'We were always chasing time.' Papers presented to Keith Blood.
(Northern Archaeology *volume 17/18, 1999*).

Squaring the Circle: Domestic Architecture in Later Prehistoric Sutherland and Caithness

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Introduction

During the course of the 1st millennium AD domestic architecture in Scotland underwent a marked change. Round houses, which had dominated the settlement record from at least the beginning of the 2nd millennium BC with an increasing diversity in form from about the mid 1st millennium BC onwards, were replaced by cellular and subrectangular buildings. By the end of the millennium rectangular buildings become the norm. The nature and causes of these changes in the form of domestic architecture between about 500 BC and AD 1000 are poorly understood, and there has been a tendency to strait-jacket sites within a rigid set of classifications which has obscured the eclecticism of building forms. An undue reliance on a handful of excavated sites has limited the extent to which regional variation has been recognised. This paper reviews the evidence for domestic structures dating to this period in the north-eastern mainland of Scotland, that is the area comprising Caithness and the straths of eastern Sutherland, but not western Sutherland where the mountainous terrain and lack of consistent survey presents more limited opportunities for analysing settlement patterns.

In some specific respects archaeological knowledge of northern mainland Scotland is limited. There are few excavated sites and even fewer modern excavations, chronology is poorly defined, and material culture is not abundant. The widespread excavation of enough sites to establish detailed chronologies is not feasible and it is in the exploration of patterning in existing survey data that much basic work remains to be done. Northern Scotland is endowed with a survey-based database of a quality which can have few parallels in its extent and coverage, and it is this, as a central element in the holdings of the National Monuments Record of Scotland (NMRS), that forms the basis of this paper. The records of the Ordnance Survey Archaeology Branch lie at the core of the NMRS and Keith Blood played a key role in creating a reliable database that underpins any research in the north of Scotland (see Davidson *et al.*, this volume). In the exploration of aspects of this data below, I hope he does not find too much to object to in what has been done with 'his' records.

Domestic architecture: form and relative chronology

Categories of domestic structures, defined on morphological grounds (eg. Fig. 1), have been in use since the late 19th century and are discussed below. A full review of the admittedly limited dating evidence for later prehistoric settlement in the north can be found in a number of published sources (eg. papers in Edwards and Ralston 1997; Armit 1990; Foster 1992; McCullagh and Tipping 1998) and this will be presented in summary form only. The greater part of the raw archaeological data for the study of settlement lies in survey records and it is in the examination of these, in the form of plans, descriptions and, most importantly, distribution maps, that much basic research is still required to address the relationships between classes of site and establish a solid basis for further analysis. Identifying strict contemporaneity of structures is beyond the scope of the available data. Implicit in the more general approach adopted below is the identification of recurrent patterns which are likely to be a product of past activity, rather than of recent landuse or recovery biases, and can be placed in broad time spans, perhaps in the order of 500 years. In such a general analysis of broad-brush patterns strict contemporaneity becomes irrelevant.

Hut-circles

The emphasis of the distribution of known hut-circles lies in the heather-clad Sutherland straths, where thousands have been recorded, and detailed survey would reveal still more in the large areas of the county covered only by relatively rapid survey. While many have been destroyed or obscured by later settlement and landuse, fluvial activity (Barclay 1985) and peat growth, vast areas of Sutherland and the adjacent upland parts of southern and western

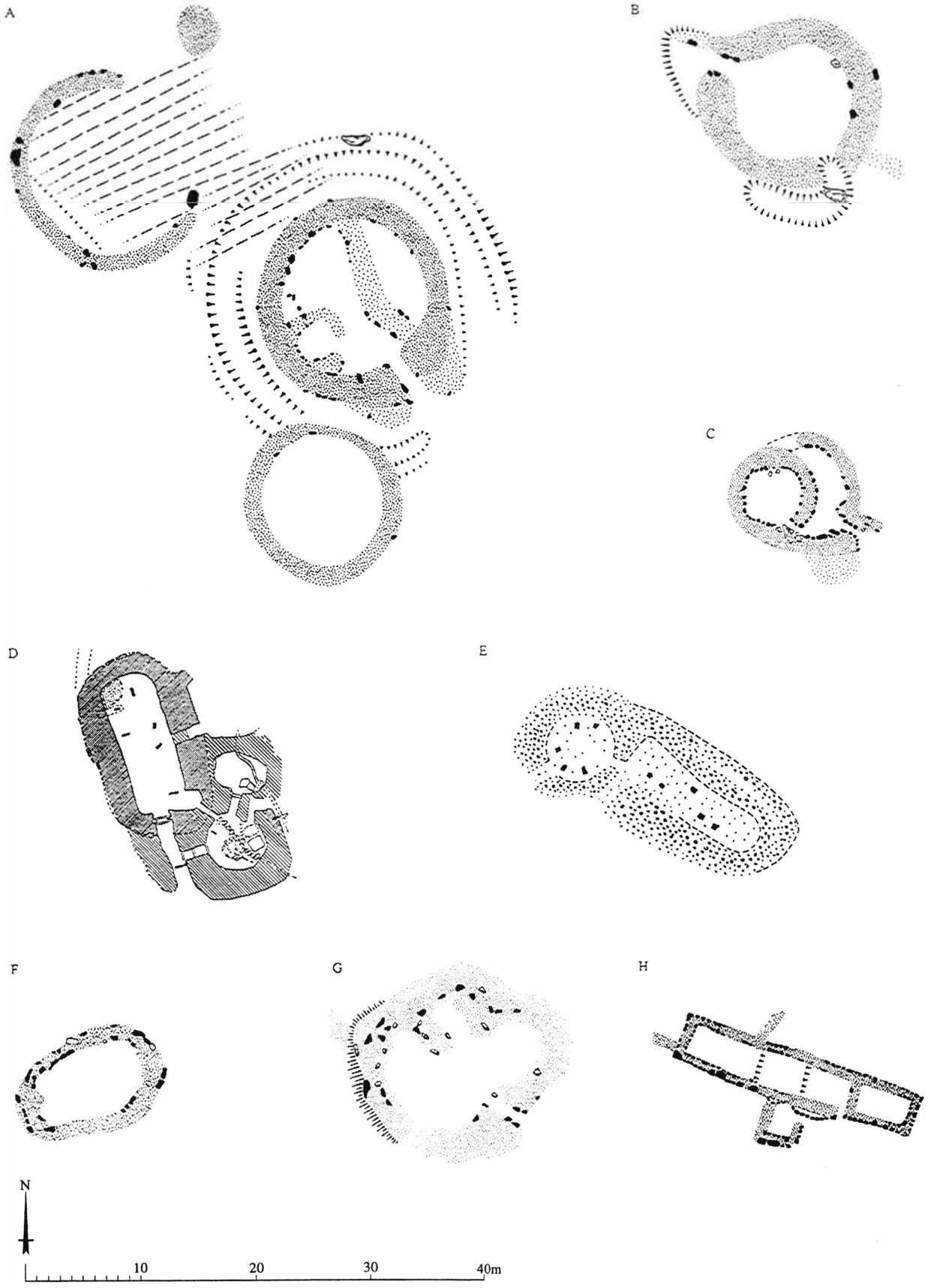

Fig. 1. Forms of domestic architecture in later prehistoric Sutherland and Caithness. A-C, G and H are RCAHMS surveys; D - A.O. Curle; E - Keith Blood; F - John Barneveld.

Caithness preserve extensive 'hut-circle landscapes'. The greater part of Caithness is relatively low-lying, rolling and extensively improved, consequently the density of hut-circles shows a dramatic reduction. Within the upland areas of Sutherland and Caithness, however, assessment of the known distribution suggests that the broad pattern of surviving later prehistoric settlement remains has been mapped and that, while there are gaps, these are largely predictable and only significant in detailed analyses (Cowley 1998, 165).

The short-comings of the term 'hut-circle', with its somewhat pejorative emphasis and all-encompassing scope, are well known, and nowhere more than northern Scotland, with its tremendous range of round buildings, are the deficiencies of this term more apparent (Fig. 1, A-C). There is considerable variation in hut-circle form, particularly in diameter which may range from 3.5m to 15m internally, the majority falling between 5m and 12m. Wall thicknesses of up to 4.2m imply a considerable range in the monumentality of the structures, with the additional implication that those at the thicker end of the range may represent multi-period buildings. This variation in size and monumentality has clear implications for the potential functions and status of structures, for example whether they represent permanent or seasonal settlements. The function and status of houses may also change through time. Elaboration in design can take a number of forms, the thickening of wall terminals to provide an extended entrance passage and the provision of an external baffle wall being amongst the most common (Fig. 1, A-C). Souterrains (Fig. 1, B) and other conjoined spaces, for example forming a 'keyhole' plan, are also recurrent features (eg. NMRS NC 92 SW 38), and may point to further diversity in function and/or status. Basic morphological variations have long been recognised (RCAHMS 1911a, xxv-xxxi), and more elaborate schemes have been developed (eg. Mercer 1985, 59-95); but all suffer from a lack of chronological definition. Recurrent relationships between buildings, such as the insertion of small stone-walled round-houses into larger structures (eg. Fig. 1, C), have also been observed, but these sequences also have no fixed chronology.

The limited available dating of hut-circles in Scotland as a whole indicates that the round-house was a highly successful building form which persisted for at least the last two millennia BC and well into the early centuries AD (Barber 1997; Carter 1993; Fairhurst and Taylor 1971; McCullagh and Tipping 1998; McIntyre 1998; Mercer 1996; Stevenson 1985). A somewhat later context for what may have been a round building, comprising a post-ring 5m in diameter and interpreted as a barn, has been excavated near Lairg in Sutherland, where a date in the late 1st millennium AD for this building seems likely (McCullagh and Tipping 1999, 58-61). While the identification of round-houses, measuring about 8m in diameter and dating to the late 6th - early 7th century AD, at Buiston crannog in Ayrshire, south-west Scotland (Crone forthcoming) suggests that this potential for round buildings in the later 1st millennium AD may be a widespread phenomenon.

This potential diversity in function and date limits the scope for discussion of chronology to broad generalisations, such as the observation that structures associated with souterrains may date to the final centuries BC and early centuries AD. The recurrent association of souterrains with large diameter, substantially built, circular houses with stone walls, suggests that these houses may generally date to this period. Other substantial houses, which may be somewhat elliptical on plan and feature extended entrance passages, have a somewhat earlier horizon between the early to mid-second millennium cal BC (McCullagh and Tipping 1998, 112) and about 500 BC (Mercer 1985).

A more general approach to the data is appropriate. An assessment of the hut-circles in Sutherland has identified recurrent patterns in the juxtapositions of houses and certain types of landuse remains. This suggests a zoning in settlement intensity, with core areas of potentially long-lived settlement associated with developed field-systems, and peripheral areas of more transient or perhaps seasonal activity (Fig. 2, A; Cowley 1998). Not surprisingly, the core settlement areas lie at relatively low altitudes and on good soils. Taken together with the distribution of most medieval and later settlement, which generally demonstrates an even greater emphasis on low-lying and sheltered locations, the distributions of prehistoric core areas can be taken as a proxy record of the most favoured areas for settlementin Sutherland.

It is clear from the evidence for repeated stages of construction of some hut-circles (Barber 1997; Mercer 1996; McCullagh and Tipping 1998; Stevenson 1985) that prehistoric settlement in many areas underwent cycles of expansion and contraction during the 1st and 2nd millennia BC. While the details of such peaks and troughs in the extent of settlement cannot be disentangled from the mass of survey data, it is clear from the distribution of structures dating to the final centuries BC, including some of the monumental hut-circles, brochs and those buildings with associated souterrains, that during the course of the 1st millennium BC the extent of settlement contracted markedly into the core areas of best ground, leaving fossil Bronze Age landscapes which have only seen sporadic and/or transient exploitation since. At Allt na Fearna, to the south of Lairg, for example, excavation has identified widespread abandonment of buildings in the locality by about 1000 BC and a maintenance of pasture until at least 200 BC (McCullagh and Tipping 1998, 209). The contraction of settlement during the later 1st millennium BC is unlikely to have been a smooth process and may have been interrupted by episodes of expansion. Cycles of expansion and contraction in post-medieval settlement have been identified in the Strath of Kildonan. For example, a small number of farmsteads and townships of 17th and 18th centuries AD date outside the major river valleys document the spread of relatively short-lived settlement into new areas (RCAHMS 1993, 15-6) and similar processes may have been at work two millennia earlier. This process of contraction is presented in broad-brush terms on Fig. 2, where the maximum extent of settlement provides a backdrop to the extent of later 1st millennium BC - early 1st millennium AD settlement derived from the coincidence of core areas and the distribution of buildings of that date.

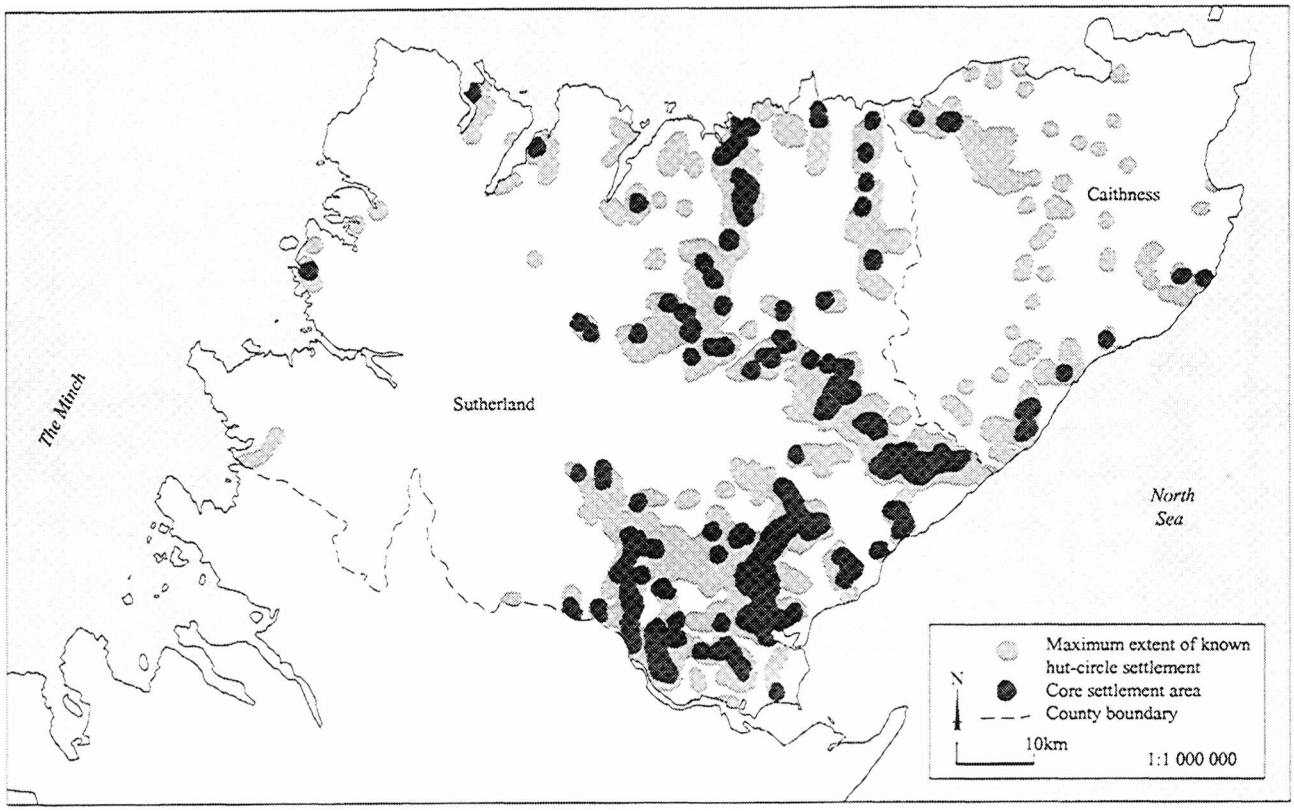

Fig. 2. A: The maximum extent of known hut-circle settlement and the contraction of settlement into core areas in the mid-later 1st millennium BC.

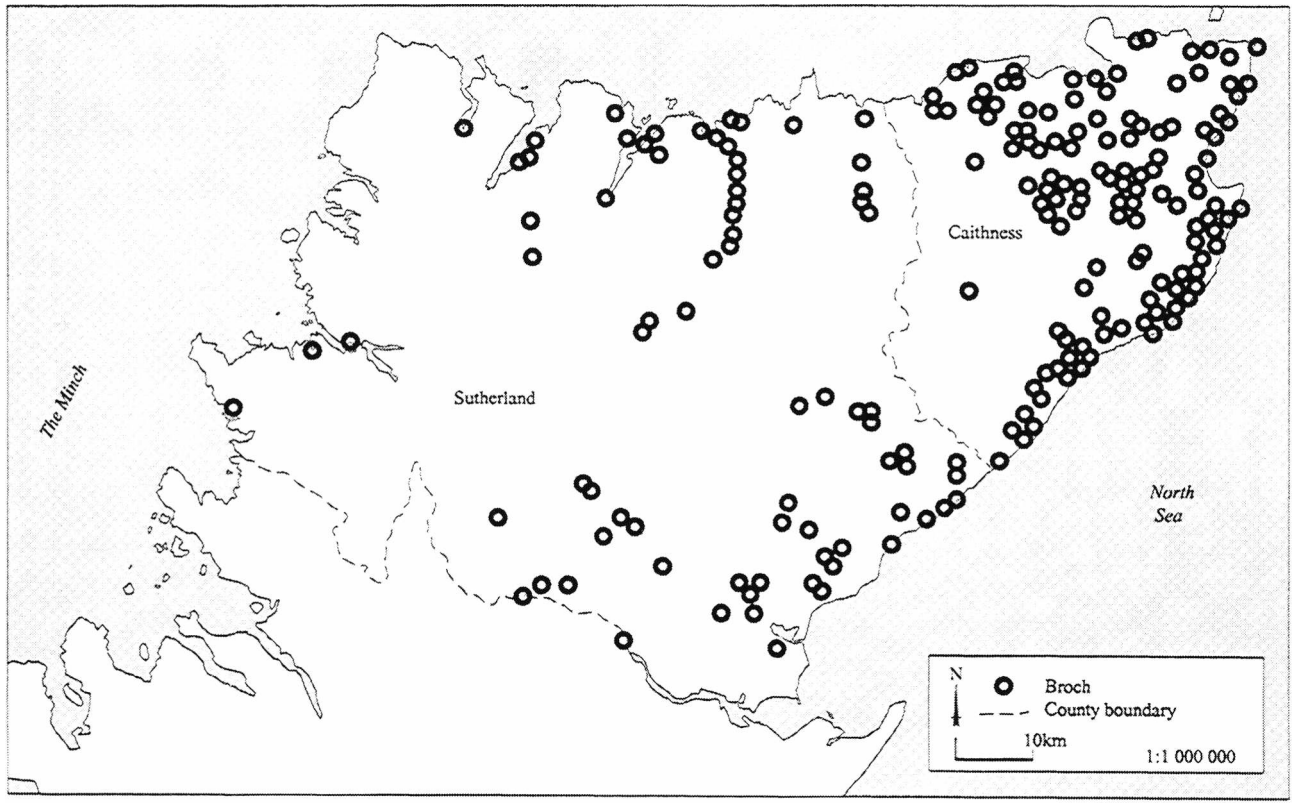

Fig. 2B: The distribution of brochs in Sutherland and Caithness.

The causes of contraction in the extent of settlement may have been manifold, but environmental factors, volcanic eruptions, population collapse, degradation of soils and consequential peat-growth have all been invoked. The majority of hut-circle groups in core areas of settlement contain large numbers of houses and these may be of widely differing dates, reflecting the successive use of the same locality. Another aspect of this pattern, assuming that there was no drastic fall in population, could be an increase in settlement size consequent on contraction in the numbers of settlement units. While there is no direct archaeological evidence for this, such a change would carry with it some implication for intensification of production in these areas and this could be tested through palaeo-environmental sources. It is clear, however, that settlements of round-houses continued, at least in the more favourable areas of Sutherland, into the early centuries of the first millennium AD at least.

The situation in lowland Caithness is less clear and landuse over the last two millennia has undoubtedly skewed the surviving material to features such as brochs at the expense of more ephemeral structures such as hut-circles. There is, however, a much denser pattern of brochs and associated structures (below) than in Sutherland and this raises the possibility that the emergence of the brochs and their extra-mural buildings saw the replacement of hut-circle settlement. It is easier for the later first millennium BC, however, to accept that the greater part, if not the totality, of the population was accommodated in the dense distribution of structures represented by the broch settlements, than it is for the thin scatter of brochs in Sutherland.

Brochs

In the final centuries BC an increasing elaboration in round-house design provides the backdrop for the emergence of brochs. While many of the substantial round-houses of the 2nd and earlier 1st millennia BC would have been monumental structures dominating their landscapes, the brochs represent a significant change of scale (Fig. 3) and have attracted attention from an early date. Much of the discussion of brochs has focused on them as unitary monuments, but more interesting in the context of later prehistoric landscapes in the north are variations in the distributions and local contexts of these monuments (Armit 1997). The brochs of Sutherland and adjacent upland areas of Caithness have a very distinctive distribution (Fig. 2, B) which is exemplified in the Strath of Kildonan, Sutherland. Here they are generally placed on the leading edge of the first major terrace above the haughland, with a commanding view to and from the valley floor (Plate 1). A marked regularity in spacing is also evident (eg. Fig. 2, B; RCAHMS 1993, Fig. 9) extending up the lower and middle reaches of valley systems and lying within or at the fringes of those areas identified above as core settlement areas. While most lie in areas where there is surviving hut-circle settlement and remains of prehistoric landuse, the broch structures do not appear to provide a physical nucleus for settlement.

In contrast, the brochs of lowland Caithness and several situated along the east coast of Sutherland form part of a settlement nucleus (Fig. 3) often visible as a distinct mound which may, in common with Orkney, contain earlier and later, structures (eg. Armit and Ralston 1997, 185; Ballin Smith 1994; Mercer 1985, 98). The concentration of brochs is also considerably denser than in Sutherland and, while further survey may well identify additional sites, the marked contrasts between the upland and lowland areas of the north are a genuine reflection of past patterns and not a product of landuse or recovery biases.

Wags and other building forms

The classification of field monuments can be fraught with uncertainty and, while the attribution of sites as brochs and hut-circles can be made with some reliability, there are a number of subrectangular and cellular sites that defy easy categorisation. Many are recorded in the NMRS under such ambiguous classifications as 'homestead', while the most clearly defined are wags or aisled houses (Fig. 1, D, E; Baines, this volume). These were originally defined by Curle (RCAHMS 1911b, xxxix-xl), as circular or oblong (with rounded corners) structures, with stone pillars supporting a slab-built roof. Circular ('wheel-house') and oblong examples are occasionally found conjoined, forming a 'keyhole' on plan (Fig. 1, E), and circular buildings may be disposed in a figure-of-eight arrangement (eg. NMRS ND 02 NW 1). These morphological differences may point to functional or social variation between structures, but in the absence of any hard evidence the circular and oblong sites can be treated as part of the same broad group, together with those clustered around brochs (Fig. 3).

The distribution of free-standing wags is concentrated in upland southern Caithness, but extends into the east of Sutherland, with examples in upper Glen Loth and perhaps even further south (Baines, this volume). This distribution may be related to the occurrence of Caithness flag, the horizontally banded sandstone which splits into the massive slabs required for the aisle pillars and roofing, and the absence of trees producing structural timber. In lowland Caithness (Fig. 3), and in two cases along the east coast of Sutherland (eg. Carn Liath, Love 1989), examples of wags and similar subrectangular buildings are found clustered around brochs, resembling the extra-mural settlements that are such a consistent feature of Orkney. Inevitably dating is poor but what evidence there is places these structures broadly in the middle centuries AD. Structural sequences at the Wag of Forse (Baines, this volume) and the Broch of Yarrows (Fig. 3, NMRS ND 34 SW 1; Baines, this volume) indicate the potential for these buildings to both post-date occupation of the brochs and to have functioned as an integral part of a broch settlement. This suggests that a broader date range, spanning much of the 1st millennium AD, may be more appropriate. It is clear that there is considerable potential for a significant chronological overlap between the round-house tradition, as expressed through both hut-circles and brochs, and the wags and other subrectangular building forms. The

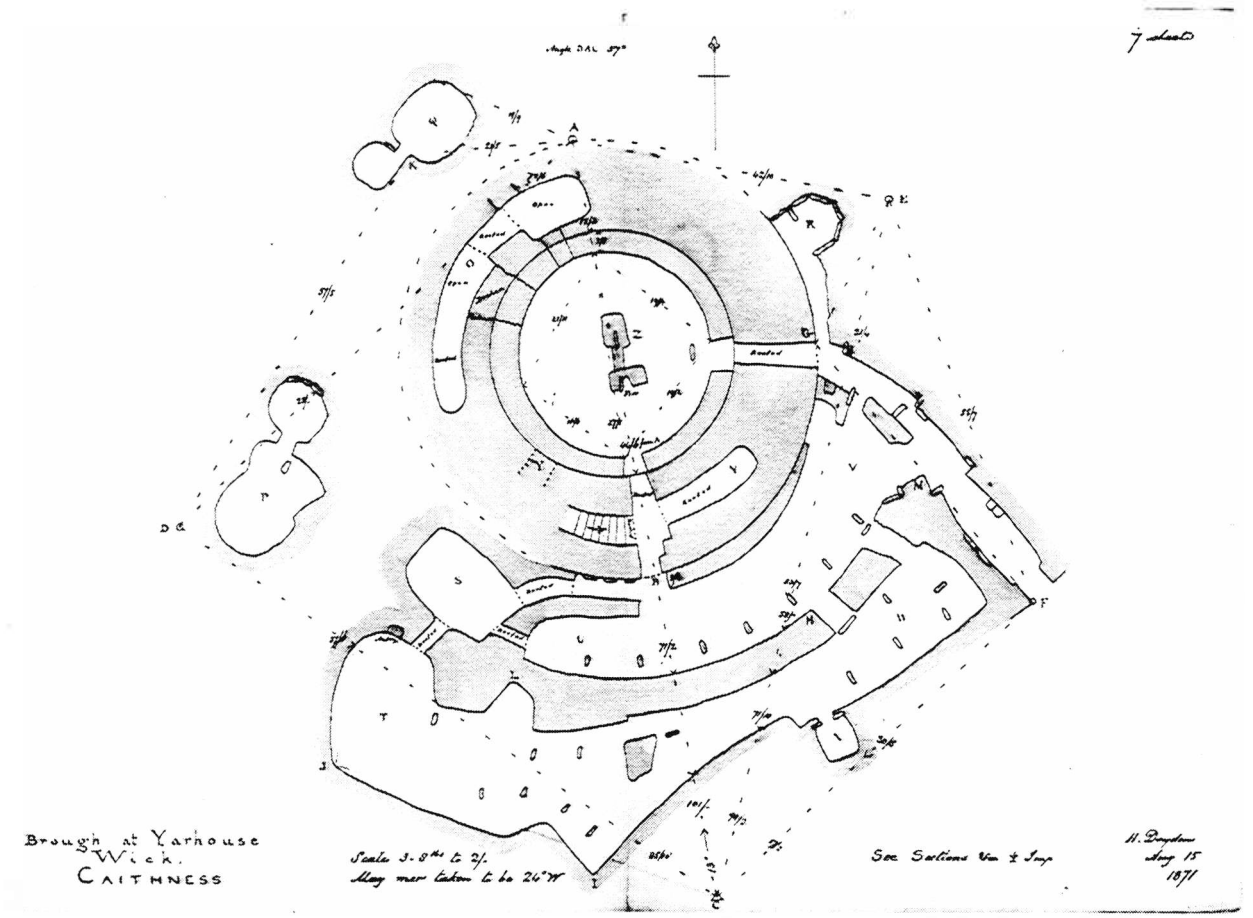

Fig. 3. Plan of Broch of Yarrows by H. Dryden, August 15th 1871, showing the disposition of aisled buildings around the broch entrance and nearby cellular structures.

Plate 1. Kilphedir, Strath of Kildonan, Sutherland (NC 91 NE 27, neg. no. A 22612) - an impressive broch with outworks dominating the middle reaches of the strath (photograph - Geoff Quick).

amalgamation of a circular 'wheel-house' with a subrectangular element, for example at the wag in Dunbeath Strath, reinforces this symbiosis.

The use of Caithness flag in construction has been fundamental in distinguishing wags from other prehistoric settlements, and they stand out from the remains of medieval and later settlement because of the breadth of the buildings and their proportionally massive walls. The subrectangular wags, for example, commonly measure between 4m and 5m in breadth within walls up to 2m in thickness. It is rare to find pre-clearance buildings in the north with internal breadth measurements exceeding 3m or walls thicker that 1m (eg. Fig. 1, H; RCAHMS 1993, 14). The structure of wags, with roofing slabs carried across a large interior on pillars, may reflect a lack of structural timber and a coincidence of suitable stone. They are prominent by virtue of their megalithic form and undoubtedly form a distinct morphological group. However, outside the core of the wag distribution in southern Caithness there are increasing numbers of buildings which are characterised by internal widths of up to 5m and are subrectangular on plan (Fig. 1, F). Although they lack any evidence for internal pillars, this may reflect the use of timber. On the basis of their morphological similarities with the subrectangular wags and the contrast they present to the 18th and early 19th century buildings, they may form part of a regionally diverse pattern of 1st millennium AD settlement (see also Ralston 1997). The requirements for supporting the roof over these large interiors could have been met by arrangements of posts similar to those of the pillars in the wags. In the case of the subrectangular buildings this would have created a similar arrangement of internal space to the subrectangular aisled wags. While the wags of Caithness are a distinctive group of buildings, there is a danger that visible aspects of their construction that may be due to local circumstances, such as the supply of building materials, highlight the individuality of these buildings unduly.

Cellular buildings may be further variants of similar date to the wags. One such building has been recorded overlying elements of a prehistoric field-system in the Strath of Kildonan and, while it is essentially undated, its cellular form suggests a date in the 1st millennium AD. The building is oval on plan and the interior appears to have been divided into cells (Fig. 1, G).

Patterns in a landscape: settlement form and power structures

Major changes in the form and distribution of settlement in the far north-east of Scotland occur during the late 1st millennium BC and early-mid 1st millennium AD. A period of at least 500 years is characterised by a fluid and eclectic mix of building forms, some aspects of which may reflect changes over time, although chronological resolution is very poor. Considerable diversity in the form and scale of buildings implies a range to the expressions of status through architecture and the presence of at least a limited hierarchy in which brochs may have been one element. By the medieval period, and perhaps in the later 1st millennium AD, building forms stabilised with an emphasis on rectangular forms. Allowing for sporadic periods of expansion, the overall extent of settlement may have contracted further within the areas identified as core to the prehistoric settlement pattern, and developed into the pattern of farmsteads and townships that survived until the clearances of the early 19th century. The intensification in production that may have been concomitant with such a contraction may be a factor in the low levels of survival of earlier structures within the medieval and later settlements (RCAHMS 1993, 16).

Current interpretations of the status of brochs are divided on the extent to which these structures should be seen as a reflection of settlement and social hierarchies (eg. Armit 1990, 1997; Sharples and Parker Pearson 1997; Sharples 1998). The clear regional variations in the distributions of brochs across the north, from the dense concentrations of settlement mounds in Caithness and Orkney to the dispersed and isolated structures of Sutherland and the Western Isles, for example, may point to geographical variations in the roles of brochs and their inhabitants in settlement and social networks (Armit 1997). The contrast between Sutherland (upland) and Caithness (lowland) is a case in point and is open to a wide range of interpretations, aspects of which are explored below.

The distribution of Sutherland brochs, in particular the regularity of spacing and an emphasis on physical domination of the valley floor, is distinctive (Plate 1). The low numbers of these structures suggest that they cannot have housed the totality of the population, and this is reinforced by the evidence for the maintenance of settlements of hut-circles into the 1st millennium AD. It is difficult to escape the conclusion that in these cases there was a hierarchy of settlement in which the brochs were at least locally pre-eminent, and provided a focus for organisational units or estates strung out along the valley systems. The density of brochs in lowland Caithness precludes the simplistic analysis of the upland brochs above, but similar patterns of landholding may have been present, perhaps with a different emphasis in the fertile lowlands to that required in the uplands of Sutherland. In Caithness it is easier to envisage a larger proportion of the population living in and around brochs.

The differences between brochs in upland and lowland areas extends beyond their disposition in the landscape. The Caithness (and Orkney) brochs can be seen as part of a settlement continuum focused on the same locations, even if habitation was not continuous. The physical isolation of those in Sutherland from other structures is marked, and they give an impression of having been planted into a landscape. Adjacent lowland Caithness provides an obvious source of such an influence and there are good reasons why this lowland area may have been precocious in this respect. The relative fertility of Caithness and its easy access to the sea must have provided a wide economic base which underpinned the development of localised and regional élites, which preceded the development of more extensive power structures by the end

of the 1st millennium AD (Armit and Ralston 1997, 187). In direct comparison, Sutherland and upland Caithness may have become increasingly marginalised during the later 1st millennium BC without the economic surplus to sustain the development of significant power bases. None-the-less these areas are likely to have remained important, for example, for grazing and perhaps timber if lower intensities of landuse saw pockets of re-afforestation.

If the upland areas did become marginal to the development of power bases in Caithness, the extensive straths would still have represented a valuable commodity, in providing grazing, for example, and it is unlikely that their potential would be ignored. The broch is increasingly widely seen as an expression of local authority (Barrett 1982) and in lowland Caithness and Orkney, where much of the population may have been living in and around brochs, this may be appropriate. The distribution of brochs in Sutherland, and in particular in the Strath of Kildonan, implies a role as a focus for a territory or estate, and would also have provided a powerful symbol in the maintenance of local power relations. In addition to this local control, the upland brochs may have been an expression of external control, reinforced by their dominant locations, physical isolation from other structures and impression of having been planted into the landscape. The identification of such elements of regional control carries with it implications for the existence of higher levels of organisation and identity centred on Caithness and Orkney, and with a wide geographical ambit (Armit 1990).

The distribution of wags and other buildings in upland areas is exclusive to the brochs but is also characterised by isolation from other structures. The origins of these buildings may also lie in Caithness and their distribution, pushing up into often fairly isolated locations such as the upper reaches of the Langwell Water in southern Caithness, suggest a process of infilling and colonisation. Wherever the inhabitants of these farms originated, the style of their buildings would have been a forceful way of stating an affiliation or allegiance which would be all the more marked in the context of colonisation and a changing social order.

The development of extensive power structures in Caithness and Orkney and the implication of the relative backwardness of Sutherland may also have a bearing on the demise of the round-house tradition. Architecture is a powerful medium of communication and, in the context of the rapidly evolving social and political structures that are implied by the settlement record, the round house may quickly have become an expression of a waning social order which survived longest in socially and politically marginal areas.

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