

The discovery of medieval deposits beneath the Earl's Palace, Kirkwall, Orkney

Eoin McB Cox*, Olwyn Owen† & Denys Pringle†
with contributions by A Crone & L Paterson

ABSTRACT

Small-scale excavations in 1982, immediately east of the early 17th-century Earl's Palace, in Kirkwall, were designed to identify a ground level contemporary with the palace. In the event it was found that the present ground level was little different to that which had existed when the palace was built. Beneath a layer of garden soil, however, a series of well-preserved medieval deposits was encountered and partly excavated. These are probably associated with the earlier Bishop's Palace, or 'Palace of the Yards'. The finds included a very fine Scandinavian-type comb and waterlogged wood. The project was funded by the Scottish Development Department/Historic Buildings & Monuments division, predecessors to Historic Scotland.

INTRODUCTION

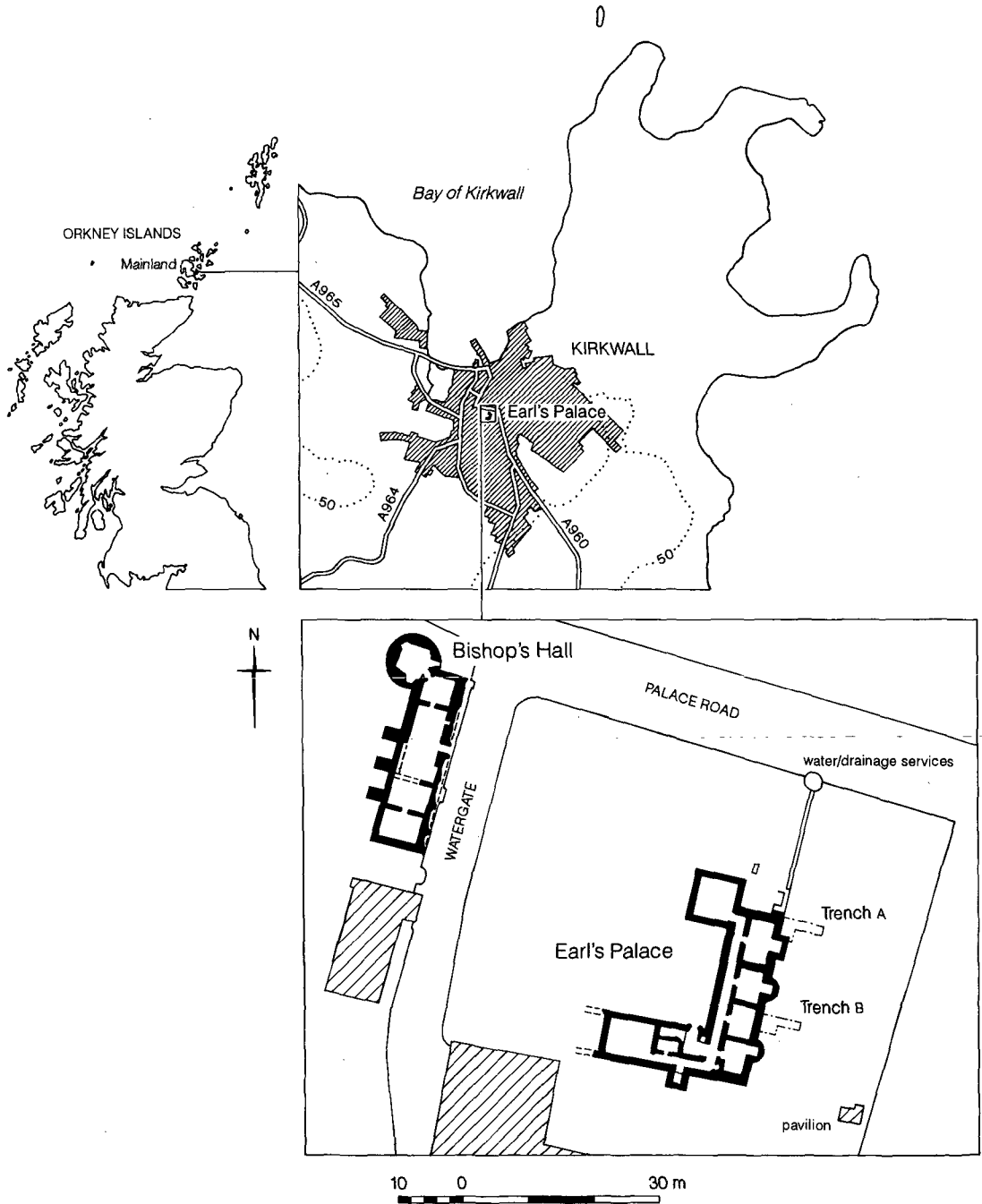
The ruined early 17th-century building known today as the Earl's Palace lies immediately south of St Magnus Cathedral and east of the Sheriff Court building in Kirkwall (illus 1). Formerly it would have occupied the south-east corner of the precinct enclosing the Bishop's Palace, or 'Palace of the Yards' (illus 8). Indeed, the bichrome red and yellow ashlar masonry of a well shaft below the Earl's Palace has been compared to that of the 12th- and 13th-century phases of St Magnus Cathedral, begun in c 1137, and the associated Bishop's Hall, suggesting that it replaced earlier structures on the same site (Simpson 1991, 23).

The present building, however, was constructed between 1601 and 1607 by Patrick Stewart, Earl of Orkney, whose father, Robert Stewart, had acquired the temporal possessions of the bishopric, including the Bishop's Palace, in 1568. It comprises a residential suite of rooms, together with additional guest rooms, above a vaulted basement including a kitchen. Architecturally it ranks among the finest Renaissance buildings in Scotland, and since 1921 it has been in the care of the Secretary of State for Scotland (for more detailed descriptions, see MacGibbon & Ross 1887, I, 519–22 & II, 337–47; RCAHMS 1946, I, 50–2 & II, 142–8; Simpson 1991; Pringle forthcoming).

In 1981, the then Ancient Monuments Branch of the Scottish Development Department acquired an area of ground lying immediately east of the palace, which had been used as a tennis court. Before the hard playing surface was removed and the area landscaped, the opportunity

* 9 Upper Nisbet Street, Jedburgh, Borders TD8 6TS

† Historic Scotland, Longmore House, Salisbury Place, Edinburgh EH9 1SH



ILLUS 1 Location map of the Earl's Palace and plan of the 1982 trenches. (Based on the Ordnance Survey map © Crown copyright)

was taken in June–July 1982 to examine the area between the tennis court and the palace wall, with a view to establishing what the ground level contemporary with the palace would have been and whether it would be feasible to reinstate it without disturbing contemporary or later (below-ground) archaeological remains. In the event it was discovered that garden soil lay immediately below the tennis court surface, and that the present ground level was little different to that which had existed when the palace was built. Beneath the garden soil, however, a series of well-preserved medieval features and deposits, probably associated with the earlier Bishop's Palace, or Palace of the Yards, was discovered and partly excavated. Although the excavated trenches revealed only a tantalizing glimpse of these features, the results demonstrate the very high archaeological potential of this part of Kirkwall.

Preparation of this report has not been without its problems. This account has been compiled from an interim report written in 1985, which included photocopies of plans prepared for publication and several photographs. Unfortunately, the field records have been mislaid. It is not clear from the 1985 report to what extent the lower deposits in the trenches were merely observed, rather than excavated. Historic Scotland's file suggests that this was essentially a watching brief, with the trenches excavated by four workmen under the supervision of Eoin McB Cox. The remaining archive materials are deposited at the National Monuments Record of Scotland and the surviving finds are housed in Tankerness House Museum, Kirkwall.

THE EXCAVATIONS

Two trenches were opened to the east of the palace, both located against the east wall of the east range (illus 1). In the following account of the stratified features and deposits, numbers in parentheses refer to illustrations 2 & 3.

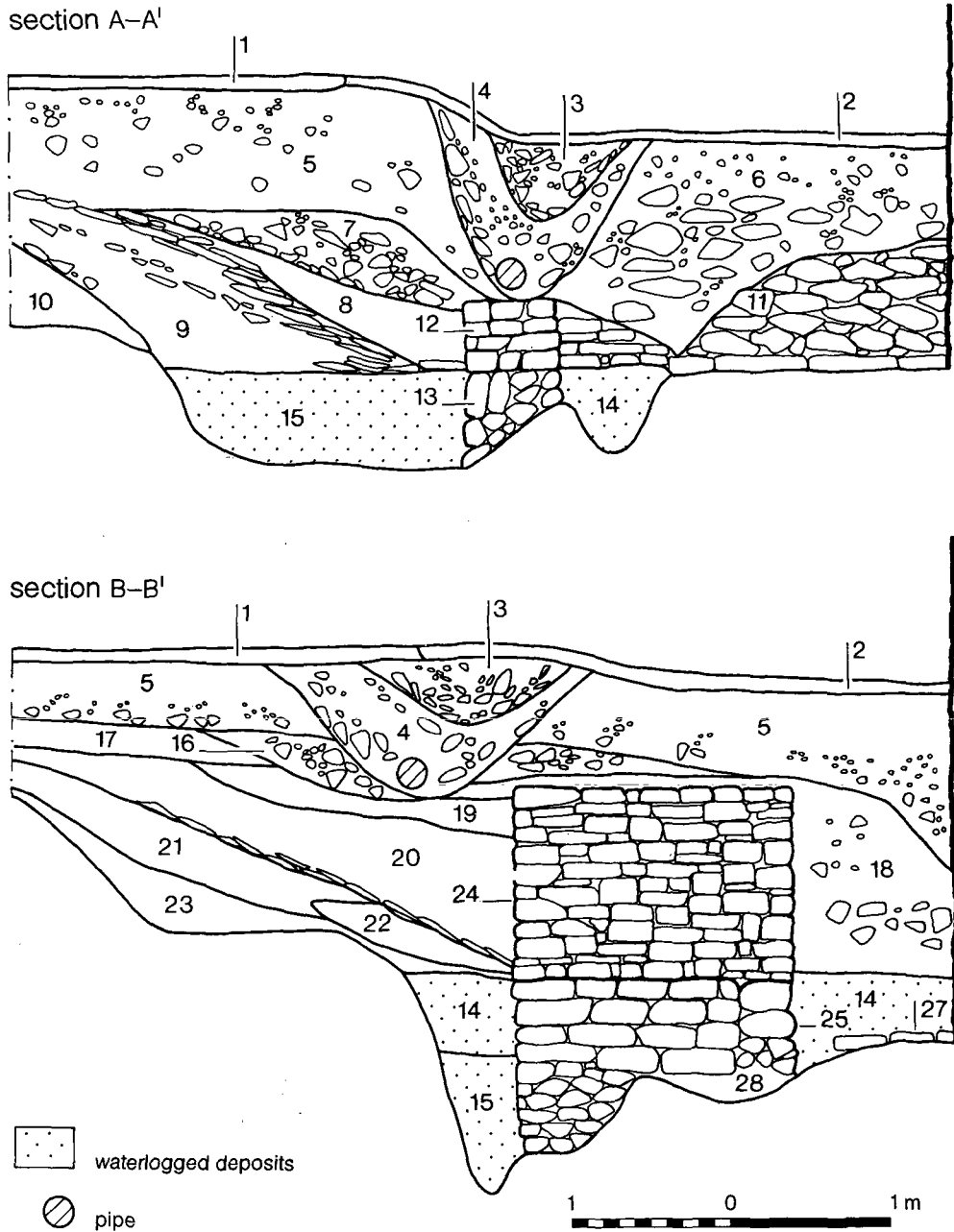
TRENCH A (ILLUS 1, 2 & 3)

Trench A was excavated to the north of and against the northernmost oriel window of the east range. The all-weather surface (1) of the tennis court was removed with the turf and topsoil (2) down to a uniform deposit of well-sorted garden soil (5). An associated level of garden soil with worked stone and rubble (6) lay against the standing structure of the east range. These deposits were cut by service trenches for water and electricity (3–4).

Beneath the substantial depth of garden soil and mixed rubble lay unsorted deposits of disturbed stony soil (7) containing an abundance of lime mortar. Tip-lines within the section suggest that this had been dumped as bottoming for the overlying garden soil. The top of a clay-bonded stone structure (12/A) lay immediately below this disturbed horizon in the centre of the trench. This structure was overlain in part by loosely consolidated rubble (11), the deliberately placed, rounded stones of which had apparently been used as foundation material for the projecting rectangular window base. The stone feature (12/A) appeared to be contemporary with another clay-bonded wall (C/B) which it abutted to the west; this in turn pre-dated the foundation course of the palace wall (D), which overlay a layer of crude stone flagging (J).

In the eastern half of the trench a mixed mortar layer (8) lay against the clay-bonded wall (12/A) and overlay a steeply tipping horizon of regularly placed worked slate and flagstones. This sealed poorly drained humic deposits (9 & 10), rich in bone, pottery, shell and wood-chippings, which lay against a steeply cut slope of natural yellow boulder clay. The clay had been cut artificially to a steep face running parallel to the clay-bonded wall (12/A) and its foundation courses (13).

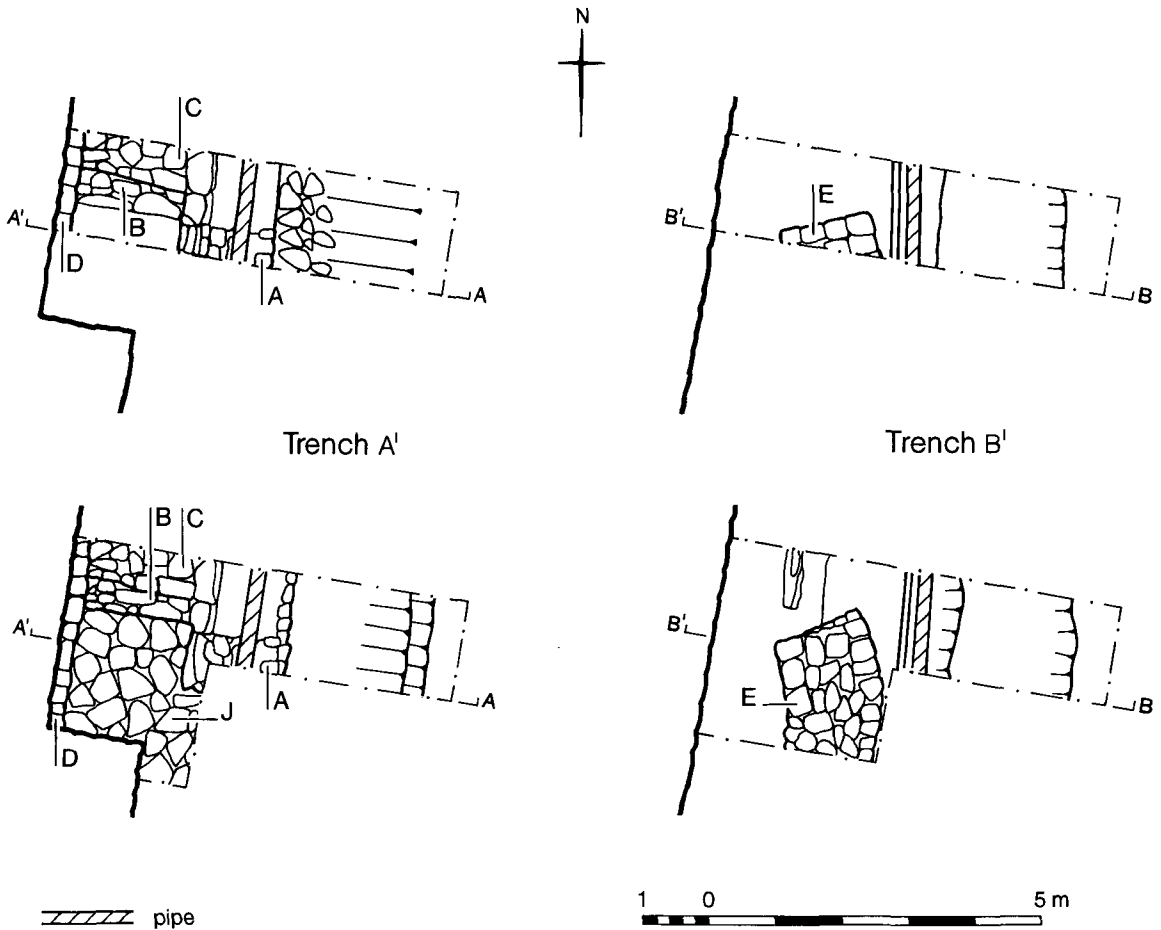
This 'cut' appeared to form one face of a substantial ditch. A waterlogged deposit (15) filled the ditch and appeared to extend west of the clay-bonded wall (12/13/A), where a similar deposit of waterlogged humic material (14) was also uncovered. The very wet conditions, however, did not allow precise archaeological interpretation of these deposits and excavation was not pursued to the base of the ditch.



ILLUS 2 Sections through Trenches A and B (see illus 3 for section locations)

TRENCH B (ILLUS 1, 2 & 3)

Similar stratigraphic horizons to those found in Trench A existed in this area. Relatively modern landscaping was responsible for the accumulation of the uppermost fills and deposits (1-5). Beneath these was a layer rich in mortar and clay (16). This horizon included large random boulders, which may have been the



ILLUS 3 Plan of Trenches A and B (before and after extending the trenches)

primary levelling or drainage deposits for the garden soil above. This recent layer overlay redeposited clays (17) and a disturbed, buried turf-line (19) which abutted a mortared stone structure (24). Below the turf-line (19), a substantial deposit of well-sorted, stone-free, garden soil (20) overlay a steep, sloping layer of worked slate and flagstones. This lay on an old ground surface, consisting of humic deposits (21, 22 & 23) of disturbed, grey-brown, charcoal-rich clay. This in turn overlay waterlogged deposits of organic debris, rich in bone, burnt wood and wood chippings (14 & 15)

The foundation of the stone structure (24) consisted of substantial, loosely consolidated stonework (25), set into the waterlogged deposits (14 & 15); these were sealed by orange clay at the same level as the uppermost foundation course. This suggests that the foundation may have been cut into the humic deposits, but no construction cut was detected, probably on account of the unfavourable ground conditions. In plan, the stone structure curves slightly to the west and stops before reaching the south side of the trench.

The waterlogged material (14) also overlay another possible masonry structure (27); but as this lay immediately below the trench section, it could not be investigated further.



ILLUS 4 Detail of curved wall remnant (24/25/E) in Trench B, from north (© Orkney Museums Service/Richard Welsby)

THE FINDS

Only a selection of finds was retrieved and examined, and apparently no soil samples were taken. Some finds, including the pottery assemblage described by the 1985 report, have since been lost. The surviving assemblage, including the comb, worked wood and bone (below), is housed in Tankerness House Museum, Kirkwall.

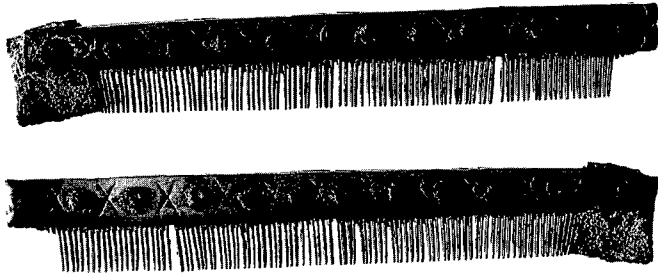
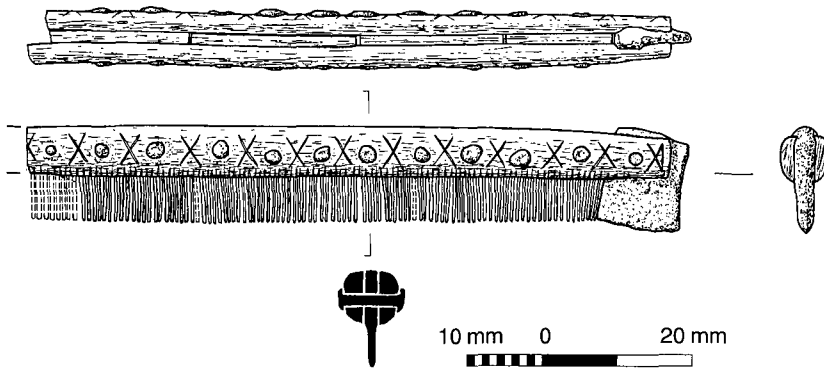
THE COMB

A very fine comb of Scandinavian type (illus 5 & 6) was recovered from one of the trenches. The comb is no longer in the original excavator's packing and the context in which it was found is uncertain. There are strong indications, however, that it was found in the waterlogged ditch deposits at the base of Trench B (14 or 15). First of all, analysis of its state of preservation and corrosion products during conservation strongly suggests that the comb was first buried in a relatively dry environment which then became waterlogged, or that it was re-deposited in an anaerobic environment such as the waterlogged ditch deposits (A Clydesdale, pers comm). Furthermore, an account of the comb by Barbara Ford in the 1985 report also suggests that it was found in one of these waterlogged ditch deposits (14 or 15).

The terminology used below is based on MacGregor (1985, 75).

Description

Length 90 mm; height 14 mm; thickness 8 mm. Composite single-sided comb of antler with a slightly convex back, ornamented with 12 incised diagonal crosses on both sides. There are two narrow side-plates, 11

ILLUS 5 The Scandinavian-type comb (*Historic Scotland* © Crown copyright)

ILLUS 6 The Scandinavian-type comb (Scale 1:1)

closely spaced copper-alloy rivets and four surviving tooth-plates (1.5 mm thick). The teeth of the comb are exceptionally fine, with 14 teeth per 10 mm on average; all are cut to the same length (7 mm). The tooth-plates lie flush with the edge of the side-plates and are held in place by the copper-alloy rivets. The side-plates are semicircular in cross-section.

The comb is incomplete and has broken across one of the rivet holes. It had also been repaired in antiquity: the one remaining end-plate (12 mm long, 13.5 mm high and 2 mm thick) is a later addition in metal, held in place between the side-plates by an iron rivet. Visual examination of the metal end-plate and its corrosion products suggests that it contains a high percentage of copper; it may be base silver, or another copper alloy (A Clydesdale, pers comm).

Discussion

Bone and antler combs of Scandinavian type are ubiquitous finds across the Viking world from the eighth century onwards, and many fragmentary and several complete or almost complete examples have been found in Scotland. The Earl's Palace comb, however, is not a common type in Scotland. It is most closely paralleled by examples from early medieval Scandinavian towns, especially from sites with strong ecclesiastical connections, in particular, combs from the 'P K Bank' excavations in Lund, Sweden (eg Mårtensson 1976, 319, fig 288, 10a) and from excavations in the medieval city of Trondheim, Norway (eg Long 1975, 27, fig 9e).

Combs of this type are generally of 13th-century date. The example from Lund was found in stratified deposits and is perhaps a little earlier (Graham-Campbell 1980, 52, no 184); but the introduction of combs with closely spaced, copper-alloy rivets has been dated at Trondheim to

around 1200 (Long 1975, 27), and comparable finds from Trondheim derive primarily from 13th-century contexts. It is likely, therefore, that the Earl's Palace comb was manufactured sometime between the late 12th and 14th centuries.

Many new comb designs were introduced in Scandinavia in the 13th and 14th centuries. The single-sided composite comb with curved back remained popular, but the later forms were often smaller and ornamented with simpler, incised geometrical motifs. The Earl's Palace type is characterized by the very slight curvature of the back (in some examples the back is actually straight), narrow side-plates, close spacing of the copper-alloy rivets and the presence of simple incised decoration. These combs vary in size but are often small; the Lund example is 139 mm in total length, which is probably not so very different from the original length of the Earl's Palace comb.

In the Norse earldom of Orkney, combs are often recovered from excavated settlement sites of the late Norse period (c 1100–1500), though usually in fragmentary condition. In Orkney itself, late Norse combs have been found, for example, at Beachview, Birsay (Morris 1996, 142–4, illus 117), and Skail, Deerness (Buteux 1997, 97, fig 8.2); in Shetland at Jarlishof (Hamilton 1956, 167–8, 180, pl 32), and Sandwick, Unst (Bigelow 1989, 188, fig 6); and in Caithness at Freswick Links (Batey 1987, pt ii, 436–8, figs 39–41). None of the published examples precisely parallels that from Earl's Palace; most are less well preserved and only a few match its high-quality craftsmanship.

Combs were common and important items of equipment throughout the Viking world; indeed, in the mid 12th century, John of Wallingford commented on the powerful attraction extended over English womanhood by the well-groomed Norsemen who combed their hair every day (Vaughan 1958, 60). It is likely that almost everyone owned a comb. It is striking, therefore, that there is no evidence whatsoever for the manufacture of combs in the Orkney earldom. In the late Norse period, combs were clearly being produced in Scandinavian workshops, usually in towns, and imported to the Orkney earldom, primarily from Norway. Contemporary comb-making debris is known from Bergen, Oslo, Trondheim and elsewhere in Norway (see eg Herteig 1969; Wiberg 1987; Long 1975). In 1154, however, the episcopal see of Orkney, based at St Magnus Cathedral and the adjacent Bishop's Palace, was transferred to the newly created Norse see of Trondheim (Simpson 1991, 5). Given the close ecclesiastical connections between Kirkwall and Trondheim at this time, and the similarities between the Earl's Palace comb and some of the Trondheim finds, it seems reasonable to suppose that the Earl's Palace comb may have been produced in a Trondheim workshop.

The Earl's Palace comb has certainly been repaired in antiquity; unusually, this was by the insertion of a replacement end-plate made of metal (either of base silver or another copper alloy). The cut lines of the original teeth can be observed on the side-plate above the inserted metal end-plate. The fitting of this replacement end-plate has forced several of the original teeth to move sideways. At the same time, one of the copper-alloy rivets was replaced with an iron rivet to hold the end-plate in place. It may be that the loss of the original copper-alloy rivet led to the weakening and breakage of this end of the comb, thereby necessitating this repair.

The repair, though elaborate in its use of 'semi-precious' metal, is out of keeping with the rest of the comb. It has been observed elsewhere that Viking Age combs were regarded almost as disposable objects, which could be easily replaced (Ambrosiani 1981, 13–15). The raw material of antler, unlike bronze or silver, was not valuable and, although comb manufacture was in itself a skilled craft, combs were rarely repaired, except for the occasional replacement of tooth-plates. The Earl's Palace comb, however, was a particularly fine object, displaying high-quality craftsmanship, and was clearly valued highly enough to warrant repair, even in this unusual

fashion. This would also account for its having been found (as far as can be ascertained) in association with pottery primarily of late 13th- to early 15th-century date (see Cox, below), a range somewhat later than the likely date of manufacture of the comb.

THE POTTERY

Fourteen sherds were examined under the microscope (at magnification x 20). The sherds were all partly abraded and were large in body size.

Fabric types

- F1 Voided, red-oxidized fabric, well-sorted ground mass, with sparse inclusions of angular/subangular quartz and rock fragments (red sandstone). Occasionally reduced core. Varying in hardness. Local origin.
- F2 Buff-grey fabric, well-sorted ground mass with abundant large rounded wind-blown glassy quartz inclusions. Occasional flecks of black to green pitchstone and red sandstone. Local origin.
- F3 Very well-sorted, voided, orange ground mass, with abundant unsorted subangular/rounded rock fragments and composite grains (some granitic). Possibly local origin.
- F4 Reduced core, coarse unsorted fabric. Identified as Scottish East Coast White Gritty Ware; date range late 12th to early 15th century (D Hall, pers comm).
- F5 Buff-cream, well-sorted, oxidized. Identified as Scarborough Ware; date range 13th to 14th century.

Catalogue

Trench A/Context 9 Five body sherds (max 3 vessels) from early garden deposits/midden-rich humic soil. Fabrics F1 (3), F2 (2). 14th/15th century.

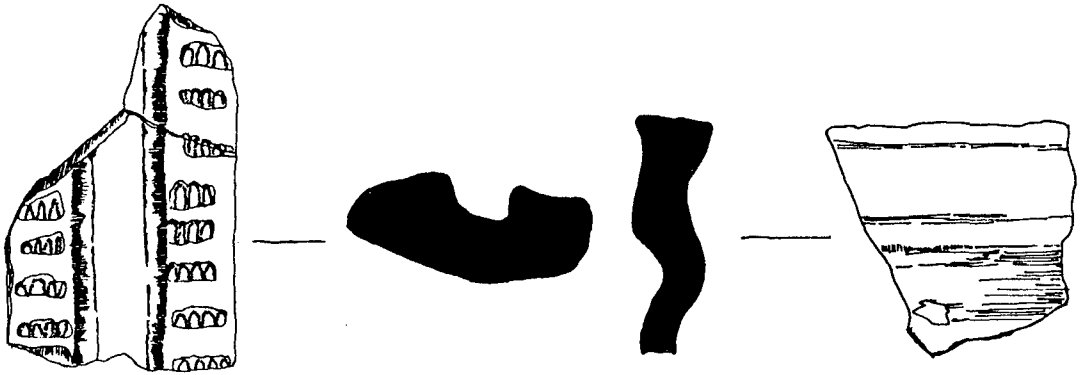
Trench A/Context 10 Two body sherds (max 1 vessel) from the beneath midden deposits (9) immediately overlying natural boulder clay. Fabric F3. 14th century.

Trench B/Context 23 Two body sherds (max 2 vessels) of reduced green-glazed ware from sealed charcoal-rich clay deposits — possibly an old ground surface — overlying natural boulder clay. Fabric F1, reduced. 14th century.

Trench B/Context 15 One decorated strap-handle (illus 7), from waterlogged deposits within the ditch pre-dating an early masonry structure (25). Fabric F4. Possibly 14th century (strap handles are not early forms of Scottish East Coast White Gritty Ware).

Trench B/Context 14 Four sherds, including one rim (illus 7), from waterlogged ditch deposits or possibly the construction cut of an early masonry structure (25). Fabrics F1 (2), F4 (1), F5 (1). Late 13th to early 15th century.

The assemblage, though small, is reasonably well stratified. Two main ceramic horizons are represented: first, from the old ground surface of Trench A (9 & 10)/Trench B (21, 22 & 23); and secondly, from the waterlogged ditch or midden deposits of Trench B (14 & 15). The first group seems to be of 14th- to 15th-century date and the fabrics are predominantly local. The second group appears to be late 13th to early 15th century in date and includes local and imported wares.



ILLUS 7 Line drawing from the original 1985 report of two pottery sherds: a strap handle and rim sherd from the waterlogged ditch deposits

WATERLOGGED WOOD

Anne Crone

A small assemblage of wood, collected from the waterlogged deposits in Trenches A and B (14 & 15), was submitted for examination. It consisted primarily of woodworking offcuts with a few pieces of roundwood; several fragments of hazelnut shells were also retrieved with the wood. The offcuts were invariably split radially with oblique chop marks top and bottom, and all were a coniferous species. Some of the roundwood fragments bore chop marks and were burnt. There were a number of clearly artefactual pieces: a thin lath of coniferous wood; a rectangular peg/stake with a roughly chopped head; and a dowel fragment of oak (*Quercus* sp), 10 mm in diameter, of the type used in furniture making. The conifer timbers were clearly imported into Orkney and the presence of several pieces of conifer-like bark imply that they were probably brought in as undressed logs.

FAUNAL REMAINS

Leonie Paterson

An assemblage of faunal material was recovered by hand, mostly from deeply buried charcoal-rich disturbed clay deposits in Trench B (Context 23). In the absence of a systematic sampling programme, this material clearly cannot be considered to be representative, an observation apparently borne out by the fact that it comprises mainly large bones and bone fragments. Nevertheless, the recovered material indicates a minimum range of species present. It also serves as a useful reminder, for any future programme of work in this area, of the high potential for well-preserved palaeoenvironmental evidence in these deposits.

All the bone was well preserved and in very good condition. A total of 481 fragments was counted from Context 23; 344 were identified, 56 of which were fish and 11 bird. The species identified are shown in Table 1. The full catalogue and analysis has been deposited with the remaining archive of the project records at the National Monuments Record of Scotland.

Despite the method of recovery of this assemblage and the consequent limitations of the evidence, some useful comments can be made. The relatively high number of dog/medium carnivore bones is notable. Dogs were clearly present on the site in some numbers, though whether as scavengers, as working (hunting) dogs, or even as a meat source, is unknown. The fact that there is a marked variation in the size of the dog/

TABLE 1
Faunal remains

Species	No of bones
cattle (<i>Bos</i> sp)	58
pig (<i>Sus</i> sp)	12
ovicaprid (sheep/goat?)	103
sheep (<i>Ovis</i> sp)	incl. above
goat (<i>Capra</i> sp)	incl. above
dog (<i>Canis</i> sp)	73
medium carnivore (incl. poss. <i>Canis</i> sp)	29
fish	56
bird	11
cetacean (dolphin/porpoise?)	1

medium carnivore bones, with some adult bones being half the size of some juvenile bones (hence their separation into two categories in Table 1), suggests that these different-sized dogs may have had a variety of roles. One dog vertebra showed possible butchery marks (two, fairly deep cut-marks across the axis of the spine), perhaps suggesting that dogs also formed part of the inhabitants' diet. This is all the more surprising given how few butchery marks were noted in the assemblage overall.

Most of the ovicaprid bones and a proportion of the cattle bones were from young animals, indicating a milk-based economy, or at least a combination of milk and meat production. It is difficult to distinguish between sheep and goat remains; but of four ovicaprid phalanges compared to the diagrams of Boessneck (1970), three were identified as sheep and one as possibly goat.

A sample of material from Trench A was not examined in detail as there is some confusion about its context. A brief assessment, however, indicated that it was dominated by cattle, sheep and pig remains, with some bird bones also present.

CLAY PIPE FRAGMENTS

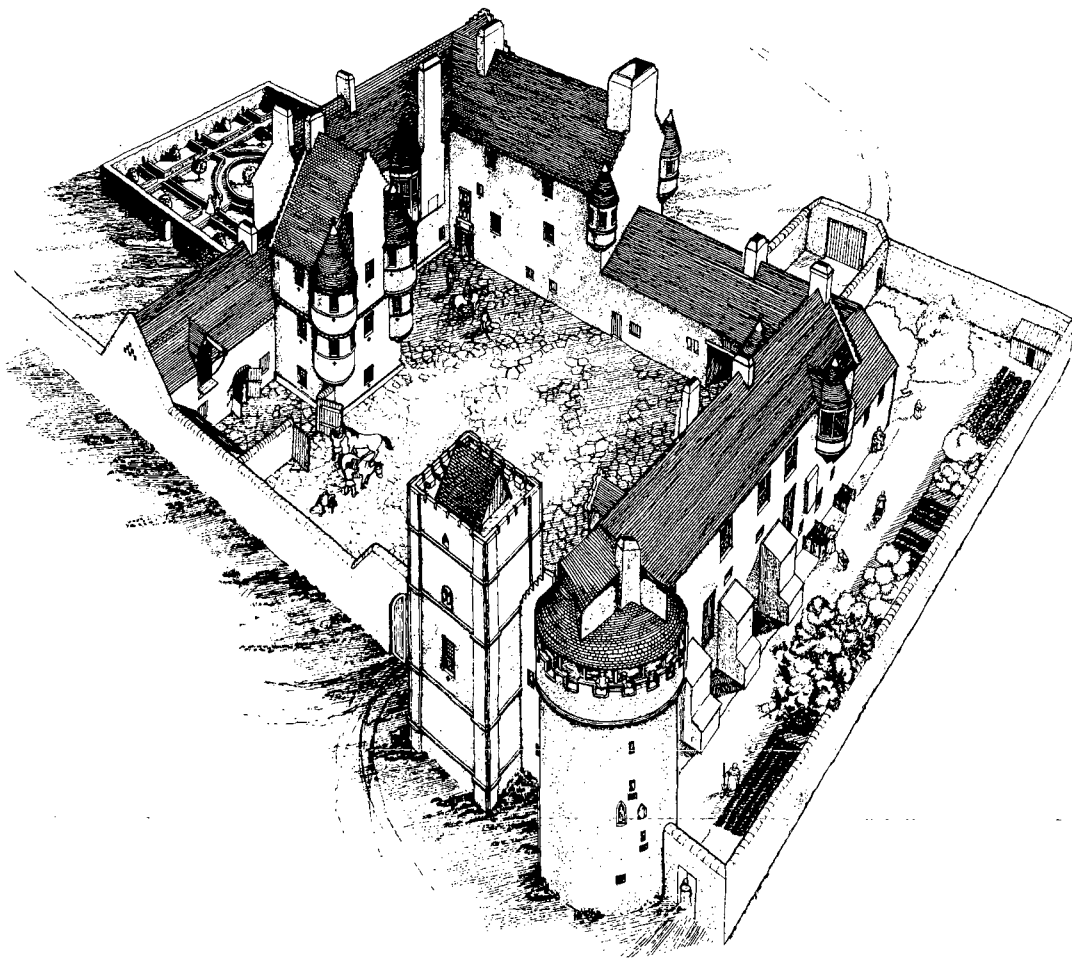
Ten fragments (not illustrated) were recovered from disturbed modern or early modern garden deposits (5). These included nine stem fragments and a bowl with pedestal foot. The stem bores are diverse in date, ranging from the mid-17th to the mid-18th century. There are no recognizable marks on any of the stems, nor on the bowl. The wide range in date suggests that these upper layers were disturbed by gardening over a prolonged period.

DISCUSSION

The limited area of excavation does not allow a complete archaeological interpretation of the ground lying immediately east of the palace. None the less, the information collated from the two trenches has revealed the presence and importance of the archaeological deposits underlying the tennis court, and probably further afield.

The palace, begun around 1601, post-dates the clay- and mortar-bonded structures revealed in these excavations. In Trench B the precise relationship of the early masonry structure (24/25) to the palace wall is not certain as waterlogged deposits in the base of this cutting (14 & 15) inhibited further investigation. Its style of building, however, is very similar to that of the structures revealed in Trench A (12/13/A, B & C). These structures clearly pre-dated the building of the rectangular oriel window base and the outer chamber of the Earl's apartment, the foundations of which overlay a probable wall remnant (12) and crudely flagged floor (J).

The clay- and mortar-bonded masonry walls in Trenches A and B may also be contemporary with the walls exposed by earlier clearance operations at the north end of the east range, though modern consolidation of the latter makes the original character of their build difficult to



ILLUS 8 Reconstruction drawing — viewed from north-west — of the 'Palace of the Yards' after completion of the newly built Earl's Palace (1601–7); the Bishop's Palace is to the right (*Historic Scotland* © Crown copyright)

determine. These were considered by the Royal Commission to post-date Earl Patrick's east range, and to represent the foundations of certain rooms mentioned in an inventory of the contents of the palace prepared for the Earl of Morton on 27 October 1653 (RCAHMS 1946, 142, fig. 215; cf Marshall 1889, 300–2). Reinterpretation of that document, however, makes a 17th-century date no longer tenable (Simpson 1991, 29), and inspection of what now remains of the walls also suggests that they run below Earl Patrick's work, and thus pre-date it.

It is possible, therefore, that all of these structures relate to the earlier precinct of the Bishop's Palace and were elements of the associated outbuildings. If so, they cannot be any later than the early 16th century, and may be somewhat earlier. No artefacts were found in direct association with these structures and, consequently, the archaeological evidence sheds no further information on the problem of building phases. It must also be stressed that only a very small area relating to these walls and flagged surfaces was examined and the evidence must, therefore, be treated cautiously.

Nevertheless, these structures clearly post-date the ditch and associated waterlogged deposits. The finds from these latter deposits are mainly 14th- to 15th-century in date. An abundance of bone, worked wood and shell, as well as leather, pottery, glass, copper and other worked objects, was observed within these deposits, testifying that intensive medieval occupation is close at hand. The discoveries of a very fine Scandinavian comb and the woodworking of undressed logs, almost certainly imported from Norway, point both to the site's predominant trading contacts across the North Sea, and to its high status.

The ditch may have been a precinct boundary associated with the episcopal residence; further excavation would reveal its course and extent. Little is known about the layout of the Bishop's Palace and associated buildings in the mid-12th to 16th centuries, although Simpson (1961) has drawn comparisons with King Haakon's Hall and Palace complex in Bergen. The surviving 12th-century and later hall (see *illus 1*) was certainly not the sole structure; the complex also comprised other buildings, including at least a chapel on the north side of the enclosure; and two large square towers, one of which, the Manse Tower, probably formed the bishop's private residence (Barry 1805, 230 and facing).

Strictly speaking, the early 17th-century Earl's Palace was not a palace so much as a self-contained house added to an existing palace complex, known as the 'Palace of the Yards' (*illus 8*) (Pringle forthcoming). This name reflects the fact that the complex was constructed progressively by successive Bishops of Orkney from the time of the transference of the see from Birsay to Kirkwall in 1137; but perhaps it also reflects the evolution of areas of workshop, storage, food preparation and other mundane activities within the complex. The two small trenches excavated adjacent to the Earl's Palace have now demonstrated, as might have been expected, that lowlier pursuits, including domestic activities such as butchery and the preparation of food, and crafts such as woodworking and, perhaps, metalworking (the repair of the comb), were carried out in the Bishop's Palace complex. Just as significant for the future, they have also confirmed that highly important and well-preserved archaeological evidence for the Bishop's Palace in particular, and medieval Kirkwall in general, survives in this part of the town.

ACKNOWLEDGEMENTS

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The 1985 report was updated and prepared for publication by Denys Pringle and Olwyn Owen; and the comb was photographed by Michael Brooks, all of Historic Scotland. The excavation illustrations were re-drawn by Christina Unwin; the reconstruction drawing was prepared for Historic Scotland by Harry Bland. Olwyn Owen is grateful to Amanda Clydesdale for comments on the metal elements and state of preservation of the comb; to Naomi Crowley for comments on the pottery report; and to Anne Crone and Leonie Paterson, all of AOC Archaeology, for their assistance with updating this report. Historic Scotland is most grateful to Anne Brundle of Tankerness House Museum, Kirkwall, for arranging the loan of finds to Historic Scotland during preparation of this report, and for kindly providing access to the Museum's collection of photographs of the excavations in progress.

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