

Medieval features and finds from Balfarg/Balbirnie, Fife

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with contributions by Barbara A Ford, Catriona M M Graham,
Derek W Hall & Nicholas McQ Holmes, and illustrations by
Sylvia Stevenson

ABSTRACT

During the course of excavations of the Neolithic and Bronze Age sites at Balfarg/Balbirnie (Barclay & Russell-White 1993) several plough-truncated features were excavated containing medieval pottery, metalwork and coins. Amongst these features were several shallow pits and what appeared to be a mill-lade. The excavation and post-excavation work were funded and managed by Historic Scotland.

INTRODUCTION

The general background to the Balfarg/Balbirnie excavations, of which the material here is a small part, is presented in Barclay & Russell-White 1993. Medieval material was found during all five seasons of excavation from spring 1983 to autumn 1985, amongst the main body of prehistoric features. To avoid this material being buried in a far larger prehistoric report this summary report has been prepared. The project as a whole was directed and co-ordinated by Gordon Barclay, with site work in the 1985 season co-directed by Nick Tavener. Excavation of the lade and other features in area D was supervised by Annemarie Gibson and the lade in area C by the author.



The medieval features at Balfarg were situated in an area bounded by the Coul Burn and its un-named tributary to the south, in excavation areas C and D of the ceremonial complex. The only certain medieval feature in area C was the mill-lade. Medieval pottery was also retrieved from one pit and from the topsoil in area A to the west of the Balfarg henge (not illustrated) and from fieldwalking of the fields to the north. References to 'lanes' in the text are to the long machine-cut sample trenches excavated at Balfarg (illus 2).

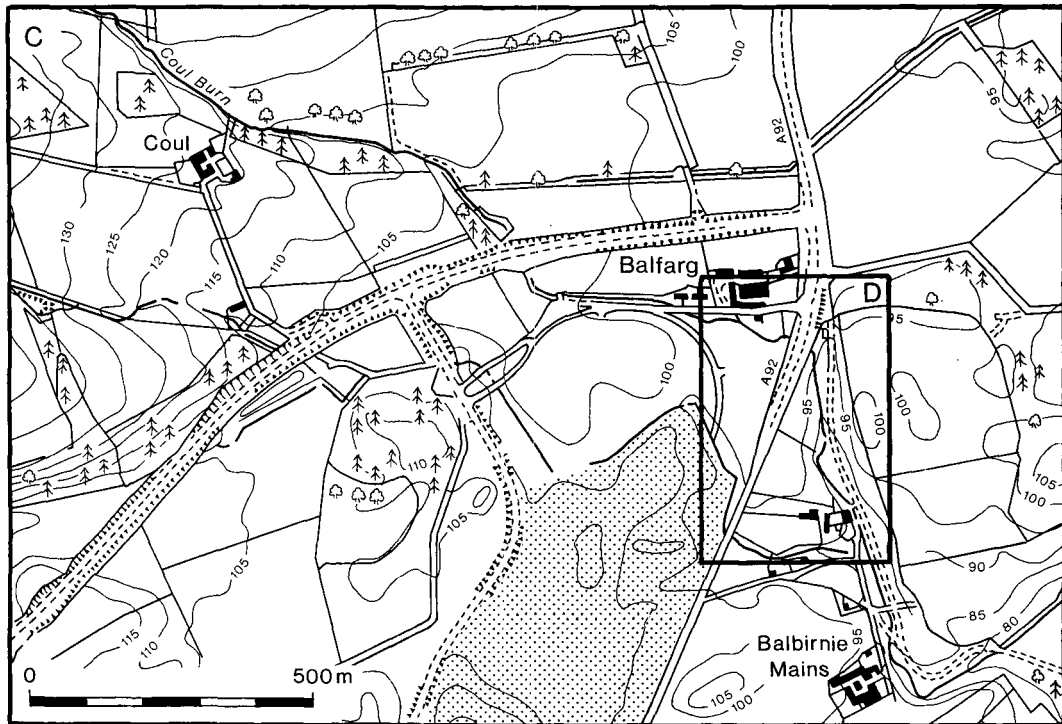
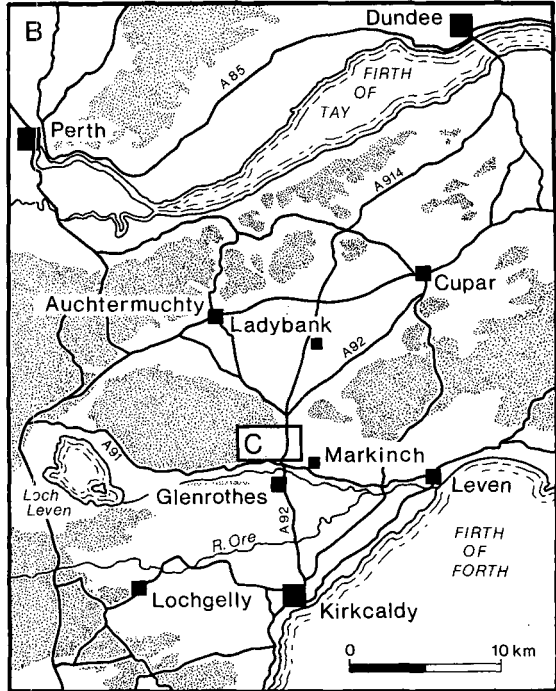
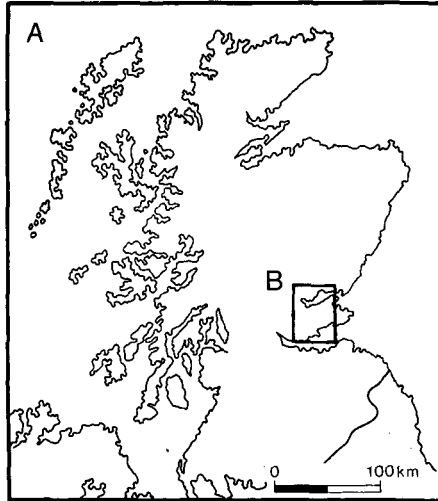
AREA A

One pit (F2238) (Barclay & Russell-White 1993, illus 7) produced three sherds of white gritty ware; a further eight sherds were found in the topsoil nearby.

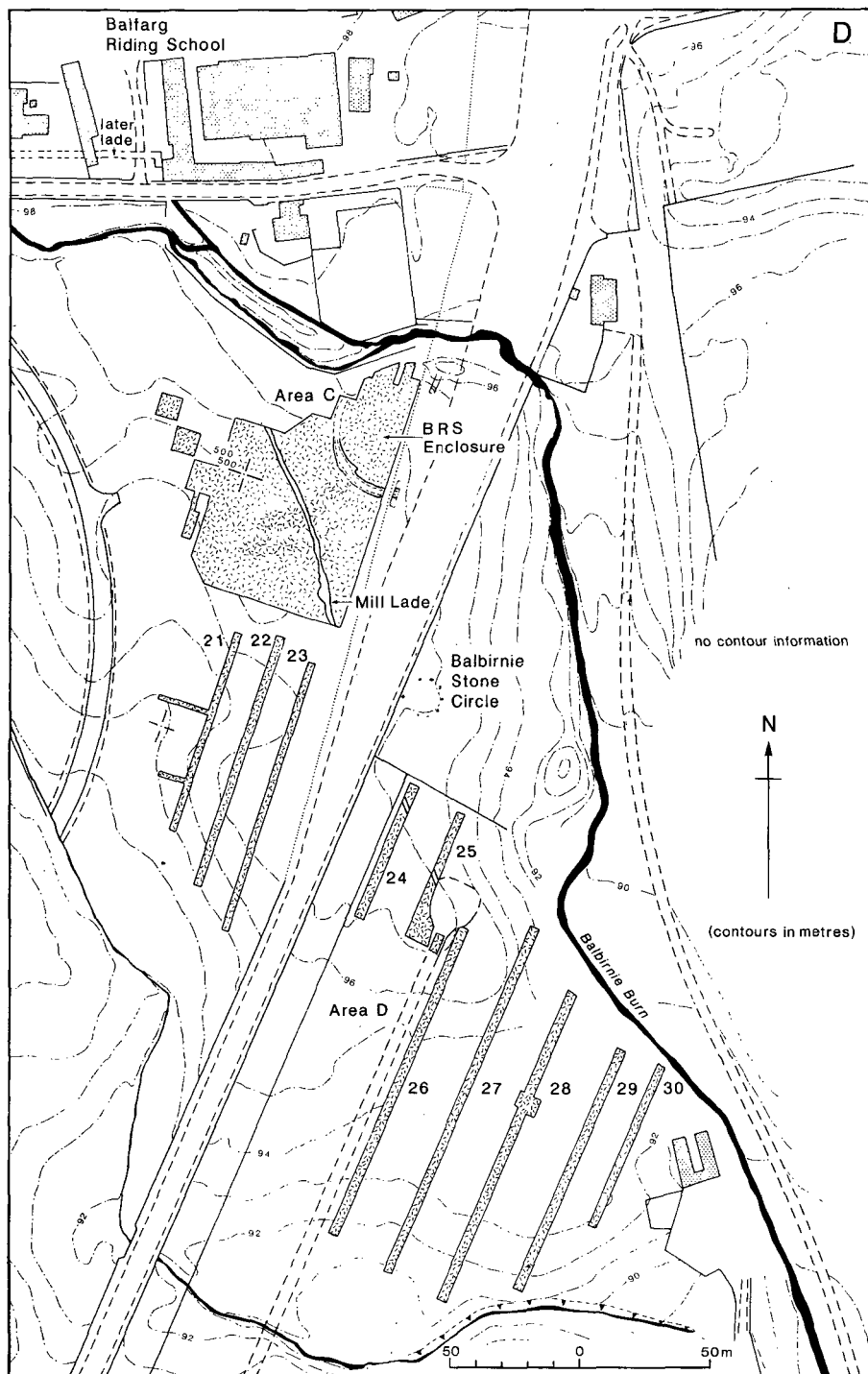
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Balfarg

-  Recent housing development
-  Land over 100m
- Contours in metres



ILLUS 1 Location map (Based upon the Ordnance Survey map © Crown Copyright)



ILLUS 2 Plan of the eastern part of the prehistoric ceremonial complex, showing the location of trenches and the line of the mill-lade

AREA C

By the end of the excavation in 1985 some 79 m of a relatively straight, quite uniform linear feature had been exposed. Some 10 m in total was excavated, wholly or in part. The fills are consistent in the main with the deposition of material by slowly flowing water. It has been interpreted as a lade – an artificial watercourse, usually related to a mill – and the broadening and structures described below (cutting III) as a sluice. That part of the lade uncovered in area C was aligned NW/SE. Extended to the north-west this line would intersect with the Coul Burn at the north-west end of a small islet which lies immediately south of Balfarg Riding School. This islet itself was part of a later water-management system (illus 2), which included a mill-dam in the area to the west of the islet.

The ring ditch, ring cairn Ai and cairn B of the ceremonial complex (Barclay & Russell-White 1993) were all cut on their north-east side by the lade; its line continued to the south-east across the comparatively featureless area to the south of the Balfarg Riding School (BRS) Neolithic enclosure. On the west side of the A92 road, in area C, the bottom of the lade was 2.06 m and 2.37 m below site datum (BSD), compared with 3.55 m (BSD) to the east of the A92 (illus 2, north end of lane 24), a drop of c 1.5 m over about 150 m (1%). Six segments of the lade were excavated (illus 3 & 4): I next to the ring cairn, II–IV in the south-east corner of area C, and VI in lane 24, area D.

CUTTING I (8142/8024; ILLUS 3 & 4)

When a relatively short length of the lade was first exposed and excavated in the summer 1984 season it was thought that it might be a natural or semi-natural water course. A 2 m length of this feature was excavated by hand revealing a roughly horizontal pattern of fine silting, interpreted as the deposition of fine material by slowly flowing water. The upper fills were looser and siltier than the lower. The stone content was negligible with a few medium to large stones noted throughout the fills. The lade at this point was nearly 1.5 m wide at the top and about 1 m deep with steep sides and a flat bottom. There were no finds.

During the 1985 season a far larger area of subsoil was cleaned revealing a substantial length of the lade and it could be seen in plan and in section that the feature was artificial. A significant change in the shape at one point (grid square 540/460) was noted; excavation, in cuttings II, III and IV, was concentrated in this area.

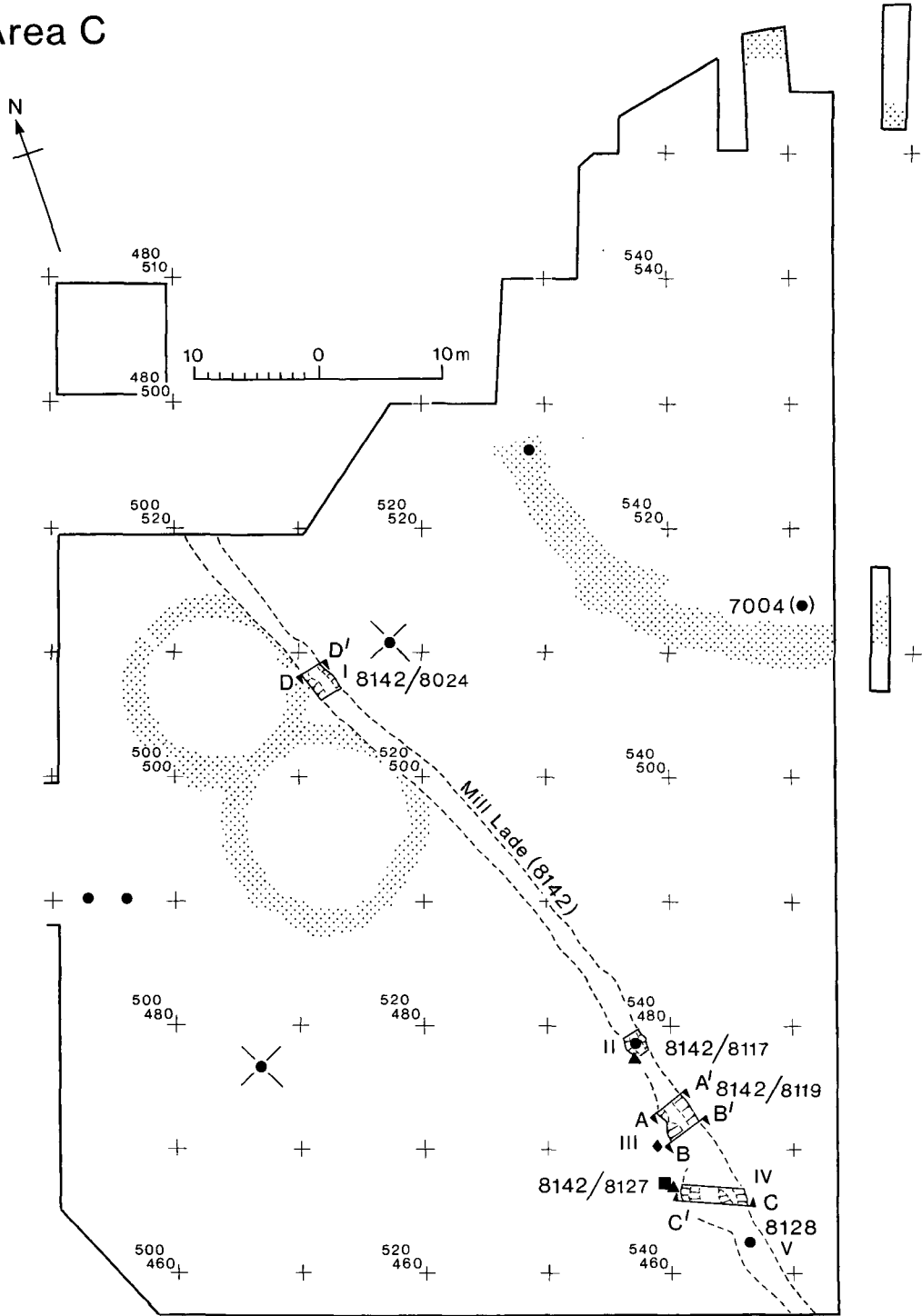
CUTTING II (8142/8117) (NOT ILLUSTRATED)

Situated at a narrowing of the lade the profile here was very similar to that in cutting I but it was shallower, less than 0.5 m deep. The subsoil and the backfill were both very stony, the latter being looser. Most of the fill appeared as distinct bands differentiated by stone size rather than texture or colour of the soil matrix, which was a fairly consistent dark brown loamy coarse sand. The uppermost stones were larger, overlying a layer of smaller stones. Some very large stones were positioned on the south-west side but these did not seem to form a distinct structure (but see Cutting III below). At the south-east end of the cutting only there was a thin lining of dark grey silty clay. Six sherds of white gritty ware and two of Perth local ware were recovered from this cutting.

CUTTING III (8142/8119; ILLUS 5 & 6)

At the subsoil surface the filled lade was seen to broaden out markedly. However, on excavation it was found to step in at about 0.25 m and again at 0.5 m depth below the surface. The two lowest fills were both roughly horizontal deposits. They were similar in nature, light to mid brown

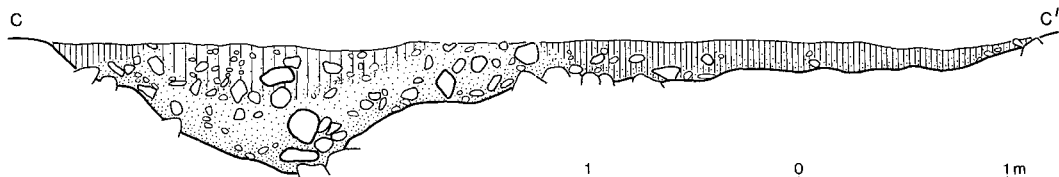
Area C



ILLUS 3 Plan of Area C of the excavation, showing the location of the cuttings through the mill-lade and the location of the prehistoric features it cut

8142/8127

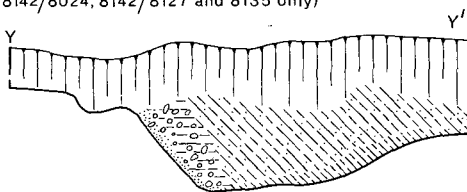
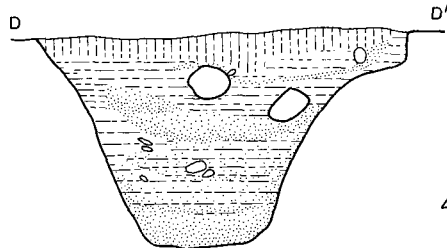
8135



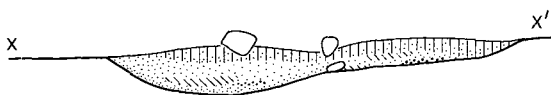
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8142/8024

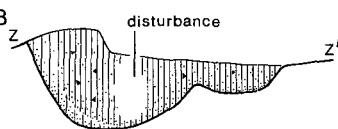
4003



4006



4008

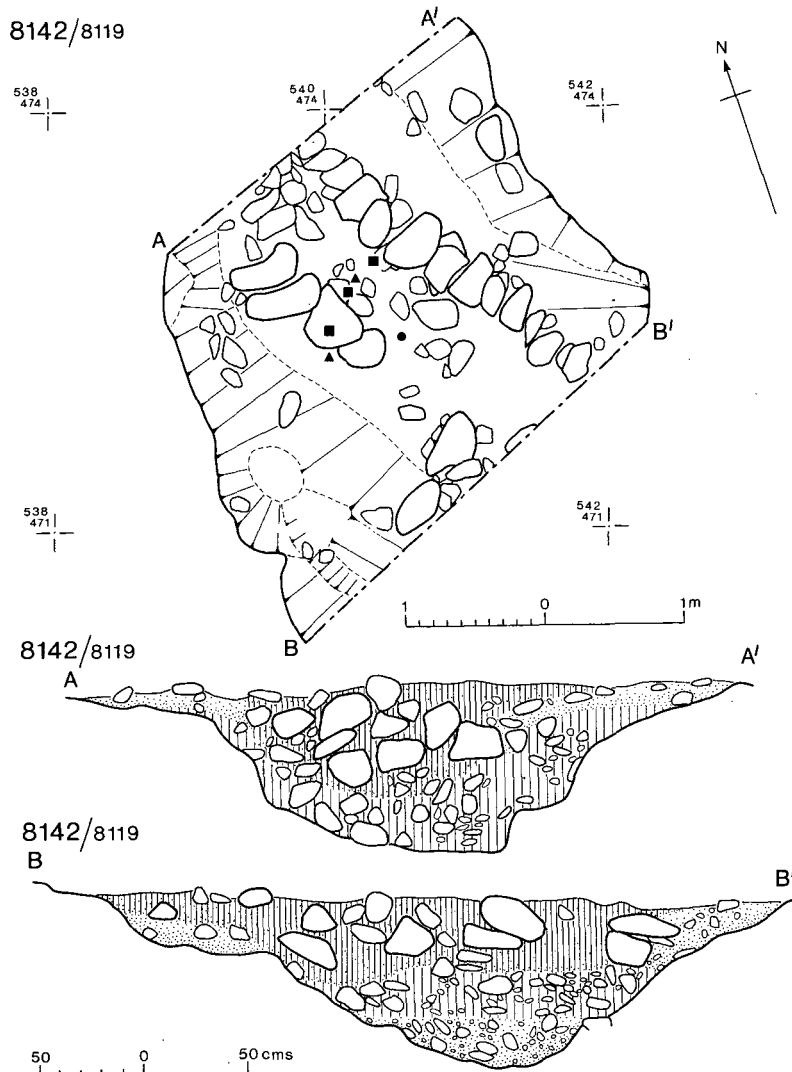


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ILLUS 4 Sections across the mill-lade in Cutting I (8142/8024); II (8142/8127) and V (4003)

	loam		charcoal
	silt/loam		pottery
	silt		copper alloy
	clay/silt		lead
	clay		iron
	sand		glass
	gravel		no specific location within context
	coal		

slightly loamy sands, but the lower was coarser with more angular stones and the upper was finer with rounder stones. Above these fills two low walls had been built running along the lade. The wall on the north-east ran the full length of the cutting (about 2.5 m), was never over two courses high, and curved towards the centre of the lade half-way along the cutting. The south-west wall extended for about 1.5 m from the north-west section and converged with but did not reach the other wall. Both walls were constructed of large fairly uniform stones. The main upper fill above and between the walls was extremely stony, large sub-rounded blocks (similar to the walls) in a dark brown sandy loam.



ILLUS 5 The mill-lade in Cutting III, in section and plan (8142/8119)

Most of the medieval metalwork was found here. The woodworking nails (BF17:964) were recovered at regular intervals along the base of the walls between wall and lade edge. The broadening of the lade, together with the stone structures and the concentration of nails, may be interpreted as a sluice.

CUTTING IV (8142/8127 & 8135)

Some 5 m south-east of cutting III the outline of the lade was obscured by a large area of dark sandy loam (8135). Cutting IV was aligned east/west across this feature rather than at right angles to the lade. The cutting was some 6 m long by 1.5 m wide. Feature 8135 was seen to be a shallow

scoop. The scoop just cut the upper fills of the lade (8127) on the west side. The bulk of the fill of 8127 was a light red brown coarse sandy loam with abundant very small to medium stones. Below this was a light red brown coarse sand. There was also some rooty interference on the east side of the lade. There were no finds in this cutting.

CUTTING V (8142/8128)

This slot was excavated a few metres to the south-west of cutting IV. The lade had the same profile and appearance as in 8127. The only significant difference was the recovery of the largest assemblage of medieval pottery on the site. The cutting could not be completed by the end of the season and neither plans nor sections were drawn.

CUTTING VI (4003; ILLUS 2, 4 & 6)

A short stretch of the lade was visible in one of the long narrow trenches excavated to sample the whole area between the Coul Burn and its unnamed tributary (Lane 24, Area D). Excavation was begun by machine but finished by hand. The section suggested a gradual infilling, lightening from the top to the bottom of the profile, where there was a higher silt content. A thin layer of pinky brown clayey silt covered the bottom of the lade. Over this the fills were described variously as a red sandy clay with silt, much stonier towards the bottom, or a thick layer of gravel with silt overlying a thin layer of coarse, yellow/brown sand. The lade here was about 1.5 m wide and 0.3 m deep.

AREA D

As part of the sampling scheme in the 1985 season of work excavation was undertaken on the east side of the A92 on the site of the Glenrothes Development Corporation tree nursery. A track ran up the hill between the plantation rows and widened into a turning circle for vehicles on the level ground (illus 2, lane 25, south end; illus 6). Seven lanes were stripped by machine and then cleaned by hand. The trenches were between 15 m and 20 m apart, aligned north/south, parallel to the road. The westernmost lane (24) has already been mentioned in connection with the lade (above).

Most of the excavated features occurred in two distinct groups: (1) in lane 25 and the north end of lane 26; (2) about 45m from the north end of lane 28.

Lane 25 Two features lay near the north end of the vehicle turning circle.

4002 This shallow, round-bottomed, linear feature, aligned NW/SE, was cut at the north-west end by 4012 and apparently did not continue beyond it. The fill was a mixture of gravel and sandy loam; width was about 0.8 m. One sherd of white gritty ware was recovered. This feature may have been the continuation of the lade but it was perhaps too shallow.

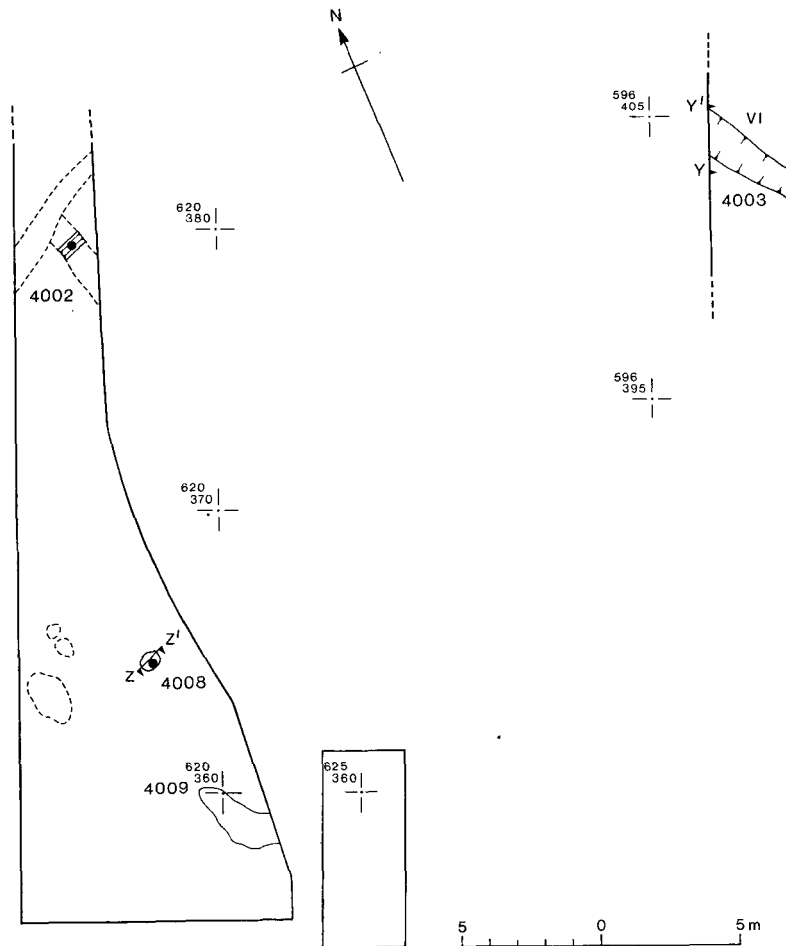
4012 This very shallow (0.5 m) feature extended for about 4 m across the trench NE/SW and about 0.7 m wide. Neither end was exposed. It had shallow sloping sides and was filled with gravel and silt. This may have been a cultivation furrow but no others were noted.

The south end of lane 25 was widened out to follow the outline of the turning circle and track (illus 6).

4008 This possible post-hole was half-sectioned. There were two fills. The 'post-pipe' was a very dark brown sandy loam with charcoal flecks. There was no stone packing and the soil packing was

Lane 25

Lane 24

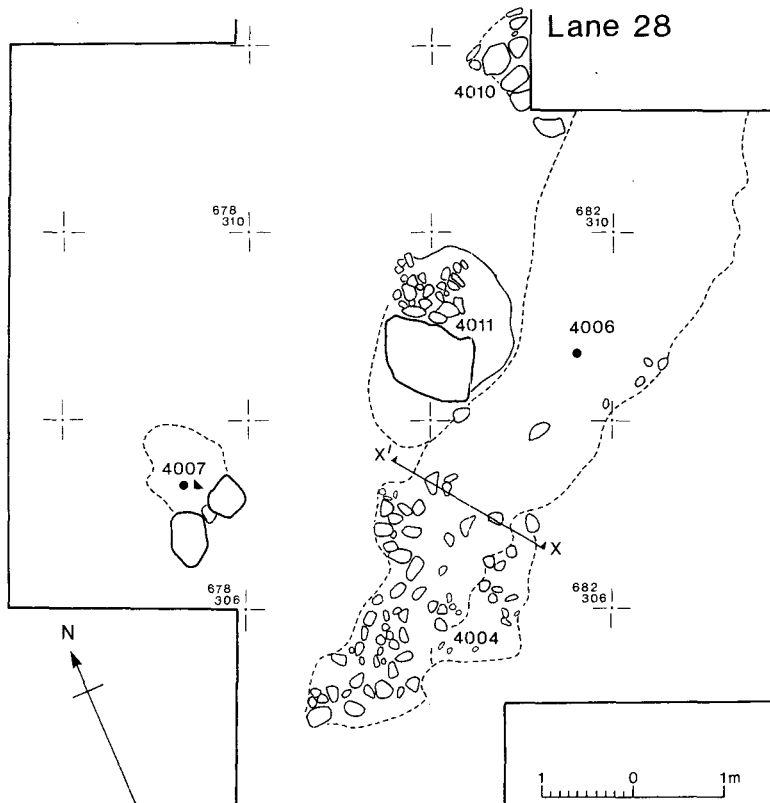


ILLUS 6 Plan of the area excavated at the vehicle turning circle on lane 25, and plan of Cutting VI across the mill-lade, in lane 24

a mid-brown loamy sand with small stone content. Two sherds of white gritty ware and some fragments of bone were recovered. The feature measured about 0.7 m wide and 3 m deep.

Lane 26 4001 This is described as a pathway. Width was 4 m and depth 0.75 m. Twelve sherds of a 'green-glazed' pottery were found but subsequently mislaid. Glass and iron fragments were also recovered. The feature was not fully excavated and no further interpretation can be made.

Lane 28 An extension to the excavated lane was made around a group of features in Lane 28. The features are tentatively described as a 'small industrial complex'.



ILLUS 7 Plan of the features located in lane 28; the location of this trench is marked by the expansion in width in lane 28, marked on illus 1

4010 An area of paving apparently set in clay with black charcoal smearing. It was not fully excavated. There were no finds. The feature extended 1.1 m north/south and 0.7 m to the edge of excavation.

4011 This feature, lying to the south of 4010, was a cluster of stones beside a natural large boulder. The stones were angular with many slanting (circular stone weight). The feature measured about 2.1 m NE/SW and 1.2 m NW/SE, and it was not excavated.

4006 The feature, to the south-east of 4011, was an elongated scoop aligned NE/SW. It extended from the northern limit of excavation about 5 m before petering out to the south. The cut was wide and shallow (1.5 m by 0.16 m) and was filled with a jumble of burnt clay lumps, charcoal smearing in brown loam and flecks and small lumps of coal and clinker, with dirty yellow brown sand towards the bottom. One sherd of reduced greyware was recovered. At the south-west end of 4006 was a possible cobbled surface.

4004 This was cleaned but not removed. More 'green-glazed' pottery was recovered but subsequently mislaid. The area was 2 m NE/SW and 0.9 m across.

4007 At some distance from the other features, this feature consisted of four paving stones set in clay and capped with a pinky grey clay. This capping formed a very hard surface and mixed into it were flecks of iron, coal chips and clinker. The area is described as roughly rectangular. Dimensions were 1.2 m NE/SW, 0.5 m wide and 0.25 m deep. Two sherds of Perth local and one sherd of reduced grey ware were recovered.

THE POTTERY

Derek W Hall

In the study of this small group of pottery (349 sherds), an attempt has been made to link the results with pottery studies carried out on material from Scottish Urban Archaeology Trust (SUAT) excavations in St Andrews and Urban Archaeology Unit (UAU, SUAT's predecessor) excavations at Inverkeithing, Fife. Eighty per cent of this group of pottery came from ploughsoil horizons overlying the prehistoric features and the remaining 20% was from cut features of possible medieval date. This study has been undertaken without the benefit of petrological analysis.

SCOTTISH EAST COAST WHITE GRITTY WARE

Most of the assemblage is of this fabric type. Recent work on the pottery type has identified apparent regional characteristics in the types and forms of vessels being produced. The regional areas currently identified are the Borders, Lothian and Fife. The Balfarg group includes sherds from vessels of Borders and Fife production. White gritty ware is a hard reduced clay with abundant rounded quartz inclusions. The two most common vessel types produced in this fabric are cooking pots and jugs, with cooking pots in the majority.

The cooking pot sherds from Balfarg are in the main from globular vessels that have been identified as a possible Fife regional type (Hall, forthcoming). Three sherds have been identified as probably being from straight-sided cooking pots of Borders type (Cox 1984). No regional variation in the form of jugs being produced has yet been identified in white gritty ware. The glazed jug sherds from B are green or yellow-brown with some external raised decoration on sherds from the ploughsoil (cat nos 9–11). This raised decoration is represented by vertical applied clay strips or applied clay pads glazed a different colour to the main body of the vessel. The cooking pot sherds have smoke blackening on their external surfaces and are unglazed. Another Fife regional type is represented by a single rim sherd from a frilled cooking pot rim from context 1004 (cat 3).

PERTH LOCAL

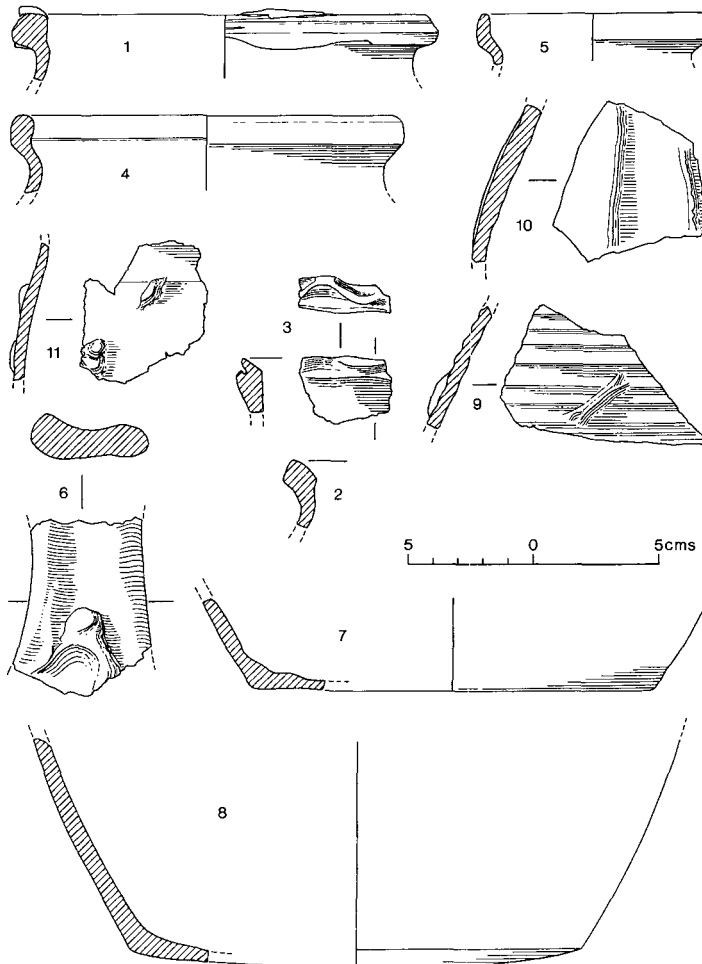
This fabric type has been identified as a possible local product being made in the medieval burgh of Perth from the 13th century (Blanchard 1983). As yet no kiln sites have been located for this industry. Perth local is an oxidized orange clay with sandy inclusions and both jugs and cooking pots were being produced. Nine sherds of this fabric are present in the Balfarg assemblage.

SCOTTISH REDUCED GREYWARE

This fabric type has long been identified as a late medieval/early post-medieval tradition in Scotland (Haggarty 1980). It is a heavily reduced grey fabric with an external green glaze. Four sherds are represented here.

ENGLISH IMPORTS

There are five bodysherds from the ploughsoil belonging to a decorated jug that may be London sandy ware. The fabric is very hard and sandy with occasional black ironstone inclusions. The external surface is glazed green with traces of brown glazed vertical stripes. London sandy ware has been identified in early 12th-century assemblages from Perth and its presence in the B assemblage is very interesting.



ILLUS 8 Medieval pottery: the numbers correspond to Hall's catalogue numbers

THE ILLUSTRATED POTTERY (ILLUS 8)

- 1 Rim from globular cooking pot in white gritty ware. Remains of handle junction on top and side of rim. Probably from Fife type cooking pot of 13th/14th-century date. (8001/893/1645)
- 2 Cooking pot rim in white gritty ware. Probably from Fife type cooking pot of 13th/14th-century date. (8001/893/1655)
- 3 Frilled cooking pot rim in white gritty ware. Fife type of 13th/14th-century date. (1004/650/754)
- 4 Cooking pot rim in white gritty ware. Possibly from straight-sided Borders type 13th/14th century. (8128/911/1720)
- 5 Jug rim in white gritty ware. Unglazed. 13th/14th century. (8001/893/1697)
- 6 Jug strap handle in white gritty ware. Traces of external light green glaze and remains of thumb pad indicating junction with main body of vessel. 13th/14th century. (8001/888/788)
- 7 Base and sidewall from flat-bottomed jug in white gritty ware. 13th/14th century. (8128/911/1725)

- 8 Base and side wall from straight-sided Borders type white gritty ware. 13th/14th century. External smoke blackening. (8117/912/1683)
- 9 Decorated jug bodysherd in white gritty ware. External light green/brown glaze with raised diagonal applied pad. Slightly rilled exterior. 13th/14th century. (8001/893/1623)
- 10 Decorated jug bodysherd in white gritty ware. External light green/brown glaze with raised vertical applied strips. 13th/14th century. (8001/893/1690)
- 11 Decorated jug bodysherd in white gritty ware. External light green glaze with two applied sub-rectangular clay pads. 13th/14th century. (8001/914/1765)

TABLE 1
Pottery by context

Context No	Context	White Gritty – Cooking Pot	White Gritty – Jug	Perth Local	Reduced Greyware	Import
1000	Ploughsoil	1				
1002	A/B Horizon	5	1		2	
1004	B Horizon	27	8	4		
1020	Ploughsoil	1				
2000	A/B Horizon	2				
2002	B Horizon	1	3			
2201	A/B Horizon	1				
2238	Pit	2	1			
2400	Ploughsoil		1			
4002	Linear feature	1				
4006	Scoop				1	
4007	Floor			3	1	
4008	Post-hole	2				
7004	Ditch	1				
8001	Ploughsoil	172	39			5 (London Sandy?)
8005	Pit	1				
8117	Mill lade	6		2		
8119	Mill lade	4				
8128	Mill lade	44 (3 straight-sided Borders)	7			
TOTALS		271	60	9	4	5

DISCUSSION

Although the group of medieval pottery from Balfarg is a small assemblage, it is important. This is true both for the apparent tight date range represented and the mix of two regional styles of white gritty ware. The material from the backfilling of the lade is of 13th/14th-century date. The other putative medieval features would also seem to be of a similar date with the occasional presence of slightly later 15th-century reduced grey ware sherds in the scoop (4006) and the floor surface (4007). The suggested date range is also reflected in the pottery from the ploughsoil which therefore does not represent intrusive material from the manuring of the field. The nature of the pottery in this assemblage is similar to that normally recovered from an urban setting and its presence in a small group from a rural context has interesting implications for the type of medieval occupation partially uncovered by these excavations. It suggests the proximity of a major medieval rural settlement to the site.

METAL, GLASS, COINS AND JET

Barbara A Ford

NON-FERROUS METAL

Eight of these nine artefacts were recovered from lade cutting III. Those of copper alloy included a small cast D-shaped buckle, a rivet fragment, fragments of sheet and a strap end. There were also three fragments of lead alloy sheet and a fragment of lead alloy waste. A ring pin was found in the topsoil.

The D-shaped buckle (illus 9: 1) of a type used to fasten small leather straps is similar to a buckle which came from a late 13th/early 14th-century context in Exeter (Goodall 1984, 339, fig 190, no 70).

The rivet fragment (illus 9: 8) was formed from folded copper alloy sheet. Rivets of this type were often used in the repair of copper alloy vessels. Other examples have been recovered from Perth where some were found riveting together two pieces of sheeting (Ford 1987, 127–8, 39–41; Ford 1995). Fragments of vessels repaired using this method have been found at King John's Hunting Lodge, Essex (Rahtz 1969, 91, nos 113–15).

The ring pin (illus 9: 3) recovered from topsoil had a T-shaped head, a type known as crutch headed. It is very corroded. There are, however, traces of ring-and-dot decoration on the head. Both the ring and pin heads of crutch pins are often decorated with ring-and-dot motifs (Fanning 1969). Crutch-headed pins are rarely unringed (Armstrong 1922) and this artefact is bored on either side on the head to take a ring, which is now missing. They often had stirrup-shaped rings. A complete crutch-headed pin with a stirrup ring is in the collection at Limerick Museum (Fanning 1969). Similar pins have been recovered from Viking contexts at Jarlishof, Shetland (Hamilton 1956, fig 60, nos 1 & 2).

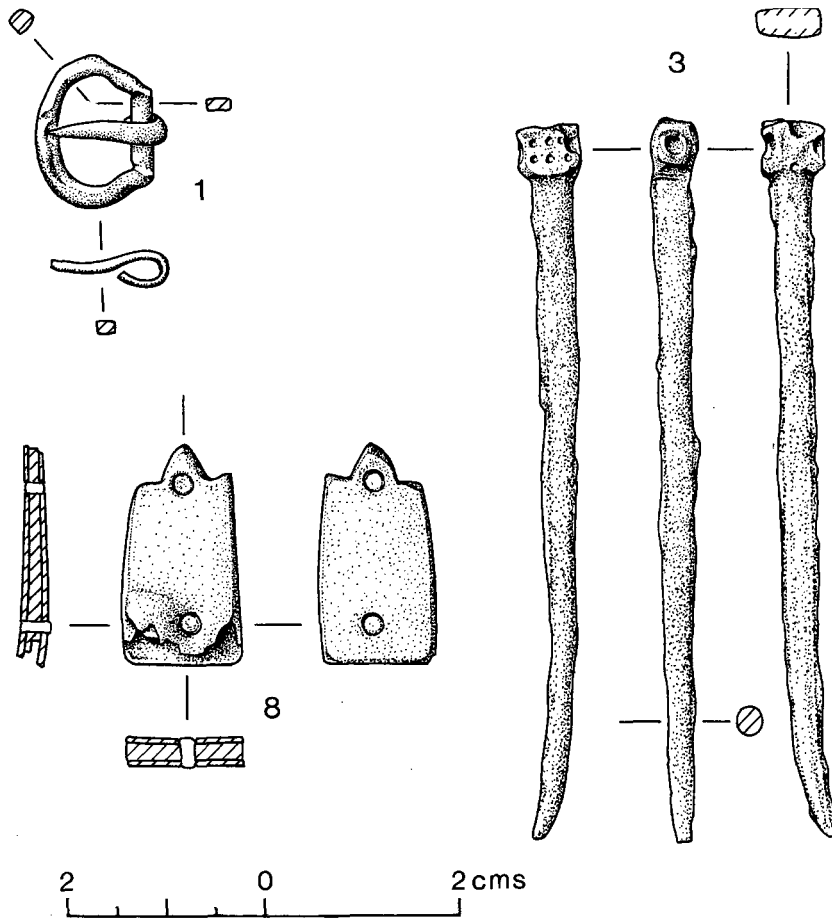
Loose ring pins were worn as dress fasteners or as ornaments on a cloak or other garment. They were the most common type of dress fastener in Celtic Britain in the early Christian period (Laing 1975). Many examples have been found in Ireland, with others often of very similar type being recovered from Scottish sites. A few Scottish crutch-headed pins have their counterparts in Ireland, belonging to the Viking period (Laing 1973). Fanning (1969) suggests that crutch-headed ring pins with ring-and-dot decoration come from the end of the ring-pin sequence, with 11th- and 12th-century examples coming from Dublin, and 11th-century or later examples from Ballinderry (Hencken 1936).

A fragment of copper alloy sheeting was recovered. It is curved and has a central irregularly shaped rivet hole. It is probably part of a mount or fitting. There were several fragments of lead alloy sheets. One has been tightly rolled into a tube. Three other fragments were associated with a fragment of slag.

The copper alloy strap end has fragments of leather strap still in place. It is constructed from 3 fine pieces of sheet shaped at one end and riveted together with copper alloy rivets. The central plate is fork shaped and the strap is fitted between these forks. Fork shaped central plates have been noted on a number of belt shapes and strap end buckles from London and are thought to be dated to the 14th century (LMMC 1940).

IRON

The majority of the iron objects was recovered from cutting III through the lade (8119). These included woodworking and horseshoe nails, one staple, fragments of sheeting and a small rod. A single horseshoe nail of fiddle-headed construction was recovered from this cutting, associated with fragments of five other horseshoe nails. This type of nail was used in horseshoes with wavy



ILLUS 9 Non-ferrous metalwork

edges and countersunk nail holes until the mid-13th century. All 11 woodworking nails had shanks of rectangular or square cross-section. Where discernible the heads are flat and are comparable with the vast bulk of woodworking nails found on medieval sites in Scotland. The two staples are in a very corroded condition. The smallest oval in cross-section is probably modern and was found in one of the small pits (4006). The large (121 mm long) staple was found in the lade. It is of similar size to one found at Brome in Suffolk in a mid 14th-century context.

COINS

(with Nicholas McQ Holmes)

Two coins were found during the excavations. The earlier, an English silver short-cross from the reign of King John I of England (1199–1216), was recovered from the lade where it was found in association with the possible sluice system, in cutting III (illus 10). The other coin was very worn, but probably Scottish, or possibly a French ‘double tournois’ (c 1590s – 1640s). It was unstratified.



ILLUS 10 English silver short-cross from the reign of King John I of England (1199–1216)

GLASS

A fragment probably from a hexagonal-sided bottle or flask was recovered from sample lane 4:27. It has been blown in a mould. A base of a hexagonal flask was recovered from Queen Street, Exeter, of c 17th-century date (Charleston 1984, 271, G80) and two hexagonal bottles were found in contexts associated with the Civil War at Sandal Castle, Yorkshire (Moorehouse 1983, 226, nos 59, 71).

JET

A small jet mount was recovered from Cutting III across the lade, where it was associated with the silver short cross penny. Objects of jet have been found on sites of medieval date, notably from York (MacGregor 1982; Waterman 1959), and Whitby in Yorkshire is the closest source to Scottish sites. In Scotland objects of jet have been found in medieval contexts at sites in Perth and at Threave Castle (Good & Tabraham 1981).

DOCUMENTARY SOURCES

Catriona M M Graham

There are problems in searching for documentary evidence of Scottish medieval sites. In addition to the general political and economic condition of Scotland at the time, there are significant problems associated with document survival and location. For example, the Scottish Record Office may house uncatalogued material of relevance to this site bound in volumes dealing with matters

apparently unrelated to central Fife. There is a further complication in that, at the time of the apparent backfilling of the mill-lade, the lands of Balbirnie were held by a minor (Earl Duncan X).

There is no early reference to the name Balfarg in the charters and all association is made through Balbirnie (or Balbrenny). The earliest mention of Balbirnie found so far dates to around 1167–71 when the lands were granted to the Earl of Fife. Thereafter references occur in the charters confirming the grant of lands to the earls. The first specific reference is 1293, in an account of the feudal reliefs due by the various lands comprising the earldom of Fife. A similar account in 1294 is accompanied by an account of the extent of the earldom. Although this account does not mention Balbirnie by name, the relief due from the fulling mill (*molendino fuleretico*) is exactly the same (54s 4d) as that due from the lands of Balbirnie. This is a strange coincidence and surely suggests that the location of the mill is at Balbirnie.

There are no further references, which suggests several possibilities: the records have not been found, have yet to be published or have been destroyed, or the mill ceased producing revenue about that time.

THE DOCUMENTS

1167x1171 Grants (confirms?) to Orm son of Hugh (son of Gillemichel Earl of Fife) Glenduckie and Balmeadie (in Dunbog), Fife as Earl Duncan (of Fife) has quitclaimed them to Orm in exchange for Balbirnie (in Markinch). (Barrow 1958, no 14, p 130)

1167x1171 Confirms to Duncan II Earl of Fife West Calder, Midlothian, granted to Earl Duncan I by King David I; and grants Strathleven, Fife; the whole to be held by knights service. (Barrow 1958, no 559, p 447)

Earl Duncan IX of Fife died 10 Sep 1289. Earl Duncan X of Fife was born after his father's death and taken into wardship. The earliest clear evidence that he was restored to his Scottish lands is an inquest of 14 Oct 1316 into the homage owed by him to the Abbot of Dunfermline. (Duncan 1988, p 356 *et seq*)

1293, Nov 20 Et de liiij s iij d de fine Dony pro relevio terrae suae de Balbrenny. Account by Walter de Cambo of the issues of the Lands and Tenements belonging to Duncan, Earl of Fife (Pipe Roll, 24 Edw.I in Stevenson 1870).

1294, Feb 16 Et de liiij s iij d de relevio pro terra de Balbrenny. (*Op cit*)

1294, Feb 16 De molendino fuleretico per annum liiij s iij d. Extent of the Lands of the Earldom of Fife, delivered to Walter de Cambo by Richard de Daringtone (*Op cit*).

Although the fulling mill is not stated to be at Balbrenny only the mill and the lands of Balbirnie are stated to be due liiij s iij d. None of the other lands has a similar value.

GENERAL DISCUSSION

C J Russell-White

The most significant part of this glimpse of medieval Balfarg is the lade. This was clearly part of a system of water management to power an adjacent, as yet undiscovered mill. The walls in Cutting III, the only structure found in the lade, are unlikely to have supported a water-wheel themselves

(see below), although they may have been associated with a sluice, a gate or a bridge. Artefactual evidence from here and to the south-east (white gritty ware and short cross silver penny) suggests a *terminus post quem* for backfilling of the late 13th or early 14th century. The line of the lade and the contours suggest a possible site for the mill somewhere in the area of the north ends of lanes 26 and 27.

A neighbouring site for a modern mill pond, lade and mill ? are shown at modern NGR NO 284033, on the Coul Burn adjacent to the Riding School (OS 6-inch 1st ser.), which is presumably one of the many mills recorded in the parish of Markinch in 1794 (*Statistical Account of Scotland*, 533). Ten corn mills, four barley mills and one flour mill are listed (*ibid*, 525). By 1845 only one corn mill is reported for the parish and no location is given (*New Statistical Account of Scotland*, IX, 672).

Of the two types of water-wheels current in 13th- and 14th-century Scotland, horizontal wheels were generally limited to the Northern and Western Isles and the north and west Highlands extending as far as the south-east Grampians in the 17th century (Shaw 1984, 10–11). It is unlikely, therefore, that the Balfarg/Balbirmie mill was of this type. The second form, the vertical wheel, is a technically far more complex construction which could be placed directly on a stream, but, for better control of water supply, was more likely to have been placed on a purpose-built lade. The more advanced technology also made the vertical wheel more suitable for industrial development.

This greater technical complexity obviously required increased financial investment, probably by an estate rather than an individual tenant. In Wales it has been argued that 'In general the mill is seen as the lord's responsibility and, whether from ancient custom or under Norman influence, the maintenance and the supply of materials falls upon the community as a labour service' (Butler 1987, 53). This may also have been true in Scotland.

Charters do not mention horizontal mills, owned by tenants, but only the larger, estate-built, vertical wheels. These were capable of being constructed on the larger waterways, for example, the River Leven, 1.5 km to the south (Shaw 1984, 46) but do not preclude construction on smaller courses. The length of the Balfarg lade, over 270 m, indicates a construction requiring some considerable investment.

The simplest type of vertical wheel was the undershot where the bottom of the wheel was set in the flowing water. It is argued that this form is most suited to low-lying areas with strong flow of water and only slight fall in level (Buchanan 1972, 241). The earthworks associated with an undershot wheel are very simple. An undershot wheel, needing no substantial drop, could have been sited on a much shorter lade than at Balfarg. More developed forms are the breast-shot, in which water is directed midway down the back of the wheel, and the overshot, where water falls on to the top of the wheel. Either type of wheel could have operated at Balfarg with 1% incline in the lade. There is a sharp drop back to the burn to the east of the excavated areas which could accommodate an overshot wheel, particularly if the mill itself were cut into the hillside as that on the Poldrait Burn in Glasgow (Pollock, pers comm).

USES OF WATER POWER

In pre-16th-century Scotland use of water power was limited to the milling of grain and the waulking (fulling) of cloth. The earliest mechanical waulk mills in Scotland, recorded so far, were founded at Innerleithen during the reign David II (1329–71). The documentary evidence uncovered so far strongly suggests that the mill at Balbirmie, was, in fact, a fulling mill (*molendino fuleritico*) which predates the Border mills by some 30 years. To date excavation and survey of medieval

mills in Scotland has been limited. Some work has been undertaken on the Poldrait, Molendinar and Camlachie Burns in Glasgow. But here the water-courses are buried under much debris and rebuilding and whether these are natural or artificial lades remains in doubt (Pollock, pers comm; Stevenson & Torrie 1990, 12–15). Layers sealing the Poldrait Burn have produced pottery of probable 14th-century date. Recent work at Lhanbryde in Moray (Alexander 1994, 13) indicates water-courses associated with a horizontal mill apparently pre-12th century in date with later use of part for a corn-drying kiln. There was also a suggestion of clay lining here which was entirely absent from Balfarg.

At Balfarg too few features were revealed and excavated to allow any reliable conclusions to be drawn. Small-scale settlement is not ruled out and the recurrence of coal and clinker suggest an industrial complex of doubtless very limited proportions. The recovery of reduced grey ware, late medieval or post-medieval in date, in several of the features indicates some possible continuity of use after the lade and, therefore, the mill was abandoned.

DISUSE OF THE SITE

When the Balfarg/Balbirnie mill was in use 90% of Scotland's population was rural and yet a monopoly of trade lay with the Royal Burghs and Guilds Merchant, and the majority of written records are urban or monastic. In a time of weak social and economic organization, against a background of civil war and deteriorating climate, insecurity and poverty discouraged initiative and reduced the scope for investment by any but monastic houses and very few lay lords (Barrow 1981, 140; Smout 1969, 38–9). The political and economic troubles were paralleled by a deteriorating climate reducing the crop yields and causing a retreat from marginal land in the late 13th and early 14th centuries. In England this prompted 'the worst agrarian crisis ... since the aftermath of the Norman invasion' (Kershaw 1973, 29). Landowners abandoned the cultivation of demesne (Platt 1978, 96). It is argued that there was a move to pastoral from arable farming and it can be assumed that the further north the harder the crisis was felt.

In 1349 bubonic plague reached Scotland and there were further outbreaks for over a hundred years. Loss of life was substantial. Contemporary commentators suggest up to a third of the population in Scotland died (Ziegler 1969, 205–8). But thanks, for once, to our colder climate the epidemic is not seen as widespread and destructive as in the south and recovery appears to have been faster in the population of Scotland than England (Grant 1984, 73–5). But the impact of such an enormous initial mortality on a poor agrarian society should never be underestimated.

Edward I's excursion of 1295 came near to Balfarg/Balbirnie. The anonymous writer of the 'Voyage of King Edwarde' briefly describes three days' itinerary south and west across Fife: 'Saterdaie to the Cite of Saint Andrew, a castell and a good towne; the Sundaie to Merkynch wher as is but the churche and iij houses. Mondaie to the abbey of Donffremelyn' (Hume Brown 1891, 6). If the village of Markinch, already a well-established settlement just under two kilometres to the east of Balfarg/Balbirnie, was so small the neighbouring hamlets must have been insubstantial indeed. The meagre appearance of peasant buildings is reinforced by Froissart when he reports the southern Scots 'saying that with six or eight stakes they could soon have new houses' (quoted in Grant 1984, 61). The scanty remains of a complete small settlement of these mean dwellings may be what we can see in excavation Area D or could even be concealed amidst the immensely more substantial ritual monuments of the Neolithic and Bronze Age in Area C.

CONCLUSION

The medieval site at Balfarg comprising extensive lade, pathways, cobbled surfaces and several pits can be seen as a small industrial and/or domestic site associated with the vertical breast or overshot wheel of a corn or wauk mill. Abandonment of the site can be seen against the backdrop of a poor, disturbed land where industrial venture if bravely attempted was sure of a stormy ride and almost certainly a brief life. Economically the slight deterioration in the climate had a significant effect on crop yields. This political and economic uncertainty, fear of neighbours' intent and the actual affect of warfare were not conducive to new or continued investments in estates. Substantial structures such as grain or wauk mills, expensive, static and under-used, would fall into disuse. And by the middle of the 14th century the coming of the Black Death and subsequent drop in the population exacerbated the bad situation, leading to a final abandonment of the site. Little of this need have involved dramatic or sudden change. It may be that recovery or redevelopment could have begun soon after but perhaps in a new neighbouring location.

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