mm; 65mm
L nail: 43mm; Diam head: 14mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 39** Large-headed nail, complete. Curved shank might suggest it has been drawn out of a timber.
L: 105mm; Diam head: 32mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 40** Large-headed nail, now shattered.
L: 30mm; Diam head: 38mm
Aldingham 68, Period IV, ditch layer d, Bag 11, unconserved
- 41** Nail, shank only.
L: 48mm
Aldingham 68, Period IV, ditch layer d, Bag 32, unconserved
- 42** Nail, shank only.
L: 37mm
Aldingham 68, Period IV, ditch layer d, Bag 32, unconserved
- 43** Nail, shank only.
L: 44mm
Aldingham 68, Period IV, ditch layer d, Bag 32, unconserved

2.3 WORKED STONE

2.3.1 All five of the stone objects from the site are from Period I, occupation layer **18**. All have been identified in the archive as probable whetstones or hones, but this identification can be called into question for two, or possibly three, of the objects. Object **44** is a small perforated whetstone in a pale green mica-schist, and is unquestionably of medieval date. A small whetstone like this was intended for day-to-day use, for instance sharpening a personal knife, and these objects were routinely worn suspended from a belt. Whetstone **45** is much larger, and would have been used to sharpen larger blades, including tools and weapons. Again, it seems well-worn, and there are numerous groups of parallel scratches on the upper and lower surfaces. Object **46**, a thin, rectangular-sectioned slab of sandstone, shows little or no sign of modification or use, but the stone would have been suitable for sharpening blades, and the stone could have been collected and retained on an *ad hoc* basis, or its presence might be entirely fortuitous. Object **47**, a flat, slaty, waterworn fragment, may, again, have been used on an *ad hoc* basis, but the beach pebbles in the locality of Aldingham Motte are often of similar shape and size (*pers obs*), and it could be entirely unmodified. Similarly, a small fragment of greenish ?schist (**48**) appears entirely unworked. A small group of fragments of heat-shattered stones, some of them heavily sooted (**49**), are included for completeness, but are not artefacts.

2.3.2 Catalogue:

- 44** Small perforated hone, now fragmentary (14 fragments) and not completely reconstructable. Pale green schist-like stone. Basically rectangular in shape, one end has been worn, probably by use, to an elongated point. There is a central perforation, c 7.5mm in diameter, and probably drilled, at the opposing end.
L: 97mm; W: 19mm; Th: 5mm
Aldingham 68, Period 1, occupation layer **18**, SF 2, conservation number 681823
- 45** Rectangular-sectioned whetstone fragment in dark greyish micaceous stone; neither of the original ends survives. The upper and lower surfaces are worn flat or slightly dished, and show groups of parallel scratches at varying angles, commensurate with its use for sharpening blades.
L: 100mm; W: 40mm; Th: 33mm
Aldingham 68, Period I, occupation layer **18**, bag 30=29, unconserved
- 46** Trapezoidal fragment of brown micaceous sandstone. No obvious signs of modification or use.
L: 94mm; W: 86mm; Th: 18mm
Aldingham 68, Period I, occupation layer **18**, bag 30=29, unconserved
- 47** Smooth, waterworn, grey slate fragment of irregular shape. No obvious signs of use or modification, probably beach pebble.
L: 177mm; W: 44mm; Th: c 7mm
Aldingham 68, Period I, occupation layer **18**, bag 30=29, unconserved
- 48** Small fragment of green ?schist with trapezoidal cross-section. Probably unmodified.
L: 60mm; W: 15mm; Th: 9mm
Aldingham 68, Period I, occupation layer **18**, bag 30=29, unconserved

- 49** Seven fragments of heat-shattered and sooted stone.
Aldingham 68, Period IV, ditch d, bag 27, unconserved

3. THE ANIMAL BONE

3.1 INTRODUCTION

- 3.1.1 In total, 188 animal bones and 76 teeth fragments, or number of individual specimens (NISP), were recovered from the excavations. Of these, 176 (66%) were identified to a species level. All of the bone was collected by hand, with no bone recovered from soil samples.

3.2 METHODOLOGY

- 3.2.1 The material was identified using the reference collections held by the author, and with reference to Halstead and Collins (1995) and Schmid (1972). Sheep/goat distinctions were made using published work by Boessneck (1969), Kratochvil (1969), Payne (1985) and Prummel and Frisch (1986). Red and fallow deer were separated following Lister (1996). Bird bones were identified with reference to Cohen and Serjeantson (1996).
- 3.2.2 The diagnostic zones used followed those described in Serjeantson (1996), although this excludes the mandible, which was zoned as described in Worley (forthcoming). For bones with more than 50% of a diagnostic zone, countable 'A' bones, the following information was recorded where appropriate: context reference; species or species group; element; number of bones; side; the diagnostic zone as either more than or less than half present; fusion state; butchery; measurements; tooth wear development; and other comments. Pathology and other developmental or congenital anomalies were also noted. Other 'B' bones were recorded by species group and element only, unless they displayed butchery marks, pathology or congenital traits, in which instance they were recorded in greater detail. Only six fragments fell into this category.
- 3.2.3 The condition of the bone was recorded by context as ranked data. This included the state of bone preservation; angularity of archaeological breaks; the relative size of bone fragments; the proportion of the original complete bones present; the level of surface erosion; and the proportion of new breaks, butchered, burnt and gnawed bones.
- 3.2.4 The extent of mandibular tooth wear can be used to estimate the age of death of the principal stock animals. Wear stages were recorded using Grant (1982) and grouped into age stages following the methods of Jones and Sadler (2012) and Halstead (1985). Measurements were taken on cattle, sheep/goat, pig and horse bones following von den Driesch (1976), Davis (1992) and Levine (1982).

3.3 PRESERVATION AND QUANTIFICATION

- 3.3.1 All of the animal bone was described as in a good condition, with normally less than 50% of its surface eroded. Although much of it retained less than 50% of the original part, the bone had not been overly fragmented, with only

29% of 'A' bones described as shaft splinters, bone-end splinters, or shaft cylinders. In total, 13 (16%) bones had butchery marks upon them and 12 (6%) had been gnawed by dogs.

3.3.2 Overall, the total number of animal bones is too small to be considered representative of the periods of use on the site. In addition, not all species likely to be consumed are present. A wide variety of wild fowl and small birds was consumed in the medieval period (Albarella and Thomas 2002), and these were notably absent (Table 1). However, significant numbers of deer bones were recorded, particularly from Period I deposits, largely from occupation deposit *18*, with small numbers from deposits *25* and *26* within the mound.

| Species | Period I | Period II | Period III | Period IV | Topsoil | Total |
|---|----------|-----------|------------|-----------|---------|-------|
| Mammal Bone | | | | | | |
| <i>Equus</i> sp | 6 | 2 | | 6 | 3 | 17 |
| Cattle | 14 | 27 | 2 | 1 | 4 | 48 |
| Sheep/Goat | 1 | 6 | | 3 | | 10 |
| Sheep | | 1 | | | | 1 |
| Pig | 4 | 21 | | 2 | | 27 |
| Dog | | 2 | | 1 | | 3 |
| Red Deer | 45 | 7 | 3 | | 5 | 60 |
| Roe Deer | | 3 | 1 | | | 4 |
| Deer | 1 | | | | | 1 |
| Cattle/Red Deer | 7 | 5 | 1 | | 1 | 14 |
| Red/Fallow Deer | 3 | | | | | 3 |
| Medium Mammal | 3 | 3 | | | | 6 |
| Large Mammal | 38 | 5 | | 6 | 1 | 50 |
| Unidentified Mammal | 2 | 7 | | | | 9 |
| Unidentified Marine Mammal | 2 | | | | | 2 |
| Total Mammal Bone | 126 | 89 | 7 | 19 | 14 | 255 |
| Total Mammal Bone Identified to Species or Low Order Group | 71 | 69 | 6 | 13 | 12 | 171 |
| | | | | | | |
| Bird Bone | | | | | | |
| Domestic Fowl | | 1 | 1 | | | 2 |
| Domestic/Greylag Goose | | 2 | | | | 2 |
| Domestic Fowl/Bantam | | | | 1 | | 1 |
| Domestic Fowl/Pheasant | 1 | | | | | 1 |
| Galliform | | 1 | | 1 | | 2 |
| Total Bird Bone | 1 | 4 | 1 | 2 | 0 | 8 |

Note: Bones of the same animal counted as 1

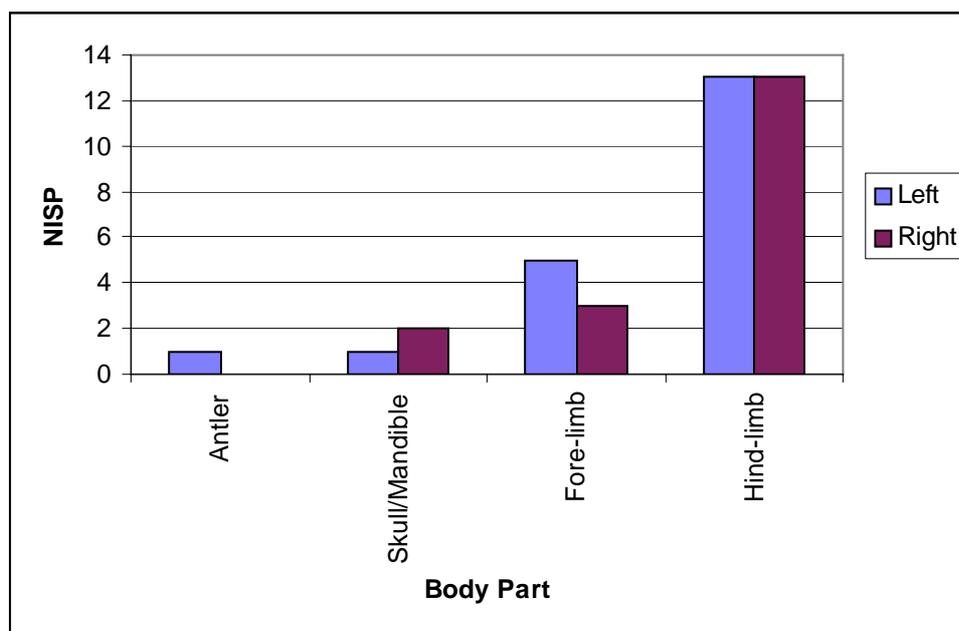
Table 2: NISP of species by period

3.4 RED DEER

3.4.1 The assemblage was dominated by body parts of red deer from Period I (Fig 1). These have been divided by the side of the body from which they came. The 'unmaking' of the deer was the climax of the hunt, when the carcass was disembowelled, skinned and butchered (Sykes 2007). Gifting body parts to members of the hunt was an integral part of this 'unmaking', with the animal's forelimbs gifted to the forester or parker and the best hunter, and the hindlimbs reserved for the elite. A survey of elite sites and hunting lodges in Britain has shown that the archaeological evidence is consistent with this

behaviour, with a notable bias towards left forelimbs from the residences of keepers (*ibid*).

- 3.4.2 The Period I red deer bones from Aldingham show no bias towards the side of the body, but there is a clear preference for the hind-limbs (Fig 1). This demonstrates that, in line with medieval hunting practices, forelimbs were normally gifted to other members of the hunt, with the hind-limbs being brought to the motte for consumption.



Note: Bones of the same animal counted as 1

Fig 1: Period I red deer 'A' bones by body part and side

- 3.4.3 Butchery marks were recorded on 15 deer bones, predominantly cut marks from the dismemberment and filleting of the limbs. In addition, two antlers had chop marks upon them, removing sections of the beam and tines to be used as a raw material for the manufacture of other objects.
- 3.4.4 In total, 15 antler fragments were recorded. Of these, six had the coronet present, three being naturally shed, and three with part of the cranium still attached. It is evident that some of these antlers were therefore collected from the wild after the animals had shed their antlers in the spring (MacDonald and Barrett 1995).

3.5 STOCK ANIMALS

- 3.5.1 The principal domestic stock animals were recorded, including cattle, sheep and pig. Goat was not positively identified, but was likely to have been only a minor stock animal, in line with the national norm (Maltby 1981). Animals of the genus *Equus* may include horse, donkey, or their hybrids, which have proven to be difficult to distinguish from their skeletal remains (Johnston 2002). The finer horses would have been used for hunting and riding, with ponies utilised for transport (Clutton-Brock 1992).

- 3.5.2 Butchery marks were found on six specimens, including cattle, sheep, pig and *Equus* sp. Such marks are largely associated with the dismemberment and filleting of the limb bones. People in Britain did not normally consume horse in the medieval period, and the dismemberment of the animal may have been to procure food for dogs (Wilson and Edwards 1993; Smith 1998). In addition, a sheep horn core had been chopped off the skull to utilise the horn for making artefacts.
- 3.5.3 Only two cattle mandibles could be used to age the animals with any certainty. One Period II mandible was of an elderly animal, and one Period III mandible came from an immature or sub-adult animal. Similarly, only four pig mandibles could be aged. One Period I mandible was from a piglet less than six months old, and three Period II mandibles were of animals aged 12-24 months, over 24 months, and over 12 months of age.

3.6 CONCLUSIONS

- 3.6.1 The small overall area of excavation within the site produced a correspondingly small number of bones. However, it is evident that well-preserved archaeozoological material is present at the site. The analysis presented here largely attests to the presence of these remains, and is not thought to be representative of all the animals consumed or utilised.
- 3.6.2 Despite the small number of bones, it is evident, particularly from the Period I material, that hunting deer contributed a significant quantity of venison to the diet of the inhabitants. A clear bias towards the hind-limbs of red deer is evident, with the fore-limbs presumably being gifted to other members of the hunt, in line with the medieval practices described in hunting manuals (Sykes 2007). After most hunts, only the hind-limbs would have been brought back to the motte for consumption, with the bones of the fore-limbs presumably being disposed of at other residences. In addition, red deer antler was also utilised for making objects. These were taken from both the carcasses and the living animals, being collected from the surrounding area after they had been naturally shed. There is also evidence for removing the horns from sheep carcasses for the same purpose.

4. BIBLIOGRAPHY

- Albarella, U, and Thomas, R, 2002 They dined on crane: bird consumption, wild fowling and status in medieval England, *Acta Zoologica Cracoviensia*, **45** (special issue), 23-38
- Arwidsson, G, and Berg, G, 1983 *The Mästermyr find: a Viking Age tool chest from Gotland*, Stockholm
- Boessneck, J, 1969 Osteological differences between Sheep (*Ovis aries Linne*) and Goat (*Capra hircus Linne*), in D Brothwell and E Higgs (eds), *Science and Archaeology*, **2**, London, 131-58
- Caple, C, 1983 Pins and wires, in P Mayes and LAS Butler, *Sandal Castle Excavations 1964-73; a detailed archaeological report*, Wakefield, 269-78
- Clark, J, 1995 Horseshoes, in J Clark (ed), *The medieval horse and its equipment c.1150-c.1450*, Medieval finds from excavations in London, **5**, London, 75-123
- Clutton-Brock, J, 1992 *Horse power*, London
- Cohen, A, and Serjeantson, D, 1996 *A manual for the identification of bird bones from archaeological sites*, London
- Cowgill, J, de Neergard, M, and Grew, F, 1987 *Knives and scabbards*, Medieval finds from excavations in London, **1**, London
- Davis, SJ, 1992 *A rapid method for recording information about animal bones from archaeological sites*, AML **19/92**, unpubl rep
- Davison, BK, 1969 Aldingham Motte, *Current Archaeol*, **2**, 23-4
- Egan, G, and Pritchard, F, 1991 *Dress accessories c.1150-c.1450*, Medieval finds from excavations in London, **3**, London
- Ford, B, 1987 Iron objects, in P Holdsworth, *Excavations in the medieval Burgh of Perth, 1979-81*, Soc Antiq Scot Monog, **5**, Edinburgh, 130-40
- Goodall, I, 1981 The medieval blacksmith and his products, in DW Crossley, *Medieval industry*, CBA Res Rep, **40**, London, 51-63
- Grant, A, 1982 The use of toothwear as a guide to the age of domestic ungulates, in B Wilson, C Grigson, and S Payne (eds), *Ageing and sexing animal bones from archaeological sites*, BAR Brit Ser, **109**, Oxford, 91-108
- Halstead, P, 1985 A study of mandibular teeth from Romano-British contexts at Maxey, in F Pryor, C French, D Cowther, D Gurney, G Simpson, and M Taylor, *Fenland Project, No 1: Archaeology and environment in the Lower Welland Valley*, **1**, Cambridge, 219-24
- Halstead, P, and Collins, P, 1995 *Sheffield animal bone tutorial: taxonomic identification of the principal limb bones of common European farmyard animals and deer: a multimedia tutorial*, Archaeology Consortium, TL TP, Univ Glasgow
- Howard-Davis, CLE, 2008 Copper-alloy objects, in F Brown and C Howard-Davis, *Norton Priory: monastery to museum. Excavations 1970-87*, Lancaster Imprints, **16**, Lancaster, 376-89

- Jessop, O, 1997 A new artefact typology for the study of medieval arrowheads, *Medieval Archaeol*, **40**, 192-205
- Johnston, C, 2002 Those elusive mules: investigating osteometric methods for their identification, in M Mashkour, *Equids in time and space: Proceedings of the 9th Conference of the International Council of Archaeozoology, Durham, August 2002*, Oxford, 183-91
- Jones, GJ, and Sadler, P, 2012 Age at death in cattle: methods, older cattle and known-age reference material, *Environmental Archaeol*, **17(1)**, 11-28
- Kenyon, JK, 1990 *Medieval fortifications*, London
- Kratochvil, Z, 1969 Species criteria on the distal section of the Tibia in *Ovis Ammon* F. *Aries* and *Capra Aegarus* F. *Hircus* L., *Acta Veterinaria* (Brno), 389, 483-90
- Levine, MA, 1982 The use of crown height measurements and eruption-wear sequences in horse teeth, in B Wilson, C Grigson, and S Payne (eds), *Ageing and sexing animal bones from archaeological sites*, BAR Brit Ser **109**, Oxford, 223-50
- Lister, AM, 1996 The morphological distinction between bones and teeth of Fallow Deer (*Dama dama*) and Red Deer (*Cervus elaphus*), *Int J Osteoarchaeol*, **6**, 119-43
- MacDonald, D, and Barrett, P, 1995 *Mammals of Britain and Europe*, London
- Maltby, M, 1981 Iron Age, Romano-British and Anglo-Saxon animal husbandry - a review of the faunal evidence, in G Dimbleby and M Jones, *The environment of Man: the Iron Age to the Anglo-Saxon period*, BAR Brit Ser, **87**, Oxford, 155-203
- Mellor, JE, and Pearce, T, 1981 *The Austin Friars, Leicester*, Leicester Archaeol Field Unit Rep/CBA Res Rep, **35**, London
- Morris, CA, 2000 *Wood and woodworking in Anglo-Scandinavian and medieval York*, The Archaeology of York: the small finds, **17/13**, York
- Oakley, GE, and Webster, LE, 1979 The copper alloy objects, in JH Williams, *St Peter's Street, Northampton: excavations 1973-1976*, Northampton, 248-64
- Ottaway, P, and Rogers, N, 2002 *Craft, industry and everyday life: finds from medieval York*, The Archaeology of York, the small finds, **17/15**, York
- Payne, S, 1985 Morphological distinctions between the mandibular teeth of young sheep, *Ovis*, and goats, *Capra*, *J Archaeol Sci*, **12**, 139-47
- Prummel, W, and Frisch, H-J, 1986 A guide for the distinction of species, sex and body side in bones of sheep and goat, *J Archaeol Sci*, **13**, 567-77
- Schmid, E, 1972 *Atlas of animal bones, for prehistorians, archaeologists and quaternary geologists*, London
- Serjeantson, D, 1996 The animal bones, in S Needham and T Spence, *Refuse and disposal at Area 16 East Runnymede: Runnymede Bridge research excavations*, **2**, London, 194-223
- Smith, C, 1998 Dogs, cats and horse in the Scottish medieval town, *Proc Soc Antiq Scot*, **128**, 859-85
- Starley, D, 2005 What's the point? A metallurgical insight into medieval arrowheads, in RO Bock, *De Re Metallica: the uses of metal in the Middle Ages*, AVISTA Studies in Medieval Technology, Science, and Art, Aldershot, 207-15

Sykes, NJ, 2007 Taking sides: the social life of venison in medieval England, in A Pluskowski (ed), *Breaking and shaping beastly bodies: animals as material culture in the Middle Ages*, Oxford, 151-60

von den Driesch, A, 1976 *A guide to the measurement of animal bones from archaeological sites*, Harvard

Wilson, B, and Edwards, P, 1993 Butchery of horse and dog at Witney Palace, Oxfordshire, and the knacker and feeding of meat to hounds during the post-medieval period, *Post-Medieval Archaeol*, **27**, 43-56

Worley, F, forthcoming Animal bones from Northfleet, in P Andrews, E Biddulph, A Hardy, and A Smith, *Settling the Ebbsfleet Valley: CTRL excavation at Springhead and Northfleet, Kent – the late Iron Age, Roman, Anglo-Saxon and Medieval Landscape*, **2**: the finds