
4 EXCAVATION RESULTS

The natural subsoil was loosely compacted, naturally free-draining yellow sand, which was present across the site and varied in depth from 1.8m below the present ground surface in the north to 1.2m below the present ground surface in the south. The site was stratigraphically phased into six periods, in part based on the presence of two major deposits assigned to Phases 2 and 4. The first (226) sealed the medieval deposits of Phase 1 and contained medieval pottery, and possibly signalled a period of abandonment (Phase 2). The second, Phase 4 deposit (212), sealed the early post-medieval features, including the burials, and contained later medieval pottery.

4.1 Phase 1: medieval pits and a well (*illus 2*)

A stone-lined well (262) was identified in the north of the excavation trench. The sub-oval pit was lined with unbonded cobblestones. It measured 1.1m wide but the full length was not uncovered. Groundwater was encountered at 2.7m below the present ground level, which prevented further excavation. The well was filled with several layers of sandy deposits, which contained oyster shells, sherds of 13th- to 15th-century pottery and fragments of bone.

Two small pits, 276 and 280, were identified to the south of the well. They were both filled with brown-grey silty sand which contained fragments of bone, pottery and glass. Pit 276 had been re-cut by another small sub-circular pit (278), which was centrally located within the earlier pit and filled with an organic silty clay. Small quantities of medieval and late medieval pottery and bone were retrieved from both pits.

An east-west-running gully (274) was identified bisecting the site. It was linear in plan, and filled with dark greyish-brown silty sand. This gully appeared to run perpendicular to the Kirkgate and possibly represented the remains of a property boundary. Pottery obtained from the fill of the gully was dated to the 15th century.

In the southern half of the trench, a large pit (285) was cut into the subsoil. This pit was sub-circular in plan, and had silted up with sandy deposits.

A foundation cut (270) for a wall (350) had been excavated into the natural subsoil. The foundation cut could be seen in plan and section on the north side of the wall only. The curving section of wall 350 comprised large sub-rounded stones, and was probably of dry-stone construction as no evidence of mortar was recovered. Five courses of stonework were exposed before excavation ceased

due to obstruction by overlying structural features left in situ. Abutting the proposed inner face of the wall and filling the foundation cut (270) was a deposit of grey-brown sand (271), from which the remains of a domestic fowl and a fragment of late medieval glazed floor tile were recovered. The full extent of wall 350 could not be determined, as it appeared to project under the overlying later walls (207 and 294), and could not be seen to continue south of them, possibly because it was cut by Phase 5 pits (214 and 237). Wall 350 was sealed by deposit 226 (Phase 2). Interpretation of the structure formed by wall 350 is uncertain, but it appears similar in form to well 262 at the north end of the site.

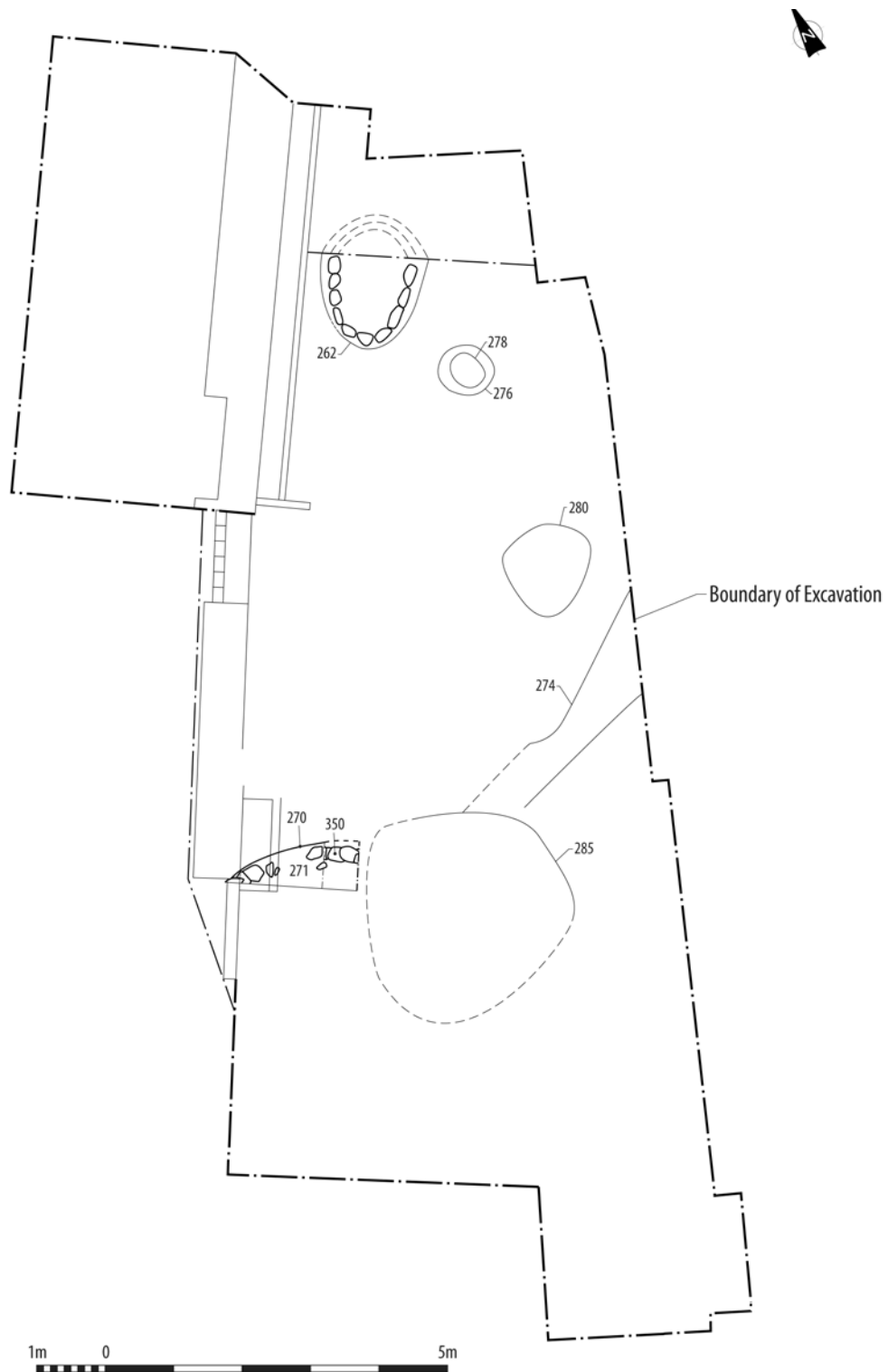
4.2 Phase 2: late medieval or early post-medieval midden deposit

A deposit of dark brown silty sand (226) sealed the Phase 1 features and overlay the subsoil at a depth of 1.2m beneath the modern ground surface. This deposit was c 0.23m thick and was present across the whole trench. It contained fragments of bone and pottery sherds, and may be interpreted as a midden deposit. Most of the pottery collected from this layer was medieval, although the assemblage included German stoneware of 17th-century date, which was probably intrusive. An alternative explanation for this material is that it is a wind-blown deposit associated with late medieval abandonment of the site, a phenomenon reported elsewhere in Leith, such as at Water Street ([Stronach 2002](#)).

4.3 Phase 3: early post-medieval quarry pits (*illus 3*)

The third phase of activity on the site is represented by the remains of two large pits in the southern side of the excavation trench. The full extent and shape of these pits were never resolved, as they had been cut away by later features within the trench.

Pit 338 cut through the deposit (226) of Phase 2. It contained numerous layers of sands and gravels that had been tipped in from the south-west. It is not known whether the sand and gravel layers were dumped deposits or whether they had been deposited through erosion. Two of the earlier fills contained abraded Scottish White Gritty Ware pottery, and a later fill contained brick fragments compatible with a 16th-century date. The full extent of the pit was not identified, as it partially underlay the eastern



Illus 2 Phase 1 plan

trench edge and was cut through by successive phases of activity.

A second pit (282) was subsequently cut through the south side of pit 338. Once more the full extent of this pit was not fully identified as it disappeared under the baulk at the south end of the trench. It contained one sherd of post-medieval oxidised ware, fragments of smithing slag and animal bone.

4.4 Phase 4: skeletal remains and overlying midden layer (illus 4)

The remains of at least six individuals were recovered in the south-east of the trench, cut into the two large pits of Phase 3. Four discrete burials (SK1, SK2, SK4 and SK5) were identified, none of which was complete, due to modern disturbance. They were



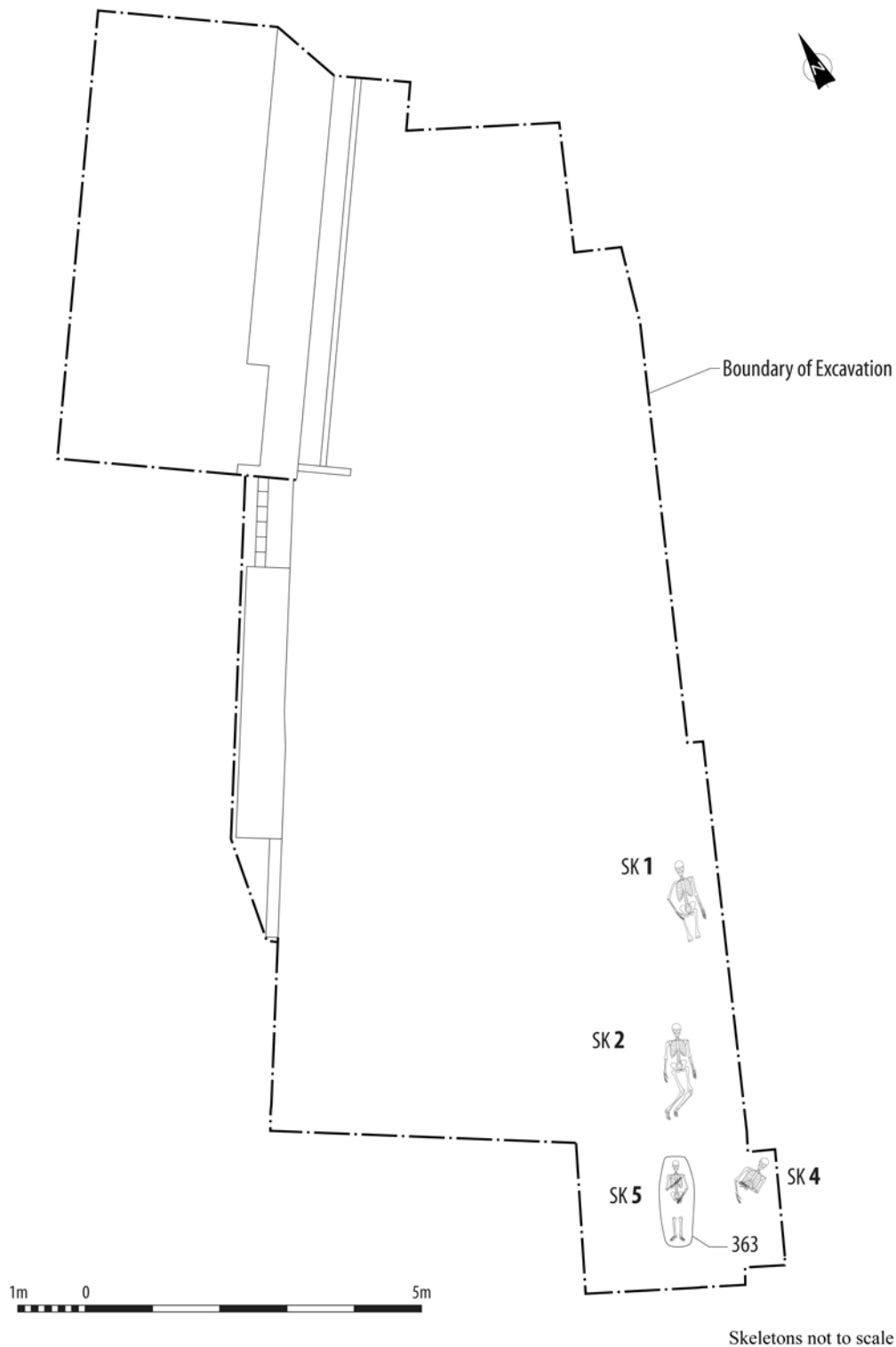
Illus 3 Phase 3 plan

all aligned NNE–SSW. No grave cuts were identified, except around SK5. The skeletons were found between 1.1m and 0.95m below the modern surface of the site. Other skeletal material was recovered from the overlying mixed deposit.

SK1 had been truncated at the knees by a modern service trench. The body was in a supine position and fully extended. Its left arm ran down its side

and its right arm was bent to lie over the torso. Two sherds of Scottish White Gritty Ware were redeposited finds from the possible fill of this grave.

SK2 was positioned about 1m to the south-west of SK1. The body was in a supine position but the legs were bent slightly at the knees and the feet were laid one on top of the other. Both arms were bent at the elbows and the hands placed over the pelvis.



Illus 4 Phase 4 plan

SK4 was positioned about 1.3m to the south-east of SK2. It was supine (*illus 5*) but had been severely disturbed by a later service trench running east to west. The cut had removed some of the lower vertebrae, the hips and all of the legs except the feet. The arms were folded across the lower chest area and the feet were very close together. Five nails were recovered in the fill surrounding this skeleton.

SK5 was positioned just to the south of SK2, lying in a supine position (*illus 6*). It had been truncated by a service trench running east to west. The cut had removed the skeleton from the base of the spine to just below the knees. A cut for this grave was identified, which measured 2m in length and had a maximum width around the shoulders of 0.61m. The eastern side of the grave and the head area were cut



Illus 5 SK4



Illus 6 SK5

into natural yellow sand. Pottery associated with this skeleton was dated to the 15th/16th centuries, and one large nail or stud was also recovered.

A mid-brown silty sand layer (212) sealed the skeletons. The layer, which contained sherds of late medieval pottery and fragments of bone and oyster shells, had been heavily disturbed and mixed by later activity. It covered the entire extent of the trench outwith the footprint of Balmerino House.

4.4.1 Radiocarbon dates

Samples of bone were selected from skeletons SK1 and SK5 for radiocarbon dating. The objective was to identify where the skeletons fitted into the sequence of events on the site. Radiocarbon assays were carried out at SUERC Radiocarbon Dating Labo-

ratory, Scotland, and dates were calibrated using OxCal software v3.10. The results are presented in [table 1](#).

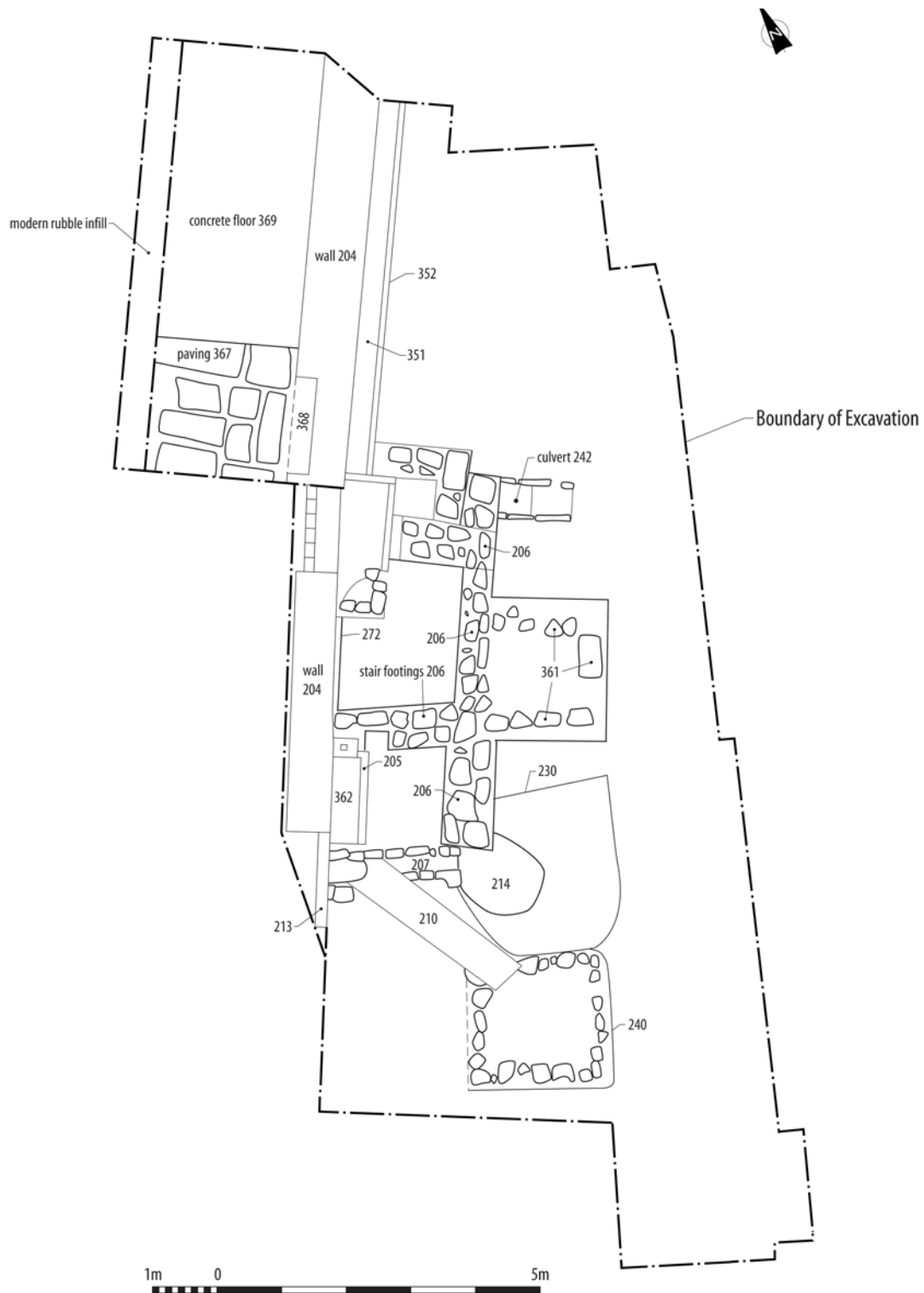
The dates of the two skeletons are statistically indistinguishable, both being compatible with a date between the early 16th and mid 17th centuries. The burials pre-dated the construction of Balmerino House in 1631 on stratigraphic grounds.

4.5 Phase 5: Balmerino House construction ([illus 7-8](#))

The partial remains of foundations for Balmerino House were identified during the evaluation stage of the work. The evaluation trench was expanded to encompass the footprint of the proposed new building, revealing further parts of the structure.

Table 1 Radiocarbon dates

Lab no.	Sample	C14 date bp	Calibrated date at 1-sigma	Calibrated date at 2-sigma	δ13C‰
SUERC-5369 (GU-12753)	SK1, L. radius	315 ± 40	AD 1510–1650	AD 1470–1650	-19.2
SUERC-5370 (GU-12754)	SK5, L. ulna	380 ± 40	AD 1440–1620	AD 1440–1640	-18.9



Illus 7 Phase 5 plan

An interpretation of the construction sequence of the house was produced by reference to the physical evidence from excavation, literary, cartographic and pictorial sources.

The excavated remains formed part of the east-facing aspect of Balmerino House, which faced onto the grounds and gardens of the house (*illus 9*; Grant 1882, 221). They included a retaining wall for the

raised garden and grounds, the foundations of the sweeping staircase, and elements of the house's drainage system.

Wall 204 was the retaining wall for the raised grounds at the front of the house. The wall was of a substantial size, constructed of unworked rubble cemented together with a yellowish sandy mortar and cut through the Phase 4 midden deposits. A



Illus 8 The foundations during excavation

brick-lined recess (368) was cut into the west-facing side of wall 204, the function of which could not be ascertained, but it may have been a decorative feature. The upper courses of the eastern elevation of wall 204 were dressed with red bricks (205 and 352) and finished with coping stones (351 and 362) along its length. The coping stones covered a gutter that ran the length of this section of wall and presumably found an outlet into culvert 242. A hole for a downpipe into this gutter was located at the north-eastern end of the wall. This downpipe would presumably have run down the north-eastern corner of the house, via the north-east to south-west return of wall 204, which was not present within the excavation trench.

Between wall 204 and the presumed position of the east elevation of the house, which was not present within the excavation trench, was a 2m wide and 1.8m deep sunken level which was paved at its south-western end with large, flat flagstones (367), laid directly onto natural sand, and to the north-east with a concrete skim (369). The existence of this sunken area was also extrapolated from Grant's depiction of the house (*illus 9*), in which the three lower windows to the north of the stairs were partially obscured by the raised grounds in front. Whether this sunken 'ambulatory' at the front of the house continued south of the stairs cannot be

ascertained, as this area was beyond the limits of the excavation.

The foundations of the front steps (206) projected south-east from wall 204 and their construction cut through the Phase 4 midden deposits. The foundation walls themselves were built upon a mid-brown sandy silt and consisted of mortar-bonded stone walls, 0.75m wide by 0.85m deep, forming a rectangle. The surrounding ground was then built up level with the top of the foundation walls. Within the rectangle formed by the foundation walls a dump of mid-brown sandy silt was used to make up the level. Around the outside of the foundation a series of deposits were used to build up the ground level.

Less substantial stone foundations ran out to either side and to the front (361) of the main front step foundations. Generally these smaller foundations were only 0.25m deep. These less massive elements of the foundations were built upon successive levelling deposits, which seem to have been laid for the purpose. One of these was a layer of crushed mortar, presumably laid down to provide a firm base.

A large sump (230) was identified just to the south of, and partially underneath, the front step foundations. It was filled with large boulders to assist drainage, and a discrete dump of kiln material and fragments of early 17th-century clay tobacco pipes



Illus 9 Balmerino House in the 19th century (after Grant 1882)

(214) was found towards the top of the sump. A stone culvert (207) passed under a lintel (213) and fed into the sump from the drain that ran along the front of the house. A later, square, stone-lined sump (240), located immediately to the south-west, replaced the earlier one, and a covered drain (210) diverted the flow from the earlier drain (207) into this new sump. The evidence of an earlier sump (230) partly sealed by foundation wall 206 suggests that either the stone staircase was later than the sump and associated culvert, or the staircase did not project as far out at the time the sump was constructed.

A covered box drain (242) was identified under the north side of the step foundation. It was not possible to follow the full extent of the drain to the west, due to the overlying deposits and walls, but its position in relation to the house and its morphological similarity to the stone culvert (207) suggests it was connected with rainwater drainage. It drained into the natural sand with no associated sump.

4.6 Phase 6: demolition and modern levelling

The demolition of Balmerino House and the in-filling of its interior to level the ground for a car park took

place in the 1970s. The paved sunken area at the front of the house had been in-filled with rubble and modern rubbish during its demolition. The latest deposits, overlying the whole trench, consisted of a layer of Type 1 hardcore, surfaced with tarmac.

4.7 Uncertain phases

A clay-bonded wall (349), founded directly on to the natural sand, was identified parallel with, but underneath, the southern side of the foundations of the steps (206) and underneath the north-east to south-west-aligned retaining wall (204). The retaining wall was stepped up over wall 349, which ran south-east from the retaining wall, presumably because it was easier to do this than to demolish wall 349. It could not be accurately fitted into the stratigraphic sequence, as its relationship with features other than Balmerino House could not be ascertained, although it was certainly earlier than the Phase 5 construction, and the clay-bonded construction used in this wall is typically medieval. This wall, with sump 230, provides indications of an earlier structure on the site.

The skeleton of a dog (SK3) was discovered in a

grave in front of Balmerino House. The grave cut through the Phase 2 midden layer and therefore post-dates Phase 2; however, the Phase 4 midden layer above the grave was heavily mixed by later activity so the skeleton cannot be securely placed

within one of the later phases. Nevertheless, considering the development of the site and the location of the dog skeleton, just in front of Balmerino House, it seems likely that it represents the burial of a pet of one of the residents of the house.