

The Investigation of some plough truncated features at Kinloch Farm, Collessie in Fife

John W Barber*

INTRODUCTION

This site near Kinloch Farm about 1 m S of Collessie (NGR NO 288118) was initially recorded on an aerial photograph taken by John Dewar (pl 1). It consists of two approximately concentric arcs, representing ditches, the outer wanting one third of its circuit on the N and W side; the inner complete and, whilst indistinct, apparently doubled on the N side. These parch-marks, located on the top of a fluvio-glacial hillock near the N edge of the valley of the River Eden, were the only features visible on the colour plates which were available at the time of excavation.

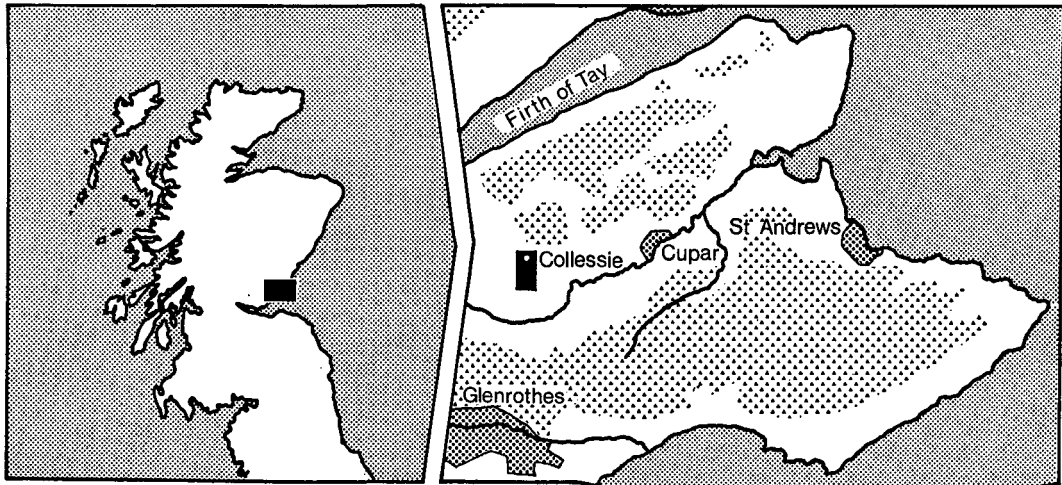
The black and white plates which only became available when this report had largely been completed seem to reveal further features, notably a linear feature running roughly E-W on the W side of the ditches described above. A further, rather polygonal, enclosure is barely discernible immediately S of the ditched enclosure and must have cut or been cut by the outer ditch though the latter fades out close to the point of intersection (see pl 1).

Prior to the present excavation the site had earlier been damaged by the insertion of two gas pipe-lines across its northern quarter (fig 1). Maintenance of these pipe-lines required the construction of a building S of the pipe-lines and straddling the eastern extent of the ditches.

EXCAVATION

In advance of this construction a salvage excavation was organized by SDD Ancient Monuments Branch and undertaken by the author on behalf of the Central Excavation Unit. The excavation took the form of cutting, by machine, NE/SW, a trench radial to the circuit of the ditches and the removal, again by machine of the top soil along a strip approximately 5 m wide of this line (fig 1). The section thus revealed (fig 2) indicated the existence of two wide shallow ditches between which a pit and a post-hole were also found.

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Kinloch Farm

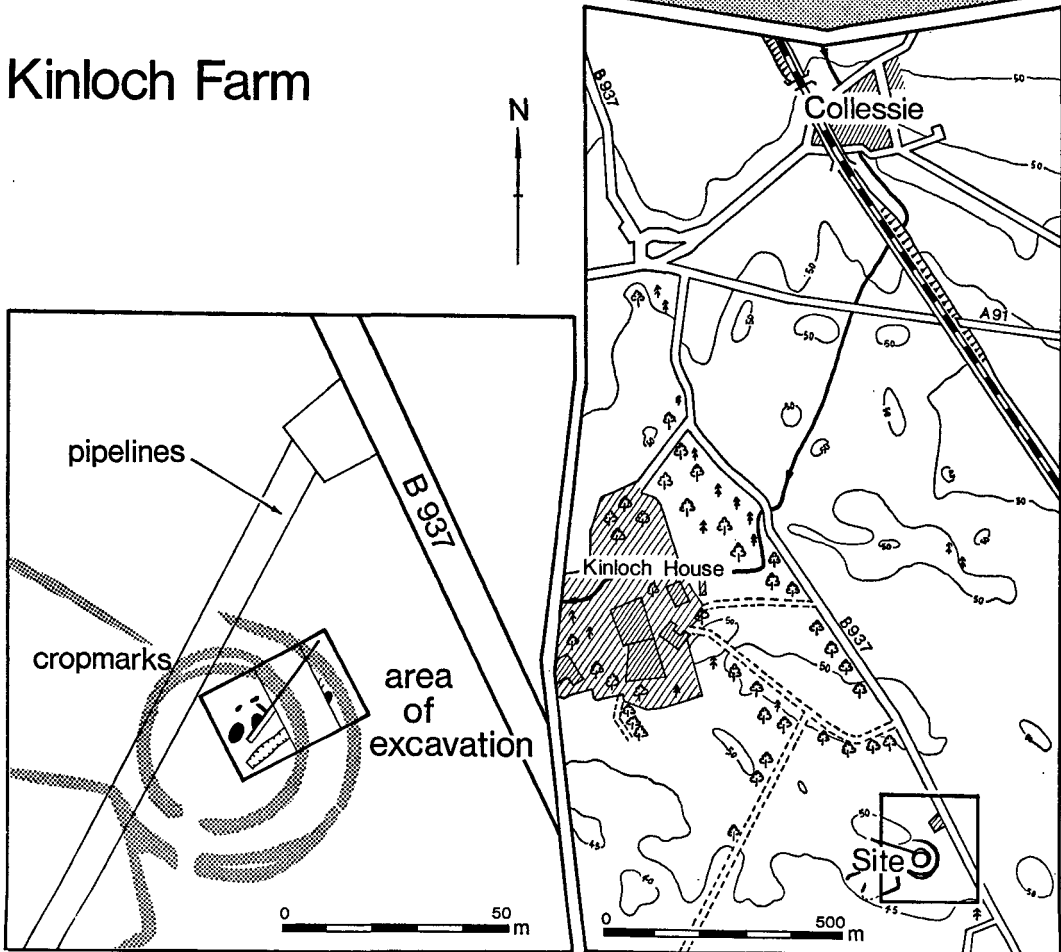


FIG 1 Site location

The inner ditch was some 3.8 m wide and cut 25 cm into the undisturbed fluvio-glacial subsoil. The infill of this ditch was a grey brown sandy silt. At the bottom of the ditch a layer, up to 10 cm deep, of rather darker brown clay silt with relatively little sand was detected. The stone content of the ditch fill in general was about 5% but increased to 15–20% in this lower stratum. Charcoal flecks were visible throughout the ditch fill from top to bottom. Fine root penetration and worm activity had continued to the bottom of the ditch. No further stratification of the infill could be detected. A floatated charcoal sample from the ditch fill returned a radiocarbon date of 2775 ± 70 bc (GU \approx 1375). A single sherd of pottery was found in this ditch, located within the dark brown clay-silt (above). Approximately 6 m N of the inner ditch and visible only in the W profile was a pit, 60 cm deep and 1.65 m wide. Its infill was dark brown clay silt with little sand and almost no stone.

About 1.5 m N of the pit described above, the outer ditch was detected. This was 3 m wide and cut approximately 20 cm into the subsoil. Its infill was a grey to brown silty sand in which the colour deepened with depth. A darker brown band was again detected along the bottom of this ditch. The stoniness of the infill was rather more than that of the inner ditch being, in general, 10–25% throughout, increasing with depth. Very little charcoal was recovered from this ditch and worms and fine roots had penetrated to the subsoil. Some 8 sherds of pottery were recovered from the basal infill of this ditch (see the pottery report *infra* 527).

At a point approximately level with the southern edge of the pit there appeared in the opposite, E, profile a small post-hole. This has been illustrated in fig 2 projected on to the W section. It was 60 cm wide and 50 cm deep. Its infill was in general a stoney silty sand and part of a silty sand post-pipe was detected in the face. The diameter of the enclosed post could not be deduced from this since it was not clear whether the feature had been cut along a diameter or a chord. No other features were detected either in the section or in the level scraped area, and it was clear that the section cut the ditches approximately at right angles.

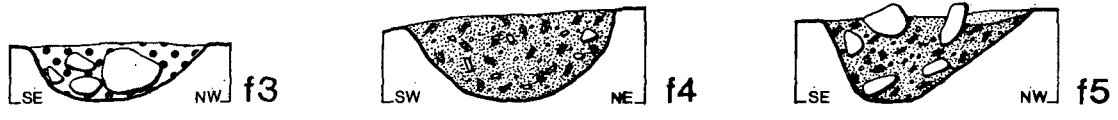
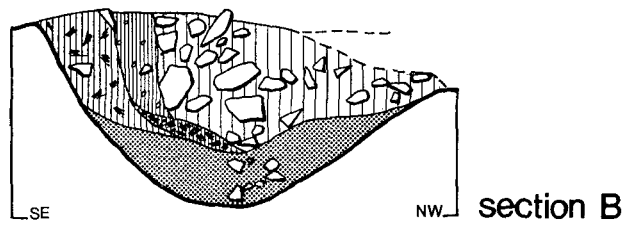
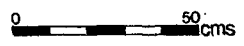
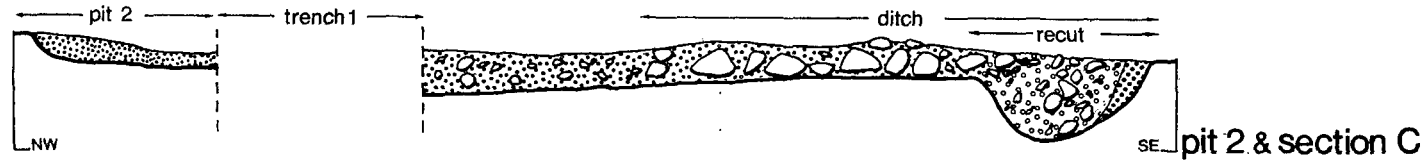
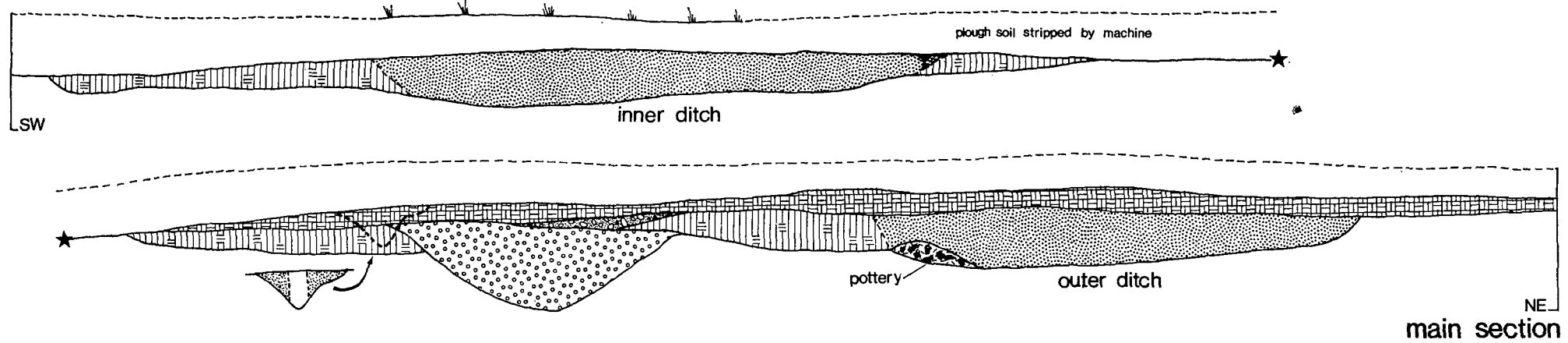
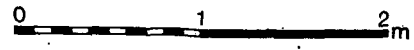
During the construction of the installation a machine-cut foundation trench, roughly 11 m by 23 m, was excavated, and the topsoil was stripped off an area of approximately 160 sq m to the W of this trench (fig 3).

The resulting sections were investigated for traces of the two ditches but none was found. The ditches were not visible on the stripped subsoil surface to the W, nor on an additional area which was stripped parallel to the path of the pipeline and N of the construction trench. As they were only 25 cm at deepest where they were located it is possible that the machine stripping – which was not archaeologically supervised – had removed them completely from the surrounding area.

However, a third ditch was located, appearing in section on both the E and W sides of the construction trench and continuing in a westerly direction across the stripped subsoil surface. Although this ditch does not appear on the aerial photograph (pl 1) it may represent the E extension of the linear feature visible W of the enclosure. It is more or less straight along the 25 m length recorded and would cut the two concentric ditches approximately radially. It is U-shaped in section and from 45 to 50 cm deep. It is up to 1.10 m wide although the N edge is not distinct on the surface because the truncated layer on this side is composed of large stones in a loose orange/brown gravel matrix, almost undifferentiated from the local fluvio-glacial subsoil. This may in part account for its absence from the aerial photographs.

The S edge of the ditch was defined by a quite distinct band of sandy silt and all the sections suggest that this was the infill of an earlier ditch which had been recut by a ditch backfilled with large stones and gravel. The sterility and unsorted nature of the later material suggests that the recutting was done soon after the initial excavation of the ditch. The earlier ditch yielded a layer of charcoal lying against the silt which was discontinuous along the excavated length.

Kinloch Farm



- silt : loose
- silt : grey-brown
- silt : grey-brown, fine, dark
- sand : silty
- sand-humus : brown
- sand-humus : brown, gritty
- sand : brown, gritty
- sand : yellow-grey, fine
- sand : grey-brown, gritty
- grit : orange-brown, fine
- grit : purple-brown
- clay
- sand : clayey, silty
- stones
- charcoal

FIG 2 Section drawings. The line of the main section is illustrated on fig 1. The locations of sections f1 to f5 and section B are illustrated in fig 3

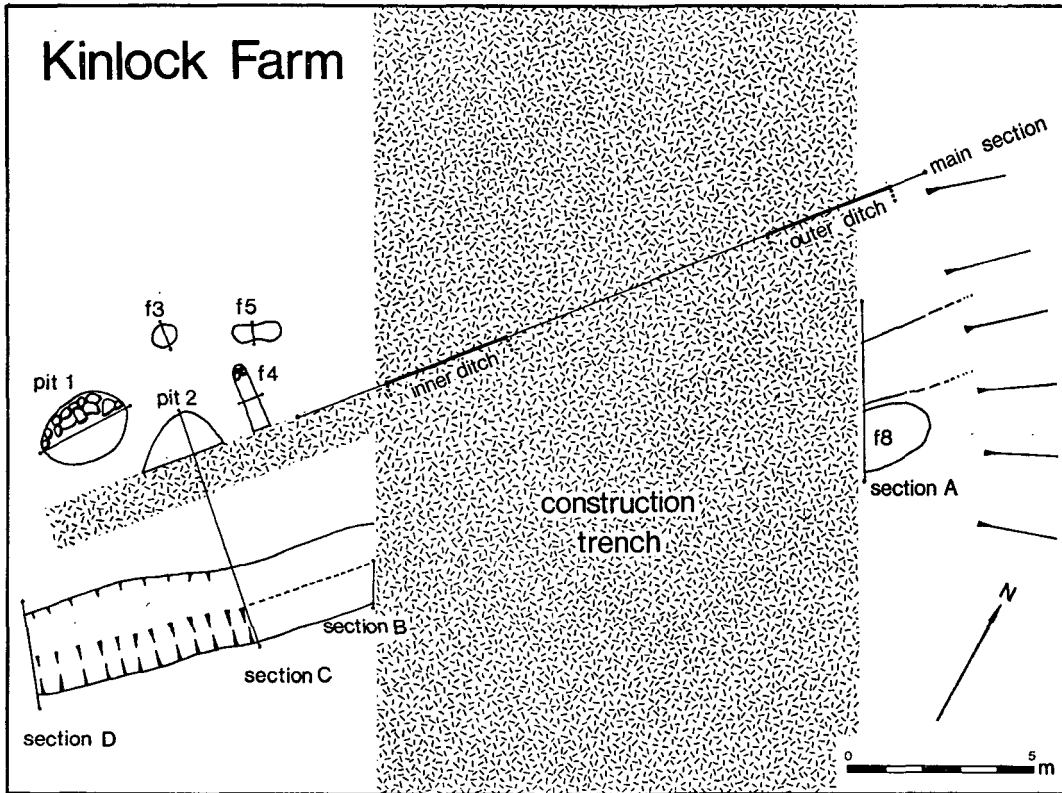


FIG 3 Features revealed during construction

The ditch was also revealed in the section on the E edge of the construction trench where it appeared to cut a pit, but continuing construction work removed the evidence for this before it could be investigated further.

To the N of the ditch a series of features were located, including two shallow oval pits, similar in infill and dimension (fig 3). Pit 1 was located 2.5 m N of the ditch and was 2.45 m long and 0.14 m deep. Pit 2 was 1 m to the SE of Pit 1 and was 2.20 m long and 15 cm deep. Both had an infill of yellow/brown gritty sand and both yielded a remarkable amount of pottery (see pottery report, below). To the E of the pits lay 2 linear features, at right angles to each other though separated by 50 cm. They were both 55 cm wide and 24 cm deep while one was 1.20 m long and the other was nearly 2 m long. They were filled with a yellow/brown sand with small stones and flecked with charcoal. The only other feature in the stripped area was a circular hole 45 cm in diameter and 14 cm deep, containing purple/brown grit and large stones, possibly the base of a posthole. Finally, charcoal, pottery and a finely retouched flint were recovered from a curvilinear feature which could not be excavated owing to lack of time.

THE POTTERY

Trevor Cowie

Some 111 sherds and approximately 30 fragments and crumbs with a total weight of c 835 g were recovered. The assemblage consists almost entirely of featureless sherds. The group as a whole is thus

internally differentiable on the basis of fabric rather than details of form or decoration. This severely limits attempts to place the material in detail in any wider ceramic or cultural context, since comparisons can only proceed on the basis of those few sherds with formal or decorative traits, and, in the present state of knowledge, only very tentatively by consideration of analogous fabric groups. The catalogue (table 1) lists all the pottery recovered from the site and, with few exceptions, the assemblage can be seen to consist of body sherds. For the most part, the position of the sherds, and frequently their orientation too, are uncertain or quite indeterminate. Pieces possessing recognizable formal features account for less than 7% of the assemblage, and these, not including cat no 28, are illustrated in fig 4.

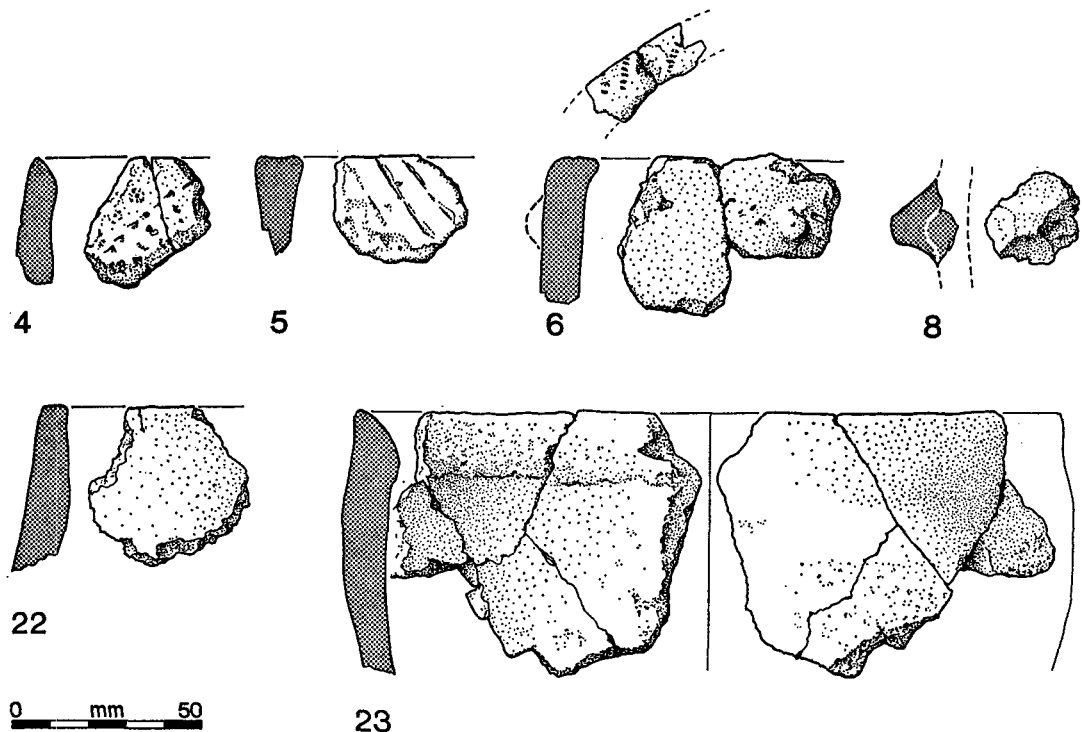


FIG 4 Pottery from the site. Sherds 4, 5, 6 and 8 are from pit 2 (see fig 3). Sherds 22 and 23 are both from the outer ditch

With the exception of cat no 23, profiles could not be reconstructed much below the rim, while the individual rim forms are insufficiently diagnostic to permit even tentative suggestions of original vessel shape. In only a single case (cat no 7) can any of the featureless body sherds be interpreted with any certainty as being part of one of the vessels represented by these rim sherds or fragments: even then the additional material does not aid reconstruction of the profile. As the drawings of the relevant pieces demonstrate, the sherds with formal features have little in common, creating an impression of heterogeneity which is emphasized by the number of fabric groups represented.

Decoration is present in only three instances – all rim sherds from Feature 2 (cat nos 4–6; see fig 4). Cat nos 5 and 6 appear to have been burnt after fracture, and they share this feature with a number of other sherds and fragments (including cat nos 1, 2, 7, 19, 22, 24, 27, although not all the pieces in each catalogue entry are necessarily affected). Most of the sherds in the assemblage are small and more or less abraded. Although all these factors relating to the condition of the pottery throw little light on its affinities, they do suggest that the assemblage is composed mainly of redeposited fragmentary material. In the

absence of telling reasons to the contrary, there seems no cause to doubt an original domestic context: the circumstances of its ultimate deposition on this site are, of course, less clear.

Assessment of wider relationships of the pottery can only be tentative. The most informative sherds in the assemblage are the decorated sherds (cat nos 4–6): the application of jabbed-and-dragged decoration, coarse comb impressions or irregular ‘grooves’ to the rim or upper body surfaces of vessels suggests affinity with late Neolithic/Early Bronze Age wares in, or, more likely, derivative from, the ‘Peterborough’ tradition (‘Neolithic B’ or Scottish ‘impressed ware’ tradition) (cf McInnes 1969, 22). In this part of Scotland, it is possible to look to the rich surface collections from the Tentsmuir area for relevant comparative material (Longworth 1967). And whilst directly comparable pieces are lacking, versions of the decorative techniques noted above are present, if only as minor elements. Nor should too much significance be read into the absence of directly analogous rim forms in view of their relative simplicity. The lug (cat no 8) and the possible pinched-up boss or lug on the break edge of the rim sherd, cat no 6, from Kinloch Farm are however without ready local parallel: although their incompleteness leaves in doubt the original forms of the vessels concerned, these features again certainly point towards a neolithic potting background. Assuming the validity of these comparisons, the fabric groups represented by these sherds (cat nos 4–6, 8) would also be within the range produced by contemporary potters.

Although the nature of the assemblage invites caution, the pottery recovered from Feature 2 could be seen as a reasonably internally consistent group. The featureless body material as well as the more diagnostic sherds could then be tentatively attributed to the same broad tradition for which a date range of between the later third and earlier second millennium could be applied. The pottery recovered from Feature 1 consists of only a very small number of sherds and fragments, and includes no diagnostic pieces, but on the basis of the fabric groups present it includes at least some material similar to that from Feature 2.

Only three of the fabric groups are represented by the pottery recovered from the inner and outer ditches: the presence of the more distinctive fabrics G and H (see below, p 531) in the ditches suggests a real difference in their distribution on the site which is emphasized by other typological differences. The small number of sherds involved again dictates caution, but the absence of decoration, and the marked difference in form and fabric of no 23 in particular, suggest that a different ceramic tradition is represented. The impression presented by the material in the outer ditch at least is of a mixed assemblage, incorporating some pottery similar to that from the internal features but also introducing an element with different affinities from those pieces discussed above. The form of plain vessel represented by cat no 23, coupled with its relatively finer, better-fired fabric invites comparison instead with potentially later material, for instance with plain wares classically represented by the Covesea assemblage (Benton 1931, 190). It is interesting to note the presence of typologically ‘late’ pottery among the Tentsmuir collections (Longworth 1967, 92); such pieces emphasize the sheer range and diversity of the unstratified ceramic assemblages from such sand dune areas, and also their problematic nature. Longworth (*ibid*) and more recently Burgess (1980, 93) have stressed how much of the so-called ‘coarse’, usually ‘plain’ ware, traditionally assigned to a later date, may well be contemporary with the decorated wares, which tend to be more amenable to identification and classification.

CONCLUSIONS

It is necessary to stress that the assemblage from Kinloch Farm is small and that the number of sherds with diagnostic features is even more strictly limited. On the basis of the few sherds with useful formal and decorative traits, however, a case can be made for seeking affinities among the late Neolithic/Early Bronze Age ceramics in the northern counterpart of the ‘Peterborough’ or at least its derivative traditions. Although not from a directly relevant context, the available radiocarbon determination from the site tends to reinforce this attribution. Some of the pottery recovered from the ditches is typologically distinguishable from that retrieved from the internal features, particularly Feature 2: on this basis only, it is suggested that the pottery from at least the outer ditch incorporates some sherds and fragments representing the products of a distinct potting tradition with affinities in the plain wares usually assigned to the later second and early first millennium, although its origins may be much earlier. The rather heterogeneous assemblage from Kinloch Farm perhaps underlines the diversity of the assemblages likely to be encountered as more excavation is carried out in the crop-mark rich areas of Lowland Scotland. As larger groups of domestic material become available, it may become possible to fit the Kinloch Farm pottery more securely into its regional ceramic context. In the meantime, where particular groups of pottery cannot easily be pigeon-holed, this seems reason enough for their publication.

FABRIC ANALYSIS

Marjorie Kenworthy

METHOD AND LIMITATIONS OF ANALYSIS

All the sherds submitted were examined under a binocular microscope at $\times 20$ magnification; a few were also examined at $\times 26$ and $\times 56$. The description of the fabrics, listed in table 2, is based on the nature, size and quantity of the mineral inclusions and on the appearance of the clay matrix itself. Most of the inclusions will have been deliberately added to the clay as temper, although some may derive from the clay itself.

Certain factors limit the accuracy with which the fabrics can be described. The total quantity of pottery is relatively small, making comparisons difficult, and many of the sherds are very small and friable, making it difficult to clean them well enough to examine them properly. Inclusions are often clustered, ie not evenly distributed within the fabric, so that their recognition depends on the chance element of their occurrence in one of the fractures or in the surface of the sherd; this problem is exacerbated in sherds of small size. Differences in the occurrence and in the quantity and size of inclusions may also be found between different parts of the same vessel. Differences in the matrix may be due to different firing temperatures being applied to different vessels of the same fabric. Inclusions are less easy to recognize in a reduced or dark-coloured fabric than in an oxidized one, and some minerals cannot positively be identified by this method of analysis. These difficulties render provisional the fabric groups and their descriptions at least in the absence of more detailed petrological analysis.

SUMMARY

The pottery can be divided into eight groups according to fabrics. The sherds within each group are not all identical and in some cases are unlikely to have come from the same vessel, but they all correspond sufficiently in matrix and in nature, size and quantity of inclusions to confirm that they are of the same fabric.

The classification of each group as a separate fabric remains problematic. Fabric B has strong similarities with both A and C; Fabric F is rather similar to Fabric A; and Fabrics D and E may be basically the same. It may therefore be concluded that there are at least five fabrics represented amongst the pottery and possibly up to eight.

- 1 The catalogue entries are here listed in summary form in table 1 compiled by J Barber. Fuller descriptions of each entry have been deposited with the finds.
- 2 Sherds are here defined as pieces on which both internal and external surfaces are represented; fragments are pieces on which only one of these surfaces survives and the numbers of fragments are quoted in parentheses. Crumbs are small pieces, arbitrarily 10 sq mm or less, which retain no formal features. Unless stated otherwise, the position and orientation of the pieces are indeterminate.
- 3 Colour – the colour range of individual sherds, or a representative sherd where a number are grouped together, is given using the Munsell notation (*Munsell Soil Colour Charts*, 1975). The colour range is variable but the majority of the pieces have reddish brown or brown external surfaces and darker, brown or dark grey interiors.
- 4 Unless otherwise stated, it may be assumed that the material included in each catalogue entry is interpreted as representing a distinct vessel. In view of the preponderance of body sherds this must, of course, be treated with due caution.
- 5 Except for those catalogue entries marked with an asterisk the pottery is all abraded and the exceptions are only relatively unabraded.

TABLE 1

Group no	No of sherds and/or fragments rim body	Size in mm of representative sherd	Colour			Fabric group	Remarks
			Inner surface	Core	Outer surface		
Feature 1							
1	2 (2)	35 × 35 × 11 (mean)	5YR4/1 + 3/1			H	Sherds composed of several pieces
2	3	20:18:9	5YR4/1			C	
3	3 (2)	23:23:16	7.5YR6/4	7.5YR4.2	7.5YR6/4	D	

TABLE 1 (continued)

Group no	No of sherds and/or fragments		Size in mm of representative sherd	Colour			Fabric group	Remarks
	rim	body		Inner surface	Core	Outer surface		
Feature 2 or disturbed material possibly from Feature 2								
4	1		34:33:9-19	5YR5/4			C	Jab-and-drag decoration (fig 4). Vessel form and diameter indeterminate
5	1		29:39:11-13	7.5YR7/4			D	Three possible oblique grooves on exterior (fig 4). Vessel form and diameter indet. Orientation of rim uncertain
6	2		45:60:10-12	7.5YR5/2 +10YR5/3	7.5YRN3/0	5YR5/4	A	Three obliquely set comb impressions on the flattened rim. Possible lug on external break edge (fig 4)
7		18	33:30:16	10YR4/1-2		7.5YR6/4	A	Probably all from same vessel as 6 above
8		1	23:25	7.5YR5/2 to 7.5YRN3/0			F	Lug or broken cordon (fig 4)
9		1 (5)	24:24:10	5YR3/1			F	Possibly all from same vessel as 8, above
10		2 (1)	32:25:12			5YR5/4	E	
11		1	17:16:10	as 8			A	
12		1					A	Probably from same vessel as 11 but found in disturbed contexts
13		2 (1)	27:24:10	7.5YRN3/0		7.5YR6/4	F	
14		(1)	30:20	as 15			C	
15*		1	38:29:9	5YR3/1		5YR5/4	C	Possibly from same vessel as 14 but found in disturbed context
16*		1	40:28:12	7.5YR4/2		5YR5/3.5	C	
17*		20	47:36:15	5YR5/3	5YR4/1	5YR5/4	B	See also 18, below
18		19		as 17			B	Possibly all from same vessel as 17 but found in disturbed contexts
19		5	36:36:10	5YR3/1		5YR6/6	D	
20		(9)					A	Eleven featureless fragments and crumbs
		(2)					E	
Inner Ditch								
21*		1	42:35:12	5YR5/3-5/4			E	
Outer Ditch								
22		1	44:41:11	5YR5/4		7.5YR4/2	G	Flattened rim (fig 4)
Outer Ditch (lens, see fig 2)								
23*		2 3	70:87:11	5YR4/2- 7.5YR4/2			H	Two body sherds join with the rim sherds (dimensions are of the joined pieces. Possibly a jar with upright, internally rounded-off rim (fig 4) diameter c 180 mm

TABLE 1 (continued)

Group no	No of sherds and/or fragments rim body	Size in mm of representative sherd	Colour			Fabric group	Remarks
			Inner surface	Core	Outer surface		
24	(1)	35:35	7.5YR4/2			E	
25*	1	40:25:6-7	10YR4/1		10YR5/3	E	
Disturbed Contexts - possibly from Outer Ditch							
26	(1)	40:27		as 22		G	Possibly from same vessel as no 22
27	2 (6)	50:30:12	5YR3/1		5YR6/4	E	
28	(1)	26 long			5YR4/2	E?	Rim fragment of uncertain form
29*	2	33:21:9-10	5YR3/1		5YR5/3	H	Two joining body sherds

TABLE 2

The relative abundance of the minerals is indicated as; x, present, xx moderate amounts, xxx abundant p, probably present and o, occasionally present

Fabric type	Catalogue numbers	Texture		Mineral incl						Rock fragments					
		Fabric	Matric	Quartz	Mica	Feldspar	Iron Oxide	Biotite fragments	Other Ferromagnesian	Igneous				Sedimentary	
										Quartz	Feldspar	Biotite	Ferromagnesian	Calcium Oxide	Sedimentary (unspecified)
A	6, 7, 11, 12, 20	Gritty	Smooth	xxx	xxx	x	x	x	x	x	x	x	x		
B	17, 18	Gritty	Smooth	xxx	xxx	x	xx		x	o	o	o	o	p	x
C	2, 4, 14, 15, 16	Gritty	Smooth	xx	xx	p	x			o	o	o	o	x	x
D	3, 5, 19	Fine	Sandy	x	xxx	p	o			x	x	x	x		
E	10, 21, 24, 25, 27, 28	Fine	Smooth	x	x	p	x	x		x	x	x	x		
F	8, 9, 13	Coarse	Smooth		xx					p	p		p		
G	22, 26	Coarse	Smooth		xx		o			x		o			
H	1, 23, 29	Fine Slightly gritty	Smooth	xxx	xxx					o	o	o	o		

DISCUSSION

It is clear from the aerial photographs that the top of the fluvio-glacial ridge bears the remains of several monuments. The main section (fig 2) provides confirmation of this in that the pit discovered S of, ie inside, the outer ditch is overlain by a layer which is cut by the outer ditch. This, in fact is the only chronological relationship which was discovered by excavation. This is not surprising, given the small scale of the excavation and the ploughed-out nature of the site.

The radiocarbon date returned for charcoal from the fill of the inner ditch of 2775 ± 70 bc (GU-1375) suggests an occupation phase in the early to middle Neolithic period. Since the fill of the ditch was worm turned throughout it is possible that the charcoal became incorporated in the fill of the ditch after the latter had been infilled. The possibility that the ditch functioned at a considerably earlier date than that indicated by the radiocarbon date cannot be eliminated.

Mr Cowie's study of the pottery has led him to the conclusion that the assemblage is most probably of late Neolithic/Early Bronze Age date which places it, chronologically, distinctly later than the date suggested by the radiocarbon assay. It must therefore be concluded that the features from which the bulk of the pottery derived are later in date than the inner ditch.

The features revealed during this salvage excavation remained effectively unrelated, chronologically as well as structurally with each other and with the major features revealed in the parch marks. Whilst this is a limitation inherent in ploughed out sites, or plough truncated features in general the problems were exacerbated by the small scale of the excavations which were possible. It would be inadvisable to consider the rather interesting pottery assemblage as anything other than uncontexted and foolish indeed to try to relate it to other specific elements within this group of crop mark sites.

This group of features, on the basis of the aerial photographs available before excavation seemed to represent a simple, probably single-period site for which comparanda, based on gross morphology, could be adduced which might indicate an Iron Age date. The minimal excavation which has taken place has demonstrated the complexity of the site and shown that it had been occupied at a considerably earlier date and reoccupied, probably more than once since then. These comments may serve to emphasize the caution within which features revealed by aerial photography must be treated.

ACKNOWLEDGMENTS

As is common in salvage excavations many people had fleeting contacts with this site. Dr Breeze visited the site with the author when the project was first discussed. Mr Ashmore worked on site for a day early in the second phase of salvage and Drs S Bohncke was also briefly involved but the bulk of the excavation was carried out by Mr Peter Strong and Miss Anne Crone to whom should go the credit for the work done. Angela Townsend prepared all the drawings and the author is much indebted to her. The contributions from Mr Cowie and Mrs Kenworthy are greatly appreciated, and their reservations in respect of the tabulation of their results noted. Mrs Kenworthy would wish to have it noted that the tabulation of her work on fabric seems to imply an objectivity which is illusory.

The finds from this site have been allocated to the NMAS, Edinburgh and the site drawings and other documents will be lodged with the National Monuments Record in due course.

This excavation, financed by SDD Ancient Monuments, was carried out with the permission and co-operation of Scottish Gas.

REFERENCES

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The features revealed in this aerial view of the site have been summarized in the inset (plate produced here with the consent of John Dewar)