Illus 1 Location of Alloa Tower.
Excavations at Alloa Tower, Clackmannanshire, 1988–1993

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Background

In the period between 1988 and 1993 a number of public bodies (Alloa Tower Building Preservation Trust, Clackmannan District Council, Central Regional Council and the Manpower Services Commission) provided funding for the Scottish Urban Archaeological Trust to carry out and supervise several excavations at Alloa Tower. The focus of these investigations was an area next to the tower known to have been the site of a mansion substantially rebuilt and remodelled by one of the most important characters in early 18th-century Scottish history: John Erskine, 23rd (and 6th) Earl of Mar known as 'Bobbing John', the leader of the Scottish Jacobites in the 1715 rebellion. It should be noted that there is disagreement and confusion over the numbering sequence of the Earls of Mar. Bobbing John is reckoned variously as either the 6th Earl in succession to John Erskine, 6th Lord Erskine, who had been granted the earldom by Mary, Queen of Scots in 1565, or 23rd Earl in succession to the ancient Earls of Mar. The confusion arises from the interpretation of Mary’s actions: whether she conferred a new title or restored an old one.

The location of the mansion had been known for many years, owing to the survival of many historical references, illustrations and plans, but this was the first time there had been any systematic archaeological investigation next to the tower. Alloa Tower Building Preservation Trust, the main driving force behind the excavations, had been formed in 1988 as part of the regeneration measures for Alloa, when it became clear how much of the burgh’s historic landscape had disappeared under 19th- and 20th-century developments. The Alloa Tower Building Preservation Trust aimed to maintain, protect, improve and secure the long term future of the landscape and architectural heritage of Alloa. The most important part of this work was the restoration of the tower with a view to its reuse as a visitor attraction and heritage centre, while the excavation of Mar’s mansion was also considered important for generating immediate publicity for the new trust and the involvement of local people.

The nature of archaeological funding in this period combined with the ongoing restoration work at the tower meant that the investigations took place in several stages. Work began on 23 February 1988 with the placing of two evaluation trenches over the site of the mansion. These showed encouraging results but a projected excavation in July 1988 (site code AL88A), under the supervision of Heather Smith, was aborted when the funding Community Programme of the Manpower Services Commission was abolished. At the same time, two trial excavations in Candleriggs on the site of a supermarket development revealed only building rubble, probably a backfilled cellar (site codes AL88B and AL88C). In the following year the main excavation of the mansion finally began under the supervision of Allyson Bailey (site code AL01). This excavation lasted from October 1989 to October 1990. During this work the gardens were trial-trenched in an attempt to locate any features from the large formal garden that had been constructed by the 23rd/6th Earl of Mar (site code AL01A). Excavation of the mansion resumed from June to December 1991, focussing on the north-east wing (site code AL01). Meanwhile, restoration work within the tower led to the discovery of a well in a wall on the first floor of the tower which was subsequently emptied by members of the excavation team in March and April 1991 (site code AL02). The final phase of work in August 1993 concentrated on an area next to the tower that had previously been restricted by scaffolding. This excavation revealed the northern part of the mansion (site code AL04). The location of the various excavations and Alloa Tower itself are shown in Illus 1 and 2.

This report provides a synthesis of all these investigations, combining and reassessing the original site archives and unpublished texts written by Allyson Bailey after each of the excavations and following the same format as her main post-excavation archive report which used both archaeology and documentary evidence to build up a history of site. Additional archive research was carried out by David Perry. It has however been necessary to refer to some of the context numbers mentioned in the original archive reports, as this helps the reader locate features on the site plan (Illus 3). The site directions used throughout the text correspond to site north, which was aligned roughly to true north-west, rather than to true north. There are three main sections to this report: the mansion excavations, investigations of the garden and finally the work carried out on the well in the tower. Finds from the various phases of work are discussed at the end of the report.
Illus 2 Location of excavations at Alloa Tower. (The location of the well is based on a drawing by Kirkdale Archaeology and reproduced with their permission)
Illus 3 Plan of mansion excavations.
Excavation of the mansion

Introduction

Alloa has been associated with the Erskine family since 1364 when the lands of 'Auleway' were granted to Sir Thomas 'Ereskyne' by David II (R.S.S., vi, no 327; NAS, GD124/1/518). Previously the lands of 'Alloway' had been granted by David to William 'Ballye' (Baillie) (R.S.M., i, App 2, no 1011). The date of the earlier grant is unknown as the charter is lost, but the charter is recorded in a list of charters which includes charters of the 17th year of David's reign (7 June 1345 to 6 June 1346) before and after the grant to Baillie. So the grant to Baillie may have happened in that year. Baillie was a follower of David II and was captured by the English with his king at Neville's Cross in 1346 (Penman 2004, 137). Sir William 'Baillie' was receiving the rents of 'Alleway' in 1357 (ERS, i, 574). William 'Baillie of Heprig' (Hoprig, East Lothian), renounced all right to the lands of 'Aulway' in 1360 (NAS, GD124/1/515). Baillie seems to have been granted the barony of Lamington in Lanarkshire in 1358 and been the ancestor of the Baillies of Lamington (R.S.M., i, App 1, no 126; R.S.M., ii, nos 1685, 3137).

Over the years the Erskines used Alloa as their principal seat, adding various modifications to their residence, Alloa House, which by the late 15th century had become a five-storey tower house (Ewart 1996, 26). By the time the 23rd/6th Earl of Mar succeeded in 1689, the family was in debt; one source quotes that Mar inherited 'more debts than estate' (Macaulay 1987, 88). Fortunately for Mar, his political associations enabled him to restore his family wealth relatively swiftly; he eventually became the Secretary of State in Scotland and keeper of the signet under Queen Anne and was instrumental in engineering the Treaty of Union between the Kingdoms of England and Scotland in 1707. However, Mar gradually lost faith in the Union, and after Queen Anne's death lost his political influence and was snubbed by the new King George I. Mar returned to Scotland, openly declared for the Old Pretender as James VIII and III and led the Jacobite troops at the ill fated battle of Sheriffmuir. After their defeat he was attainted for treason and fled abroad with the Old Pretender, spending the rest of his life in exile, although he later disagreed with the exiled court and accepted a pension from George I. Mar's titles and estates were forfeited but his brother, Lord Grange, and relative, Erskine of Dun, purchased the estates in trust for Mar's son. Until his exile Mar managed to transform Alloa and develop its industry by building a new road network and port to greatly improve local and foreign trade. He also instigated the construction of a reservoir to maintain a reliable water supply in order to power mills and drain the many mines which were producing coal for export abroad. This work was to provide the foundation for the industrial development of Alloa over the next two centuries.

Mar was also a keen amateur architect and landscape designer and, along with the industrial improvements in Alloa, he enlarged and enhanced his own estate. The most ambitious of these alterations was the construction of a large formal landscape of tree-lined avenues, wooded groves and water features which by 1710 dwarfed Alloa town (Illus 4). The Earl also made substantial alterations to his family home, making it less like a medieval fortress and far more like a lord's residence fitting of the time. To do this Mar set about demolishing some of the ancillary buildings which had grown up around the tower whilst also enlarging and adding to others to form a more coherent baroque mansion. This work included many alterations to the tower itself, changing the internal layout to suit its new purpose as an elegant adjunct to the mansion.

A remarkable collection of documents concerning this work on Alloa House still exists, including the original plans of the mansion drawn by and for the 23rd/6th Earl of Mar. When the archaeological work on the mansion was taking place, these plans and letters were found to be invaluable in shedding light on the excavated remains and helped provide some answers to the site chronology.

The archaeological sequence itself was found to be relatively simple, broadly corresponding to three main phases, the first being the construction, alteration and destruction of the mansion by fire (Phase I). After this was a period of robbing and levelling (Phase II), and finally, a series of features represented by 19th-century and later activity, when the area became a garden (Phase III). These last two phases were found to have greatly truncated the archaeological remains of the mansion. Features in the centre and on the east of the site had generally been badly robbed and the best surviving features here were the drains. The east side and south-east wing of the mansion, however, were found to be better preserved.

The approach to excavation from the outset was to reveal and record any surviving walls of the mansion without digging through them, with the aim of consolidating and displaying the surviving remains. This essentially non-invasive approach has meant that although enough information has been gathered to build up a good picture of the site, it is likely that there are further features yet to be discovered which lie hidden in or under the stonework.

The residence prior to 1700

A survey carried out by Kirkdale Archaeology in 1996 (Ewart 1996; Kirkdale 1996) recorded a sequence of seven building periods at Alloa Tower between the early 14th century and the mid 19th century. A fortified residence of unknown form with cellar or pit prison stood on the site in the early 14th century. By the mid 14th century this had developed into a three-storey hall house, to be succeeded by the 15th century by a developed hall house, four or five storeys high. By the late 15th century this had become a tower house five storeys high. With the exception of the unknown
Illus 4 ‘Plan of ALLOA The Seat of The Lord MAR etc’ by Bernard Lens, 1710. (Scotlandsimages.com. Crown Copyright 2011 The National Records of Scotland ref RHP13258/1)
earliest residence, all these buildings had first floor access. By the late 16th century a ground floor access may have been added. By the 18th century the tower served as an annexe to the mansion of Alloa House. In the early 19th century, following the destruction of Alloa House by fire in 1800, the tower was partially re-occupied while a new mansion house was built elsewhere.

Relating the earlier building phases to historical records can provide a possible chronology for the tower. The builder of the earliest residence is unknown; it may even have been a royal hunting lodge within the forest of Clackmannan, a royal hunting ground from the reign of David I (1124–1153) (Gilbert 1979, 20) to that of Robert I (1306–1329) (RMS, v, 134). The second building phase may be the work of William Baillie (see above). The four/five-storey developed hall house was possibly built after 1364 when the Erskines were first granted land at Alloa by David II. In 1442 the ‘castle of Alloay’ was seized by the king after Robert, 1st Lord Erskine seized Kildrummy Castle in support of his claim to the earldom of Mar, although the reference occurs in a document dating from over a century and a half later (Spalding Misc, v, 275). A lost document of 20 June 1448 refers to the exchange of the castles of Alloa and Kildrummy but, although Erskine surrendered Kildrummy Castle by 21 July, the castle of Alloa had not been restored to him by 4 April 1449 when he protested in a General Council at Stirling (McGladdery 1990, 40, 41). The earliest surviving contemporary reference to a building is on 17 September 1448, when a document is recorded as being ‘done within the outer gate of the manor-house (manerii of Alway’ (NAS, GD124/1/528). A charter of 8 March 1480/1 was dated at the ‘castle (castrum) of Aleway’ (NAS, GD124/1/529) and a charter of 1497 refers to ‘the manor or castle of Alway’ (RMS, ii, no 1497). By this time the fortification was at its present height of five storeys (Ewart 1996). So it is possible that the earlier ‘manor-house’ in 1448 was also the present tower, four or five storeys high by the 15th century. Thereafter the residence is regularly described as a ‘castle’ (castrum) in charters.

This suggests that the tower was always more than just a tower house. There would have been ancillary buildings within a courtyard enclosed by a perimeter wall as early as 1448 when the ‘outer gate’, presumably within the perimeter wall, is mentioned. By the late 16th century the tower was flanked by buildings to north and south within an enclosure wall in whose east wall was a gateway (see Pont’s map showing Alloa Castle, Illus 5). Slezer’s 1693 view of Alloa (Illus 6) shows a jumble of rooftops to one side of the tower and a possible courtyard opening out towards the town. We have no clear picture of these early ancillary structures but we do know that one of these buildings was probably a kitchen tower. In a letter from 1703 or 1704 Mar mentioned that his mother was demolishing ‘the little tour and stables’ (NAS, GD124/15/227/1); the letter is dated London 19 January 1703, possibly meaning 1704, since in Scotland the start of the new year was moved from 25 March to 1 January in 1600, while in England the date of the new year continued as 25 March until 1752. It is likely that the ‘little tour’ was a kitchen, as years later Mar suggested some construction ‘where the kitchen tower stood’ (NAS, GD124/15/1261/1). It certainly makes sense that the stables and kitchen would be moved out of the tower as soon as was practicable, since both may involve malodorous and possibly hazardous activities.

During the excavation of the mansion, several small features were found that possibly related to the early structures shown on Slezer’s view. One was a relatively shallow drain, which ran across the centre of the site (0534). This drain was blocked by the widening of the south wall of the servants’ hall block (0912) (shown on the plan drawn by the Earl in 1727; Illus 7), and was overlain by a late drain (0536). Associated with the early drain, and lying just to the north of it, was a small circular pit (0537). Both features were filled with the same material, a very mixed soil containing a great deal of bone and pottery fragments. These deposits show that the drain and the pit were deliberately filled with rubbish, to allow them to be built over. The pottery, which is of later 17th-century date, indicates that this activity was probably associated with Mar’s renovations. Further north, excavations in the north-east wing next to Alloa Tower revealed a cobbled surface under many 18th- and 19th-century layers. This surface was probably a cobbled yard or path that lay in between the tower and the early structures.

It is clear that not all the early ancillary buildings were swept away by Mar’s building programme. Late in his life, Mar remarked ‘I was to blame, as my Father was, for going about repairing the old House of Alloa, w[h] was more fit to be made a quarrie . . . ’ (Erskine 1896, 182). Reasons of expense and convenience meant that he was unable to build a new house all at once, but had to integrate some of the older buildings with the new house (ibid). We have no direct evidence as to which of the older buildings he incorporated into the mansion, but some good inferences may be drawn about the oldest parts of the house. As can be seen from Mar’s 1727 plan (Illus 7), the south-east wing (south of the servants’ hall) lies at a rather oblique angle to the rest of the building. It is unlikely that Mar would have designed it thus, and in fact in later plans he took measures to disguise it: A flap was later added to the original plan showing a curved stair running around the three walls of the south-facing courtyard to disguise asymmetry caused by the south-east wing. It is therefore fairly safe to assume that this is an early structure pre-dating the mansion, though the original upstanding part of this building was probably remodelled or demolished by Mar.

Interestingly, the south-east wing is one of only two parts of the house to have cellarage. The second is an area below the waiting hall known as the wine cellar, still intact but closed off for security reasons after a survey was carried out during the main excavation of the mansion. It comprises a north–south corridor under
Illus 5 Alloa Castle as depicted by Pont, late 16th century. (Reproduced by permission of the Trustees of the National Library of Scotland [NLS Shelfmark Adv.MS.70.2.9, Pont 32])
Illus 6 ‘The Prospect of the House & of the Town of Alloua’ with enlargement below from Theatrum Scotiae by John Slezer, 1693. (Reproduced by permission of the Trustees of the National Library of Scotland [NLS Shelfmark EMS.b.5.1])
the east side of the waiting hall with three vaulted rooms leading off to the west (Illus 8). Two of these rooms have brick bins for wine bottles; the third, stone benches for beer barrels. When the mansion was fully constructed, the corridor would have had three cellar windows centrally in its east wall opening onto the eastern courtyard. At either end of the corridor, doorways would have led into the two stair turrets on this side of the mansion. A third blocked doorway was found at the north end of the corridor which possibly led to the early entrance to the cellar on the south side of the tower.

Two strands of evidence suggest that this wine cellar may also have been an early structure, reused when Mar constructed his mansion. Firstly, the excavation revealed that the wine cellar was floored in the same manner as that in the south-west wing, with very fine pink sandstone slabs. Secondly, one of the notes written on the 1710 plan (Illus 9; NAS, RHP13258/4) drawn by Alexander McGill mentions ‘two foot to be taken down of the present floor’ [of the wine cellar], thus suggesting that the wine cellar was remodelled in 1710, rather than being newly constructed. In fact this could have been the area that Mar was referring to when he ordered wine to be sent down to his cellars in 1706 (NAS, GD124/15/397/5).

It is perhaps not surprising that Mar seems to have reused the cellars from earlier buildings. Most of the mansion is built directly onto bedrock, so the digging of new cellars would have been very laborious and time consuming. Presumably Mar, impatient to create a suitable house, and always concerned with money, decided against the expense of such work.
Illus 8 Plan of wine cellar.
The building of the mansion

It is clear from the surviving plans and elevations that Mar wanted to make his residence as commodious and elegant as his means allowed. Much of this work was possible because Mar had restored the family’s fortunes through his various commercial and political activities. These political duties naturally kept him in London for much of the time, but he was kept in touch with work at Alloa by a continual flow of letters from his relatives and employees, to which he replied with his orders. The house was not fully complete when Mar went into exile, but he continued to draw plans of additions and alterations to the mansion from abroad. One of these plans, drawn by him in 1727 (Illus 7), shows the additions conveniently colour coded, so it is possible to separate those features which were already built or begun from those which were purely visionary.

A comparison of Mar’s plan with the excavated remains shows that the layout of the mansion remained essentially the same throughout its life, though there were some internal changes. It is however, possible to gain an understanding of the rough chronology of the mansion’s construction, through studying the surviving documentary sources along with the archaeology. As was discussed above, some of the stonework from existing buildings was retained, probably that of the south-east wing and the wine cellar, though from McGill’s plan (Illus 9) it appears that any structures above these two areas were demolished to ground level by 1710, as there are no existing walls shown in these locations.

Some demolition and alterations had definitely begun by 1703, and three years later, William Hutton (possibly overseer of works) wrote that ‘the masons have done with the new wing of the house and the wrights with the roof ... Thomas Backop hath the sledges of the gabel already therein’ (NAS, GD124/15/440). By the next month, work was advancing on this west gable, the second floor
windows were probably led to the original entrance to the wine cellar, also revealed in the north wall of this stair turret that led into the wine cellar corridor. Another doorway was digging of garden beds, the excavators did reveal the turret was found to have been damaged by the later enough was revealed to show that some of the stairs (Illus 7). The turrets were not fully excavated but on either side of the courtyard as shown in Mar’s plan (Illus 9), presumably the Earl decided to modify his architect’s ideas.

Excavations in this area revealed two stair turrets on either side of the courtyard as shown in Mar’s plan (Illus 7). The turrets were not fully excavated but enough was revealed to show that some of the stairs of the southern turret survived. Though the northern turret was found to have been damaged by the later digging of garden beds, the excavators did reveal the blocked up entrance in the stairwell which would have led into the wine cellar corridor. Another doorway was also revealed in the north wall of this stair turret that probably led to the original entrance to the wine cellar, a passage leading down along the south side of the tower.

Both the east and north walls of the waiting hall were found during the excavations along with the sandy floor deposits of this room. A small sondage was excavated into this floor, which revealed the top of the vaulting to the wine cellar below. A number of stone plinths were revealed during the excavation of this room that correspond nicely to Mar’s plan (Illus 7). These represent the bases for columns which would have supported the roof. Originally there would have been four columns in the centre of the room and 12 around the walls.

The east end of the waiting hall does not seem to have been the only area later modified by Mar. The rooms along the south side of the main block and the long formal stair do not appear on McGill’s plan. It is likely that their construction began some time after 1710 and the stair was certainly in existence in 1715 (NAS, GD124/15/1261/1). Unfortunately, on excavation this area was found to have been largely robbed of stone, though a series of rock-cut drains mainly relating to the south-facing courtyard survived. This part of the house was not quite complete when Mar went into exile, and obviously work had then to be suspended for a number of years (Macky 1723).

Writing to his brother in 1724, Mar listed those projects which he felt had to be finished to make the house habitable ‘... finishing the salle and hall below it, which was so far advanced nine years ago ... and in time to build a dining room where the kitchen tower stood with bedchambers over it’ (NAS, GD124/15/1261/1). In the years between 1724 and his death in 1732, Mar continued to design more and more elaborate additions to the house, adding them to his plan with carefully positioned flaps.

As far as can be ascertained from the archaeological remains, only one of his proposals was carried out: the construction of the north and east walls of the servants’ hall. This was an obvious step to take, to finish off the construction of the north and east range, and the new gable is the south-west tower.

Alloa House after 1732

Most of the Erskine estates were returned to the 6th Earl’s son, Thomas, by 1739, and the family lived at Alloa House until its destruction in 1800. Over the years various changes were made in the house. These changes were revealed during the excavation by examining the stratigraphic sequences of walls and by comparing Mar’s plan (Illus 7) with the site plan. The alterations were most obvious around the south-east wing, the best preserved part of the mansion.

The earliest deposit found in the servants’ hall was a dark crumbly layer containing much bone, shell and charcoal (0196). Analysis of the bone showed that it
came from a variety of animals (including sea mammal) and was finely divided, suggesting that it had been used in soup production, most likely for consumption by the servants. There also seems to have been a rodent problem in this area as many of the bones were identified as belonging to rats, though this seems also to have been a problem in other parts of the mansion (see The Wall Plaster). At some point a thin dividing wall (0954) and fine threshold stone was constructed over this bone-rich deposit about half way across the servants’ hall. In the eastern room created by this division, a mixed deposit of clay, stone and charcoal (0219) may have been the remains of an oven or hearth. It is not clear why such an alteration took place, but perhaps it was decided to improve the servants’ quarters by making better use of what had been a rather unsavoury area.

To the south of the servants’ hall lay the remains of a cellar room which was probably the larder shown on Mar’s plan (Illus 7). This room seems to have undergone several changes over the years. Four brick-built vaulted chambers (Illus 10) were constructed at the south of this room and a rectangular brick structure was built to the north. Some time after this work a brick wall (0904) was built across the entrance to these vaults as if to block them. Later on this cellar was finally abandoned, when a large quantity of brick debris (0144) was used to backfill the room and vaults, and the stairs leading down to this room were finally bricked up.

Major changes seem to have also been made to the rooms east of the cellar. The south wall of the milk room shown on Mar’s plan was found on excavation to have been cut back so that a large three-chambered stone structure (0940), possibly a settling tank, could be inserted into the boiler room. Seven brick tanks or bins were also built around the walls of the room to the north; their precise function remains unclear. The boiler room was at some point filled with rubble and the old boiler in the west wall was demolished along with the turnpike stair. When this room was remodelled, a stone passage or drain (0937) was incorporated into the rubble which could be accessed via two rectangular manholes that opened onto the surface. There is a possible inlet into the manhole closest to the site of the old boiler, which suggests a new boiler was fitted during this work. Above the rubble, the boiler room floor was covered in mortar and finished with flagstones, traces of which were found during the excavations.

When architectural fashions changed, the exterior of the building was also altered, late in the 18th century. The elaborate parterre gardens gave way to open naturalised grassland, and the baroque front of the house was altered to give a bland uncluttered classical façade (see Illus 11 and 12). Mar’s original plan showed a very simple porch, a semi-circular flight of steps up to an entrance flanked by two columns. His later, more elaborate designs were never implemented. Paintings of the house dating to the latter part of the 18th century
Illus 11 Upper 'Front of ALLOA house towards the parter as it now is w' a fronton Raised in the middle', 1725-1730; lower 'FRONT of ALLOA house towards the Hawkhill', 1727. (Scotlandsimages.com. Crown Copyright 2011 The National Records of Scotland ref RHP13258/13, /14)
show a simple three sided bay extending the full height of the building and placed further south than Mar’s porch. The archaeological remains, by contrast, correspond to none of these types, though they are in the same position as the porch in the late 18th-century pictures. They consist of a rectangular plinth (0949) with narrow wing walls running north and south off the outer (west) corners. On the outside is a step between two column bases. No trace was found of any other porch that this may have superseded.

A dramatic end to the building came on 24 August 1800, when a servant left a candle too close to the bedclothes and the house caught fire. Everyone in the house escaped safely, and most of the furniture and pictures were rescued, but with the exception of the north-east wing the house was burnt to the ground.

Alloa House since 1800

After the fire the family removed to one of their other properties in Edinburgh, or, it has been suggested, to Walk House in Lime Tree Walk, Alloa (Susan Mills pers comm). In 1838 however, the family returned when a new house was completed for the 26th/9th Earl of Mar a short distance away from Alloa Tower. During this period the surviving north-east wing of the mansion became the estate factor’s house. The archaeology of the site showed that at some point most of the material from the burnt out portion of the mansion was robbed out; presumably this material was used elsewhere on the estate. Pottery fragments from a deposit in the north-west corner of the servants’ hall (0189), below the levelling layers, dated to around 1810 (post-medieval pottery report). This evidence is interesting as it points to the mansion ruin having been left open, during which time it was presumably robbed, for as much as 10 years after the fire. Deposit 0189 also suggests that the ruin was used for the dumping of rubbish, possibly by the estate factor. At some point in the 19th century various bulk deposits of soil and rubble were then spread over the mansion ruins to level up the site.

The wine cellar was unaffected by the destruction of the mansion (probably owing to the strength of the vaulted chambers) and evidence from the survey suggests that it may have continued in use after the fire. Both doorways leading from the two stair turrets into the cellar were blocked off, one of them with decorated stonework from the mansion. In the cellar corridor, the central window, which opened onto the eastern courtyard, was then enlarged to make a new entrance.

The site of the mansion after it had been levelled and tidied up seems to have become the estate factor’s...
garden. Excavations at the north end of the site revealed that several evenly spaced rectangular cuts, probably for plant beds, had been made into the archaeological deposits in the stair turret on the north side of the east-facing courtyard. Similar cuts were also found to the north much closer to the tower but these were not investigated fully. Other remains relating to this phase included many field drains, a series of paths across the site, and an estate road and paddock to the west.

The final phase of building on the site seems to have been the construction of an extension to the north-east wing some time in the 19th century, probably for the estate factor. Excavations here revealed the walls of the extension and a stone-lined drain (0973) running across it, aligned south-west to north-east. At the east end of the extension were floor surfaces for what appeared to be a coal store. Whilst excavating inside the original 18th-century part of the wing, the remains of an oven were found in what appeared to be 19th-century deposits. By the 1970s both Alloa Tower and the north-east wing had fallen into a state of disrepair and both were derelict. The poor condition of the north-east wing eventually led to it being demolished in 1985.

Internal features of the Mansion

Decoration

In general, the paucity of the mansion remains means that very little can be said about the decoration of the house. Presumably most of the valuable pieces of decorated stonework were either removed from the house as fashions changed or when the mansion was robbed of stonework after the fire. However, during the survey of the cellar it was noted that the blocking of the doorway from the southern stair turret utilised some decorated stonework. At the time these fragments could not be removed, but in the future they may prove to be a useful resource for further study of the decoration on the mansion. One piece of decorated stonework was recovered and photographed during the excavation (Illus 13). The stone seems to be part of a decorative frieze with raised pellets, line and leaf decoration. The frieze may have been part of a decorated pediment or window/door surround, presumably from the outside of the mansion.

Many fragments of plaster were recovered from the mansion, mainly from the levelling deposits filling the southern drains of the house. From these pieces it has been possible to ascertain the shape of the cornice in one part of the mansion (The Wall Plaster). Some fragments from a wall also reveal that at least one room was painted with a pale green distemper. Three lumps of plaster from the north-west corner of the servants’ hall (0189) were also found to be painted. The design comprised curving lines of reddish brown paint on a plain background. The precise location of this paint scheme within the building cannot, unfortunately, be located with any certainty. The plaster itself was found along with relatively late pottery, suggesting that the deposit had been transported from elsewhere on site.

The drains

A very interesting set of features for which there is very little historical information is the drains to the house. There are three groups. The first includes a long narrow channel, lined with timber, which runs along the outside of the front wall. The location of this drain seems to suggest that it may have been built to enable water to flow away from the front entrance and porch. Interestingly, a piece of plaster containing crushed glass recovered from the front wall robbing trench was found very close to this drain. As glass inclusions of this type are usually used to prevent rodents from gnawing through the plaster, it might be inferred that this front drain may have had a rodent problem. Blocking up any holes leading from the drain through the front wall would have been particularly important, given that the dining room and the drawing room were likely to have been close by (see Mar’s plan, Illus 7). The other drain in this group is a narrow channel (0540) running from one of the front rooms through the front wall to join the first.

The second set runs in the east court. These were not excavated, but a fairly clear plan can be built up from several sources. On McGill’s plan of the house
Excavations at Alloa Tower, Clackmannanshire, 1988–1993

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(IIllus 9), a passage is shown running east from the wine cellar, joining a north to south passage in the court. Mar’s plan (IIllus 7) shows a single east to west drain running out beyond the house. This drain is known to exist, having been partially explored by some of the workers on the estate in the 1970s. During excavations a small sandstone plug was found, unfortunately destroyed by vandals. This revealed a vertical shaft with small side channels leading into it. This shaft is positioned at the crossing point of the two passages in the 1710 plan. A small drain which ran along the west side of the servants’ hall disappeared under the north wall along the east side of the spiral stair. Judging by the line on which it runs, it is one of the channels leading to the shaft. This system appears to be quite an early construction, to which additions were made as necessary. It is interesting to note that in his comments on plans for the House of Dun (also designed by McGill), Mar states that ‘there must be a syyer (sewer) from the wine cellar to the Den [a nearby watercourse] for conveying of the oyster and the dirty water ....’ (NAS, GD123/120/1).

The third set of drains is the most impressive: a series of rock-cut channels running through the south-facing garden court (IIllus 14). These channels drained to the south-east and reached a depth of 1.6m before disappearing into the eastern limit of the excavation. An area of gently vaulted stone capping had survived over one of these drains showing how they would have been covered before the destruction of the mansion. In several places stone downspouts led into the drains, though in at least one case this was replaced by a lead pipe. Though the drains were largely rock-cut, to the west of the site they had been constructed from stone blocks because the bedrock dipped down to the west.

Structures

Four interesting structures were found during the excavation. The first was an oven discovered in the north-east wing of the mansion. This structure comprised large flat sandstone blocks showing evidence of burning, which were bonded together with mortar and clay. Set on top was a rough circle of brick surviving one course high. These remains were probably part of a bread oven which could have either served the mansion in the 18th century or the estate factor’s house in the 19th. Interestingly, its position is different from the oven shown on Mar’s 1727 plan (IIllus 7) which is located outside the wing, to the north. One possible interpretation for this difference could be that the old oven shown on Mar’s plan was demolished when the 19th-century extension was built to the north. The remains from the excavation may therefore have been a replacement oven built into the north-east wing in the 19th century.

The other three structures lie in the south-east wing and include the brick-built bins, the narrow brick structure in the same room as the vaults and the large settling tank. All these structures are later additions to the wing and this shows that the function of the rooms may have changed over the years. Parallels for these structures have not been found, but some semi-industrial process seems likely. Many large houses brewed their own beer, and Alloa Tower would certainly have been decanting and bottling wine. The laundry and scullery of a large house would have been near-industrial operations. Perhaps documentary evidence will come to light in future.

The garden (AL01A)

Around the same time as the mansion was being constructed, the 23rd/6th Earl of Mar set about developing an extensive formal landscape around Alloa. A plan of this landscape made in 1710 (IIllus 4), shows the numerous paths, water features and avenues that drew the eye to the mansion and other prominent landmarks. Towards the River Forth and harbour was an extensive parterre along with vegetable and fruit
gardens, orchards, statues and terraces. The landscape was partly influenced by continental tastes; particularly by the type of landscape developed at Versailles.

Once completed, the gardens were widely appreciated and visited by Mar’s guests who were able to obtain a good view of them from the top of the tower. Sir David Dalrymple for example commented in a letter in 1708 that the landscape was ‘the largest and finest . . . of any in Britain; it far exceeds either Hampton Court or Kensington’ (NAS, GD124/15/897/2), though the ‘filthy naked statues’ which adorned it were apparently not to his taste (ibid).

By the latter part of the 20th century, there was no surviving evidence of this formal landscape save two obelisks on piers that would have marked the termination of the garden at the harbour, but which had been moved to Broad Street. It was thought that some evidence might remain of the original layout of beds, paths and hedges, and trial trenching of the gardens was undertaken during the main excavation of the mansion over a period of two weeks in April 1990.

As the historic plans of the garden showed most of the paths radiating out at oblique angles from the house, it was decided that the longest trial trench should be placed on the same orientation as the main house in an attempt to catch these radiating paths, hedges and beds. Only the first few inches of topsoil were removed by machine, to ensure that any garden features at a shallow depth would not be disturbed.

The longest trench measured approximately 35m by 2m and the other, placed at right angles to it, measured 23m by 3.5m (Illus 2). Unfortunately, when the trenches were cleaned the only features revealed were a 19th-century rubble field drain, a modern water pipe and further debris from the destruction of the house. Sadly there was no evidence of the formal landscape dating to the early 18th century.

The negative findings of this work suggest that either the trenches were so placed as not to intersect any of the features of the garden (perhaps being too close to the mansion), or else the re-landscaping, later in the 18th century to the more informal, romantic style, totally destroyed any evidence of the earlier gardens. Although it was hoped to resume further trenching of the garden in the spring of 1991, this was unfortunately never carried out.

The Well in Alloa Tower (AL02)

Running parallel with the excavations of the mansion were the ongoing repairs and restoration of Alloa Tower funded by the Alloa Tower Building Preservation Trust and Clackmannan District Council. During this work a chamber was discovered when a blocked aperture was opened up next to the main spiral staircase on the first floor. The mural chamber, which was located within the thickness of the north wall, was found to house an infilled well next to a small window. Although the well was not under any threat at the time, it was felt that an investigation should be carried out while an archaeologist was immediately available and while the renovation work was in progress, the contractors ensuring a steadily available source of help with scaffolding and equipment.

The process of excavation was quite complex. A scaffold frame was erected over the top of the well. It carried a spotlight, a gin wheel and a rope which was attached to the excavator’s safety harness in case of any sudden slumping of the fill underfoot. A wooden chute was constructed in the window embrasure; the debris from the well being pushed out of the window and the resulting spoil heap being removed later. Access to the well itself was by rope ladder. Once water was found, at a depth of 6.8m, some changes in procedure were made for safety reasons. Continual oxygen monitoring was initiated, and the excavator’s harness was attached to a winch to allow immediate rescue if unconscious.

In practice there were no emergencies. The fill did not slump, and no dangerous gases were encountered.

The well was found to have been deliberately infilled with deposits containing cinder, bone, clay pipe, glass, stone, brick and mortar to within 80cm of the sill. The most interesting find was part of a wooden bench (The Wood) amongst the infill. The shaft was found to be in excellent condition, more than 7m deep and cut about 0.5m into bedrock at the bottom. For most of its length it was faced in rectangular ashlar sandstone blocks averaging 0.26m by 0.7m in size; those near the top were smoothly faced but further down they had a pecked surface. At the very bottom of the well was a thin layer of dark sticky silt with occasional lenses of pale grey clay containing a large quantity of twigs and bone fragments deposited during the period when the well was in use, having fallen or been thrown into the well.

In the original excavation report it had been assumed that the upper fills dated to the same period as the blocking up of the chamber, assumed to have happened during the 23rd/6th Earl of Mar’s renovations of the tower. However, recent analysis of two clay pipes from the two upper fills show them to be roughly mid-17th century in date (The Clay Pipes). Although the pipes could have been part of old rubbish thrown down the well, it is also possible that they were deposited by the workers responsible for infilling the well, indicating that the well may have been filled in before the blocking up of the chamber by the 23rd/6th Earl of Mar. The well may have been deliberately blocked for a number of reasons, such as its water having become contaminated, or more possibly because Mar’s predecessors also altered the tower and wanted to use the well chamber for a different purpose.
The pottery
George Haggarty and Derek Hall

Scottish White Gritty Wares

The excavation produced only four sherds of Scottish white gritty ware which are all residual. One from Context 0189 is a body sherd from the neck of a jug which has a soapy stelite feel when rubbed. This fabric can be paralleled by two conjoining strap handle sherds from an excavation at the gatehouse of Dunfermline Abbey (Haggarty 1981, 395, fabric 3). These sherds are now in the National Museums of Scotland fabric reference collection, and have a suggested 14th-century date. A single body sherd from Context 0130 is very thick with large sparse inclusions, and visually looks similar to pottery which, it has been suggested, may date to the end of the Scottish white gritty tradition, that is, to the late 15th or early 16th century. These wares have been well documented from an excavation carried out in Leith (MacAskill 1985, 426), and have also been identified from excavations at Inverkeithing (MacAskill 1983, 335). Recently it has also been recognized in Edinburgh and this material is currently the subject of a small scientific project at Glasgow University (Dr Richard Jones pers comm). Two body sherds from Contexts 0138 and 0226 are from green glazed jugs in a hard white brown fabric with a slightly reduced core. These are somewhat reminiscent of fabrics recovered from excavations at the Abbot’s House, Maygate, Dunfermline (Hall 1996, 88–91).

Scottish Post-medieval Oxidised Ware (SPMOW) and Scottish Post-medieval Reduced Ware (SPMRW)

Archaeological evidence suggests that in the late 15th and early 16th century in Scotland both medieval white and red gritty fabrics began to disappear and potters, for reasons not yet fully understood, began to produce pottery which was much smoother to the touch. These changes may be the result of cultural factors such as a change of cooking habits, but are just as likely to be due to the introduction of new technology, for example the use of larger, longer lasting kilns, giving more control while firing. In addition new clay sources may have been discovered following large-scale peat extraction on the carse-lands especially in the Forth littoral which allowed new and sometimes extremely thick estuarine clay beds to be utilized.

These same iron rich clays fire red under oxidising conditions, forming Scottish Post-medieval Oxidised Ware (SPMOW), whilst under reduction, the same clays fire to a dark grey, producing Scottish Post-medieval Reduced Ware (SPMRW). Fully reduced sherds recovered from excavations would seem to be almost exclusively from large jugs, which by the 17th century nearly always had multiple wavy grooving on the shoulder just below the neck and are covered with a thick, dipped, dark olive green, lead glaze. Oxidised sherds are normally from a range of much smaller jugs, skilles, flanged bowls, drug pots etc (Haggarty 1980a, 40–4; Haggarty 1980b, 45–61; Caldwell and Dean 1992, 11–22). These forms are often extremely difficult to identify from body sherds alone.

It is worth noting that a great number of the oxidised sherds have reduced light grey cores or patches of reduction on the surface. Where there has been no deliberate attempt to reduce the pottery it has been classified by default as SPMOW. Often the oxidised sherds are covered with a thin red coating. It has been suggested that this random glaze effect is almost certainly caused in the kiln by the iron in the clay body being drawn out then redeposited back onto the surface of the vessels (John Hudson pers comm).

Both SPMOW and SPMRW have a ubiquitous distribution within Scotland, and a long date range. The evidence suggests that the industry started somewhere in the late 15th century (Haggarty 1980a, 36–46) and continued into the third quarter of the 18th century (Haggarty, 2004). In the 1980s it was suggested that there was a production site for this type of pottery in 17th-century Glasgow around the Old Calton area (Quail 1982, 1–3) as well as in the vicinity of Stirling Castle (Haggarty 1980a, 37). Archaeology has subsequently proven these assumptions to be correct, as work funded by Historic Scotland has since confirmed a large and important 17th- and early 18th-century production site for this type of pottery centred on Throsk, a few miles to the east of Stirling (Caldwell and Dean 1992, 2–7). An assemblage of coarse redware and waster material has been recovered at the Gallowgate, Glasgow where it is known that a number of redware potteries, including Maxwell’s pig house, were in production during the 18th century (Quail 1982, 1–3).

New research on the pottery at Throsk has revealed links to a number of other potteries in the area (Harrison 2002). We can therefore be fairly certain that the sherds of both SPMRW and SPMOW recovered from Alloa Tower would have been made in the vicinity of the site. The number of sherds present in many contexts (0117, 0130, 0134, 0138, 0143, 0144, 0172, 0177, 0178, 0179, 0180, 0182, 0188, 0193, 0210, 0226 and 0232) surprisingly suggests that large SPMRW jugs were still being used right up to the end of the 18th century, later than previously thought.

Post-medieval imports

Among the identifiable post-medieval imports from the site are sherds from stoneware vessels. Four sherds, of which two conjoin, from the neck and shoulder of one or possibly two pale grey stoneware vessels and one vessel with slight evidence of a red ash glaze were recovered from Context 0130. The appearance of the fabric indicates it may be from either Siegburg in Germany or Beauvais in Northern France. Siegburg stoneware is not uncommon in Scottish ceramic assemblages, especially from excavations in the east coast burghs dating from the later 14th and
15th centuries. However recent work suggests that in the 16th century, Beauvais stoneware, especially drinking cups, may be more common and have a wider distribution (Haggarty 2006a, Word File 27). A body sherd and a basal angle from Frechen stoneware bottles occur in Contexts 0127 and 0187. The basal sherd (0187) is in a light grey fabric and almost certainly dates from the last half of the 17th century. These have a very common distribution in the Forth littoral, the largest published group being from an excavation on the Isle of May (Will and Haggarty 2008, 147). Six thick pink sandy sherds have a white coating on their exteriors and appear to be from a large storage vessel, probably of Iberian or Mediterranean origin (Context 0182). From an unpublished excavation in Leith there are the remains of at least seventeen similar large storage vessels which, despite Inductively-Coupled Plasma Mass Spectroscopy (ICP-MS) analysis on the fabric, have not been sourced.

Roof tiles (ceramic building material/CBM)

A pilot program of Inductively-Coupled Plasma Mass Spectroscopy (ICP-MS) analysis has been carried out on a range of Scottish post-medieval iron-rich pottery from known production localities over a wide geographical area (Chenery et al 2001, 45–54). Thanks to the excellent results obtained from this study a second and much larger programme of work was initiated. This project included the sampling of a group of 10 roof tiles from Context 0147 at Alloa Tower (Haggarty et al 2011). The initial results suggest two sources for the Alloa Tower tiles, one possibly local and the other probably north European. Certainly the custom accounts show large amounts of Dutch roof tiles coming into Forth ports. Unusual in the Alloa assemblage are the black glazed examples. Given their abundant use it is not surprising that fragments of pantiles were recovered from contexts all across the site.

Tin glazed wares

The manufacture of tin glazed earthenware came extremely late to Scotland, with production only beginning at the Delftfield site in Glasgow in 1748 (Kinghorn and Quail 1986). However as these wares were being produced mainly for export to the wider Americas, they were probably never a major factor in the Scottish market. This is especially true on the east coast which was almost certainly dominated by imports from the huge tin glazed industries of northern Europe. Research currently being carried out on excavated Delftfield sherd material is being hampered by the inability to identify extant examples in British collections (Haggarty and Gray 2010). The lack of Delftfield tin glazed sherds is also evident in groups of unpublished material from excavations in Leith and other sites around the Forth. The only tin glazed sherds from the Alloa assemblage (Context 0232), which when conjoined allowed identification of the pattern, show good affinities to a plate produced in the Dutch ‘T Fortuyn’ pottery, during the ownership of Joris Oosterwijk 1706–47 (Matusz 1977, 45). A number of undecorated and undiagnostic tin glazed sherds recovered from Contexts 0130, 0139 and 0168 would also sit comfortably within an 18th-century time frame.

White salt glazed stoneware, creamware and Pearlwares

The increasing popularity of tea, and to a lesser extent, coffee drinking led in the second quarter of the 18th century to a transformation of the British ceramic industry. At first this used refined red earthenware and later white firing clays, producing white salt glazed stoneware, creamware and pearlware. Although white salt glazed stoneware was being produced in industrial quantities in Staffordshire from c1720 to c1780 (Edwards and Hampson 2005, 30), there is no good archaeological evidence to suggest that it was in common use in Scotland much before the start of its production in 1750 at Prestonpans (Haggarty 2007, 219). It is therefore likely that most of the sherds from this site date from the second half of the 18th century. Our understanding of the development, marketing and ultimate decline of creamware is still the subject of much research, and the dating of examples is fraught with problems, which in the long term, only the dual approach of documentary research and archaeology can hope to resolve. What seems to be evident from the work done thus far is that its development was basically a North Staffordshire phenomenon c1740 (Barker 2007, 31) occurring some ten years later in Scotland (Haggarty 2007, 219). It does not seem to occur with its contemporary, pearlware, on Scottish rural sites before c1780, by which time a number of Scottish factories were producing them with the standard range of decoration (ibid, 218–30).

Industrial redwares

As already stated, recent archaeological and documentary research suggests that during the 18th century Scotland's indigenous coarse redware ceramic industry was subjected to massive changes. Research on the ceramic material from the West Pans and Morrison Haven production sites (Haggarty 2006b and 2009) has demonstrated conclusively that at least in the area of the Forth this was in part due to potters migrating from south of the border. A juggled and trailed slipware industry was introduced by them from c1750, and this developed and was carried on at numerous locations throughout Scotland during the 19th century. What is presently not at all clear is the status of any indigenous slipware prior to this date, although at least one example of possible local manufacture has been published (Haggarty 1980a, 44–5 fig 11:54). Recently it has been suggested that a couple of 17th-century sherds decorated with trailed white slip from a site in
Edinburgh may possibly be of local manufacture (Julie Franklin pers comm).

There is also good evidence that most if not all the new potteries built for the production of ceramics using white firing clays were also producing redwares. Excavations in Cupar, Perth and Aberdeen have also recovered wasters from small 19th-century redware potteries (Martin and Martin 1996, 27–41; Blanchard 1979, 75; Cameron 2004). Much more difficult to determine, and probably much less important, are the small enterprises for brick and drainage tiles begun by the major land owners to fulfil their own needs, and probably those of their neighbours.

From the late 18th century the output of redware for the home and dairy was mainly in the form of the ubiquitous large flat based white slipped dairy bowls and glazed crocks for storage and pickling. These wares are impossible to date but they do not seem to occur in archaeological contexts before c1775, and in many places were still being produced well into the 20th century (Haggarty 2006a, Folder 4 Word File 6).

Discussion

Although medieval and later archaeology, especially in towns, has been making progress in Scotland for half a century, it is only recently that archaeological interest in industrially made ceramics has gained momentum. Largely however this has been confined to production sites (Haggarty 2005, 2006b, 2007, 2008 and 2009). Consequently to date no large 18th- and 19th-century assemblages from high status sites, burghs or towns have been published. There is therefore very little idea of how the incredibly important 18th-century ceramic revolution impacted on the Scottish middle and upper classes, except in a few cases where they have left documentation. Unfortunately these invoices, etc, often only refer to purchases of high status porcelain and pottery procured in cities like London. In instances when ceramics are purchased direct from a Scottish manufacture, details of decoration, etc are unfortunately rarely given, which is a great pity, as they can be extremely illuminating (Haggarty 2008, 55).

Although Alloa Tower is thought to be one of the earliest and largest Scottish tower houses, it has been extensively remodelled during its long history. This is especially true from the 17th century onwards, when it was incorporated into a much larger classical house in various phases. The ceramic assemblage is extremely interesting and although there is a small residual ‘background noise’ suggesting a medieval presence, the bulk of the assemblage almost certainly dates to c1780–1810, with the exception of Contexts 0227 and 0231 which are probably about a hundred years later.

As far as is known this is the first in-depth study of a late 18th-century ceramic assemblage from the house of a major Scottish family. However, apart from a few very small sherds of fairly typical Chinese export porcelain (Contexts 0187 and 0192), and two sherds of 18th-century English porcelain, one from a saucer and one from a plate (Context 0172), for a house of this importance it is a fairly pedestrian assemblage. One of the reasons for this may be rather simple, almost self evident: incredibly large amounts of common earthenwares were produced, used daily and broken, and therefore appear abundantly in the archaeological record. By contrast the high status ceramic material was always very expensive, used carefully, and has been preserved intact, surviving in enormous quantities in historic houses, museums and other collections, rather than as sherds in the ground.

Illustrated pottery catalogue

All contexts are from site code AL01, unless stated otherwise. A complete catalogue of sherds from the excavations is held in the site archive.

1 Sixteen glazed redware sherds from a flat based crock (Context 0138, Illus 16)
2 One SPMOW base sherd, glazed green (Context 0143, Illus 16)
3 Three conjoining light grey stoneware sherds conjoining to form the rim, neck and upper part of a handle from a salt glazed bottle with a pinkish interior. It is difficult to parallel this vessel which may be a late continental import (Context 0165, Illus 16)
4 Sixty-eight SPMOW sherds of which fifteen, five and three two’s conjoin from what may be three jugs. One jug has been decorated around its shoulder with an incised wavy line (Context 0182, Illus 15)
5 Rim and strap handle junction, reconstructed (Context 0182, Illus 15)
6 Twenty-seven conjoining pearlware sherds forming the complete profile of a thinly potted slop bowl with a thin straight footrim. Decorated on the exterior with two different blue and white transfer prints of floral and house designs, one with a small figure, vaguely Chinoiserie inspired. The interior is decorated with a leaf and floral transfer print border and a single stylized flower in the centre. Height 600mm; base diameter 820mm; rim diameter 137mm (Context 0189, Illus 16, 18)
7 Forty-eight pearlware sherds which conjoin to form the complete profile of a thinly thrown bowl with a well developed footrim and everted rim. The bowl has been decorated on the upper surface with a hand painted blue band, and on the exterior body with vertical cut flutes done on a rose lathe. Height 82mm; rim diameter 221mm; base diameter 110mm (Context 0189, Illus 15, 17)
8 Twenty-one pearlware sherds with seven, four, two, and three conjoining, from a jug decorated with a fine hand painted blue band on the rim and rose lathe cutting on the neck and possibly on the body (Context 0189, Illus 16)
9 Rim sherd from a blue and white Chinoiserie transfer printed pearlware caudle or tea cup with a distinct waisted body. This shape of cup was influenced by continental porcelain examples and probably dates from c1810 (Context 0189, Illus 16)
Illus 15 Post-medieval pottery, Pot Cats 3, 6, 8, 9 10 and 13.
Illus 16 Post-medieval pottery, Pot Cats 1, 2, 3, 6, 8, 9, 10 and 13.
10 Four redware sherds, with three conjoining, from a small jar that was lead glazed both internally and externally (Context 0189, Illus 16)

11 Seventy-nine redware sherds, with a large number conjoining, from a large two-handled crock covered on both surfaces with a black, iron-rich, lead glaze. Rim diameter c140mm; the base of the crock is missing; estimated height c250mm (Context 0189, Illus 15)

12 Seventy-nine sherds, all of which conjoin to form a complete, and typical, post-medieval SPMRW jug, with a strap handle, shoulder cordon, and grooved neck. More unusual are the two thin incised bands around the middle (Context 0189, Illus 15, 19)

13 Twenty-eight white earthenware sherds of which twenty-seven conjoin forming the complete profile of a 2lb marmalade jar with a diamond registration mark on its base inside the impressed letters [MA]LING/NEWCASTLE. The pot has also been decorated with a black transfer print AWARDED THE VIENNA EXHIBITION 1873/JOH[N] . . . & SON/P . . . [MARMALADE/ . . . E&LONDON/ . . . AND MEDAL OF MERIT/2lb. It has been suggested that Maling may have been the largest producer in Britain of commercial earthenware jars (Moore and Ross 1989, 78). Height 145mm; base diameter 110mm (Context 0227, Illus 16, 20)

14 Thirty-one sherds of which twenty-one and four conjoin to form two fragments of what is almost certainly an 18th-century Dutch tin glazed earthenware plate with no footrim. The upper surface has been decorated with crude cobalt blue hand painted swirls, leaves and crosshatching, see main text. (Context 0232, Illus 15, 21)
Illus 19 SPMRW Jug, Pot Cat 12.

Illus 20 Earthenware marmalade jar, Pot Cat 13.

Illus 21 18th century Dutch tin glazed earthenware plate, Pot Cat 14.
The metal objects
Tamlin Barton

Introduction
Most of the metal finds discovered during the various excavations were recovered from layers deposited during or after the destruction of the mansion (Phase II). This is to be expected given the extensive levelling of the site in this phase. In addition, since the walls of the mansion were left in situ rather than being totally excavated, artefacts dating from the first phase, particularly the construction of the mansion, may still lie unrecovered on site. Iron nails were by far the most frequent find, which is what one would expect given the large quantities of nailed wood that would have been present in a mansion of this size, and destroyed when the mansion burned down. However, a small number of more interesting and diverse iron objects was recovered from the wine cellar survey.

Copper alloy object
The only copper alloy object from the site was a 1738 halfpenny found in the topsoil. Although these coins remained legal tender until decimalisation in 1971, the number of 18th-century halfpennies in circulation by that date would have been exceedingly small. It is difficult to know exactly when the coin was lost, though it seems likely that this occurred after some time in the 19th century, when the site became the factor’s garden.

George II halfpenny (1738) Diameter 27–28mm. Slightly oval in shape. The coin is worn and the details of Britannia and the King are hard to make out but the inscription is easily readable. (Illus 22). AL01 Context 0102; Find No 13; Phase II

Lead/iron object
Comprising a piece of lead caulking attached to an iron ring, this object is part of an inspection cover. Lead caulking was used in stone masonry to prevent iron from rusting and splitting the stonework into which it was inserted. Both caulking and ring were found inside the fill of the large drain running across the south-facing courtyard and probably related to a stone inspection cover over this feature. The lack of lead on the site in general is a little surprising given that large quantities of it would have been used for flashing on the roof of the mansion. Presumably the fire and the clean up of the site afterwards meant that large quantities of lead did not enter the archaeological record.

2 Drain inspection cover ring The iron ring is triangular in shape with curved corners and has a circular cross section approximately 15mm across. Each side of the ring measures roughly 100mm. At one of its corners the ring is connected to a circular iron link, 25mm in diameter. A third of this link is embedded in the lead caulking. Presumably the iron link is connected to an iron rod that is encased in the caulking. The lead caulking is trapezoidal in shape and square in section with the thinnest part 24mm across closest to the iron ring and the thickest part 37mm across. Beyond this the caulking opens out to form an irregular but slightly circular end with a convex face. Overall the lead caulking is 72mm long. Chisel impressions can be seen on the face of the caulking under horizontal light. Originally the caulking would have been set into a piece of masonry with the iron ring providing a means of lifting the stone. The thickness of the stone can be estimated from the impressions left on the caulking as 55mm. (Illus 23). AL01 Context 0169; Find No 269; Phase II

Iron objects

Tools
This selection of artefacts includes a scissor candle snuffer (No 3) which, being made of iron, suggests it was a rather low status item, perhaps used by a servant from the mansion. Despite the name, scissor snuffers were largely used for trimming the wick rather than snuffing the candle. Frequent trimming of wicks was necessary because long charred ends could cause guttering, which both wasted the candle and provided unsteady light. The box provided a means of preventing the trimmed-off wick falling to the floor or landing in the liquid fat below the flame. The invention of the plaited wick in the early 19th century eventually ended the need for continual trimming of candles. The chisel (No 4) and the punch (No 5) are probably both designed to be used in a forge; the chisel in particular is very short and has a squared off end which is suggestive
Illus 23 Metal objects, Nos 2, 4, 6 and 8.
of a handle-less blacksmith’s cold chisel. However it remains possible that the punch may have been used by a stone mason. The hook (No 6) is a common design found throughout the post-medieval period, as it could be made quickly by a blacksmith. The straight pointed end is driven like a nail into the piece of wood where the hook is required. This type of hook was eventually superseded by the screw-in variety that is still used today. A relatively large and crude hook such as No 6 is more likely to have been used in a kitchen, pantry, storeroom or outside shed, rather than being part of the fittings of the well furnished part of the mansion.

3 Scissor candle snuffer This artefact is rusted closed. Overall length 120mm, width of scissors around pivot is 10mm, width at finger holes, 45mm. The thickness of the scissors part is between 5mm and 1mm. The box is semicircular in design, 37mm in length, 12mm wide and 25mm thick. Only half of the finger holes survive, but they seem to be D shaped. The snuffer is snub ended though there is a slight point. (Illus 24). AL01 Context 0192; Find No 250; Phase II

4 Chisel Length 113mm overall. Head end is octagonal in cross section (with 4 short sides 10mm and 4 long sides 20mm). The head end is squared off but has become deformed on one corner, probably due to having been hit with a hammer. The faces of the blade descend to a blunt edge (5mm thick). (Illus 23). AL01 Context 0164; Find No 150; Phase II

5 Punch Length 222mm, width of main shaft approximately 18mm. The shaft seems to be square in section although corroded. The head of the punch shows mushrooming from use and measures 22mm by 16mm. The pointed end is 90mm long and is rectangular in profile measuring 22mm by 14mm at the widest point. (Not illustrated). AL01 Context 0163; Find No 148; Phase II

6 Hook In its entirety, the hook measures 155mm in length and 115mm in height and is made from a roughly squared iron rod 10mm by 10mm. One end of the hook has been bent at 90 degrees and tapered to a point. This pointed end is 75mm long. The depth of the curve is 30mm and the width 62mm measured from the tip of the hook on the inside. The profile of the curve is asymmetrical and is bent outwards slightly as it reaches the tapered hook tip. (Illus 23). AL01 Context 0163; Find No 123; Phase II

Door or cabinet fittings

Three different types of hinge were noted in the assemblage: H hinges such as No 7 were generally used where there was not much breadth to the wood being joined, such as doors, cabinets and cupboards. The size and asymmetrical nature of this hinge is more suggestive of the latter two objects. The second hinge (No 8) was represented by a large L-shaped iron bracket which would have been fixed into the masonry of a doorway. One end of the bracket was forged into a rounded bar –the pintle-- which would have pointed upwards and acted as the hinge pivot. A large hinge such as this is likely to have been used for a heavy external door, or possibly even a gate. T-shaped hinges, however, are the most numerous amongst the metal finds as eight were collected during the wine cellar survey (No 9). These are large hand-forged door hinges with rounded, slightly pointed heads. It seems likely, given their size, that only two of these hinges would have been needed for each door and this interpretation is backed up by fact that two of the hinges are slightly different from the others and form a distinct pair. Therefore, there were probably hinges for four doors in the wine cellar which were almost certainly the two doors for Rooms 1 and 3, and the two doors for Room 2 (Illus 8). The two similar looking hinges stand out because they have large rivets close to the pivot instead of nails and the frame wings contain two additional nails. This suggests that one of the doors was heavier than the rest and probably closed off a well-secured space, perhaps the inner chamber of Room 2, see below.

The wrought iron lock (No 10) is a fairly sturdy lock for what was presumably a robust door. A likely interpretation is that it belonged to the door into the inner chamber of wine cellar Room 2, perhaps indicating the value of the wine kept within. Also found in the same room was a door plate and ring (No 11), which may have originally belonged to the same door as the lock. This item could have been attached to the upper part of a door, the ring being used to hang implements, or it could have been part of an additional security fitting, such as a hasp and staple or a hook and eye.

7 H Hinge This object is one side of a small iron H hinge. The piece retains the upper and lower hoops (each 9mm long, 12mm wide and 6mm thick) and the central pin. There is a 12mm wide gap for the third hoop which would have belonged to the other half of the hinge. The plate that would have been nailed to a wooden surface is roughly 120mm long (one end has become folded over), 15mm wide and 1.5–2mm thick. One end of it is squared off but the other has been bevelled on the outer face. There are two holes placed asymmetrically along the plate; the one closest to the squared off end contains a 20mm long nail or tack. (Illus 24). AL01 Context 0169; Find No 176; Phase II

8 Wall pivot for door (part of hinge) This item is a bracket that has been hand forged from an iron bar; the pin end is 23mm in diameter. At the end of the pin the cross section becomes rectangular where it bends at 90 degrees. The bracket then extends forwards for 125mm and becomes increasingly flat and wide. At the second 90 degree turn, the metal is only 1mm thick and 10mm beyond this corner metal has corroded away. (Illus 23). AL01 Context 0163; Find No 124; Phase II

9 T Hinges There are eight hinges in this group. The door wings mostly measure 450mm long and 200mm wide at the widest point (pivot end) and 30mm wide at the narrowest point, just before the head. These wings are 3mm thick at the pivot end and less than 1mm thick at the head end. Not all the heads have survived corrosion; those that survive are variable but roughly arrow and leaf shaped. The door wings have been punched by 6 or 5 holes (some contain nails) and two of the hinges have had large rivets inserted through the hole nearest the pivot. The frame wings are between 220mm and 230mm long, 55–60mm wide and 2–3mm thick. The upper
Illus 24 Metal objects, Nos 3 and 7.
and lower hoops of the pivot of each hinge seem to have been hammer-welded closed for security, not simply formed by bending tabs protruding from the frame wings. They are too corroded to see clearly, but they may have been formed by cutting the frame wings with over-long tabs, bending the tabs forward in a right angle, back round the pivot pin, and then behind the frame wing. The ends of the tabs could then be hammer-welded onto the back of the frame wing. Six of the hinges have frame wings that have been punched with five nail holes in a zig-zag pattern, but two have seven holes. Many of the hinges still retain nails and pieces of wood and one of the hinges is still attached to an 800mm length of door frame. (Illus 25; bottom three hinges drawn in outline only, due to similarity of construction). AL01 Wine Cellar Survey.

10 Door lock A large wrought iron rectangular lock measuring 208mm wide, 127mm high and 35mm thick. The lock mechanism is placed slightly off centre from the front plate and measures 95mm by 78mm but the lower half of the keyhole and face plate is missing. The bolt is still intact, the head measuring 15mm by 48mm in cross section, 36mm wide and having rusted in an open position. Internally there is a single, central ward plate. Either side of this, directly under the shank of the bolt, there are traces of what could be two levers or flat springs, but is too corroded to interpret with confidence. Fragments of wood from the door survive above and below the mechanism and there are small holes pierced in the front and bolt plate where the lock was nailed to the door. The bolt would have locked the door on the left hand side, suggesting that the door swung clockwise. On the face of the lock are slight remains of ornamentation. (Not illustrated). AL01 Wine Cellar Survey; floor of Room 2.

11 Door plate/ring Comprises a rectangular plate 95mm by 78mm by 2.5mm thick with a ring (36mm in diameter, central hole 12mm wide) attached to its centre. There are four screw holes, one in each corner of the plate, and in one a screw survives (31mm long, 6mm across). Wood adheres to the back of the plate. This object could have been the staple part of a hasp and staple, secured by a padlock, or the eye of a hook and eye, used to secure a door. (Not illustrated). AL01 Wine Cellar Survey, floor of Room 2.

Rivets

Two iron rivets of different sizes were probably used on very different objects. The smaller rivet (13), though of similar length to 12, is finer and of a much smaller diameter and therefore could have been used to join two pieces of metal (or metal plating on either side of a piece of wood) that would have been on show. The larger one (12) on the other hand, is much more heavily constructed and is bisected by an iron spike. It may have joined two boards of a wooden door. The purpose of the spike is somewhat of a mystery, though perhaps it was inserted into a hole in the middle of the rivet, to prevent the rivet moving whilst the ends were hammered into shape. The rivet and spike are heavily encased in corrosion and mineralised wood, obscuring any details of construction.

12 Rivet with iron spike This comprises an iron rivet, 73mm long with a diameter of 14mm. The two ends open out abruptly and are 2mm thick with square profiles, roughly 20mm by 20mm. An iron spike has been driven or inserted through the centre of the rivet. The spike measures roughly 75mm long, 15mm wide and 12mm thick; 50mm of its length protrudes on one side of the rivet. The head of the spike opens out abruptly to an irregularly shaped end measuring 10mm by 20mm. (Not illustrated). AL01 Context 0102; Find No 47; Phase II

13 Rivet An iron rivet 63mm long with a diameter of 7mm. The ends of the rivet open out relatively gently to rounded tips measuring 10mm and 8mm in diameter respectively. Presumably used to hold together two pieces of metal. (Not illustrated). AL01 Context 0138; Find No 40; Phase II

Miscellaneous

The precise function of several artefacts in the assemblage cannot be ascertained with any certainty.

14 Possible shoe plate A flat piece of iron 3mm thick, 85mm long and 75mm wide. One end is curved, much like the toe end of a shoe. The two sides of this curve (as with a shoe) are asymmetrical. The far end appears to have broken off in an uneven manner but there is a half a hole, 15mm wide, which may be original rather than being caused by corrosion. There are no signs of nail holes or any means in which the plate could have been attached to a shoe, other than the hole mentioned above. The plate is in poor condition and has delaminated. (Not illustrated). AL01 Context 0147; Find No 113; Phase II

15 Strap A flat trapezoidal piece of iron 212mm long on one side and 170mm on the other; the piece measures 85mm wide and 2mm thick. The strap is incomplete and presumably was once longer. On one of the flat sides there are slightly raised flanges along the top and bottom edge (both 8mm wide), possibly representing basic decoration, as well as traces of white paint which have prevented corrosion in the centre of the artefact. The strap is perforated by two nail or rivet holes (8mm by 15mm and 10mm by 7mm) placed centrally and equally spaced. This item is possibly a strap for a wooden object, such as a door or box, the painted side presumably facing outwards. (Not illustrated). AL01 Context 0149; Find No 163; Phase II

Nails

A total of 98 nails was recovered from stratified contexts during the excavations and five from the wine cellar survey (excluding those attached to hinges). Most of these had square cross-sections and would have been hand-made. The lack of round cross-sectioned wire nails in the assemblage is to be expected considering that this type of nail was not common until the 19th century. Additionally, few artefacts were collected from the topsoil. In general the nails that were recovered appear to be wrought, rather than cut, though corrosion
makes this distinction difficult. They have been classified by the general common names given to nails from post-medieval to modern times.

By far the most common type of nail is the flathead, which showed a variety of sizes, though the most common length for this nail was about 75mm. Flatheads would have been used as a general all-purpose nail, primarily for joining wood to wood. The clouts on the other hand have wide heads relative to their length and were often used to pin various types of sheeting material, such as leather or cloth to wood. It is not clear exactly what the clouts in the assemblage were used for, but one possibility is that they were used to nail down lead flashing. Flooring brads, as the name suggests, are used to nail down wooden floors and have a very small head to make them less noticeable amongst the floorboards. It is surprising that there are so few of them, given the many wooden floors that a mansion this size would contain. Rosehead nails are generally used where a flush surface is not needed, or for ornamentation. The long rosehead spike present in the assemblage was probably used for joining two large pieces of timber. Analysis of the nails by period shows, in general, a picture that is to be expected given the sequence of events that occurred to the mansion: The largest quantity of nails was recovered from Phase II, when the mansion ruin was levelled, and the least number of nails from Phase III, which agrees nicely with the area becoming a garden.

The glass

K Robin Murdoch

Bottles (Illus 26)

The glass from Alloa Tower is a typical 17th/18th-century assemblage (see Table 2). By far the greatest part derives from wine bottles (for example No 16). These ultimately cheap containers were first imported into England, probably from Belgium, around 1630. Production was quickly established in England and they became very popular. Although generally termed wine bottles, they, or very similar containers, were also used for beer or ale and no doubt many other purposes. The earliest example from a Scottish excavation, at Cramond, dates to around 1660. They were expensive and relatively scarce in the 17th century and tend to be restricted to prestigious sites. However by the early 18th century they are almost ever-present on all manner of sites. The practice of marking bottles with shoulder seals, sometimes dated, has allowed a good typology for the evolution of these containers to be developed. It is easy to attribute a relatively close date for manufacture, but dating their demise is more problematic. This is because, particularly in Scotland, wine was generally stored in casks until around 1800. The wine was decanted into bottles for serving at table and they could have been in use for years before breakage. The base rings often carry wear commensurate with being slid across table surfaces for considerable periods of time.

The majority of the Alloa wine bottles can be dated to the late 18th century, some possibly even into the early 19th, since it appears that the wine cellar may have continued in use after the fire of 1800. A significant number may have been made at the nearby Alloa Glassworks, founded in 1767.

While exhibiting typical late 18th-century manufacturing characteristics, many of the bottles are slightly different from similarly dated items from other Scottish sites. In particular, the upper bodies are thinner than usual, the angle of entry of neck into shoulder less abrupt and the base rings often irregular, rendering the bottle slightly unstable. All of these criteria may indicate local manufacture.

16 Bottle Neck, lip and part shoulder of wine bottle. Pale rich green, moderate to heavy denaturing, patches of mortar adhering. Neck height 80mm, curving splay 26.5–51/64, poorly applied triangular string ring, aperture 17.5mm. Probable late ‘onion’ to ‘mallet’ type of 1720–40. (Not illustrated). Context 0170, Find No 199

Table wares, including drinking glasses

The only slightly atypical aspect of the Alloa Tower assemblage is the small number of finer table wares. Only three out of the thirty-two glass-bearing contexts yielded shards of fine table ware.

Of note is a substantial plain drawn stem from a drinking vessel, probably with a trumpet bowl (Context 0130, No 17). This type of stem was at its most popular in the middle 50 years of the 18th century (Bickerton 1971, 12). This particular stem, because of its rugged construction, is similar to items produced for tavern use (ibid) and therefore likely to be subject to considerable abuse.
A second plain drawn stem, No 19, recovered from Context 0132, was much smaller and lighter than the example from Context 0130. This stem probably dates to the mid 18th century. The re-introduction of duty on glass in 1745 led to a general lightening of construction of vessels.

No 18 from Context 0130 appears to be a shard from a meshwork vessel. This is a mould blown technique generally from the Low Countries and was popular from the mid 16th to late 17th centuries. The mould design in this case is similar to Henkes (1994, 143, 32.2a). However the intense cobalt blue colour of the shard and its relative thickness suggest that it probably came from a bowl or sweetmeat dish rather than a drinking vessel.

A beaker base from Context 0170, No 20 is also from the Low Countries and dates to the first half of the 17th century or possibly the late 16th. It is a classic form where a foot-ring was applied to the base of a thin blown vessel, initially to add strength but also for decoration. The foot ring in this case has been pincered at intervals around its circumference. Although foot rings did carry on to the end of the 17th century, pincering had been replaced by fused coil forms by 1650 (Henkes 1994, 192). Footed beakers were known to have been made in England around this time but generally in the forest glass tradition and are generally coloured pale green, whereas this item is clear with a faint amber tinge.

A bag of 21 small vessel shards from Context 0170, Find No 201 appeared to contain shards from at least four different vessels. Twelve came from a rounded bowl (drinking vessel) of moderately thick (c2mm) glass. These may originate from a cup shaped bowl but equally could have come from a roemer, a convex-bowed drinking vessel which started in production in the second half of the 17th century in the Low Countries. Five others were from a much thinner (c1.0mm) straight sided bowl (drinking vessel) dated to the late 17th to 18th centuries.

One very small shard with applied external rib (No 21), probably from a Dutch or Low Countries import, may be part of a vessel represented by base No 20. These very thin blown beakers were often strengthened by thin vertical external ribs (Henkes 1994, 146, 33.4).

One shard of folded foot originally c90mm diameter from a drinking vessel of reasonable size and two very small shards of folded foot were dated to the late 17th to mid 18th centuries (No 22).

17 Vessel Substantial plain drawn drinking vessel stem, clear, slightly dulled, patchy white denaturing in the shatter. Heavy (probable lead crystal) tapering to trumpet bowl; ‘tear drop’ near springing of bowl. Probably early 18th century. (Illus 27). Context 0130, Find No 16
Table 2 List of glass-bearing contexts with date ranges.

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19 Vessel Small plain drawn drinking vessel stem with part bowl, clear with patchy white denaturing (lead glass?); minimum stem diam 12mm, quite heavy foot, no merese. Probably mid 18th century. (Illus 27). Context 0132, Find No 14

20 Vessel Complete base from footed beaker, clear with light flaky denaturing. Diameter 70mm, conical kick 10mm deep with 10mm diam pontil. The foot ring has been added to strengthen thin, 1.4mm vessel walls. Foot ring decorated by pinching at an angle at intervals varying from 5–10mm. Low Countries import. Late 16th to early 17th century. (Illus 27). Context 0170, Find No 200

21 Vessel Very small vessel shard in clear glass with light denaturing, thin rib on external? surface. Possible ribbeker. Low Countries import. Late 16th to early 17th century. (Illus 27). Context 0170, Find No 201

22 Vessel Shard of folded foot from a drinking vessel, originally c90mm diameter. Late 17th to mid 18th century. (Illus 27). Context 0170, Find No 201

Window glass

Significant quantities of window glass were also recovered from the site but mostly as very small shards. Window glass, needless to say, is more difficult to date because of a lack of shape. However glass, particularly from a buried environment, can exhibit criteria which may help.

In the proximity of a lime-mortared structure such as Alloa Tower the local buried environment surrounding the glass is alkaline. Glass is tolerant of most acids but denatures in the presence of alkali. Many factors affect the rate at which this happens, chemical make-up of the glass and moisture levels being most relevant.

Up until around 1680 most window glass used in Scotland was potash-fluxed, that is, the alkali used to lower the temperature of vitrification and the temperature at which it remains workable was potassium based. From 1680 to around 1820 the fluxing alkali was derived from kelp, rich in both potassium and sodium. Finally Le Blanc’s development of industrial sal alkali meant that this sodium-based salt was used
for glass production (among other things) from c1820 onwards. The fluxing alkali affects the way that glass corrodes and the nature of that corrosion.

Potash-fluxed glass tends to denature more readily than soda glass and results in heavy dark brown corrosion products and often deeply pitted surfaces. In extreme cases the entire thickness of the glass may denature leaving an opaque material which will readily fragment into very small granules.

Soda glass, on the other hand, denatures far more slowly and in a more regular manner. Corrosion products are generally paler in colour and tend to flake off in thin layers leaving a relatively smooth surface beneath.

Thickness of glass is also a factor in assessing the likely age of window glass. Experience from other Scottish sites has indicated that window glass up to about the middle of the 16th century was fairly thick (over 2.5mm). By the 17th century however the thickness had reduced, sometimes drastically, seldom exceeding 2mm and sometimes less than 1mm. The most common form of glazing in the 17th century was a matrix of small panes (often diamond-shaped) mounted in lead cames. Sash and case windows with rectangular panes became fashionable at the end of the 17th century.

Thin window glass persisted throughout the 18th century, no doubt in part due to a duty levied on glass in 1745 and not lifted till 1845. However slightly thicker glass is also found as the size of the rectangular panes increased in keeping with architectural change.

While it is impossible to be sure, it appears that none of the window glass in the Alloa assemblage is earlier than the late 16th century and a considerable amount dates to the 18th.

A full catalogue of all the glass shards, by context, may be found in the site archive.

The clay pipes
Dennis Gallagher

This report considers 93 fragments of clay pipe, including nine bowl fragments. The datable assemblage is mainly 17th-century in date, with the exception of one marked stem of early 19th-century date.

The 17th-century pipes are from two distinct sources. The first is a group of Dutch style pipes of approximately mid 17th-century date. Dutch pipes were common in Scotland in the first half of the 17th century when the seaborne nature of the trade made them competitive with the limited home industry (Davey 1992). One bowl (No 23) has a moulded rose decoration, derived from a Tudor rose, a common form of cheap export pipe. Another bowl (No 24) is an example of the poor quality export pipes; it is remarkable in its scarred nature, indeed the hole in its bowl may have made it impossible to smoke. A stem decorated with fleur-de-lis stamps is an example of a higher quality of pipe (No 27). All the fragments may be ascribed to c1630–50, although such poor quality pipes could have continued in production for an undemanding market after this period.
The second group of pipes consists of Scottish pipes from the latter half of the 17th century. One is a product of the Edinburgh maker, William Banks, who died in 1659 (No 28). This maker held a monopoly on pipe production in Scotland during the earlier part of the 17th century and his products are common in the southern part of the country. Two other fragments (Nos 30, 31) are products of Stirling makers from the later 17th century, both marked with slightly different star basal stamps (Gallagher and Harrison 1995, 1134–5). Like contemporary Edinburgh pipes, the basal stamp refers to the burgh rather than a particular maker. The stars may be derived from the star-like spur rows that appear on the seal of the burgh.

The 19th-century stem fragment (No 32) is a product of Alexander Coghill who is recorded as active in Glasgow from 1826. Although the firm of Coghill continued until 1904, the relief style of lettering and the address is atypical of his later products (and of the Glasgow style of marking in general) and may be ascribed to the earlier part of the century. Additionally the street name on the stem, Jackson Street, is unusual. Coghill usually described his place as Ropewalk Lane, which branched off Jackson Street.

Dutch style pipes

23 Bowl with rose decoration, bottered and partially milled, Dutch, possibly Amsterdam, c1630–55 (cf Duco 1981, 244). (Illus 28). AL01 Context 0226
24 Bowl, bottered and partially milled, scarred during production including grooves from careless handling and a 5mm diameter hole in the lower part of the bowl; mid-17th century. (Illus 28). AL01 Context 0190
25 Basal fragment, Dutch, mid-17th century. (Not illustrated). AL01 Context 0226
26 Basal fragment, Dutch, mid-17th century. (Not illustrated). AL02 Context 0101
27 Stem fragment with part of two fleur-de-lis stamps, c1630–50. (Illus 28). AL01 Context 0226

17th-century Scottish pipes

28 Stem and basal fragment with W/B and a faint impression of an Edinburgh ‘portcullis’ style basal stamp; William Banks of Edinburgh, 1640–60. (Illus 28). AL02 Context 0100
29 Bowl and stem fragment, bottered and milled, no maker’s marks; c1650–80. (Illus 28). AL02 Context 0100
30 Large bowl, bottered and burnished, star basal stamp; a Stirling product, c1660–90. (Illus 28). AL01 Context 0147
31 Large bowl, bottered, burnished and partially milled, star basal stamp; a Stirling product, c1660–90. (Illus 28). AL01 Context 0232

19th-century pipes

32 Stem fragment with mouthpiece, marked A. COGHILL/ JACKSON STREET, in relief serif lettering, several of the letters of the address being faint impressions; Alexander Coghill of Glasgow, c1826–50. (Illus 28). AL01 Context 0102

The wall plaster

David Bowler

A large assemblage of wall plaster was recovered, from AL01 Contexts 0130, 0142, 0144, 0145, 0147, 0169, 0189 and 0192, all post-demolition levelling deposits and fills. Some of this was flat wall plaster, typically 30–35mm thick, much of it showing traces of a pale green colour on the surface, apparently a colour wash or distemper.

One unpainted plaster fragment from Context 0192, Find No 248, had timber impressions on one edge, as if it had come from near the floor. It was filled with crushed green bottle glass, typically 1–1.5mm thick. Some of the glass was weathered and delaminated, including some broken edges. Crushed glass (cullet) is a traditional remedy for blocking up rat and mouse holes. The sharp glass stops the rodents from gnawing their way through the soft lime plaster. Glass fibre is the modern (less humane) equivalent. Rodent infestation would have been a permanent problem in the cellar and kitchen areas, and rat bones were found in the present excavation (The Animal Bone). The location of the fragment from 0192 shows that rodents may have also been a problem near the front (west) wall of the mansion, probably due to the drain which ran just south of the porch.

More than 74 fragments of plaster cornice were found, up to 330mm long. Most were from Contexts 0142 and 0169. All were of the same rather elaborate profile, except for a slight, probably accidental difference at the bottom of the profile where it runs into the flat wall plaster. Two examples have been drawn to show the slight difference, and one has been drawn in section to show how the cornice was built up in layers (Illus 29).

Mr L Grandison of L Grandison and Sons, Peebles, has kindly compared the Alloa cornice profile with his own reference collection, but has not been able to find a direct match. A search through MacGibbon and Ross (1887–1892) also failed to identify any comparable cornices. However, since profile templates were made up in wood and zinc as required to suit the taste of the craftsman and the client, great variation is to be expected.

The cornice fragments show that they were made by first keying the flat wall and ceiling plaster, and then running a rough plaster fillet into the angle. When the first fillet was dry, further fillets were added in stages, to approximate the required profile. Finally, a smooth plaster coat was added, and shaped by running a profile template along the wall, supported on a wooden ‘horse’ or guiding frame. The cornice was built up in stages, to avoid slumping while wet and shrinkage as it dried. This was sometimes done by ‘muffling’ the template with a layer of felt to create an undersize profile, on which the next coat could be laid (Gibbons et al 2004, 18), but at Alloa the inner layers may have been built up freehand. Deep and heavy cornices like the Alloa example were often built up on a framework
Clay pipes, Nos 23, 24, 26, 27, 28, 29, 30, 31 and 32.

or armature of wooden laths (ibid, 12), so as to economise on plaster, reduce drying times, and reduce the weight of plaster hanging from the ceiling, but the Alloa example is made entirely of plaster.

The site excavator (Bailey 1995, 5) reported finding ‘Some painted plaster ... from which it is possible to reconstruct the decorative scheme of at least one room. This was a plain, pale green dado topped with a narrow frieze, painted black with red flowers. Above this, the wall was again pale green, patterned with tiny darker green fleur-de-lis. The cornice had a fairly shallow angled moulding.’ The pale green plaster and the cornice are described here, but unfortunately the painted floral details were no longer to be found in the assemblage when examined in 2009.

However, three pieces of decorated plaster were recovered from Context 0198, a deposit of charcoal and pottery filling a hollow in the north-west corner of the servant’s hall. Not enough plaster survives to comment on the type of decorative scheme, but it comprises curving lines of differing thicknesses drawn on a plain cream background in reddish-brown paint.

Two cornice fragments are described, selected to give as complete a profile as possible, and to represent the two varieties of the single profile type found.

33 Cornice Fragment Length 158mm, height 126mm, depth 100mm. Body off-white, slightly coarse, with many small air bubbles. Divides into rough fillet to fill corner, profiled layer applied on top, about 40mm thick. Interface rough

Illus 28 Clay pipes, Nos 23, 24, 26, 27, 28, 29, 30, 31 and 32.

Illus 29 Wall plaster cornices, Nos 33 and 34.
and irregular. Top and back of fillet well defined, but rough, showing impressions of keying on wall and ceiling plaster. Moulded surface about 1mm deep, with faint horizontal striations caused by profile template. Profile as below, except for additional step at very bottom, perhaps accidental, caused by different handling of template. (Illus 29). AL01 Context 0169

**34 Cornice Fragment** Length 152mm, height 118mm, depth 90mm. Body off-white, slightly coarse, with many small air bubbles. Divides into rough fillets to fill corner, and profiled layer applied on top, about 40mm thick. Interface rough and irregular. Top and back of fillet well defined, but rough, showing impressions of keying on wall and ceiling plaster. Moulded surface about 1mm deep, with faint horizontal striations caused by profile template. Section drawn to show build-up of fillets and layers. (Illus 29). AL01 Context 0142

**The wood**

Tamlin Barton

Only one wooden object of interest was recovered from the excavations: part of a table or bench recovered from the infill deposits of the well inside Alloa Tower. The object has dried out and has probably shrunk by about a third, but still retains its overall shape and features.

**35 Table/bench leg** The object comprises a leg fitting into a wide ornamented foot, length 0.473m. The joint between the two pieces of wood is formed by a mortise in the upper face of the foot into which the leg slots. Two wooden dowels would have secured the joint and one of these still survives projecting from the leg piece. The corners of the upper part of the leg piece are tapered showing where it may have once slotted into a mortise in the bench/table top. The overall form of the piece suggests that it is one side of a fairly small bench/table supported on two legs. However, the width of the foot is an indication that some stability was needed so one would expect the object to have had a fairly wide table/bench top. It seems likely that the table had been broken before being discarded. (Illus 30). AL02 Context 101, Find No 12

**The animal bone**

Catherine Smith

**Introduction**

During the excavations at Alloa Tower, a sizeable quantity of animal bones was recovered (Site code AL01). This bone was generally well preserved, of relatively large fragment size and slight to moderate surface abrasion, allowing a good rate of identification. Two contexts were worthy of note since they contained large quantities of bone which could be related to the servants' hall (0196) and the infilling of a shallow drain during the period of the 23rd/6th Earl of Mar’s rebuilding works (0182).

**Methods and measurement**

The mammal and bird bones were identified by direct comparison with modern comparative material and were allocated to particular bone and species where possible. Where it was not possible to identify bones as far as species, the terms *large ungulate*, *small ungulate* and *indeterminate mammal* were used: thus all large vertebrae other than the atlas and axis were described as large ungulate, while small vertebrae were described as small ungulate. Ribs were similarly allocated depending on their size. Large ungulate bones were most likely to have come from cattle, but could also have come from horse or red deer. Similarly, small ungulate bones were most likely to have come from sheep, but could possibly have originated from goat, pig or roe deer. All other mammalian fragments for which neither species nor bone could be ascertained were described as indeterminate mammal. Boessneck’s (1971) criteria for differentiating between the bones of sheep and goat, which are morphologically very similar, were applied where feasible.

Measurements were made in accordance with the scheme of von den Driesch (1976) and are expressed in millimetres. Additional measurements on the humerus follow Legge and Rowley-Conwy (1988). Mandibular tooth wear and eruption patterns were assessed using Grant’s (1982) scheme for cattle, sheep/goats and pigs, as well as Payne’s (1973) scheme for sheep/goats. Horn cores were aged using Armitage’s (1982) criteria. Withers heights for sheep/goats were estimated using Teichert’s (1975) factors.
Species present

In total, 3094 animal bone fragments were recovered, of which 744 could be assigned only to indeterminate mammal. The majority were classifiable to at least the level of taxonomic order.

The assemblage was dominated by the bones of large domestic mammals, particularly cattle (770) and sheep/goat (329) (numbers of fragments in brackets). Bones of pigs (22) and horses (4) were scant. Wild animals of importance to the diet, such as red (1) and roe deer (6) were similarly scarce. Other mammalian species were rabbit (3), rat sp (2), dog/fox (14), dog (1), cat (1), of which only the rabbit might be expected to have been eaten. In addition two vertebrae from a small cetacean were recovered from a deposit in the servants’ hall (0196).

As regards birds, domestic fowl (155) were plentiful, domestic/greylag geese (33) less so, and wild birds, although represented by pheasant (1), red grouse (2), grey partridge (1) and heron (1), occurred in only small numbers. In addition, almost all of the bird species other than fowl and goose occurred in a single context, 0182. This context also contained two bones thought to be from a turkey. Duck (2) bones which could not be attributed to a particular Anatid species were recovered from Context 0196.

The numbers of bone fragments from each species are summarised in Table 3. The relative percentages of bones from the main food-forming large mammals (cattle, sheep/goat, pig, horse and deer species) are also shown in Table 3.

Age of animals at death

Mandibles of cattle and sheep/goat were assessed as to age at death where preservation and completeness of the dentition allowed. Tooth and mandible wear stages are shown in Table 4 (cattle) and Table 5 (sheep/goat). No pig mandibles were available for assessment. Age categories were assigned to suitably complete long bones of cattle, sheep/goat and pig by scrutinising the state of epiphyseal fusion, that is, whether the articular ends of bones were unfused, as in a young animal, or fused, as in an adult (Table 6). A key indicating how these age categories were assigned is available in the site archive.

The results indicate that as far as cattle are concerned, all the mandibles came from older or indeed elderly adults. The two oldest individuals (Contexts 0107 and 0138) may represent a cull of older dairy cows. Indeed one (0138) demonstrated recession of the alveolar bone, a possible indication of gum disease, which may have been a factor in deciding to cull this animal. Somewhat surprisingly, given that bones of juvenile and immature animals were present (Table 7), calf mandibles were entirely absent. This may indicate that the heads of juveniles were disposed of elsewhere, or were perhaps subjected to some cookery procedure (such as prolonged boiling for soup or brawn) which may have led to their destruction.

Therefore while cattle seem to have been killed in only small numbers while still juvenile or immature, factors such as differential preservation of fragile juvenile bones with respect to the more durable bones of adults should be taken into account in trying to determine a pattern of culling. However, the majority of the cattle long bones appear to have come from adults in the immature/adult or adult categories. A bias towards bones classified as immature/adult (50.5%) is a result of the high numbers of first and second phalanges recovered: these fuse at an intermediate age while the animal is not yet considered fully mature and may therefore represent either immature or adult beasts. Bones from animals which were more reliably classed as full adults accounted for at least 31.0% of the total assessed.

The cull pattern for sheep/goats based on mandibular evidence was strikingly different. While young cattle mandibles were completely absent from the assemblage, those from sheep/goats in their second, third and fourth years of life were dominant. This appears to be borne out by the epiphyseal fusion evidence which shows a higher number of sheep/goats were killed when juvenile or immature than were cattle.

Table 3 Total number of animal bones, summarised by species.

<table>
<thead>
<tr>
<th>species</th>
<th>number of bones</th>
<th>% food-forming mammals</th>
</tr>
</thead>
<tbody>
<tr>
<td>cattle</td>
<td>770</td>
<td>68.0</td>
</tr>
<tr>
<td>sheep/goat</td>
<td>329</td>
<td>29.1</td>
</tr>
<tr>
<td>pig</td>
<td>22</td>
<td>1.9</td>
</tr>
<tr>
<td>horse</td>
<td>4</td>
<td>0.4</td>
</tr>
<tr>
<td>red deer</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>roe deer</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>dog/fox</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>dog</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>cat</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>rabbit</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>cetacean</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>large ungulate</td>
<td>712</td>
<td></td>
</tr>
<tr>
<td>small ungulate</td>
<td>272</td>
<td></td>
</tr>
<tr>
<td>indeterminate mammal</td>
<td>744</td>
<td></td>
</tr>
<tr>
<td>greylag / domestic goose</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>duck sp</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>turkey</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>pheasant</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>red grouse</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>grey partridge</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>domestic fowl</td>
<td>155</td>
<td></td>
</tr>
<tr>
<td>heron</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>indeterminate bird</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>3094</td>
<td></td>
</tr>
</tbody>
</table>
Although the pig sample size is very small (only 11 suitable bones and no mandibles), it appears that more pigs were killed at a younger age than either cattle or sheep/goats (63.6% were juvenile/immature).

**Size of animals**

A summary of long bone size ranges for the most abundant species, cattle, sheep/goat and domestic fowl, is available in the site archive. Few large bones of cattle and sheep/goat were present, indicating a date for the material prior to the first half of the 20th century at the latest. The bones fit into the size ranges of medieval to post-medieval assemblages from Scotland and indicate fairly small animals by today’s standards.

A few sheep/goat long bones survived butchery and provided estimates of stature during life. Withers heights based on the radius, metacarpal and metatarsal indicated sheep (or goats) with a withers height (height at the shoulder) of from 52.3cm to 62.6cm. These animals fall well within the range of the large medieval assemblage from Perth High Street of 46.8cm to 65.8cm (Hodgson et al 2011).

Domestic fowl eaten at Alloa Tower were not particularly large birds, but were probably larger than bantams. Most bones measured slightly more than the lower end of the medieval Perth High Street range, but did not exceed the upper limit.

**Analysis of major bone-bearing Contexts 0182 and 0196**

Sixty percent of the bones from the site was recovered from just two contexts: Context 0182, the fill of a drain (0534) contained almost half of the bone found on the entire site (48.9%), and Context 0196, debris from the servants’ hall, contained 11.4% of the total bone from the site. The remaining 39.6% was scattered across a further 39 contexts.

**Table 4** Tooth (tws) and mandible (MWS) wear stages of cattle mandibles, after Grant (1982).

<table>
<thead>
<tr>
<th>context</th>
</tr>
</thead>
<tbody>
<tr>
<td>107</td>
</tr>
<tr>
<td>130</td>
</tr>
<tr>
<td>138</td>
</tr>
<tr>
<td>198</td>
</tr>
<tr>
<td>226</td>
</tr>
<tr>
<td>notes</td>
</tr>
<tr>
<td>nm-</td>
</tr>
<tr>
<td>-k-</td>
</tr>
<tr>
<td>ll</td>
</tr>
<tr>
<td>kl-</td>
</tr>
<tr>
<td>kkk</td>
</tr>
<tr>
<td>MWS</td>
</tr>
<tr>
<td>47–50</td>
</tr>
<tr>
<td>adult</td>
</tr>
<tr>
<td>estimated 50</td>
</tr>
<tr>
<td>42–44</td>
</tr>
<tr>
<td>adult</td>
</tr>
<tr>
<td>alveolar recession M1/PM4</td>
</tr>
</tbody>
</table>
| Table 6** Age categories of cattle, sheep/goats and pigs at death, based on epiphyseal fusion of long bones.**

<table>
<thead>
<tr>
<th>age</th>
<th>cattle</th>
<th>sheep/goat</th>
<th>pig</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>8</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>J/I</td>
<td>39</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>I</td>
<td>5</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>I/A</td>
<td>142</td>
<td>46</td>
<td>1</td>
</tr>
<tr>
<td>A</td>
<td>87</td>
<td>43</td>
<td>1</td>
</tr>
<tr>
<td>total</td>
<td>281</td>
<td>123</td>
<td>11</td>
</tr>
</tbody>
</table>

**Table 5** Summary of numbers and percentages of sheep/goat mandibles by Payne’s (1973) age stages.

<table>
<thead>
<tr>
<th>Payne Stage</th>
<th>n</th>
<th>%</th>
<th>age inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>1</td>
<td>11.1</td>
<td>1–2 years</td>
</tr>
<tr>
<td>E</td>
<td>4</td>
<td>44.4</td>
<td>2–3 years</td>
</tr>
<tr>
<td>F</td>
<td>2</td>
<td>22.2</td>
<td>3–4 years</td>
</tr>
<tr>
<td>G</td>
<td>2</td>
<td>22.2</td>
<td>4–6 years</td>
</tr>
<tr>
<td>total</td>
<td>9</td>
<td>100.1</td>
<td></td>
</tr>
</tbody>
</table>
Context 0196 (debris in servants' hall)

Although this deposit contained fewer bones than the drain fill 0182, the quantity was still significantly larger than all other deposits from the site. Present were a minimum number of five cattle, two sheep/goats and one each of pig, red deer, roe deer, rabbit and fowl. More interestingly, two vertebrae from a small cetacean, similar in size to a porpoise or dolphin, were also found in this deposit. All of the foregoing would have been eaten, but it is less likely that the single bone of dog/fox came from an animal that contributed to the diet. The rat bones, as well as evidence of rodent gnawing on several of the bones in this deposit, indicates infestation by vermin at some point in the site's history: whether this was contemporary with the occupation of the servants' hall is not known, as rats may have burrowed in after the hall went out of use.

Also noticeable was the degree of chopping undergone by bones in this deposit, when compared with those from the drain (0182) and indeed elsewhere on the site. While the lower meat-yielding bones such as the metapodials survived as fairly large fragments, articular ends of higher meat-yielding humeri and femora were butchered into thin slices and chippings. Skull fragments were also highly chopped and teeth chopped along the crowns. Tarsals such as the astragali, which are dense compact bones which often escape intact, were also roughly chopped. Such heavy butchery is reminiscent of kitchen deposits and probably indicates a preparation area for food. Additionally, it may also indicate that food served in the servants' hall was more highly processed in order to extract the maximum amount of meat and marrow for soups and stews.

These two deposits, 0182 and 0196, appear to offer a degree of contrast. It should of course be borne in mind that both these deposits may include mixed rubbish from site clearance and so may have originated elsewhere on the site. However, the drain deposit contains less heavily butchered meat bones and a wider variety of game bird and domestic poultry than the servants' hall deposit where meat bones were heavily butchered and there was a smaller range of edible species.

Discussion

Analysis of the animal bones from Alloa Tower seems to indicate a contrast in the diet of the nobility and their domestic staff. 'Above stairs', good quality joints of beef, mutton and pork were consumed and a wide variety of game birds and poultry was available. Chickens were especially numerous and geese and turkeys were also enjoyed. Turkeys were introduced from North America in the early part of the 16th century and have been found at archaeological sites in Britain dating to the mid-16th century and later (Davis 1987, 195). By the late 17th and early 18th century they were commonly found on the menus of the Scottish gentry, as can be seen from the household account books of Lady Grisell Baillie (Scott-Moncrieff 1911) and Ochtertyre (Colville 1907).

The sort of meal enjoyed by the Earls of Mar is probably similar to that recorded in the early 18th-century household book of Lady Grisell Baillie, where the author records not only the meals eaten at her own table in Scotland, but also as a guest in the homes of other noble families (Scott-Moncrieff 1911, 281ff). Beef was served roast as 'rost bieff', minced as 'collips/collops' or stewed as 'sweed bieff very tender with sallary' [celery]. Mutton appeared on the menu roasted or in a 'py', occasionally as a 'hog potch of bief mutton veall', which was possibly more appetising than it sounds. Interestingly in the context of foods which we might consider of less appeal to the gentry and more to the liking of the servants, are items such as 'fricasys veals feet', which might help explain the numerous cattle toe bones in the Alloa drain assemblage, although these are mainly from adults rather than calves. (A 'ragow' of 'hogs feet' may originate from sheep rather than pigs, a hog in Scotland being a young fat sheep; pigs appear to have been referred to as 'swine' or indeed 'pigs' which rather confusingly means juveniles, or piglets in today's terminology). Similarly a 'friciass of cockscombs and sweat breads' also referred to as 'lambs stons' would be considered offal in modern times but were obviously a delicacy in the 18th century. Sheep and calf heads were also served: the 'duck [duke] of Montros' was present at a meal in January 1715 where 'sheep head' was served, along with 'hages' [haggis]. Marrowbones were obviously used to enrich soups, as in 'a soup with marrabon'. Thus it would be a mistake to conclude that only the servants ate offal at Alloa Tower; on documentary evidence the nobility of the 17th and 18th centuries also found cockscombs, haggis, marrowbones, calves' feet and sheep's heads entirely to their taste.

Missing from Lady Grisell's accounts are any mentions of dolphin or porpoise having been eaten in her home or as a guest. However, this presumably reflects availability, which must have been rather limited and possibly fortuitous. The Alloa specimen may have been caught, or indeed, beached in the Forth.

The Household Book also offers an insight into the ages at which domestic animals were slaughtered. Table 7 shows the numbers of carcasses 'spent' or consumed by the family in 1748 and 1749. Over this period, 11 adult cattle and 7 calves were killed, corresponding to 61.1% adult and 38.9% juvenile. For sheep, the proportions were 65.7% adults to 34.3%. In sharp contrast, pigs were 19.6% adult compared with 80.4%. This age structure provides a very good comparison with the findings from Alloa.

Lady Grisell's record also mentions pigeons, which were not found at Alloa. However these formed part of the post-medieval diet at Dairsie Castle in Fife, where a decommissioned garderobe chute was found to contain numerous bones of the 'doocot doo' (Smith 1996). It is quite likely that the inhabitants of Alloa Tower would have consumed 'pidgion py' as Lady Grisell...
did – pigeon bones are small and in the absence of soil sampling might easily be missed.

Almost as interesting are the food items which have left no trace in the archaeological record: Lady Grisell’s household consumed a variety of vegetables such as spinach, which was eaten at ‘Lord Orknays’ on October 12, 1715, as ‘hame and spinch stacks with minst meat about them’. Celery and asparagus were also served. Fruits and nuts were also abundant and various desserts such as syllabubs and jellies were served at the end of dinner. Presumably gelatine extracted from boiled up bones would have been used to make these confections, suitably sweetened, as in calves foot jelly.

## Discussion

### David Bowler

In the years that followed the Alloa Tower project, Scottish archaeology became increasingly focussed on rescue excavation in advance of commercial development, closely defined in time and scope, and guided by the requirements of national planning policy. The work at Alloa Tower was quite different.

The tower stood in the shadow of Paton’s and Baldwin’s vast wool-spinning mill and the archaeological project was rooted in the Manpower Services Commission’s Community Programme, designed to provide what in those days was considered short-term employment (a year), mainly but not exclusively for young people, to mitigate the shock of 1980s de-industrialisation which had hit Alloa as hard as any community in central Scotland. The theme of community regeneration underlay not only the archaeological project, but even more the far-sighted, indeed visionary scheme to repair and restore the tower as a focus for renewal in the centre of what had once been an elegant and opulent designed landscape, but latterly a place of dereliction and decline, cut off from the life of the town by a post-industrial wasteland. To the latterly a place of dereliction and decline, cut off from the life of the town by a post-industrial wasteland. To the
drastically altered or overthrown our previous knowledge of the site. What they have done is to provide the physical details underpinning the grand designs recorded by the Earl. We now have the foundations of his house, the well his ancestors used when they lived in the tower. We have the wine bottles in his cellar, the locks and hinges that secured them. We know what he and his servants ate, and the dishes they used, after him, and the well his ancestors used when they lived in the tower. We have the wine bottles in his cellar, and the locks and hinges that secured them. We know what he and his servants ate, and the dishes they used, on special occasions and on ordinary days, and perhaps a bench on which they sat. We have the plaster cornice that decorated the Earl’s chambers, the rats who stole his provisions and the measures taken to stop up their holes.

The excavations around Alloa Tower have not drastically altered or overthrown our previous knowledge of the site. What they have done is to provide the physical details underpinning the grand designs recorded by the Earl. We now have the foundations of his house, the changes introduced by those who came before and after him, and the well his ancestors used when they lived in the tower. We have the wine bottles in his cellar, and the locks and hinges that secured them. We know what he and his servants ate, and the dishes they used, on special occasions and on ordinary days, and perhaps a bench on which they sat. We have the plaster cornice that decorated the Earl’s chambers, the rats who stole his provisions and the measures taken to stop up their holes.

We still do not know as much as we would like about his gardens and landscape designs, but we have not exhausted the evidence or bottomed the site. No doubt others will investigate the site in the future, and add more of the missing pieces. In the meantime the tower and its surroundings have been transformed, and reconnected to a revived town centre. This account of the excavations will make further connections, of the evidence above and below the ground, of the tower and the lost mansion house, and above all of the Earl and his household, of the grand narrative of his public career and creative vision, and the prosaic details of his daily life.

### Table 7 Data from The Household Book of Lady Grisell Baillie 1692–1733 (Scott-Moncrieff 1911, 304–5). Quantity of meat spent (used or consumed) in 1748 and 1749, relative to age of animals (spellings as given).

<table>
<thead>
<tr>
<th>Species</th>
<th>carcasses per year</th>
<th>total number</th>
<th>% by species</th>
<th>% by age, within each species</th>
</tr>
</thead>
<tbody>
<tr>
<td>oxen</td>
<td>6</td>
<td>11</td>
<td>cattle</td>
<td>61.1% adult</td>
</tr>
<tr>
<td>calves</td>
<td>3</td>
<td>7</td>
<td>swine</td>
<td>38.9% juvenile</td>
</tr>
<tr>
<td>wedders</td>
<td>19</td>
<td>37</td>
<td>sheep</td>
<td>51.1% adult</td>
</tr>
<tr>
<td>ewes</td>
<td>1</td>
<td>7</td>
<td>sheep</td>
<td>65.7% adult</td>
</tr>
<tr>
<td>lambs</td>
<td>11</td>
<td>23</td>
<td>pigs</td>
<td>34.3% juvenile</td>
</tr>
<tr>
<td>swine</td>
<td>4</td>
<td>9</td>
<td>pigs</td>
<td>35.1% adult</td>
</tr>
<tr>
<td>pigs</td>
<td>10</td>
<td>37</td>
<td>sheep</td>
<td>19.6% adult</td>
</tr>
<tr>
<td>total</td>
<td>54</td>
<td>131</td>
<td></td>
<td>80.4% juvenile</td>
</tr>
</tbody>
</table>
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Abstract Excavations between 1988 and 1993 during restoration work at Alloa Tower revealed evidence of construction, alteration and destruction by fire of the mansion house. Original plans drawn by and for the 23rd/66th Earl of Mar correlated with, and aided the interpretation of the archaeological evidence. Finds of 18th century pottery, glass and clay pipes confirmed the date of the building and its abandonment.

Keywords
18th-century ceramics
 cellar
 door fittings
 drain
 Earl of Mar
 Erskine
 mansion
 tower
 wall plaster
 well
 wine bottles

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