

**Excavations of a Pair of Eighteenth Century Farm Buildings at Wester Dalmeny
Steading, Dalmeny, Midlothian.**

by

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Summary

During a watching brief on ground works associated with redevelopment of the 19th-century buildings at Wester Dalmeny Steading structural remains were discovered, sealed beneath a layer of rubble and redeposited subsoil. Subsequent limited rescue excavation, including full excavation of two services corridors, revealed the remains of two adjoining farm buildings of 18th-century date. The remains appear to be those of a small-scale, agricultural workshop and possible domestic building. Artefacts recovered from the site included items of metalwork, quantities of metalworking slag, a range of post-medieval pottery and a collection of glass which all indicate construction and abandonment during the course of the 18th-century. An examination of historical maps provided additional information on the sequence of development of Dalmeny during the 18th- and 19th-centuries and provided confirmation that the remains are part of a dynamic small rural settlement. The fieldwork and post-excavation work were funded by Bell-Grant Design + Build.

Background

Dalmeny is a small rural settlement 12km to the northwest of Edinburgh and 2km from South Queensferry (Figure 1). The village lies within the Estate of Dalmeny House, the seat of Lord Rosebery, and the present village layout can be traced to the mid-19th-century.

In May 2002 a programme of standing building recording and archaeological evaluation was undertaken at Wester Dalmeny Steading, at the west end of the village, prior to its redevelopment to provide new housing. During the course of the evaluation, features of potential archaeological significance and fragments of post-medieval pottery were discovered in the open ground to the south of the upstanding 19th-century farm buildings (Cressey et al 2002).

During a subsequent watching brief on drainage ground-works, structural remains of an earlier phase of building on the site were revealed. In consultation with the developers, Bell Grant, and the City of Edinburgh Council Archaeology Service (CECAS) a decision was taken to excavate as much of the remains as would be

affected by the construction of the site access road and the installation of utility services.

Excavations:

General / strategy

The proposed access road corridor from the main street was stripped of topsoil and overburden deposits to the level of the identified archaeological deposits using a mechanical excavator. The area was then cleaned by hand to expose the full extent of the features within the access road corridor and further excavation of all features and deposits was carried out by hand in accordance with standard practice.

Once the remains had been fully exposed, cleaned and recorded, two corridors were established through the remains, one to accommodate the surface water drainage pipework and a second for a utility services trench. The archaeological deposits within these corridors were fully excavated down to the natural subsoil surface. Those elements of the site that could be preserved *in situ* were covered and consolidated with pea gravel to a minimum depth of 0.1m, then covered with hardcore to form the base layer for the access road.

Structural remains

The remains of two adjoining buildings were discovered (Figure 2 and Plate 1). Building A appears to have been a single compartment structure measuring approximately 9m externally from front to back (N-S) and at least 5.3m E-W and clearly continued to the east of the exposed remains, outwith the affected development area. Building B measured approximately 11m long externally N-S and was 5.5m wide E-W. The remains of the two buildings were defined by the partially preserved footings of the outer walls. The walls appeared to have been constructed directly on the subsoil surface as no definitive foundation trench cuts were identified. Bedrock outcropped at the subsoil surface in a number of places across the excavated area, indicating a good load-bearing surface and those apparent cuts which were identified can perhaps be attributed to robber trenches. The entire superstructure of

both buildings had apparently been deliberately reduced to ground level and much of the wall stone appears to have been robbed for other purposes.

Approximately 7m to the south of the building remains and immediately to the north of the present boundary wall, the remains of an earlier boundary wall and ditch were discovered, with traces of a cobbled path along the outer, south, side of the wall (Figure 2, Plate 2).

Building A (Figure 3)

Building A is defined by the remains of the north wall (005), the interface with Building B, and a break of slope in the subsoil that possibly represents the remains of a south wall (044). Towards the western end of the remains of the north wall (005) a slab of sandstone (026), approximately 0.8m long by 0.6m wide, marks what was most likely a doorway (c.0.9m wide). A base sherd of early 18th-century pottery and tanged iron tool handle were recovered from wall 005. The western wall appears to have been shared with Building B, although the relationship is unclear from the fragmentary remains of the superstructure. The suspected former position of a possible south wall is marked by a distinct east-west break of slope in the subsoil (044). A break, approximately 0.8m wide, at the western end of the break of slope, may mark the position of a possible second entrance.

The floor level in Building A appears to have been substantially disturbed. Well-preserved cobbled floors existed in the northern half of the building but no similar stone-surfaced floor was present south of the building's mid-line. The cobbled floors display a variety of construction methods and are divisible into discrete areas based on the type of floor surface present. A principal feature is a curving stone alignment (009), constructed of large sub-rounded boulders, which separates the cobbled area, running along the northern wall of the building, from the rubble deposit that lay to the south of the alignment. A pecked hollow in the upper surface of the easternmost stone of the alignment, measuring approximately 100mm in diameter and 40mm deep, clearly distinguishes this stone from others in the alignment. To the north of the alignment a spread of cobbles (007) was discovered which was shown to be secondary. Careful removal of 007 revealed a second, discontinuous layer of

cobbling (027), which contained a large quantity of iron slag. It is likely that 027 was the original occupation level and that 007 is either a repair or a secondary floor.

To the east of the stone alignment (009) there was an area paved with large, flat-topped boulders and slabs (008). Immediately south of the paved area was a drain gully (045), 0.4m wide and 0.15m deep, formed by two opposing rows of flat faced cobbles set in a shallow 'V' arrangement, sloping to the west and draining towards an uncobbled floor area of Building A (Plate 3). The gully probably continued to the east. To the south of the gully was a further discontinuous spread of cobbling (010), which extended as far as the approximate mid-line of the building, 4m from the north wall.

The western part of this building was filled with a spread of rubble consisting of small and medium-sized cobbles and small boulders in a grey, clayey-silt matrix (024, 031, 046). Excavation of a section through this deposit showed that there was no consolidated cobbled floor below the rubble, and artefacts recovered from the deposits included pantiles, window glass, miscellaneous iron objects and 19th-century stoneware ceramics together with a considerable quantity of post-medieval earthenware fragments. On the basis of the preserved evidence it is unclear whether or not the whole of the suspected area of Building A was originally paved.

Building B (Figure 4)

Building B is defined by the variably preserved remains of a series of walls (006, 013, 014, 032-33, 035, 051 and 056) each estimated to have been approximately 0.6m wide. This building, measuring approximately 11m long N-S by 5.5m wide overall, was divided into two compartments distinguished by the nature of the floor deposits.

The northern compartment (c.5.5m long by 4.2m wide) had a beaten earth floor (018) approximately 50mm thick. An area of apparent cobbling (020) in the south-east quarter of the compartment was restricted in extent, rather patchy and contained two deposits of coal-rich material (022, 023). It is likely that the 'cobbling' was not an original feature of the floor but remnants of demolition material that had been compacted into the beaten earth floor surface.

Walls 014 and 035 formed the western wall of the building and contained one large sandstone block (019) markedly different from all others. This stone (Plate 4) 0.6m by 0.4m in plan and c.0.4m high, had been hollowed-out to create a rectangular, bowl-shaped socket, presumably to accommodate a timber post approximately 0.25m by 0.2m in cross-section. One interpretation of this feature could be that it formed a post-pad to support a cruck beam, but the absence of a corresponding, similar feature in the opposing wall casts some doubt on this interpretation. An alternative interpretation could be that the stone supported a substantial doorpost. There were features (small slabs and a slight cut in the subsoil, which might indicate a threshold) adjoining the inside of the wall at that position, which could indicate the former presence of a doorway. On balance, the latter interpretation is probably the most likely.

The eastern wall (006) of Building B was very poorly preserved; few of the identified larger stones formed a convincing wall face. The wall 006 had apparently been built directly abutting the western wall of the adjoining Building A.

The north wall (013) was very poorly preserved with few stones consistent with a wall footing present. This wall had traces of lime mortar (015) in places along its internal face, although, as the wall remains were limited to the footings and no similar traces of mortar were detected on other wall alignments, extrapolation to a fully lime plastered wall finish is conjectural at best.

The southern compartment of Building B appears to have been 'L'-shaped and was defined by wall remains 035, 051 and 056 surrounding a well-preserved cobbled surface. The southern 'L'-shaped compartment measured c.3.6m long N-S by 4.2m E-W and was paved with small and medium sized cobbles (037, 038) with an open drain gully (039) built into the structure of the floor. Half of the upper section of a rotary quern and a hollowed stone vessel had been re-used in making the cobbled surface. Excavation of a section through the cobbled area revealed that the cobbles overlay a more randomly laid layer of larger cobbles set within a silty matrix (082) (Figure 5a).

A culvert drain (034) marks a clear distinction between the northern and southern compartments and it is likely that the two compartments were functionally different. The culvert drain (034) was 0.3m wide and 0.12m deep, with flat sandstone slabs covering much of its length (034, 077-79, 088; Figures 4 and 5a; Plates 5 and 6). This drain passed through the walls between the two buildings and discharged into the southern half of Building A.

A curving open drain gully, 0.45m wide and 0.22m deep (039, 042-43, 058) (Figures 4 and 5b; Plate 5), ran East to West across the cobbled surface (037, 038) of the southern compartment of Building B and also discharged into the southern half of Building A.

Two hearths were found, both in the northern compartment of Building B. The principal hearth (016), at the northern end of the northern compartment of Building B was set slightly clear of the north wall and was rectangular in plan, measuring 0.6m E-W by 0.48m N-S (Figures 4 and 6a; Plate 7). The fire-pit (094) was cut into the floor layer to a depth of 80mm. Surrounding the edges of the fire-pit were flat sandstone slabs (016) set flush with the beaten earth floor surface and around these an ashy deposit (017) extended out 1.2m from the inside of the north wall in a rough arc around the hearth. The fact that this hearth is positioned clear of the northern wall alignment and on the central axis of the building indicates perhaps that a hanging lum served to draw smoke from the fireplace.

What may have been a second hearth (070) was found in the south-west corner of the northern compartment (Figures 4 and 6b; Plate 8). This hearth was roughly bowl-shaped and measured approximately 0.9m in diameter by 0.2m deep. The subsoil surface into which the fire-pit was cut was markedly heat-scorched. The lower fill (068) of the pit consisted of a sticky clay deposit containing numerous small angular stone fragments and the upper fill (021) was a mixture of coal, cinders and fist-sized stone cobbles. A corroded and abraded George III halfpenny, dated to between 1770-75, was recovered from the uppermost fill. The location of this hearth in the corner of the main compartment of the building perhaps indicates the presence of a 'copper' used for heating large quantities of water. Alternatively it may have served as a small smithing hearth.

Other features (Figure 2)

Apart from the two buildings described above a number of other features were discovered, some of which are clearly related to the buildings whilst others are less definitely so.

The remains of a linear east-west aligned wall (054-5) were discovered 6.5m south of the two buildings, running parallel to and immediately north of the present boundary wall. It had a cobbled surface on the outside (south side) (053, 076) and a ditch along the inside (northern) face (057, 093) (Figures 2 and 6c, Plate 2). The foundation course of the wall (0.75m wide) was constructed of large boulders set in a construction trench (067). The presence of 19th-century ceramics and mid to late 19th-century glass in the upper ditch fill (057) suggests that the boundary wall may have continued in existence for some time after the buildings reported here had gone out of use and been replaced by the remodelled steading.

Abutting the outside of the north wall of Building A was an area of silty clay filling a slight hollow (003). This feature is interpreted as the result of trampling, either by beasts or people, outside the rear door of the building. The residual trace of a cinder and ash filled pit (001), 0.5m square and less than 50mm deep, was cut into 003, indicating that this was a later feature. A second, similar pit (002) was located 5.2m to the west.

Abutting the outside of the north wall of Building B and tucked into the corner adjoining Building A was a paved area measuring 2.4m by 0.9m and constructed of cobbles (011) and sandstone slabs (012). This paved surface lay between Building A and a north-south wall alignment (004), 0.8m wide and 5.5m long, abutting the north wall of Building B.

Ceramics

by George Haggarty

Introduction

The ceramics assemblage amounted to 283 sherds of pottery, 86 fragments of pantile and three ceramic marbles. These are recorded in full in the archive, and a summary catalogue of the pottery is presented as Table 1.

Scottish Post-Medieval Wares

The bulk of the pottery assemblage consisted of sherds of Scottish Post-Medieval Oxidised Ware (SPMOW) and its reduced version (SPMRW), a ceramic industry which has been discussed at length elsewhere (Haggarty 1980a, 36-46). Both fabrics have a ubiquitous distribution within Scotland, and a wide date range. The evidence would suggest that this industry started somewhere in the late 15th century and continued into the early 18th century (ibid, 36-9; Haggarty 1980b, 45-7). An 18th century date has been attributed to the bulk of the Dalmeny material, based on excavated pottery groups published from the wider Forth littoral, particularly Throsk (TH) and Stirling Castle (SC), from which parallels are listed in the catalogue.

Excavations have recently recovered substantial amounts of ceramic waste at the Gallowgate, Glasgow, and a large and important 17th- and early 18th-century production site for this type of pottery has been confirmed centred on Throsk, a few miles to the east of Stirling (Caldwell & Dean 1992, 2-7). Recent research using Inductively-Coupled Plasma Mass Spectroscopy (Chenery, Phillips & Haggarty 2004, 45-53) strongly suggests that the industry is far more complicated than we believed and that there are many more Scottish production sites using iron-rich clays awaiting discovery. For example, a very cursory glance into the documentary record shows that, in the first half of the 17th century, at least seven potters were working just outside Edinburgh city wall in the area of Potterrow (Haggarty forthcoming).

Given the 18th-century date which is suggested for the majority of the Wester Dalmeny pottery assemblage, the Scottish post-medieval wares could not have come from Edinburgh as the potters had moved out by then (Forbes & Haggarty forthcoming). It is possible that it was coming by boat from Throsk, or one of the

other potteries known to be in the area, such as Cowie or Elphinstone (Harrison 2002, 465). It is always possible that it was produced locally, but this is a question for chemical analysis.

Importantly the ceramic evidence from this site would suggest that the post-medieval industries were lingering on until the 1770s, as has been suggested by Harrison (2002, 467).

Imports

Although all of common type, noteworthy and somewhat out of place for a rural farmstead, and especially in such a small ceramic assemblage, are four small sherds of 18th century Chinese porcelain, representing four separate vessels, from contexts 009 (stone alignment), 011 (cobbled area) and 046 (rubble deposit). These probably suggest a connection with a major house in the area.

Another possible import is a sherd 9 to 10 mm thick in a pinkish buff fabric covered on both surfaces with a thin green glaze. Although the fabric is unlike that from the large early 19th-century assemblage of Iberian pottery identified from excavations in Burgess Street, Leith (Haggarty in prep), and that of standard olive jars, an Iberian source is still suggested.

Tin Glazed Earthenware

Much less exotic are the nine small sherds of Tin Glazed Earthenware (TGE), from the site, one from context 011, six from 031, and one from 058. All look 18th century except the one from context 009, which may be earlier. Local sources of TGE included Leith, where an attempt was made to produce it at the beginning of the 18th century (Haggarty & Forbes 2004), but it was only at the Delftfield pottery in Glasgow, in the third quarter of that century, that it was produced in Scotland in any quantity. The North European TGE industry as a whole was almost obliterated by the introduction of Staffordshire creamware, so that by the beginning of the 19th century it is not common from Scottish archaeological contexts.

Brown Salt Glazed Stoneware

There are three sherds from one brown salt glazed stoneware vessel (BSGS), from context 031. They all have the typical exterior coating of dark brown ferruginous slip on the exterior and overlapping bands of well executed rouletting under a salt glaze. Salt glazed stonewares of this type were produced from the last quarter of the 17th century but are generally found in archaeological contexts dating to the first quarter of the 18th (Jennings 1981, 219). The Dalmeny sherds are probably a little later and possibly a Nottingham product of 1750-75, as a number of forms of that date have 'breadcrumb' decoration (Hildyard 1985, 91 figs 238-41).

White Salt Glazed Stoneware

Also recovered were eight sherds of White Salt Glazed Stoneware, (WSGS), three from context 024, two from 031, and three from 058. White Salt Glazed Stoneware is a ceramic body which was produced at Prestonpans in Scotland from 1750 until c.1770 but which was being produced some 20 years earlier in Staffordshire.

Creamware

There is one sherd of Cream Coloured (CC) or Creamware from context 058. Cream Coloured is a fine, twice-fired, almost pale yellow coloured; lead glazed earthenware made by mixing ball clay with ground flint which is thought to have been introduced by potters in Staffordshire around 1740. It became by far the dominant and fashionable fabric type during the period 1760 to 1780, but its popularity waned over the next twenty or so years, although it did drag on, getting thicker, heavier and whiter in colour, until around 1825. It was produced at all the important industrial potting centres around the British Isles making it almost impossible to be certain where any particular piece was manufactured.

Standard White Earthenware

Standard White Earthenware (SWE) is used as a coverall term to encompass a number of related white fabrics used over the last two hundred years. The sherds from Wester Dalmeny all came from context 057 and general cleaning and probably date from the last quarter of the 19th or 20th centuries.

Miscellaneous items

From the 19th century context 057 there are three ceramic marbles, 16, 19 & 21mm in diameter. The smallest of the complete examples is agate ware. Marbles of this type were recovered during excavation at the Newbigging pottery Musselburgh founded 1800-01 (Haggarty 2005), but it is highly probable that most contemporary potteries were producing them.

By far the most interesting ceramic find from the site is a small, crude, low fired handmade vessel, probably a cresset or spiked oil lamp, represented by four conjoining sherds. It has lost part of its spike. The fabric is fine with sparse inclusions of rounded quartz up to 2mm and the colour varies from light grey to red. The date for this vessel is conjectural. There are two Scottish medieval examples, one a white gritty, unglazed, wheel-thrown example was recovered from a 12th-century context at Jedburgh Abbey (Haggarty & Will 1995, 103 illus 83 no 51). The second, also wheel-thrown, is a glazed example from Inverness which has been tentatively dated to the mid-14th century (Wordsworth pers comm). Wheel-thrown examples are also extremely rare south of the border where most examples are of 11th and 12th century date (Jennings 1981, 21).

Pantiles

The many fragments of roof tile from the site are not datable and to date no analysis has been carried out on these. It is known from documents that there was production at Throsk, and at other sites in the Forth littoral. It is also generally believed that pantiles were brought by ship from Holland as ballast. The majority of fragments were recovered from rubble deposits in Building A.

Conclusion

The pottery assemblage suggests that the structures at Wester Dalmeny Steading were both constructed and abandoned in the 18th century or at the earliest constructed towards the end of the 17th. What is certain is that there is not one sherd of pottery in the whole assemblage which could be dated with any certainty to the last decades of the 18th or first half of the 19th centuries.

Table 1: summary of pottery by building and feature

Note: parallels refer to Throsk (TH) and Stirling Castle (SC)

Context	Description	Fabric	No.	Notes	Date
Building A					
005	wall	SPMOW	1	basal angle sherd (SC 51)	E.18th c.
007	cobbles	SPMOW	13	including 3 everted rims and 1 base	L.17th/E.18th c.
		SPMRW	2	thick conjoining flat base sherds from a large jug, round kiln scar on base	L.17th/E.18th c.
009	stone alignment	SPMOW	52	including 6 everted jar rims (TH 18, 49 & 19, 42 twice), 1 base and 2 strap handles	L.17th/E.18th c.
		Chinese	1	very small fragment from the rim of a thin Chinese export porcelain saucer decorated with an internal blue border	c.1730-50?
		redware	4	2 conjoining from the almost straight neck of a thinly potted redware vessel, slightly everted rim, dipped lead glaze on both surfaces is dark and a little speckled, suggesting the possibility of a little iron or manganese in it	c.1750+?
		TGE	1	small-abraded rim sherd from a (TGE) dish. Decorated with bands of manganese and probably hand painting. Probably Dutch	L.17th c.?
024	rubble deposit	SPMOW redware	5	3 conjoin from the basal angle of a vessel	M-L.18th c.
			5	includes a small crock? The dipped lead glaze covers both surfaces. 1 of the sherds, from a base, has been slip decorated	c.1750+?
031	rubble deposit	WSGS	3	body sherds	M-L.18th c.
		SPMOW	30	fragments of a large storage jar? a number of distinctive horizontal grooves around the green glazed interior	M-L.18th c.
		WSGS	1	flat based vessel c.200mm in diameter	M-L.18th c.
		WSGS	1	rim sherd c.260mm in diameter which might suggest a storage vessel with cover?	M-L.18th c.
		TGE	6	small body sherds glazed pale blue on both surfaces: all have elements of cobalt blue decoration	M-L.18th c.
		BSGS	3	English (Nottingham?) jar and cover: The cover is 80mm in diameter and the straight neck of the jar 13mm in height. The jar and cover are decorated with typical bands of rouletting with an additional band c.8-9mm broad of crushed quartz around the top of the cover	M-L.18th c.
046	rubble deposit	SPMRW	6	body sherds	c.1750
		SPMOW	2	rim sherds (TH 19)	c.1750
		redware	9	thinly potted redware vessel, a small crock? The dipped lead glaze covers both surfaces	c.1750+?
		Chinese	1	thick, underglaze blue and white Chinese export porcelain, plate or dish, decorated on the upper surface with the branches of prunus and what is probably a common hatched border, the glaze is spotted	post 1750?
064	west wall cut?	SPMOW	3	conjoining sherds, large knife trimmed basal angle with kiln scar	L.17th c.?
Total			149		
Building B					
011	cobbling to N	SPMOW	3	body sherds	M-L.18th c.
		redware	2	body sherds of a thinly potted redware vessel	c.1750+?
		TGE	1	small-abraded body sherd, blue tinted	M-L.18th c.

Context	Description	Fabric	No.	Notes	Date		
058	drain fill	Chinese	1	glaze small rim sherd Chinese export porcelain bowl with a slightly everted rim and external café-au-lait ground, Batavian ware. Thousands of bowl of this type were recovered from the Nankin cargo wreck. This suggests that they were a common type at that the period of the shipwreck	c.1750		
		Chinese	1	burnt rim sherd from a small thinly potted blue and white Chinese porcelain saucer or plate decorated with an underglaze band around the rim and a flower	c.1750		
		SPMOW	14	including 3 conjoining from an everted rim jar/chamberpot? (SC 10)	M-L.18th c.		
		SPMRW	5	base sherds which conjoin to form a large fragment of a large jug with a base diameter of 110mm, the base has a rim scar	M-L.18th c.		
		WSGS	3	small, thin, conjoining body sherds possibly from the bowl of a pedestal salt?	M-L.18th c.		
		CC	1	undecorated saucer sherd	M-L.18th c.		
		TGE	1	very small body sherd, blue tinge to the glaze and cobalt decoration	M-L.18th c.		
		Unident	4	conjoining sherds, from a small crude low fired, handmade Y-shaped vessel, probably a cresset, or spiked oil lamp	Medieval?		
		073	wall cut	SPMRW	1	body sherd	L.17th/E.18th c.
		077	culvert fill	SPMRW	2	body sherd	L.17th/E.18th c.
082	below cobbles	SPMOW	1	body sherd	L.17th/E.18th c.		
038							
083	cobble fill	SPMOW	1	body sherd	L.17th/E.18th c.		
084	culvert packing	SPMRW	1	body sherd	L.17th/E.18th c.		
086	culvert packing	SPMOW	1	rim sherd from a dish. This sherd with its distinctive lip has a direct parallel with an unstratified fragment recovered in 1999 in a workman's trench on the site of a Brewery in the lower Cannongate	17th-M.18th c.		
		SPMOW	1	rim sherd from a jug? Near-cylindrical sherd with slight internal thickening at the rim	17th-M.18th c.		
088	culvert bedding	SPMOW	2	conjoining fragments from the base of a lead glazed drug pot (TH 40). The edges have been smoothed, probably for secondary usage	17th-M.18th c.		
Total			46				
Boundary							
057	boundary ditch	SWE	7	including 2 sponge decorated, 3 with blue and white transfer printed decoration, 1 moulded majolica with pink inner surface and one from a white moulded jug	19th c.		
066	front boundary wall: cleaning	SPMRW	3	abraded body sherds			
		SWE	2	ashed, decorated with standard blue & white transfer printing	L.19th c.		
		Porcelain	2	undecorated sherds from a saucer	L.19th c.		
Total			14				
Watching brief							
082	site cleaning	SPMOW	12	large fragment from the bottom of a jug with a base diameter of 110mm			
		SPMOW	25	body sherds (some may be from the large			

Context	Description	Fabric	No.	Notes	Date
		SPMRW	4	jug in 031) rim sherds: 2 conjoining from a large vessel (TH 112), 1 from a typical jug and 1 from a jar (TH 49)	
		redware	10	dairy bowl decorated in its interior with white joggled slip: slightly everted club rim	c.1760
		redware	3	a crock? dipped lead glaze covers both surfaces	post 1750?
301	rubble over F3/1	SPMRW	3	body sherds	17th/E.18th c.
Total			57		
<i>Unstratified</i>					
000	unstratified	SPMOW	13	including 1 base, 1 strap handle	L.17th/E.18th c.
		SPMRW	1		
		redware	2	conjoining sherds from a thinly potted redware vessel, dipped lead glazed on both surfaces	post 1750?
		Iberian?	1	9-10mm thick, pinkish buff fabric, both surfaces covered with a thin green glaze	PMed
Total			17		

Glass

by K.R. Murdoch

Window glass

Most of the shards of window glass in the assemblage appear to be ‘crown’ or spun disc characterised by varying thickness and slightly curving striations. Most of the corrosion products indicate soda glass and point to probable manufacture after c.1680. Until the 19th century most window glass had a distinctive greenish tint, resulting from the presence of iron either in the raw materials or in the clay production crucibles. In the 17th and early 18th centuries window glass tended to be very thin and windows were often made of matrices of small quarries (or panes) held in a framework of lead comes. Diamond shaped quarries were popular and there is at least one example here, from rubble layer 031.

Catalogue of window glass – could be cut and noted as in archive

Context	Description	Date
<i>Building A</i>		
009	Three small shards window glass 1.7, 2.0 and 2.2mm thk light green tint, light denaturing (soda glass).	.
009	Shard from near centre of ‘crown’ window disc in pale bluish aqua.	Mid-18th c.
031	Nine shards ‘crown’ window glass, generally thin (less than 2 mm) with distinct dull green tint and pale greyish denaturing (soda glass). Five have narrow 3mm came shadows indicating use in leaded windows, one shard has come from a diamond-shaped quarry.	Early 18th or just possibly late 17th c.

031	Three shards thin (less than 1.6mm) window glass slightly less tinted than above but with similar denaturing.	Probably slightly later than above.
031	Shard window glass 2.3mm thk pale green tinge, dulled surfaces. Looks to be sheet glass.	probably 19th c.
046	Shard window glass in pale bluish aqua from near the centre of a 'crown' window disc.	Probably mid 18th c.

Building B

058	Two shards window glass 1.1 and 1.6mm thk, pale green tint with soda glass denaturing.	
086	Small shard probable window glass, thin 1.4mm with thickened heat rounded edge. Very pale green tint with moderate denaturing. Looks to be soda fluxed and could just possibly be part of a vessel because of slight curvature at one end.	Unlikely to be later than early 18th c.

Unstratified

000	Shard 'crown' window glass 1.8-2.3mm thk, pale green tint with light silvery denaturing (soda glass). One grozed edge with 4-5mm wide came shadow, probably from leaded window. Second shard similar but slightly thicker at 2.1-2.6mm, one grozed edge and 3mm wide came shadow.	Early to mid-18th c.
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Bottle glass

As is typical of an assemblage from mainly 18th-century contexts, the glass shards from Dalmeny derive predominantly from the ubiquitous wine bottle. These containers, first made in glass around 1630, underwent a gradual shape evolution until the introduction of 'completely' moulded bottles from 1821 onwards. Wine bottles often carried a seal, which identified the owner, vintner or establishment. Many of these seals also carried dates, which has allowed a typology of date to shape to be established. There are no such seals in this assemblage and, while there are quite a number of bases, there are only two diagnostic lips. Fortunately glass colour and corrosion characteristics are very similar to material recovered from many other sites in Scotland and this can help to give some indication of date.

The type of glass that was used to make wine bottles was quite tolerant to an acidic environment but corrodes readily in the presence of alkali (lime mortar for instance).

Importantly, all of the wine bottle glass in this assemblage is green. 'Black' glass became common in England just after 1700 but experience has shown that it does not appear in Scotland until c.1800. The reason for this variation lies in the different types of wine favoured in each country.

Also present in the assemblage are examples of medicine phials which also underwent a gradual shape evolution over a similar period to the wine bottle. Starting off as

lumpy, conical shaped items in dark green glass in the 17th century, they gradually became more cylindrical, taller and narrower, developing into the 'test-tube' shaped profile with everted lip typical of the 19th century.

In a few contexts there are mid to later 19th-century items including beer bottles and probable condiment bottles. Classic three-piece moulded bottles, some with pimple kicks, are represented. Although bottles had been blown in moulds since Roman times, Henry Ricketts of Bristol patented the first 'mass-production' equipment in 1821. However, even with Ricketts' kit the lip had to be added as a separate operation; complete moulding was not achieved until the early 20th century.

The cheap and cheerful 'shear lip' is present amongst the assemblage. These bottles were simply wetted-off from the blowpipe and not retouched, leaving a jagged and irregular rim onto which an oversized cork could be easily jammed.

While some of the window glass may just date to the late 17th century, there is one small group of shards from culvert fill 058 which undoubtedly pre-dates the rest of the assemblage. Three shards, two conjoining, appear to derive from a square-section bottle with slightly indented sides. This shape of bottle was made over a long period of time and at least until the middle of the 17th century. Made from a similar potash fluxed glass as the later wine bottles, these containers tend to become very corroded in an alkaline environment.

Two main types of glass were typically manufactured, potash (fluxed with land-based plant alkali) and soda (fluxed with natural soda or marine-based plant alkali, eg kelp or barilla). The flux was needed to lower the temperature at which the sand would vitrify and remain workable. For reasons which are still not fully understood, potash glass is generally far more susceptible to corrosion than soda. Much potash glass from the medieval period has probably disappeared completely.

However, examination of the shards from 058 reveals a significant thickness of non-corroded heart glass surviving. On the basis of this, these shards are probably early 17th century, or perhaps late 16th, but unlikely to be any earlier.

Catalogue of bottle and vessel glass – could be cut and noted as in archive

Context	Description	Date
<i>Building A</i>		
007	Small fragment of rim with upturned triangular section string ring, light green with light to moderate denaturing.	1st half 18th c.
009	Twenty seven shards in mostly light green with mainly moderate denaturing. Surviving shapes indicate 'mallet' type and sharp shouldered types.	Late 1st qtr/early-2nd qtr 18th c. and mid-18th c.
009	Small shard pale green from what looks like a 20th century bottle.	20th c.
010	Two shards in light green with moderate buff coloured denaturing. Condition and colour similar to more diagnostic mid 18th century pieces in the assemblage.	Mid 18th c.?
024	Slightly mis-shapen base in mid green with moderate buff coloured denaturing. Diameter c100mm, kick 32mm(56mm diam), moderately tight angle of entry through base ring. Not enough sidewall left to be sure but probable 'mallet' type.	Early 2nd qtr 18th c.
024	Neck shard and upper body shard probably from the same bottle.	.
031	Complete base and lower body in mid dull green with patchy moderate denaturing. 96mm diam., 30mm kick, tight angle of entry to base ring (moderate wear), belling.	3rd qtr 18th c.
031	Two further lower body shards from bottles of c120mm diam with belling.	Mid 18th c.
031	Twenty-two body shards in various shades of green, the great majority from bottles with some flattening of the sides indicating probable second and third qtr 18th century dates. The type and level of denaturing would support this. Two body shards come from more rounded types. Five neck shards from similar.	Earlier 18th c.
031	Base shard from possible storage jar (far more angular base) in similar colour and condition to above therefore probably of similar date.	.
031	Neck and everted lip from medicine phial c40mm diam in firebright pale aqua. Diameter over lip 24mm, aperture 8mm. Nine further shards probably from the same.	Mid to late 18th c.
031	Part neck and lip from medicine phial in slightly darker green than above. Diameter over lip 26mm, aperture 13mm.	Earlier 18th c.
031	Shard from probable beer bottle in firebright olive green with horizontal mould mark indicating manufacture in three piece mould.	Mid to late 19th c.
031	Body shard from probable drinking tumbler in clear with blotchy white denaturing, slight rib decoration.	18th c.
031	Three shards firebright amber from flat sided bottle (not wine).	Late 19th-20th c.
046	Part base and lower body from bottle c110mm diam in pale mid green with moderate to heavy pale buff coloured denaturing. Sharp angle of entry through base ring into deep kick of 45mm plus, very upright sides with belling.	Mid 18th c.
046	Three base shards mid to dark green.	
046	Twelve further shards, at least four of which come from datable bottles.	1st half 18th c.
046	Base shard in pale dull green from medicine phial c41mm diam, 6mm deep kick with rough 17mm diam pontil scar. The scar is in the from of a ring and may have been created by a blow pipe rather than the usual solid pontil.	Early 18th c.
<i>Building B</i>		
018	Four lower body shards from probably the same bottle in dull mid green with dulled surfaces. From straight sided bottle c120mm diam with belling.	Mid 18th c.
058	Neck and lip in light dull green with moderate pale coloured denaturing. Neck height c120mm with triangular string ring nipping in neck below out-turned lip.	Mid 18th c.
058	Part base possibly from same bottle as above c120mm diam, deep kick of c45mm, sharp angle of entry through base ring, belling. Thirty two further	

	shards in similar colour and condition.	
058	Lower body shard from probable 'mallet' shape bottle, light green with moderate to heavy denaturing	Late 1st qtr to early 2nd qtr 18th c.
058	Nine shards, some tiny, from clear drinking vessel, probably a wine glass with a conical bowl, very slight surface denaturing	18th c.?
058	Three shards, two conjoining, in pale green with heavy stable brown denaturing, possibly potash glass. These shards appear to be from a probable square section bottle with slightly dished sides, the start of one corner has survived. Little to go on but they certainly predate the wine bottle glass from this context by a considerable margin.	
059	Shard light green with moderate buff coloured denaturing.	Early to mid 18th c.
073	Shard light green with moderate denaturing.	Mid 18th c.
077	Very small shard light green with moderate denaturing.	Mid 18th c.
082	Very small shard light dull green with moderate denaturing.	Mid 18th c.
<i>Boundary</i>		
057	Nine shards probable beer bottle in firebright dark olive including part base with deep mould blown conical kick.	Mid to late 19th c.
057	Ten shards in various shades of pale aqua including two shear lips from various use bottles.	Mid to late 19th c.
057	Glass marble, clear with internal blue twists.	
057	Shard in firebright clear from small bowl or possibly lamp glass.	
057	73mm length of glass tube in pale aqua.	
057	Facetted cut glass 'jewel' in clear from necklace or dress ornament, basically rectangular in shape, 28 x 20 x max 10.3mm.	
<i>Unstratified and watching brief</i>		
000	Body shard from well rounded bottle, possibly an 'onion' or rounded 'mallet', light rich green with moderate to heavy denaturing.	1st qtr to early second qtr 18th c.
000	Three body shards from straighter sided bottles, again light green with moderate denaturing.	Mid to 3rd qtr 18th c.
Cleaning	Nineteen shards in various shades of light to mid dull green with moderate, occasionally heavy denaturing. Most of the body shards indicate straight sided bottles.	Prob 2nd qtr to mid 18th c.
WB 804	Two base and lower bodies from probable beer bottles in firebright dark olive. They have been mould blown in three piece moulds and therefore have no vertical mould marks on the lower part of the body which tapers out slightly as it rises (to aid removal from the mould). The first is 81mm diam at the base with a 29mm deep conical kick (no central pimple) and some moderate base ring wear. The second is 78mm diam at the base with a 21mm deep slightly more rounded kick with central pimple, lighter base ring wear.	Mid to 3rd qtr 19th c.
WB 804	Upright moulded but applied later lip and part neck, same colour as first base above.	.
WB 804	Fragment of lip very similar with colour same as second base above.	.
WB 804	Four further shards in firebright dark olive.	.

Discussion

The fact that there are only a couple of shards dating earlier than c.1700 should not be interpreted as lack of occupation. Unlike pottery, glass was mainly the preserve of the rich until the explosion of use, particularly in wine bottles, from the start of the 18th century. The probable date of manufacture of the wine bottle should not necessarily

be assumed to be close to its date of breakage/loss. Many of these bottles have significant base ring wear indicating repeated use, probably over years, occasionally decades.

The presence of glass dating to the first three-quarters of the 18th century is typical but there appears to be a hiatus until the middle of the 19th century and there is very little later than c.1880.

Metalwork and slag

by Andrew Heald

Non-ferrous alloy

Six non-ferrous alloy objects were recovered. No scientific analysis was undertaken.

Coin

1. George III halfpenny, dated to between 1770-5 (N. Holmes, pers comm).
Corroded and abraded. D: 29mm; T: 2mm. Context 021.

Button

2. Cast round livery button with attachment loop. ?Pewter. D: 22mm; T: 1.5mm.
Context 009.

Mount?

3. Circular disc, slightly domed, badly corroded with possible signs of a rivet. This may be a mount or an 'appliqué'. During the medieval and post-medieval period a variety of thin metal decorative discs and plates were applied to various fittings including belts, straps, boxes and other objects of leather, textile and wood.
Alternatively, the object may be the remnants of a button shank. D: 14mm; W: 2mm; Rivet: 2mm. Context 046.

Buckles

Buckles are one of the largest categories of medieval and post-medieval dress accessory; they could be used for a variety of tasks including fastening spurs, weapons, shoes and fitting breeches. Shoe buckles had been in intermittent use since

the 13th century, but it was not until the late 17th and 18th centuries that they became widespread. Indeed, by the beginning of the 18th-century shoe buckles were in universal use amongst all social classes except the very poor, who continued to use shoe ties (Whitehead 1996, 6-7, 96). The forms of both Dalmeny buckles are similar to examples known from the late 17th and 18th centuries (Whitehead 1996, 96-102) although plain or simply decorated buckles were manufactured and used over several centuries.

4. Fragment of a shoe or knee buckle frame. Linear decoration on front face, particularly around the central area. H: 50mm; W: 43mm; T: 3mm. Context 038.
5. Part of a shoe buckle. 'Cooking-pot' shaped loop chape and single internal spike. In use the spike was pressed through a hole in the upper latchet (Whitehead 1996, 96-7). The corroded ends of the object seem to preserve the spindle. H: 40mm; W: 34mm; T: 3mm. Context 031.

Miscellaneous

6. Sheet. Rectangular off-cut with indented marks. L: 29mm; H: 19mm; T: 1mm. Context 057.

Ferrous

Much of the ferrous metalwork is in a very poor condition, heavily corroded, with many pieces spalling and developing deep cracks. Only a few objects were conserved and X-rayed making identification and measurements difficult if not impossible for many finds. All recognizable objects have been classified and catalogued; many indeterminate objects require further conservation.

Horse furniture

7. Horseshoe. Complete. The diagnostic features used to classify horseshoes include the width of the webs, the outline form of the shoe, and the shape of the nail-holes. The corroded nature of the piece and the lack of X-ray make discussion of these attributes impossible. That said, shape and size suggests a date later than the 14th century. L: 172mm; W: 153mm; T: 39mm. T of shoe: 30mm. Context 057.

Domestic objects

8. Scissors. Fragment of scissor blade and finger loop. Loop slightly offset from centre of stem. Blade broken and bent at end. There is a circular hole through the centre of the blade to accommodate a rivet, which would have acted as a pivot for the two blades. Scissors were introduced into Europe in the 6th or 7th centuries AD but only came into widespread use in the late 13th or 14th centuries. They are known from a number of late medieval and post-medieval sites. Examples were recovered from 15th–17th-century contexts from Sandal Castle (Goodall 1983, 244, 246, fig 6 nos 87-91) and medieval Perth (Cox 1996, 780-1, illus 24, no 415). L: 101mm; B: 33mm; T: 6mm. Context 086.
9. Vessel. Three joining fragments of a large vessel. Remnants of the body and rim. Pieces associated with other iron fragments, presumably from the same vessel, and other corroded and spalling material, probably iron corrosion products. Badly corroded. L: 271mm; B: 109mm; T: 4mm. Context 057.

Tools

10. Spoon bit or auger. Tool with spoon-shaped blade. Rectangular cross-sectioned shank with expanded terminal. Badly corroded. This woodworking tool is an auger bit used to bore holes. A number of complete and fragmentary examples have been recorded from Sandal Castle dated to between the 15th and 17th centuries (Goodall 1983, 240-1, fig 4, nos 35-40) and an example was recovered from a late 14th-century context in Perth (Ford 1987, 134-5, illus 67, no 95). L: 131mm; W of blade 9mm. Context 038.
11. Tool. Chisel or punch. Circular bar tapering to a chisel like tip. Broken at top. Badly corroded. L: 87mm; D: 14mm. Context 057.
12. Handle and tang with central rivet hole. L: 88mm; B: 35mm; T: 2mm. Context 005.

Fittings

Fourteen objects appear to be associated with fittings. Two (SF 024 & 031) are miscellaneous strips that may be fittings for structures or portable objects.

13. L-shaped fitting. Badly corroded object, not enough of the original surface shows or survives to identify object. Probably a wall fitting. L: 119mm; B: 7mm; W: 7mm. Context 031.

14. Strip or binding. Badly corroded slightly curved sub-rectangular strip of metal.
Possible hole or terminal at one end. L: 35mm; H: 33mm; T: 5mm. Context 031.
15. Strips or binding. Thirteen badly corroded and spalling plate fragments. In section a thin strip of metal 3mm thick is visible. Some of the pieces join suggesting the pieces were once part of a flat, thin rectangular strip. Possibly part of binding for ?household furniture or fittings. No holes visible. Associated with other badly corroded material, presumably eroded from the same object(s). Three pieces appear to join: L: 186mm; H: 35mm; T: 3mm. Context 057.
16. Grill. Broken at both ends. Three complete rectangular holes (8mm x23mm) survive and remnants of two others at either end of object. Associated with fragments of corroded and spalling iron. Preserved within the corrosion are fragments of wood. L: 121mm; H: 80mm; T: 10mm. Context 057.

Nails

The most common iron objects from Dalmeny were nails, with 10 examples (Table 2). Of these, four were intact and five had surviving heads. Square-sectioned rod fragments with no other distinguishing features were assumed to be nail fragments. All are typical carpentry nails used throughout the medieval and post-medieval period and have been found on a number of Scottish sites, for example at Edinburgh Castle (Clark 1997, 157-9) and Perth (Ford & Walsh 1987, 138-9).

Table 2. Nails.

Context	Intact	Survives (head/shank/tip)	L	Head B	Head W	Head T	Shank B	Shank W	Bent?	Head shape
009	Y	h/s/t	142	35	13	4	13	7	Y	'Figure-of-eight'
031	N	s/t	26	-	-	-	4	4	N	
	N	S	25	-	-	-	4	4	N	
038	N	h/s	23	10	10	3	4	4	N	Flat-square
cleaning	Y	h/s/t	114	20	16	4	12	10	N	Flat-rectangular
	Y	h/s/t	43	11	9	2	6	6	N	Flat-rectangular
	Y	h/s/t	44	11	11	2	5	5	Y	Flat-sub-circular
	N	s/t	71	-	-	-	5	4	Y	
	N	s	31	-	-	-	5	5	N	
000	N	s	51	-	-	-	4	4	N	

Miscellaneous and unidentified

Six objects do not have enough recognisable diagnostic features to reconstruct original function and four were too corroded or fragmentary to identify

17. Spike. Sub-circular-sectioned rod fragment. L: 67mm; D: 4mm. Context 057.
18. Spike. Sub-circular-sectioned rod fragment with large mineral and stone accretion masking the original surface. L: 125mm; D: 5mm. Context 057.
19. Spike. Irregularly shaped tapering rectangular bar. L: 84mm; W: 12mm; T: 9mm Context 018.
20. Bar. Tapering strip of metal reaching a point at one end. Slightly curved at one end. In section, the strip appears to be slightly curved. L: 354mm; W: 23mm; T: 8mm. Context 057.
21. Flat tapering bar with hole at one end. Curved top. L: 90mm; B: 21mm; T: 5mm; D of hole: 11mm. General site cleaning.
22. Thick piece of metal curved at one end. Possibly a tool, perhaps a scythe, although the object appears to be too thick. L: 328mm; H: 54mm; T: 17mm. Context 057.
23. Possible knife fragment. L: 60mm; H: 26mm; T: 5mm. Context 031.
24. Two corroded sub-spherical objects. H: 26mm; B: 27mm; T: 23mm. H: 20mm; B: 18mm; T: 17mm. Context 057.
25. Corroded curved object, possibly a blade. L: 62mm; B: 23mm; T: 12mm. General site cleaning.
26. Badly corroded lump. A thin strip of metal is visible in the section core. L: 64mm; W: 38mm; T: 26mm. Context 024.

Slag

2942g of material classed as slag during excavation was visually examined which allows it to be broadly classified. Slag on archaeological sites is not always indicative of ironworking and can be created during various pyrotechnic processes. Iron production usually creates a range of slag morphologies yet only a few, for example tap slag and smithing hearth bottoms, are truly diagnostic (of smelting and smithing respectively).

None of the slag from Dalmeny has sufficient diagnostic features to be confident of the process that created them. Many of the examples are small, fragmented pieces. Nor was any hammerscale recovered which usually indicates *in situ* metalworking. Further elemental and mineralogical analyses would be necessary to classify the material more conclusively - this was not undertaken. The slag has been described using common terminology (eg Spearman 1997).

The largest group is from cobbles 007, accounting for around 90% of the total. The slag from this context varies in shape and size. A few of the larger pieces have a distinct bubbly exterior that, together with the magnetic attraction and overall appearance of some of the pieces, suggest that they were created during ironworking. The majority of other pieces are unstructured fragments, apparently broken from larger masses. The magnetic attraction and traces of iron scale within some of the matrices suggest that some of the smaller pieces may be residues of ironworking, probably smithing. Other pieces within this context appear to be vitrified fuel ash – slag formed when material such as earth, clay, stones or ceramics are subjected to high temperatures, for example in a hearth – and vitrified stone. These ‘slags’ can be formed during any high temperature pyrotechnic process and are not necessarily indicative of deliberate industrial activity.

Some material within the general slag assemblage also appears to be masking iron objects. These objects may either be badly corroded iron objects or objects mixed with the slag.

Distribution

Table 3 outlines the object distribution. There are four main groups of recovery: general cleaning or topsoil; Building A; Building B; and the boundary ditch.

Table 3. Distribution of metal finds and slag

Group	Context	Context description	Find type
Building A	005	Wall alignment	Tool handle
	007	Tumbled cobbled surface	Slag
	009	Curvilinear stone setting	Nail and button
	024	Rubble	Miscellaneous
	031	Rubble	L-shaped fitting; 2 nails; miscellaneous; strip; ?shoe buckle
	046	Rubble	Circular disc
Building ‘B’	018	Beaten earth floor deposit	Spike
	021	Coal deposit – topmost fill of hearth	Coin (1770-75)
	038	Cobbled surface	Spoon bit; nail; buckle; slag
	058	Base stones of drainage channel	Slag
	086	Packing stones N side of culvert drain	Scissors
Boundary ditch	057	Fill of boundary ditch	Sheet; vessel frags; horseshoe; tool (chisel or punch); strips; 2 spikes; grill; bar; 2 miscellaneous; slag
Unstratified	cleaning		5 nails; 2 miscellaneous; slag

In Building A, the iron, tanged handle was recovered from one of the walls (005). A spread of secondary cobbles (007) to the north of stone alignment 009 produced a notable concentration of small slags some of which appear to be associated with ironworking. There are at least three explanations for this cobble and slag accumulation: either the deposit represents a repair or a secondary floor; or a spread of tumbled wall stone; or a metalworking area. It is not uncommon to recover fragments of slag interspersed with cobbles on archaeological sites, the slag used as flooring material in the same way as stone. However, the nearby gully and pecked stone nearby may suggest an *in situ* metalworking area. Perhaps the building was re-used after the original occupation. The lack of hammerscale and recognisable smithing hearth bottoms leaves this in some doubt.

The central and western half of Building A was filled with a spread of rubble consisting of small and medium cobbles and small boulders in a grey, clayey-silt matrix (024, 031 & 046). Artefacts recovered from the deposits included various iron fittings (eg nails), and a buckle of probable 17th/18th-century date.

Building B is divided into two compartments, distinguished by the nature of the floor deposits. One of the hearths (context 021; upper fill) from the northern compartment contained a coin dated to between 1770-75. The scissors were recovered from packing stones on the north side of the culvert drain. The southern compartment was paved with small and medium cobbles (037, 038). The woodworking tool and buckle were recovered from this area.

The upper fill of the boundary ditch (057) produced a number of finds although mainly miscellaneous iron objects and a small amount of slag.

Discussion

Many of the finds can be paralleled on a number of medieval and post-medieval sites. The only find that can be confidently dated is the coin, which dates to between 1770-75 (N Holmes, pers comm). This provides a chronological framework into which the other metal objects can be placed. Many of the finds would not be out of place from

the 15th/16th centuries onwards. Given that it is believed that the excavated buildings represent elements of a precursor settlement to Wester Dalmeny Steading, which was constructed in the 1820s, it is likely that all of the finds discussed here date to between the 16th and early 19th centuries.

The small assemblage allows partial insight into the activities that took place within the steading walls and immediate area. The horseshoe illustrates that animals were kept close. The buckles and buttons inform us about the appearance of the inhabitants whilst the scissors tell us what implements they used. Some of the finds allow a glimpse into the small-scale crafts: the spoon bit was used to bore holes into wood; and the nails would have held together internal structures, fittings and furniture.

Coarse stone

by Adam Jackson

Two coarse stone objects were recovered: a fragment of the top part of a small rotary quern (Cat. no 1) and a rectangular stone vessel (Cat. no 2). Both of these finds had ceased to be used in their original functions and had been incorporated into cobbled surfaces (037 and 038) forming the floor of the southern compartment of Building B. Both were manufactured from locally available sandstone.

Catalogue

1. Fragment (half) of the top stone of a rotary quern of sandstone. Flattish section with a slightly convex, smoothly ground, work-surface. The central perforation appears in section at the broken edge and is drilled from both faces. It is widened to form the hopper on the top face. There are no drilling striations visible. At the edge there is a rectangular handle socket that runs horizontally into the body of the quern. This socket is slightly skewed, has a slightly V-shaped profile and was probably carved with a metal tool. The quern was roughly flaked or chipped to shape using a hammerstone. L: 293mm; W: 166mm; T: 88mm. Perforation: 80mm wide at the mouth of the hopper, narrowing to 28mm. Handle slot: L 35mm; W 28mm; Depth 42mm. Cobbled surface 037.

2. Roughly rectangular vessel of sandstone. The interior and exterior are flat-based and straight-sided. The vessel rim is thick and square. One edge of the vessel rim was broken in antiquity; the break is worn smooth. The vessel bowl retains the scars from pecking and chiselling. L 272mm; W 194mm; T 114mm. Bowl: 16mm; W 108mm; Depth 52mm. Cobbled surface 038.

Animal bone and shell

by Sue Anderson

The majority of bone and shell was recovered from taphonomically insecure deposits which post-date the buildings. The analysis of such poorly dated and possibly residual material can clearly not be used to enhance our knowledge of the subsistence economy at the time the building was in use. Tables 4 and 5 present a brief descriptive catalogue of the animal bone and shell from this site.

Table 4. Animal bone

Key to taxa: E - equid (horse); B - Bovid (cattle); OC - ovicaprid (sheep/goat); LM - large mammal (horse, cattle, large deer); MM - medium mammal (sheep, pig, etc.); SM - small mammal (dog, cat, rabbit, etc.); BI - bird.

Context	Taxon	No.	Wt/g	Notes
<i>Building A</i>				
cobble spread 007	MM	1	10	humerus shaft, chopped
rubble 024	LM	1	11	cranial vault fragment
	LM	2	15	= one bone, unidentified
rubble 031	E	2	267	complete metatarsal, length 281mm – estimated size 15 hands
	E	30	548	skull and maxilla fragments, including 3 teeth, possibly one individual – deciduous tooth present, possibly young female
	E	1	109	proximal tibia fragment, small
	E	1	19	proximal radius fragment
	B	1	139	proximal metatarsal
	LM	60	92	rib fragments – one cut and one chopped
	LM	1	12	long bone or rib shaft fragment
	SM	1	2	long bone shaft fragment
	BI	1	4	humerus – domestic fowl or pigeon?
rubble 046	LM	2	41	cranial vault fragments
<i>Building B</i>				
culvert fill 059	E	2	96	adult teeth
culvert base 058	OC	2	8	tarsal and proximal phalanx
	LM	2	55	rib fragments
	LM	1	11	vertebra fragment
	LM	1	13	scapula or pelvis fragment

	MM	1	11	distal ?radius, unfused - juvenile
	SM	1	1	rib?
culvert packing 084	E	1	199	almost complete scapula
	LM	2	13	pelvis (acetabulum) fragment
cobble fill 083	B	12	552	skull fragments of at least two individuals, including chopped horncore
deposit below cobbles 038, 082	LM	1	9	skull fragment
fill 074	MM	1	4	?thoracic vertebral spine
<i>Boundary</i>				
ditch fill 057	B	1	214	large distal femoral epiphysis
	LM	1	50	?thoracic vertebra spinous process
	UN	4	4	small fragments, unidentified
<i>Unstratified</i>				
U/S	OC	2	37	distal fragment and shaft of 2 tibiae, one small
	OC	1	2	proximal phalanx
	UN	3	4	small fragments
cleaning	LM	1	26	unidentified, torso fragment?
Total		132	2026	

Table 5. Shell

Note that counts are for minimum numbers of shells *not* fragment numbers.

Context	Taxon	No.	Wt/g	Notes
<i>Building A</i>				
stone alignment 009	winkle	1	5	
rubble 031	winkle	3	4	
	mussel	4	12	v. fragmented
	oyster	1	34	
rubble 046	?winkle	1	1	v. abraded
	cockle	1	9	full of coarse lime mortar
<i>Building B</i>				
culvert base 058	winkle	1	6	
deposit below cobbles 038, 082	whelk	3	7	v. fragmented
Total		15	78	

The animal bone assemblage contained a high proportion of equid bones and appears to represent at least two individuals. The main meat-bearing animals (cattle, sheep/goat) are represented by very few bones and there is no certain evidence for pig. However, several of the large/medium mammal bones may also belong to these taxa. Only one bird bone was present, but this could not be identified to species. A few bones showed evidence for butchery in the form of knife cuts and chop-marks, including one horncore which had been removed and may be evidence for hornworking in the area. No pathological changes were seen and no other observations were made in this small assemblage.

The shells are all remains of edible species and presumably represent food waste.

Discussion

No structures are shown on the Ordnance Survey 1st Edition map (1856) at the location of the excavated buildings. Furthermore, their discovery, sealed beneath a layer of rubble and redeposited subsoil in the area to the south-east of the 19th-century Wester Dalmeny Steading, indicates that the structures were not contemporary with the Steading, which was constructed in 1828. The artefactual evidence from the excavations points to a late 17th - 18th-century date for the construction and occupation of the buildings with abandonment/demolition in the early 19th century.

The limited excavations, constrained by the requirements of the development, did not expose the full extent of the two buildings in plan and detailed archaeological investigation was restricted to the two services corridors, therefore any interpretation of the function of the two buildings is similarly constrained by the available evidence. In addition, the limited and variable preservation of the structures renders detailed analysis of the remains problematic.

What evidence there is suggests that the two buildings were most likely drystone, rubble-built constructions; mortar being conspicuously absent from the wall alignments with the singular exception of traces of a possible plastered face to the inside of the north wall of Building B. The buildings also appear to have been built on a slightly irregular plan with the north-facing walls in particular being set at a slight angle to the others. The two buildings are clearly functionally different although their intimate proximity suggests at least a close association, if not a unitary function. The arrangement of Building B is fairly typical of vernacular, medieval and post-medieval rural two-room byre dwellings, although there are some unusual features, whereas Building A clearly had a non-domestic function. It is probable that much of the superstructure of the two buildings had been robbed of the better stonework; the remaining footings being largely poorly preserved and ill-defined. This was particularly noticeable at the interface between the two structures where a formal wall line was not detected and where the internal wall faces were difficult to identify unambiguously. Furthermore, the presence of a possible south wall of Building A was represented only by a break of slope in the subsoil, with no stone component present. Given the construction of the visible remains it is probable that

had there been a south wall it would also have been constructed of stone but the evidence is inconclusive. Alternatively, it may be that the structure of Building A is limited to the northern cobbled and flagged part of the identified remains and that the southern part of this structure was an open yard. It may, for example, have been an entirely open-fronted structure, or it may have had a lightly built wooden façade, although no post-holes or post-pads were identified during the excavation. The fact that three drainage gullies all discharge towards the south-west part of Building A may better support the latter interpretation, as it is difficult to offer a justification for the deliberate discharge of foul water into the interior of a building, for any purpose.

The excavated remains are typical of a vernacular style of small, rural farm buildings which was prevalent across much of Britain in the post-medieval period and perhaps earlier. There are, for example, elements of the buildings that are similar to features of medieval buildings excavated at Springwood Park, Kelso (Dixon 1998). The covered culvert drain has parallels in the two primary Phase III buildings (A and C) at Springwood Park, dated to the 13th- to early 14th-centuries. The sizes of the drains and their structure correspond well to those from Springwood Park and, as there, the drains at Dalmeny were clearly planned from the start. The byre, attached to one end of the domestic structure, is paralleled at many sites from the medieval period to the 19th-century and the layout of Building B is in many ways typical of contemporary domestic house-byre structures excavated elsewhere (eg. Building 8 at Glenochar farmtoun, Ward 1998). The total floor area of the two compartments at c.36 sq m is also similar to that for Building C Phase III at Springwood. The gable-end hearth in the northern compartment of Building B is paralleled at Balnasium and Kiltyrie longhouses on Lochtayside (Atkinson et al 1999) and the irregular floor plan of the two buildings finds many parallels elsewhere and simply demonstrates that the buildings were not high class. However, there are some interesting variations from the typical arrangement that suggest a possible non-domestic function. Firstly, there is the presence in the northern compartment of two hearths, one in the centre of the north wall and one in the south-west corner in what would be considered to be the living quarters of a typical two room structure. Secondly, there is no apparent separation between living and sleeping areas in the northern compartment, that must have been particularly cramped as a dwelling space.

The artefact assemblage provides further indications of a non-domestic character to the remains of the two buildings. The metalwork assemblage, for example, contains a large proportion of items and materials attributable to small-scale rural craft activities. There was a large amount of metalworking slag compared to metal artefacts, there were numerous woodworking nails and various tools, and there were miscellaneous metal rods and strips and broken items that may be interpreted as accumulated scrap. The ceramic assemblage is dominated by fragments of jugs and jars, with few diagnostically domestic artefacts present. Fine china and porcelain is present, though it is rare.

Some insight to the siting of the buildings and their relationship to Wester Dalmeny Steading and the village of Dalmeny in general is provided by a study of historical maps. William Roy's Military Survey map (1746-54) is the first to depict Dalmeny in any detail and shows a village laid out in an east-west linear array around an open central area. Although somewhat diagrammatic, the village layout depicted on Roy's map corresponds well to the Type IV (regular plan, grouped around a central square or green) described by Hooke (1985). Two maps held in the National Archive of Scotland - 'A plan of the estate of Dundas' by Lewis Gordon dated 1757 (NAS RHP 3370); and 'A plan of the estate of Barnbogle and Dalmeny belonging to the Earl of Roseberry', surveyed by John Adair and dated c.1800 (NAS RHP 3657) - provide more detail than Roy and offer comparative layouts of Dalmeny in the middle and at the end of the 18th-century.

Gordon's 1757 map (Figure 7a) provides the most relevant information in the context of this study as it shows what are almost certainly the buildings discovered during the excavation. This map shows a group of buildings at the west end of Dalmeny village, including a large cross-shaped building with a small 'L'-shaped structure to the south-east. Further to the west there is another group of buildings set within an enclosed garden. This group collectively appears to represent a significant farm. By the time of Adair's survey of the Estate the layout of Dalmeny appears to have changed quite markedly, in particular with significant remodelling and enclosing of land at the west end of the village, now named as Dalmeny Croft (Figure 7b). Overall, however, the village still retains its basic layout. By the time of the Ordnance Survey's first survey

in 1856 (Figure 7c) the layout had changed again to virtually the present village layout, and incorporating the remodelled Wester Dalmeny Steading.

Dating evidence is restricted to comparison of the available maps and assessment of the artefact assemblage. As noted above, the buildings uncovered by the excavation compare in both scale and location to the structure(s) depicted on Gordon's 1757 Estate map. Adair's map (c.1800) shows that by that date the buildings were no longer in existence. The artefactual evidence likewise points to a wholly 18th-century date for both the construction and destruction of the buildings. Pottery recovered from the wall footings of both buildings and the base layers of the culvert drain and cobble floor in Building 'B' strongly suggest a construction date at the earliest in the late 17th century and at the latest in the first half of the 18th-century. The limited glass finds from the same contexts compare well with such a date, although there is some inclination in that evidence to a construction date in the second quarter of the 18th-century.

Conclusions

The excavations at Wester Dalmeny Steading have revealed the presence of elements of a precursor farmstead to the remodelled steading and demonstrated that there are preserved remains of earlier settlement in and around the present village. From the physical evidence alone it is not possible to determine whether Building A was upstanding and in use when the drains from Building B were in operation, or whether the structure of Building A was restricted to the northern half of this part of the site with an open or covered yard occupying the southern half. However, on the basis that the east wall of Building B appears to abut the west wall of Building A and clearly aligns with it, it seems quite likely that the two buildings were contemporary, if not necessarily constructed at the same time. The artefactual evidence clearly indicates a degree of contemporaneity and map evidence shows that the two buildings were both certainly present in the middle of the 18th-century. In all probability the two structures were constructed at the same time and were intended to be complementary. It is likely that the remains are those of some type of small-scale rural craft workshop, most probably associated with metalworking. Whether or not Building B was an entirely domestic structure is not clear. The map evidence suggests that there is considerable scope to elicit further knowledge of the development of the village and

of the daily lives of the people of this small but dynamic rural settlement. Over a period of a hundred years from the mid 18th- to the mid 19th-centuries it is apparent that there were many changes to the layout of Dalmeny village, although the village has retained much of its original form and character.

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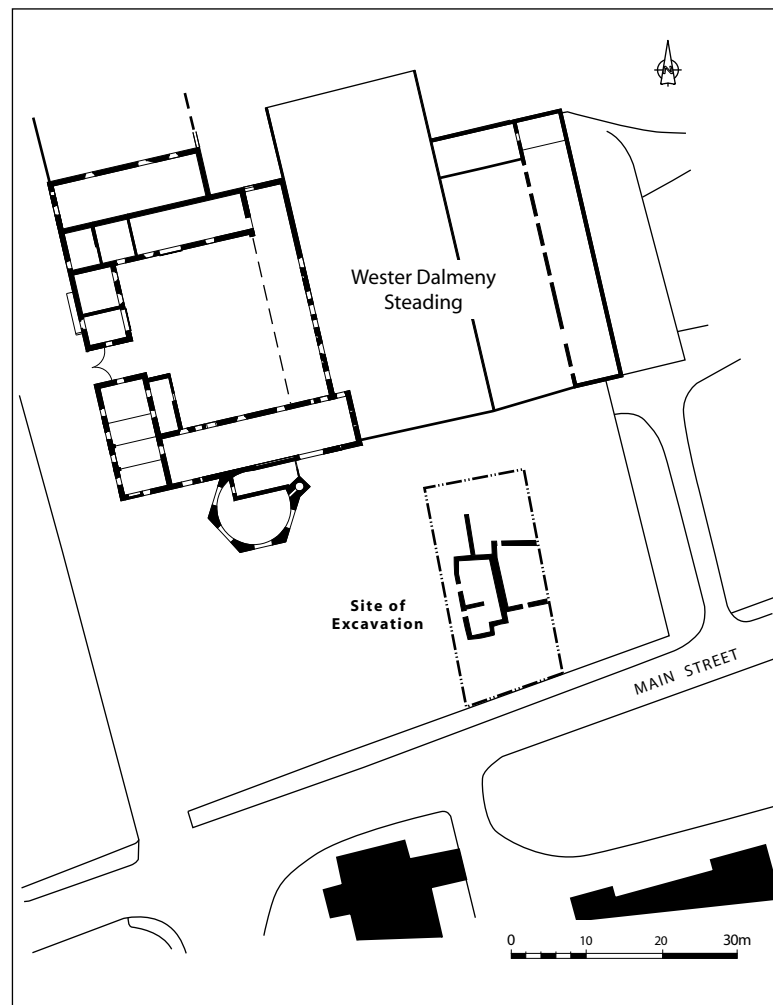


Figure 1 - Site location maps

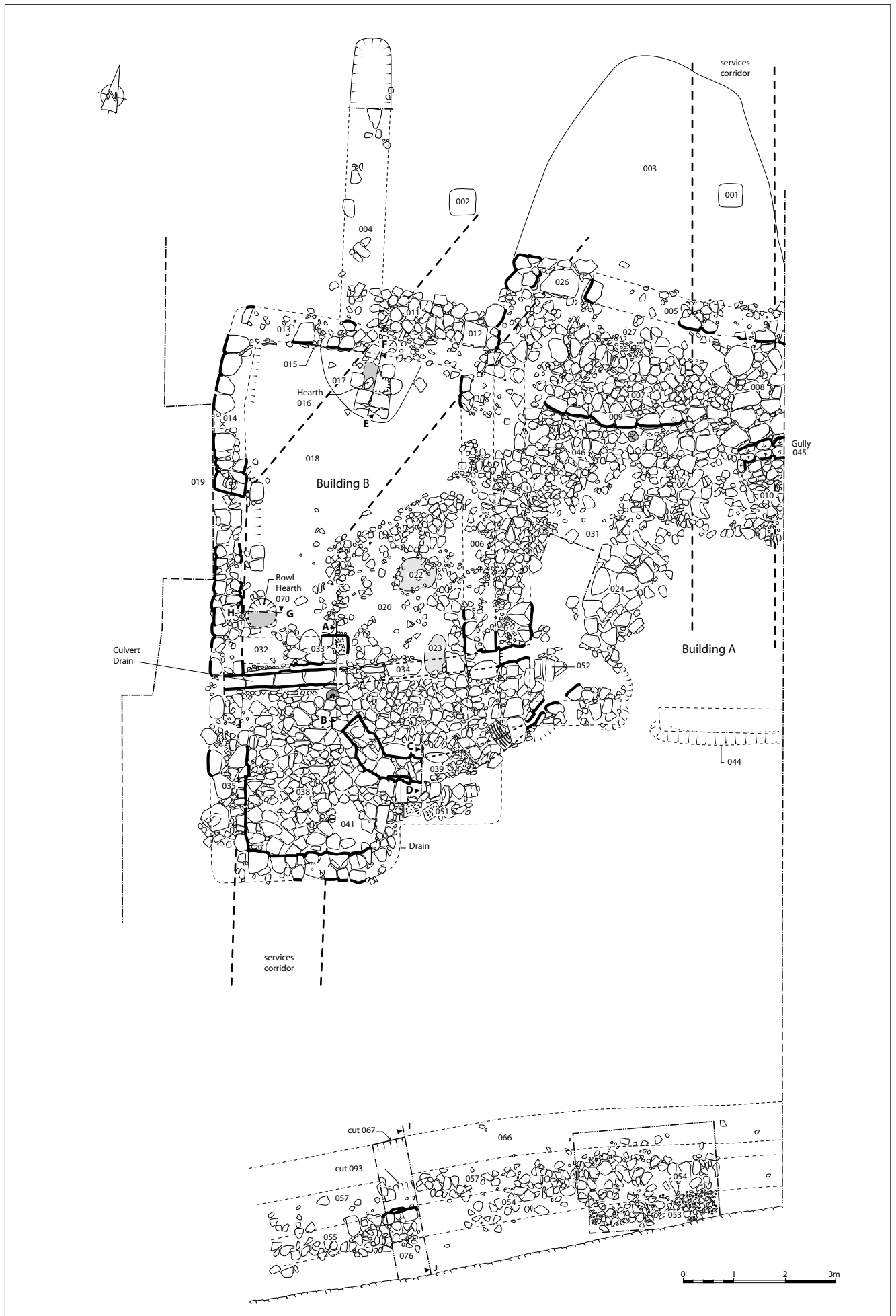


Figure 2 - Site plan showing archaeological remains and features

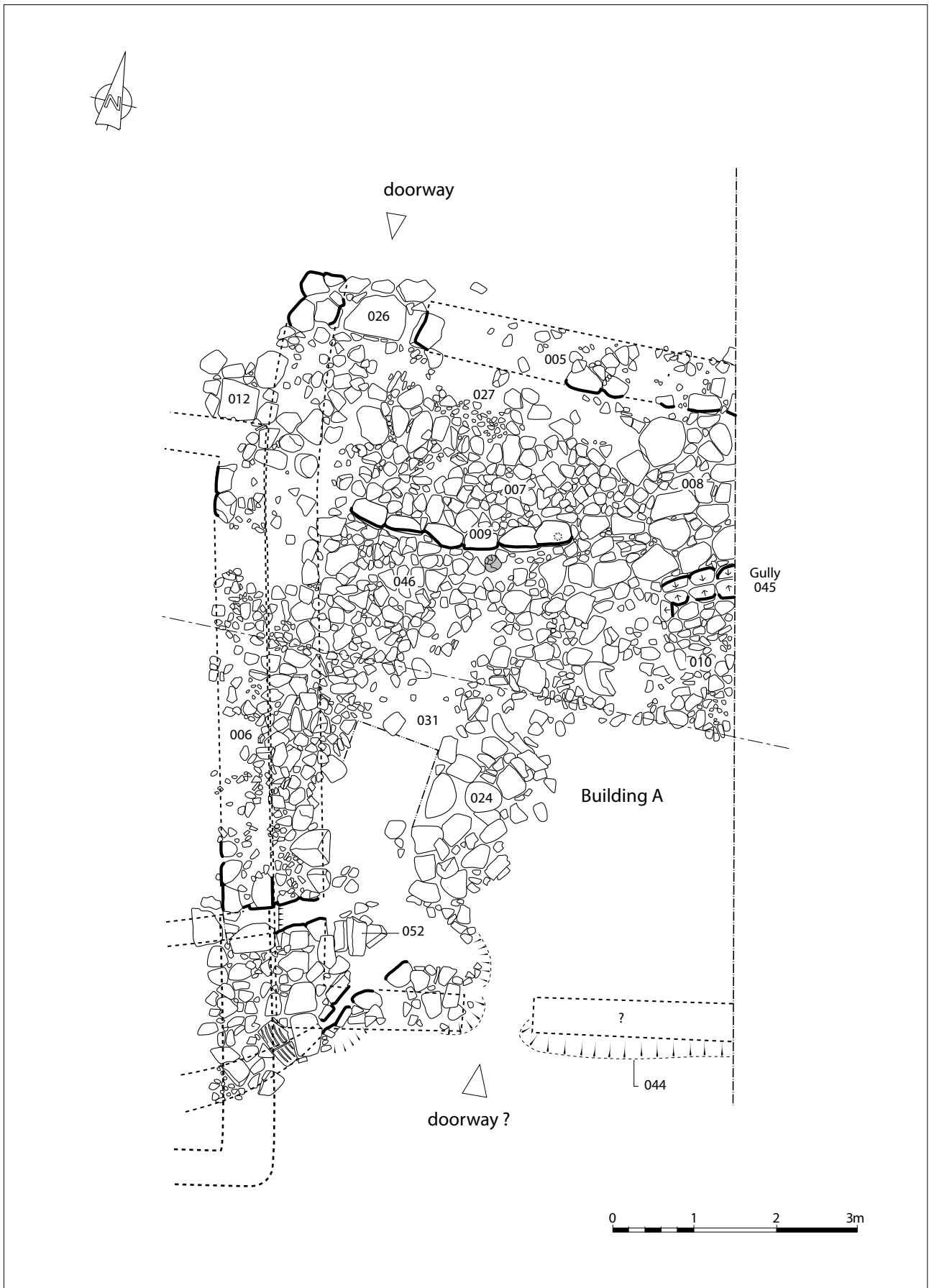


Figure 3 Plan of Building 'A' showing features.

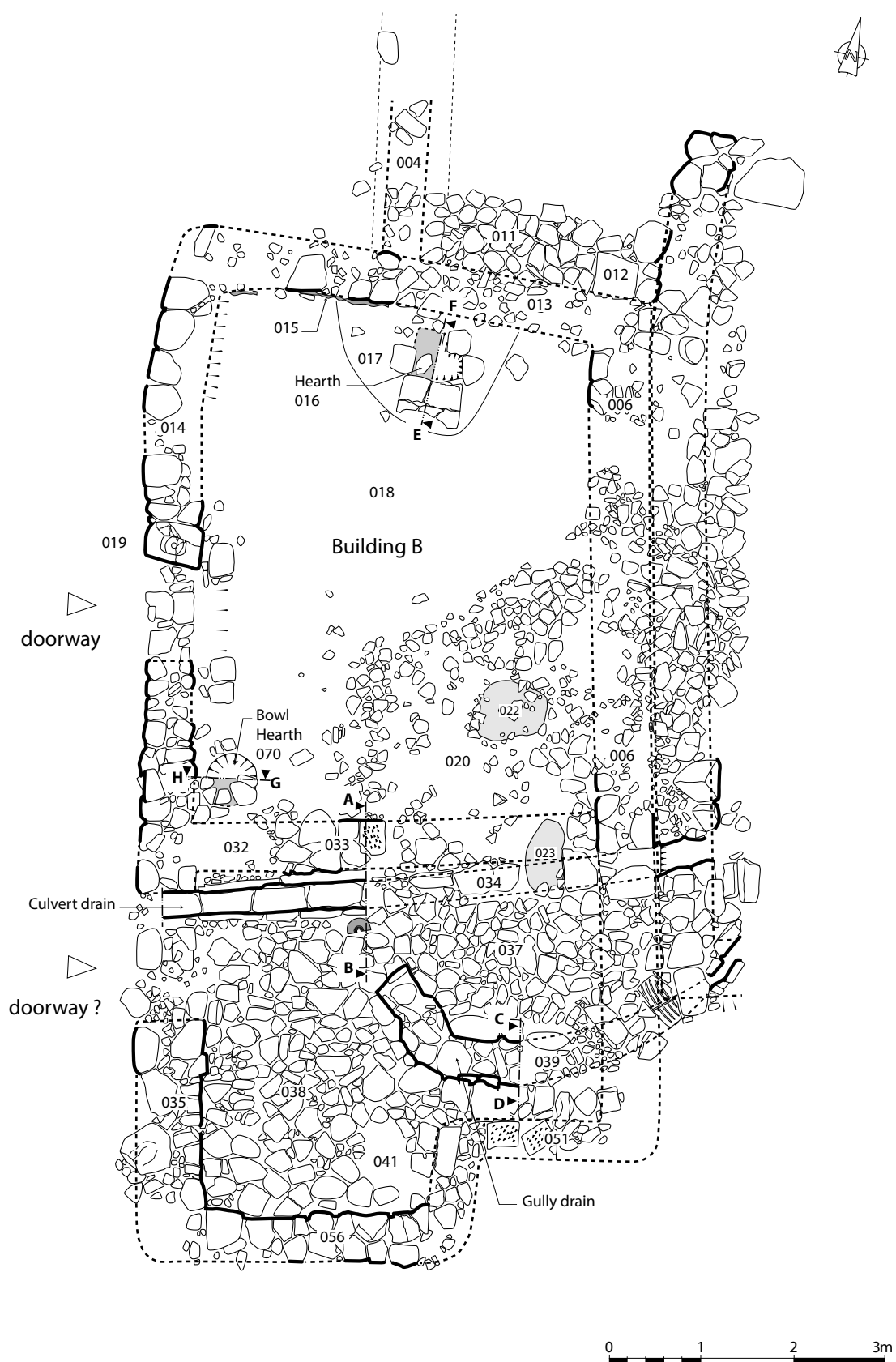
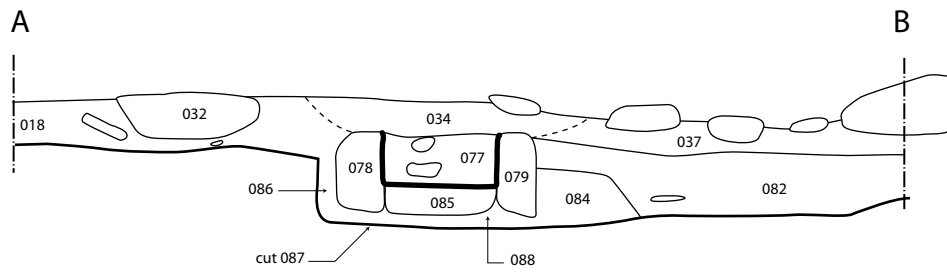
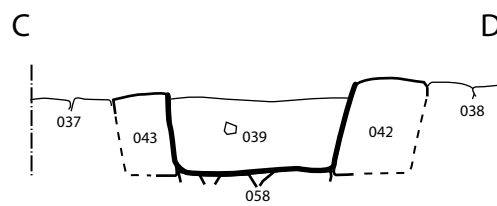


Figure 4 Plan of Building 'B' showing features.



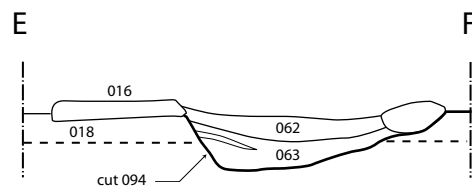
(a) West facing section through culvert drain



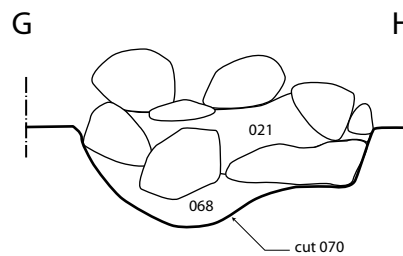
(b) West facing section through open gully drain



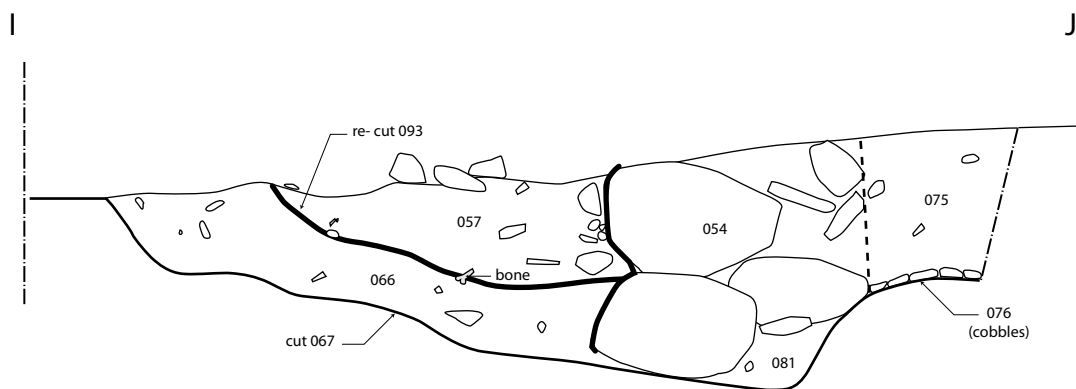
Figure 5 - Sections through drains in Building 'B'.



(a) East facing section through hearth



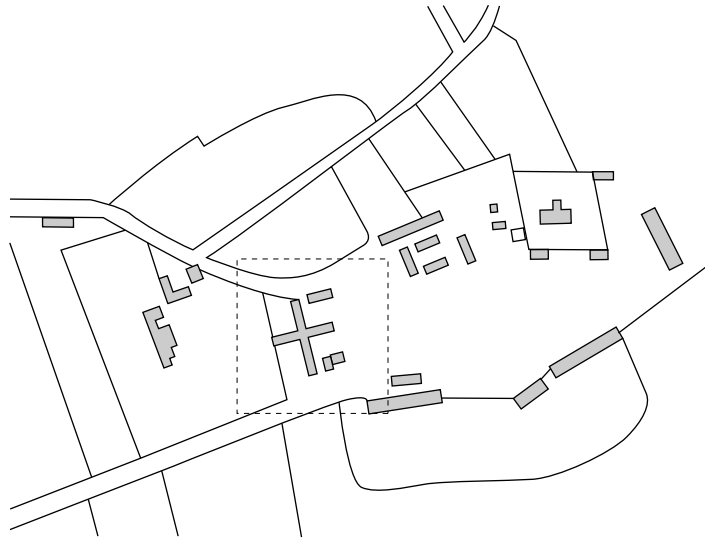
(b) North facing section through bowl hearth



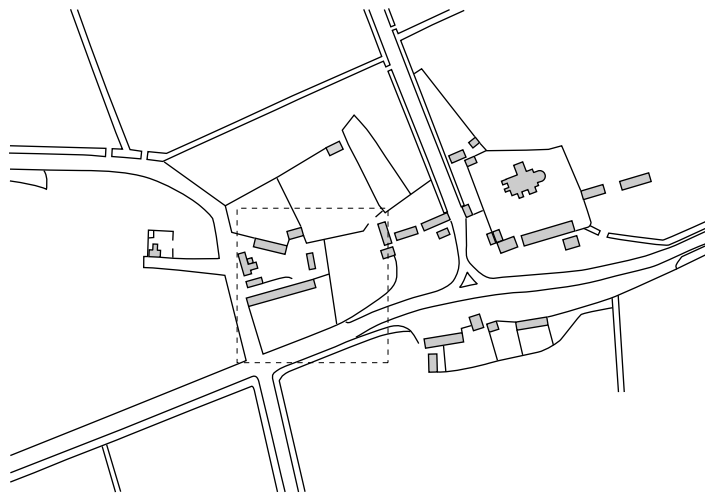
(c) Section through boundary wall 054 and ditch



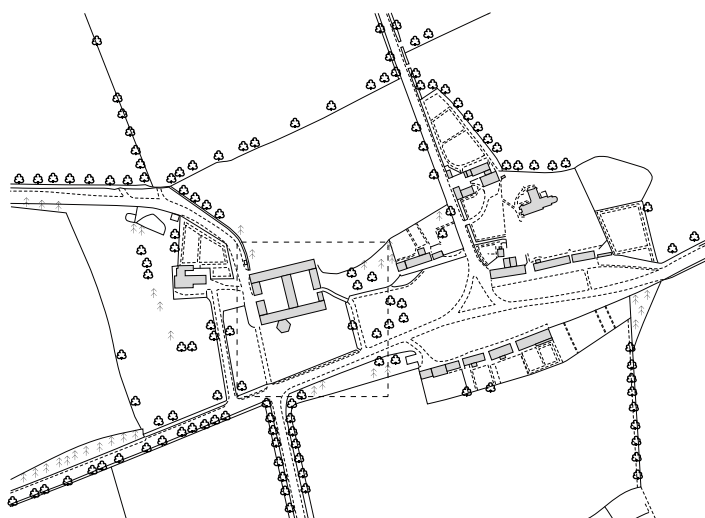
Figure 6 - Sections through hearths and bopundary wall.



(a) 1757 (after Gordon, L)



(b) c.1800 (after Adair, J)



(c) 1856 (after OS 1st Edition)

Figure 7 Comparative historical plans of Dalmeny village.

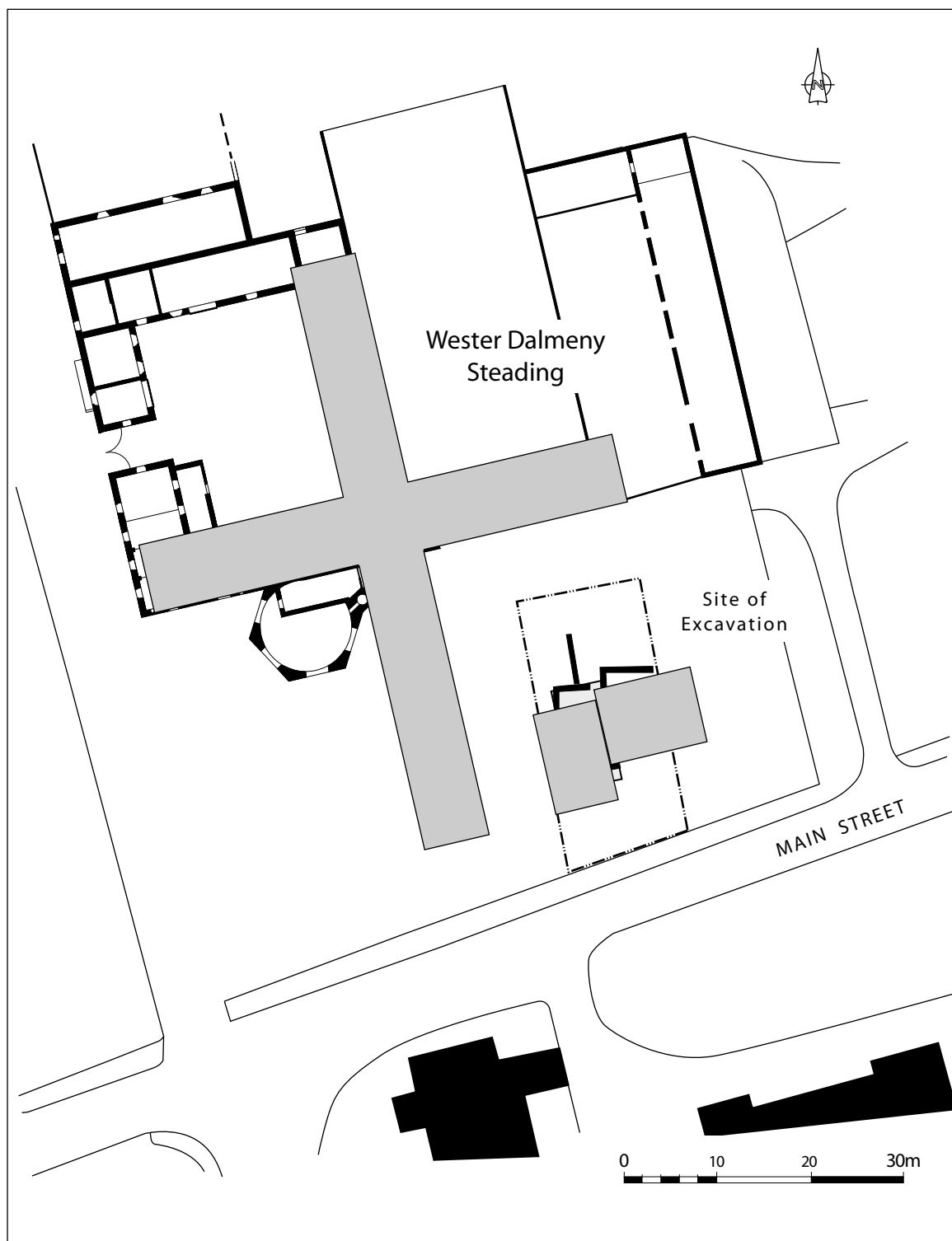


Figure 8 - Wester Dalmeny Steading with 1757 layout overlain.



Plate 1 Building remains from East (Building 'A' in foreground)



Plate 2 Boundary wall and ditch (with cobbled surface visible to left)



Plate 3 Gully drain and cobbled area in Building 'A'.



Plate 4 Post pad in Building 'B' (C. 019).



Plate 5 Building 'B' cobbled surface showing gully drain at left and culvert drain at right.



Plate 6 Culvert drain and cobbled area in Building 'B.'

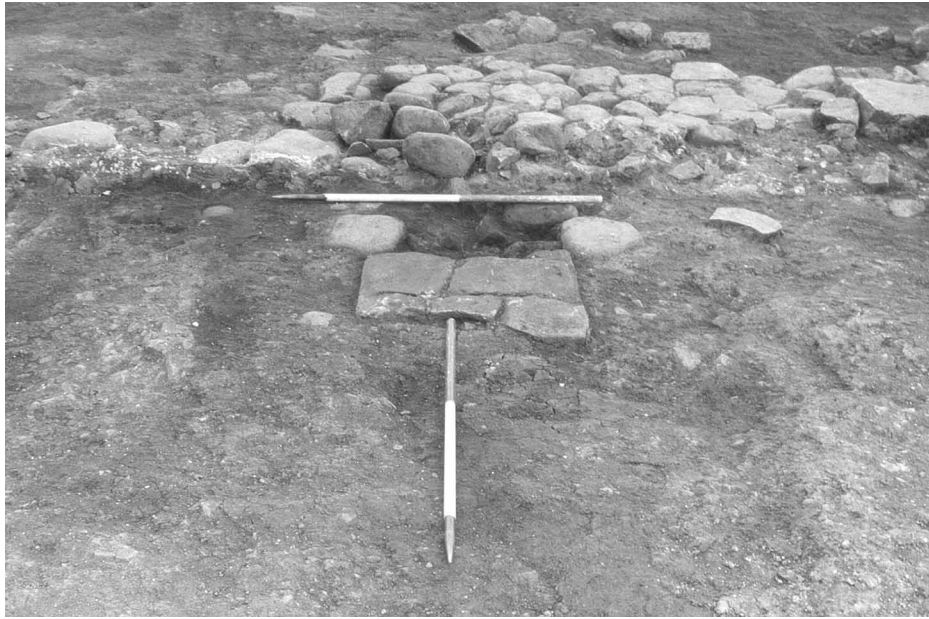


Plate 7 Principal hearth in Building 'B'.



Plate 8 Bowl hearth (sectioned) in SW corner of Building 'B'.