Proc Soc Antiq Scot, 137 (2007), 169–178

Excavation at Orquil souterrain, St Ola, Orkney

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ABSTRACT

In July 1971 a souterrain was excavated at Orquil, St Ola, Orkney. Although it is generally typical of many Orcadian souterrains, a lower subsidiary pit feature was identified during the course of excavation which appears to be a novel feature of souterrain construction.

INTRODUCTION

The souterrain at Orquil is located 2.5km to the south-west of Kirkwall (NGR: HY 428 097) on a low knoll of boulder clay 33m OD, which faces southwards towards the Scapa Flow (illus 1). The site was discovered in 1969 when a tractor dislodged one of the capstones covering the structure's main chamber. Evidence suggesting this was the site of an archaeological monument had previously been apparent when a concentration of sandstone slabs on the highest point of the knoll was exposed and scattered by ploughing activities.

In July 1971 an excavation was undertaken at the site by D D A Simpson on behalf of the then Ancient Monuments Inspectorate, Department of the Environment. Prior to the excavation it was possible to gain access to the structure's main chamber, although this was partially filled with collapsed stones and boulder clay, but the precise nature of the monument remained uncertain and the possibility that it was a chambered tomb was entertained. As a consequence of the unconfirmed nature of the structure, the entire area of stone concentration was examined within a single cutting, with an extension to the west beyond the stone scatter.

EXCAVATION

Excavation concentrated in an area 4.6m from east to west by 4.5m from north to south. The topsoil (C1) and associated overburden of stones (C2) were removed to expose fully the undisturbed upper features of the structure, which were found to be limited to the area of the main cutting. Prior to excavation a series of timber supports had been put in place to secure the monument's infrastructure (illus 2) as the roof and walls of the main chamber were unstable. The partial collapse of the building, as a consequence of many seasons of ploughing, necessitated the piecemeal removal of all courses. The site was therefore excavated in a series of six levels, with all features recorded at intervals using vertical photographs (see Murphy & Simpson 2002). A site plan and section was composed (illus 3 & 4) using the information contained in the photographs.

STRUCTURES

A set of four large in situ stone slab lintels (C3) overlay a passageway. Each side wall of the passage (C4 – north side wall; C5 – south side wall) was revetted with upright slabs and

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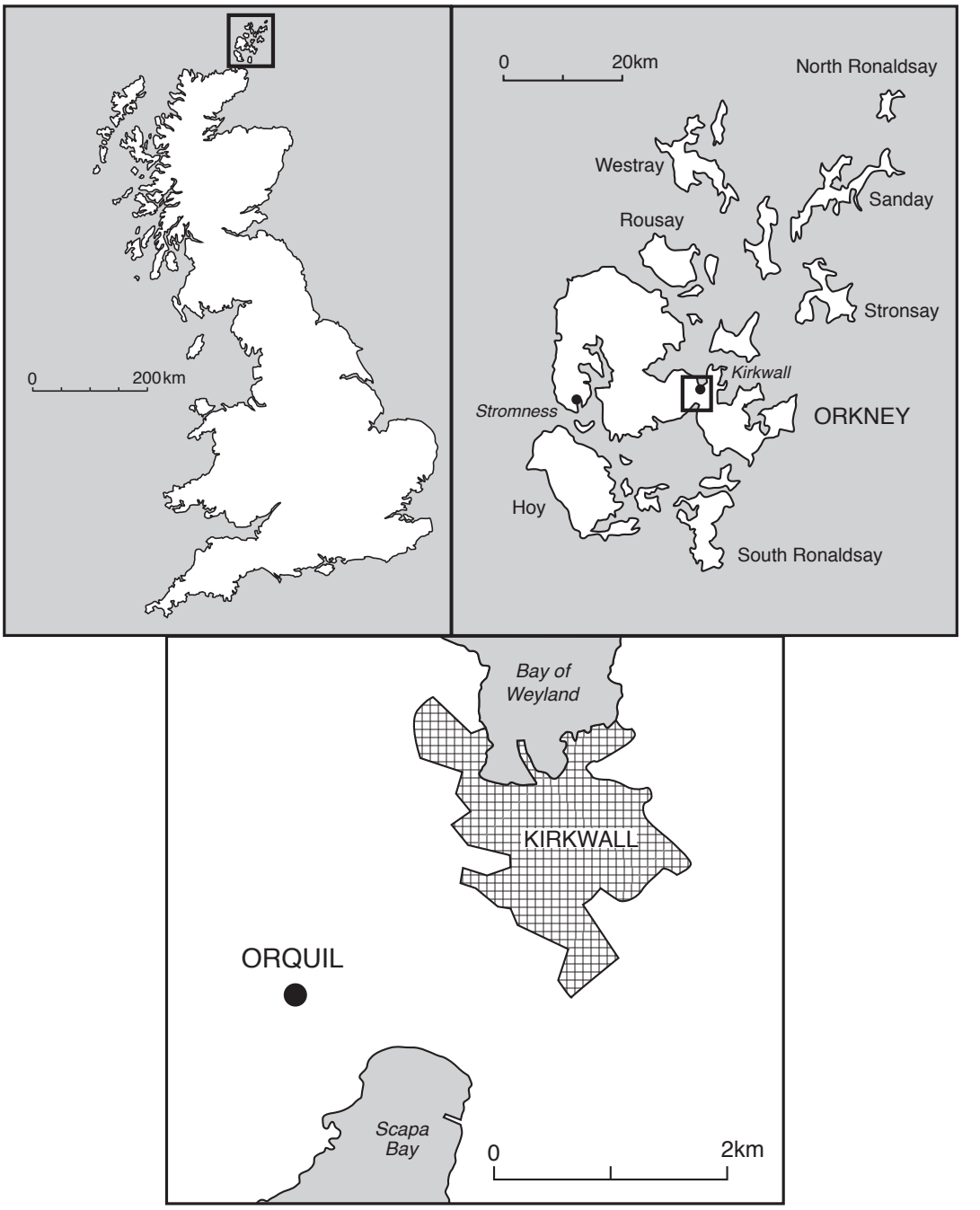
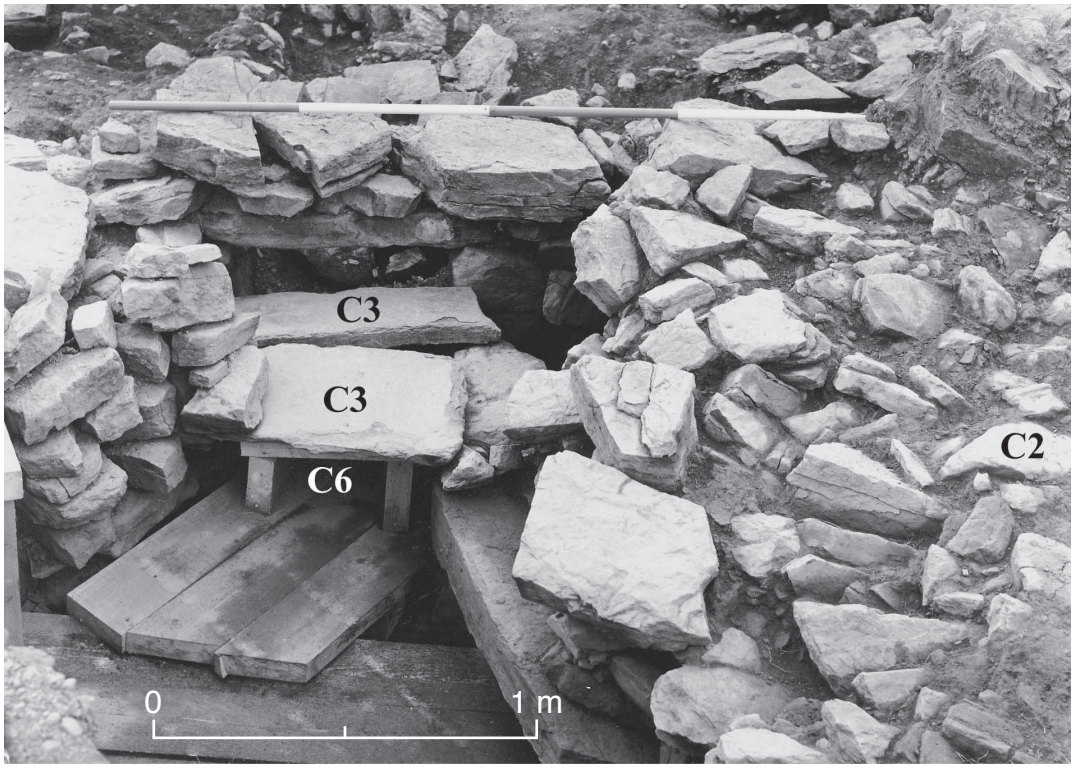


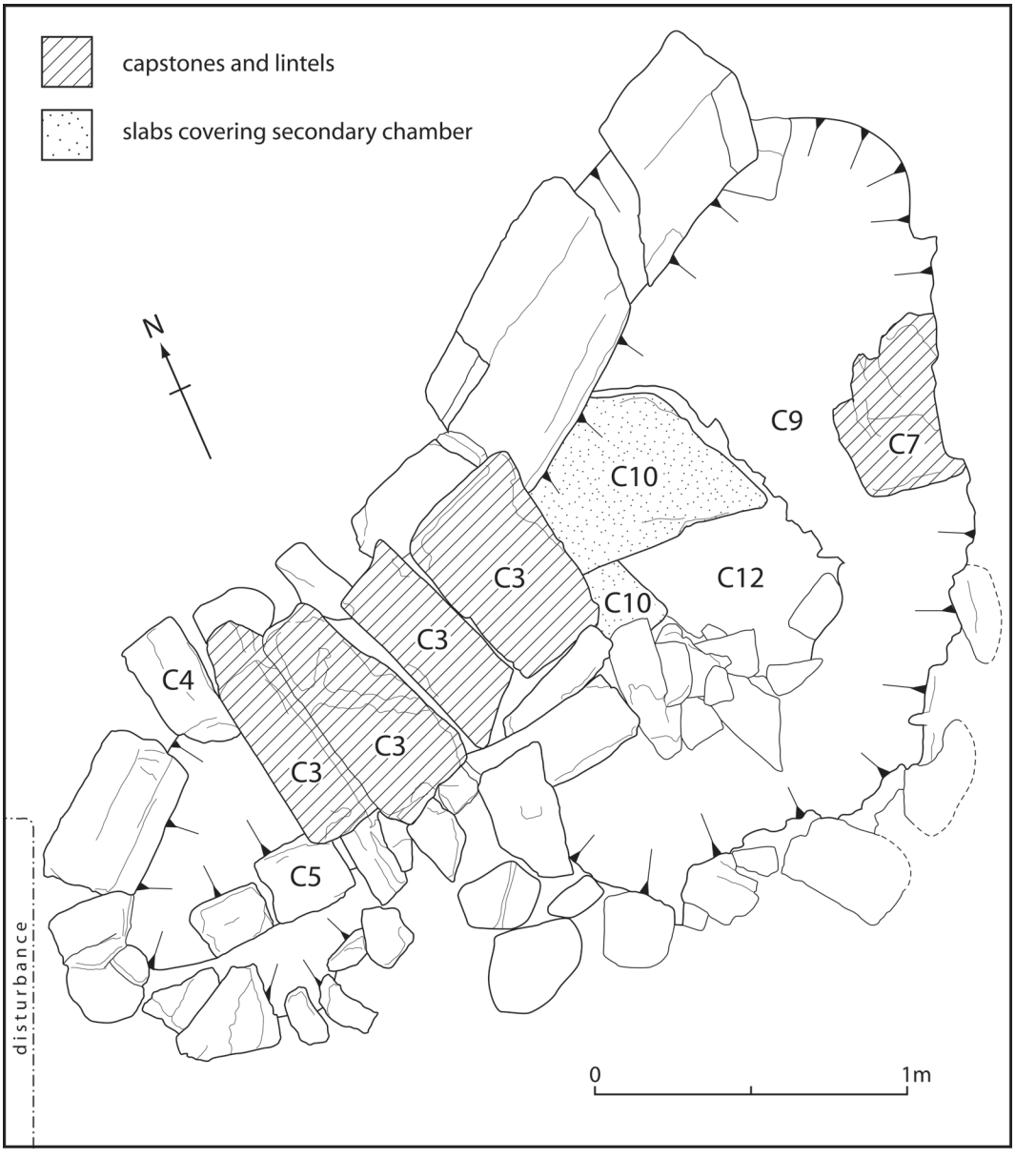
ILLUS 1 Location of the Orquil souterrain



ILLUS 2 Souterrain before excavation

stones arranged in a coursed masonry formation which supported the covering lintels (illus 4). The removal of the four lintels and remaining overburden during the excavation revealed that the passage (C6) had been cut into the clay to a depth of 0.5m and was traceable for a length of 2m. The total height of the roofed passage was 0.7m. The outer end of the passage to the west had been truncated by disturbance relating to an unsuccessful attempt to remove the entire structure by means of a mechanical excavator, and further displaced slabs probably represented a continuation of this feature into the disturbed area (illus 3). The passage connected with the structure's main chamber (C9) was located to the east at this level and was some 1.3m wide at the point where it entered the chamber.

The excavation showed that the main chamber (C9) was a roughly oval structure situated in the boulder clay, with a maximum diameter of 3.3m at floor level and a depth of 1.1m (illus 3). The chamber was roughly beehive-shaped in cross section. The numerous slabs of collapsed stone projecting from the clay initially prompted the suggestion that it had originally been corbelled or, at least partially, stone-lined; however, closer examination revealed that the chamber was entirely earthfast, with no traces of masonry on its sides. The structure had been roofed with large overlapping capstones (illus 4: C7) – a number of which had been broken or displaced by the tractor – which abutted the sides of the excavated chamber. The capstones were supported internally by a series of irregularly placed stone piers (C8) which were composed of

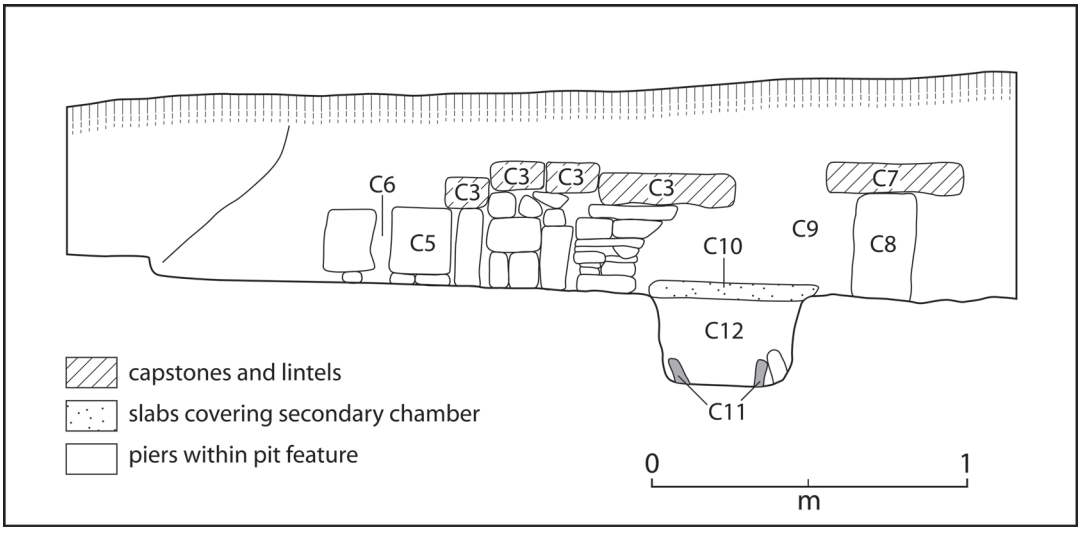


ILLUS 3 Plan of the souterrain, with the main construction features highlighted

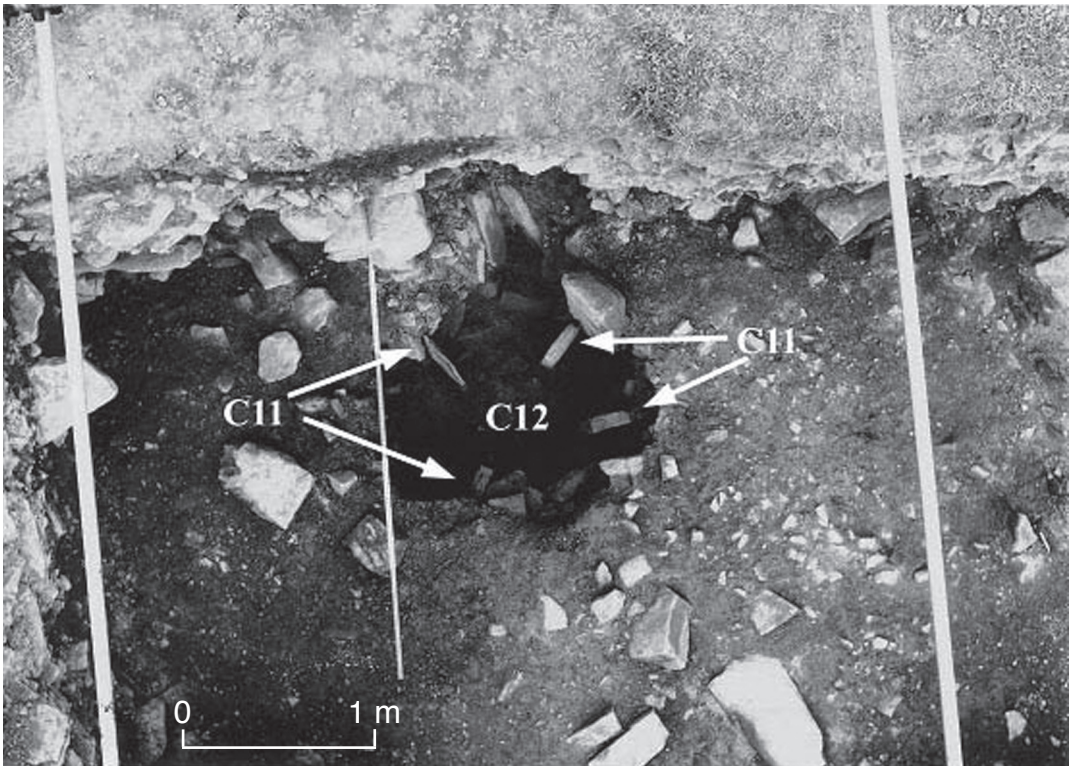
substantial uprights resting on the floor. A number of smaller slabs had been positioned between the capstones and the stone piers. The chamber was partially filled with collapsed roofing material in addition to clay and stones that had weathered from its very wet sides.

The secondary pit feature

Removal of the stones from the passage and main chamber revealed large overlapping sandstone slabs (illus 3 & 4: C10) situated on the floor of the main chamber, occupying approximately



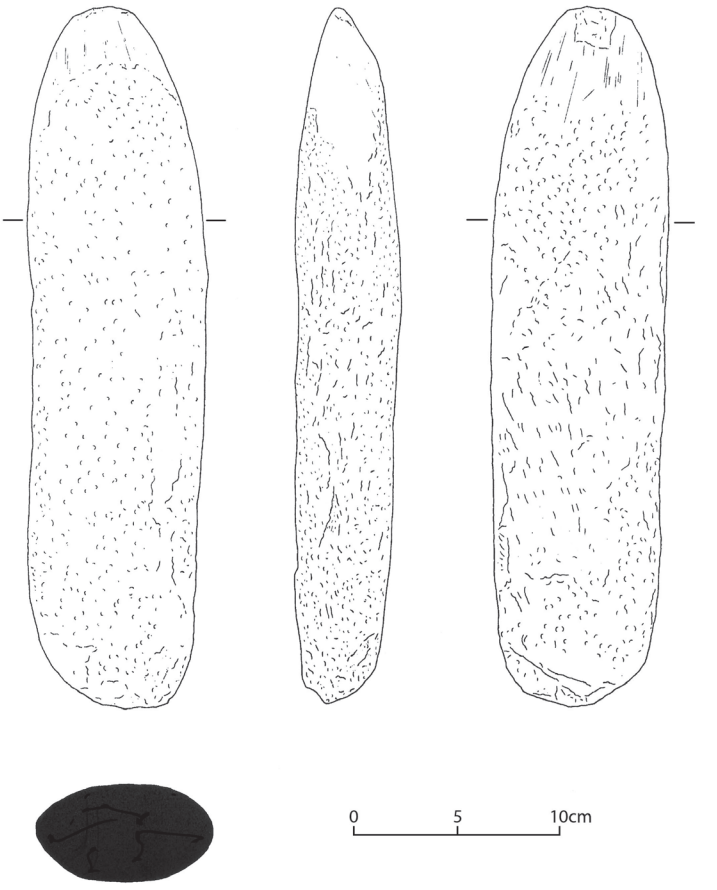
ILLUS 4 Reconstruction of east–west section through the souterrain showing probable placement of lintels and capstones



ILLUS 5 Vertical view of the opening into the secondary pit feature (C12), with four piers in view (C11)

one-third of its total area. Portions of the slabs had been broken and had then fallen into a small lower pit feature (C12). It was evident that the slabs had formed the roof of the secondary pit feature.

During the excavation it was shown that the pit feature (C12) had been dug into the boulder clay to a depth of 0.58m. It was of irregular plan, with a maximum diameter of 1.3m (illus 4). Four piers consisting of single narrow slabs (illus 5: C11), arranged in a roughly radial pattern, were set on the floor of the pit feature. No traces of stone lining were evident on the sides or floor of the structure.



ILLUS 6 Stone ard point

SMALL FINDS

No small finds were associated with either the structure or fill of the souterrain. The only artefact discovered during the excavation was a stone ard tip which was recovered from among boulders to the south-west of the structure.

STONE ARD TIP

The ard point had a length of 34cm, a maximum width of 10cm, and a maximum thickness of 5.1cm (illus 6). It was manufactured from a bar of sandstone, which appeared to have been originally rough flaked to shape and subsequently pecked. On the upper surface, pecking was confined to the tip and butt end, while the midshaft area preserved the original flaking. The under surface and sides of the ard were pecked overall, with the exception of the tip which was polished and striated through use wear. Polishing and abrasion on the upper surface extended from the tip for a distance of 8cm. A single large flake scar was situated on the central area at the tip. Polishing and abrasion extended over a V-shaped area for a distance of 3.6cm on the underside of the ard. On the left side, viewed from above, wear extends for 10cm and on the right for 12cm. The ard point belongs to Rees' Type 2 implements (1979, 13; 1986), since it is oval in cross section and has a greater width than thickness. In addition, it can be ascribed to her sub-type B since it has a tapered and blunted butt end. In terms of length it falls within the mean

(Rees 1979, 7) although it is of greater width than average.

Rees (1979) records 144 ard points from Orkney and even greater numbers from Shetland. In Orkney the majority have been found in low-lying situations, although the Orkney figures have been greatly inflated by the large number of finds recovered from Skaill. This region has produced 108 ard tips, most found without context, although 10 have been recovered from archaeological sites. With the possible exception of the ard recovered from the stalled cairn of Midhowe (Henshall 1963, 116), all are in general later than the Shetland tools (Rees 1979, 30). At least one other Orcadian ard point was recovered from a souterrain at Dale, Harray (Kirkness 1928), although what were probably souterrains at Houland and Safester in Shetland produced numerous examples (Mitchell 1866–8). These were mostly recovered from the ground surface or in the topsoil located above the structures – a context very similar to that of the ard point from Orquil.

Clarke (2006, 127) notes that while stone tools from flaked blanks (such as ard points) appear in contexts from the Neolithic to the Early Iron Age in Orkney, it is only during the Bronze Age that they form a substantial component of the Orcadian assemblages. It is uncertain whether ard points and other stone tillage tools were still being manufactured during the Iron Age or if they were residual. Evidence from the roundhouse and broch at Howe suggests that during the Iron Age these kinds of flaked tools had lost their original function and were being used for agricultural processing rather than for tillage (Clarke 2006, 126–7). While the souterrain at Orquil cannot be precisely dated it probably post-dates the use of such tools as ards (see below). It may be that the ard point was used in agricultural activities carried out in the vicinity of the site or in the construction of the souterrain itself. During the Bronze Age, flaked stone bars (flaked blank tools of a similar form to ard points) are thought to have been used for breaking up ground and digging prior to cultivation (Clarke 2006, 25) and prehistoric cultures in North America used ard-like tools for digging holes (Clarke 2006, 132). As such, it is feasible the ard point found during the excavation at Orquil may have been a tool used to dig the cavity or break-up the earth during the construction of the souterrain then discarded nearby.

DISCUSSION

Most Scottish souterrains are of dry-stone construction, wherein the excavated walls of the structure are lined with, sometimes slightly corbelled, stone, capped with stone lintels, and covered over with earth. Structurally, the souterrain from Orquil fits comfortably with the distinctive Orcadian variant of souterrain morphology, notably in being partially cut into the subsoil or bedrock and roofed with capstones supported on sidewalls that comprise a combination of upright panels and coursed masonry. Some Orcadian souterrains, for example, that at Gripps, Rousay (Grant 1939), are entirely un-faced; some like that at Biggings, Harray (Kirkness 1930), have stone-lined passageways and an earth-walled chamber, while others, such as the souterrain at Bu, Stromness (Hedges & Smith 1979), have chambers semi-lined by a slightly corbelled roof or lined with stone slabs set against the walls.

Typological sequences have been attempted based on these variations (eg Kirkness 1930); however, they are just as likely to be due to availability of building materials or the skill or otherwise of the souterrain-builders. The Orquil souterrain possessed passage walls similar to those at South Keigar, Deerness (Rendall 1934), and the roof appears slightly corbelled, though this may be collapse from the overburden. A further characteristic of northern souterrains generally, also found at Orquil, is the clear delineation between the low, narrow passage, and the much more spacious round or oval chamber; as distinct from southern examples, in which

chambers are sometimes formed by little more than a slight widening of the main passage.

References to a subsidiary pit feature below the level of a souterrain floor seem to be otherwise absent in Orkney, and extremely rare elsewhere in Scotland. It is possible of course that such lower pit features may have been missed in the frequently cursory examination of these sites. Occasional mention has been made to alcoves or small recesses in souterrain walls, such as the series of ambry-like features in the souterrain at Rennibister in the Bay of Firth (Marwick 1927), but the only comparable feature may be a pit in the floor of the central chamber of the Cyderhall souterrain in the Highlands. The Cyderhall pit is of similar dimensions, 1.5m in diameter and 1.05m deep (Pollock 1988; 1992), to the Orquil pit feature. However, it is a much more irregular cut, lacking the structural elements, the straight sides, piers and 'lid', of the Orquil example.

Orcadian souterrains also differ from other Scottish forms in the very early chronology suggested for their construction and use. Dating souterrains is problematic, as the rare examples of associated finds, which are often characterized by domestic detritus, need not be necessarily associated with the primary use and original function of these structures. Indeed, many finds may represent secondary occupation or deliberate backfilling of the structures with rubbish following abandonment, as seems to be the case in the earlier of the two structures at Grainbank, St Ola (Haigh 1983, 370). Radiocarbon dates are rare, and, when available, are liable to produce the inconsistent and vague date-ranges often associated with Iron Age samples. Nevertheless, several chronologies have been suggested for the different souterrain traditions of Scotland through a synthesis of datable finds, radiocarbon and stratigraphic dating.

The earliest example appears to come from Bu, Stromness, where a souterrain had been built into the masonry of a disused roundhouse with an occupation date in the seventh century BC. The deposits on the souterrain floor suggested it had been constructed not long after the abandonment of the roundhouse, prompting Hedge's proposal that the construction of 'earth houses' or souterrains such as this must have been a coeval tradition (Hedges 1987, 93). The most reliable radiocarbon dates for an Orcadian souterrain may be those from Phase 5–6 at Howe, Stromness, in which the date-range of 500–200 BC was supported by the structure's stratigraphic relationship to overlying buildings. There was also evidence that the Howe souterrain had been reused during Phase 7 of the site's development, suggesting it was still functioning during the first and possibly second centuries AD (Ballin Smith 1994, 29–33).

This review produces a rather wide range of possible dates for the Orquil structure, with the earliest Orcadian souterrains occurring in the seventh and sixth centuries, and the tradition ending (for the most part) at the end of the first millennium BC or shortly afterwards. Souterrains in other parts of Scotland usually produce a later date-range, somewhere between the fourth century BC and the end of the millennium, although these dates vary between different traditions in different regions.

Associated above-ground structures or settlement evidence is not apparent for the Orquil souterrain, though, as with many such structures, this may be the result of inadequate investigations. Howe, Stromness (Ballin Smith 1994), Grainbank, St Ola (RCAHMS 1946, 155–6), Bu, Stromness (Hedges & Smith 1979) and Warebeth cemetery broch, Stromness (Bell & Dickson 1989), are all associated with souterrains or other subterranean structures. In some cases, such as at Howe (Ballin Smith 1994), or in Pitcur, Perthshire (Armit 2005, 61), a souterrain acted as the cellar for a roundhouse or broch, indicating the relationship between the structures and, by implication, its role in the community which built or used it. Recent excavations at Langskaill, Tankerness (Moore et al 2002, 89; 2003, 103), uncovered a souterrain in the immediate vicinity of (perhaps contemporary) Iron Age remains such as pottery, bone combs and metal objects.

In its wider setting the Orquil souterrain forms one of 40 such sites in Orkney currently listed in the RCAHMS Canmore database. The main concentration of these structures on Orkney is in lowland areas with good arable land, with only three sites occurring above 46m OD. How far this is a true reflection of their distribution pattern is uncertain as many have been discovered as the result of ploughing and the greatest concentration, in the vicinity of Kirkwall, is almost certainly the result of airstrip construction and other industrial and building activities. These Orcadian souterrains (together with those from Shetland) form a fairly distinctive class which sets them apart from those in southern Scotland, or indeed elsewhere in Atlantic Europe (Wainwright 1953).

The precise function of the Orcadian souterrains is ambiguous and it is likely that the structures performed particular roles at different times and in different geographical areas of Scotland. In southern Scotland, for example, numerous theories of souterrain function have been proposed (cf Wainwright 1963; Barclay 1980) and these have been conveniently summarized by Armit (1999). In this area the use of souterrains for defence and as animal shelters has been largely discounted on architectural grounds (Barclay 1980; Watkins 1980). Instead, many of the souterrains are viewed as possible agricultural stores for either grain or dairy produce and meat. It is also argued that these structures often, if not always, incorporated certain rituals and symbolic acts which were perhaps akin to the rituals which are nominally associated with the use of grain storage pits in other areas of Iron Age Britain (Armit 1999, 583). In Orkney, although the souterrains differ morphologically and chronologically from those of southern Scotland, it also seems possible on architectural grounds that the structures were used as agricultural stores, as opposed to refuges or animal shelters, particularly in view of the lower pit feature at Orquil.

There is no evidence to suggest whether the secondary pit feature was dug at the time of the souterrain's construction or as an additional feature during its use-life. Given its relatively small size, it is likely the souterrain was constructed simply to necessitate the additional storage of grain. As such, it is possible the pit feature had a more specialized role and was used as a hidden compartment to conceal goods either from other members of the community, or from some outside threat. Armit (2005, 63) has suggested that a high density of souterrains might indicate they were used by communities to store agricultural produce, rather than as a place of collection and redistribution by one, more powerful individual. If this scenario is correct it is feasible that the secondary pit feature was used by the entire community to safeguard precious items against outsiders. Indeed, the presence of the radial divisions within the pit feature would appear superfluous in terms of structural integrity but they would seem to echo some of the building traditions of Atlantic Iron Age Scotland but in miniature form. A number of scholars, such as Gordon Barclay (1980) and Ian Armit (1999), have suggested there may have been a ritual dimension to some souterrains and Hingley (1992, 29) has highlighted the presence of cup-marked stones in some examples and reused Roman masonry in others. Armit (1999, 583) has stated that when the scale of souterrains and the effort needed for their construction is taken in conjunction with their probable relationship to food production and storage it would be surprising if they were not related to various ritual practices and symbolic acts. As such, it seems reasonable to postulate that the pit feature in the Orquil souterrain, with its structurally unnecessary piers, may have served some ritual purpose.

There is much yet to be learned about the precise function of souterrains but it is clear they were monuments of major social significance. It is anticipated that further excavations of Orcadian souterrains will help address the question of their function and clarify their role as a component of Iron Age life in the region.

ACKNOWLEDGEMENTS

The post-excavation project was generously funded by Historic Scotland and we are particularly grateful to Patrick Ashmore for supporting the programme of post-excavation research. Thanks are also due to Dr Colm Donnelly, Queen's University Belfast, for his comments on an earlier version of this text and to Libby Mulqueeny, Queen's University Belfast, for preparing the illustrations. We are also grateful to the two anonymous reviewers for their comments which have helped improve the quality of the text.

REFERENCES

Armit, I 1999 'The abandonment of souterrains: evolution, catastrophe or dislocation', *Proc Soc Antiq Scot* 129, 577–96.

Armit, I 2005 *Celtic Scotland: Iron Age Scotland in its European Context*. Batsford, London.

Ballin Smith, B (ed) 1994 *Howe: Four Millennia of Orkney Prehistory Excavations 1978–1982*. Edinburgh.

Barclay, G 1980 'Newmill and the "souterrains of southern Pictland"', *in* Watkins, T, 200–8.

Bell, B & Dickson, C 1989 'Excavations at Warebeth (Stromness Cemetery) Broch, Orkney', *Proc Soc Antiq Scot* 119, 101–31.

Clarke, A 2006 *Stone Tools and the Prehistory of the Northern Isles*. Oxford.

Grant, W G 1939 'An earth house at Gripps, Frotoft, Rousay, Orkney', *Proc Soc Antiq Scot* 73, 273–5.

Haigh, D 1983 'A second earth-house at Grainbank, St Ola, Orkney', *Proc Soc Antiq Scot* 113, 367–72.

Hedges, J 1987 *Bu, Gurness and the Brochs of Orkney (Vol 1)*. Oxford.

Hedges, J & Smith, B 1979 'Naversough, Bu (Stromness p), Broch and earth house', *Discovery Excav Scot 1979*, 25–6.

Henshall, A S 1963 *The Chambered Tombs of Scotland*. Edinburgh.

Kirkness, W 1928 'An underground building at Dale, Harray, Orkney', *Proc Soc Antiq Scot* 62 (1927–8), 155–61.

Kirkness, W 1930 'A pillared underground chamber at Biggings, Harray, Orkney', *Proc Soc Antiq Scot* 64, 222–32.

Marwick, H 1927 'Underground galleried building at Rennibister, Orkney', *Proc Soc Antiq Scot* 61, 296–301.

Mitchell, A 1866–8 'On some remarkable discoveries of rude stone implements in Shetland', *Proc Soc Antiq Scot* 7, 118–34.

Moore, H, Wilson, G & Carruthers, M 2002 'Langskaill (Westray Parish)', *Discovery and Excav Scot 2002*, 89.

Moore, H, Wilson, G & Carruthers, M 2003 'Langskaill (Westray Parish)', *Discovery and Excav Scot 2003*, 103.

Murphy, E M & Simpson, D D A 2002 *Orquil souterrain, Orkney, Excavation 1971*, Data Structure Report presented to Historic Scotland.

Pollock, R 1988 'Cyderhall Farm (Dornoch Parish) roundhouse, souterrain', *Discovery and Excav Scot 1988*, 17.

Pollock, R 1992 'The excavation of a souterrain and a roundhouse at Cyderhall, Sutherland', *Proc Soc Antiq Scot* 122, 149–60.

Rees, S E 1979 *Agricultural Implements in Prehistoric and Roman Britain*. Oxford.

Rees, S E 1986 'Stone Implements and Artefacts', *in* Whittle, A (ed) *Scord of Brouster: An Early Agricultural Settlement on Shetland*, 75–91. Oxford.

Rendall, R 1934 'Notes on an underground chamber at South Keigar, Deerness', *Proc Orkney Antiq Soc* 12 (1933–4), 26–8.

Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) 1946 *Twelfth Report with an Inventory of the Ancient Monuments of Orkney and Shetland*. Edinburgh.

Wainwright, F T 1953 'Souterrains in Scotland', *Antiquity* 27, 219–32.

Wainwright, F T 1963 *The Souterrains of Southern Pictland*. London.

Watkins, T 1980 'Excavation of a settlement and souterrain at Newmill, near Bankfoot, Perthshire', *Proc Soc Antiq Scot* 110 (1978–80), 122–64.