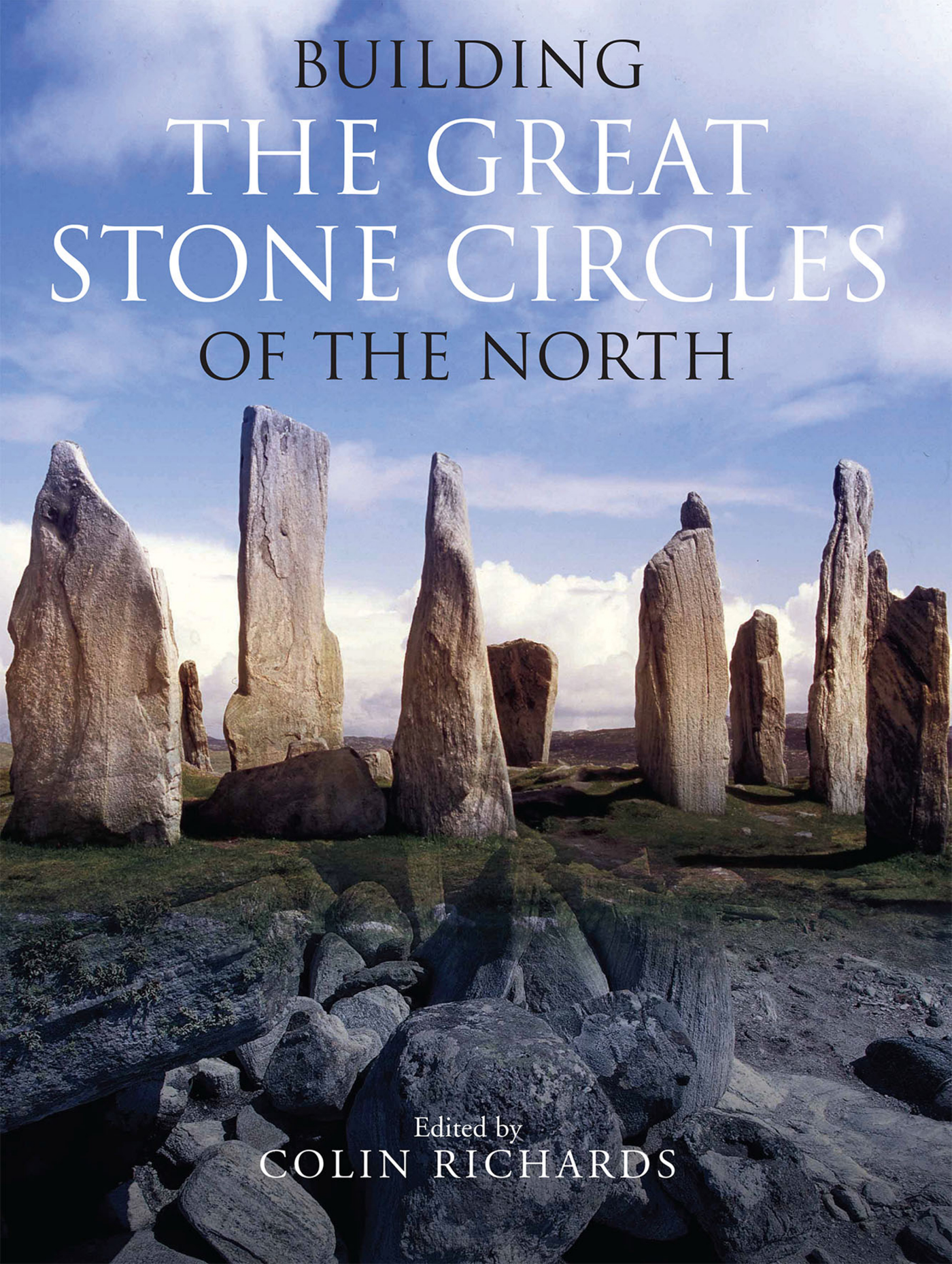
BUILDING THE GREAT STONE CIRCLES OF THE NORTH



Edited by
COLIN RICHARDS

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For Richard Bradley

Dark Sunset

JANE GLUE

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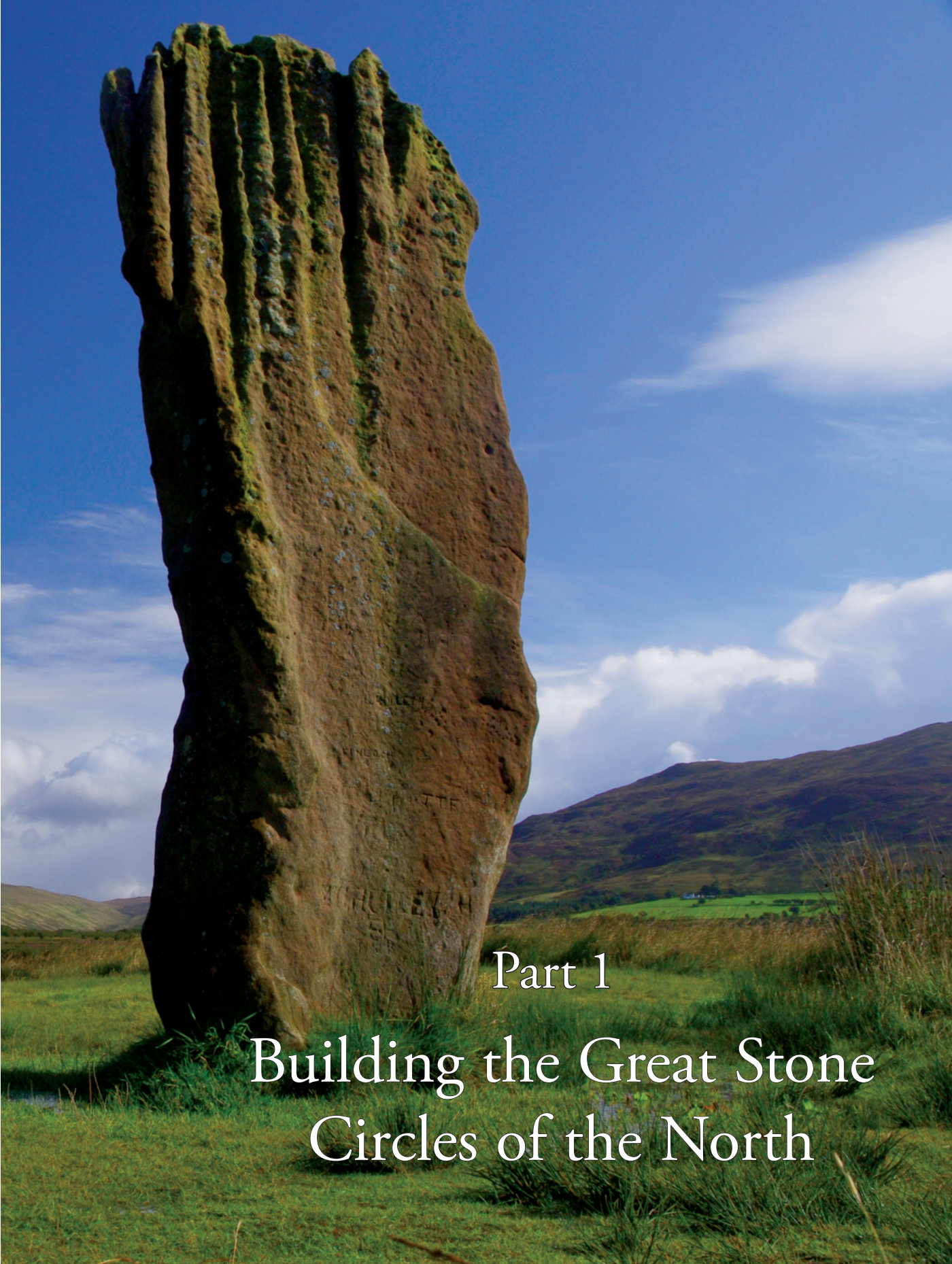
Stone of Circle 3 at Machrie Moor, Arran

COLIN RICHARDS



Part 1

Building the Great Stone Circles of the North

CHAPTER 1

Interpreting Stone Circles

Colin Richards

The stone circle

Of all prehistoric monuments, few are more emotive than the great circles of stone that were built throughout the British Isles and Ireland from the beginning of the third millennium cal BC. From the tall elegant, pointed, monoliths of the Stones of Stenness, in Kathleen Jamie's words, 'like three elegant women conversing at a cocktail party', to the misshapen sarsen blocks at Avebury, the circles of stone exert a magnetic fascination to those who venture into their sphere of influence. Their aesthetic is broad and unsurprisingly, more people visit stone circles today than any other form of prehistoric monument in Britain. In many ways their popular appeal lies not only in the striking imagery of a ring of massive stones but also in the curiosity of the apparently intangible labour and practices that gave rise to their creation. In short, visitors may stand in awe at the scale of these monuments but they also want to know how and why these great circles were erected and what they were used for. Such questions are not restricted to the visitor. For instance, over ten years ago Aubrey Burl, the doyen of stone circle studies, pondered 'what they were used for and what happened in them', before lamenting that 'this can still not be answered completely' (2000, 64). Of all questions, these are surely some of the most commonly asked of stone circles, but do they really represent the most appropriate or productive line of enquiry? Certainly, the answers still appear as elusive as ever to archaeological investigation.

The apparent difficulty in answering Burl's questions does not necessarily hinge on any deficiencies of the archaeological evidence. On the contrary, it may be a direct result of our ideas concerning the nature of monuments and monumentality within the third millennium cal BC that is problematic (cf. Bradley 1998a, 124–8). For instance, a central concept guiding the interpretation of stone circles has been that they represent a monumental 'type' much like henges, cursus, passage graves, and so forth (*e.g.* Barnatt 1989, 5–9; Burl 2000, 33–5). Because of this idea discussions are orientated towards searching for spatial (regional) patterns (*e.g.* Barnatt 1989; Burl 1976; 2000), alongside

FIGURE 1.1. A druidic gathering in the southwestern circle at Stanton Drew, Somerset.
COLIN RICHARDS

questions asking what a stone circle 'was built for' and 'how it was used' (*e.g.* Waterhouse 1985, 21–6; Burl 2000, 64). Originally, this purpose or role was considered as being rather straightforward and unproblematic as exemplified by the antiquary Dr Borlase when he stated, 'it is highly probable that these circles were of religious institution, and designed originally and principally for the rites and ceremonies of sacred worship' (Cotton 1998 [1827], 26). It will be noticed that this observation is not so dissimilar from more recent interpretations of stone circles as ceremonial or ritual centres (*e.g.* Ritchie 1985; Barnatt 1989, 3).

Interestingly, once a dominant interpretation is established it inevitably produces a discursive framework that determines how other attributes are understood. For example, on the basis of a stone circle being conceived as a 'ritual or religious centre' it becomes analogous to a place of worship (Figure 1.1). Under such circumstances, its internal size or area is considered directly relational to the numbers of a potential 'congregation' gathering within its confines (*e.g.* Burl 2000, 44). Indeed, Burl actually provides a formula with which to calculate the 'population and area of a ring' (1995, 16). Given such gatherings, it is unsurprising that the general paucity of material evidence recovered from excavating stone circles appears anomalous and puzzling (Burl 2000, 76). Attempts to rationalize this absence result in the attribution of practices which leave little material trace such as dancing, astronomical observation, and such like (*e.g.* Thom, 1967; Burl 1976, 84–9; 1980; Ruggles, 1998, 205–8).

When questions concerning a stone circle are framed in terms of use, the practices of building become subordinate to function. Yet, the deployment of massive monoliths in the architecture of the stone circle surely emphasizes construction, not least because the practices of building radiate away from the

monument itself. For instance, each monolith would require to be dragged to the site from a location beyond the circle, and in many cases needed to be quarried from outcropping rock. The more the practices of construction are considered, the more central the idea of building becomes.

Building a stone circle

Just consider the nature of construction today. Before any building actually commences the planning process demands identification of what is to be built, for instance, a dwelling, factory or prison. At this point the completed entity is formalized to the extent that it exists as an entity in the form of architectural drawings and plans. From the initial digging of the foundation trenches to the last finishing coat of paint the planned building is conceived as being in a state of becoming. Building practices entail the gathering of different materials, machinery and specialists together at the building site, a place where the architecture is incomplete – a non-thing that is often partitioned off and concealed behind boarding (Fig. 1.2). After the duration of construction, almost overnight the boarding is removed and the building site is suddenly transformed into a school, university, hospital, and so forth.

In short, we are accustomed to see and conceive the construction process as simply one of facilitation that has a clearly identifiable final form and outcome. This very much falls within the 'building perspective' identified some years ago by Tim Ingold (2000, 178). The building perspective can be briefly characterized as people being required to make worlds before they can dwell in them (for an interesting discussions see Kirk 2006, 74–7; Whittle 2006). It is within this perspective that stone circles have been considered in privileging the completed form (cf. Barrett 1994, 13–4). There is an essential factor here, that of a building only assuming a social role or function upon its completion (Ingold 2000, 188).

FIGURE 1.2. Partitioning around construction at Sainsbury's, Leek, Staffordshire.
COLIN RICHARDS

The lure of viewing all monuments in this manner is because it simply mirrors our day-to-day understanding and experience of the creation of architecture. However, there is an alternative line of reasoning. Accepting that architectural form is of consequence, it is also the physical engagement of people with the materiality of their world within the context of construction that may be of greater interest and import (see McFadyen 2008; Richards 2009). Hence, the main point of departure for the 'Great Stone Circle Project' was a more imaginative and critical view of monumental construction, and to follow the suggestion that in certain forms of Neolithic monumentality we may be witnessing a complete reversal of our own experiences of architecture (Evans 1988; Barrett 1994; Ingold 2000). In such a reversal, *the process of making* becomes the focus and function of the stone circle. Such a reorientation not only requires a suspension of contemporary attitudes towards the idea of completion, as the realization of a pre-formulated plan, but also the abandonment of a related idea, that of efficiency or ease of effort being a teleological aspect of monumental construction.

Consider for a moment the supposed requirements for building a Cumbrian stone circle as suggested by Burl:

> A convenient clearing was looked for, perhaps one already opened by early agriculture, large enough for the circle, flat like those at Carles or Ash-house Wood, or on a slope as at Long Meg whose size may have precluded the choice of a more horizontal site. At Swinside … the area may have been levelled, hinting that the effort was justified by the discovery of a spacious dry patch from which few heavy trees had to be removed. An important factor may have been the nearness of stones. Many circles are built of glacial boulders common locally
>
> (1977, 71).

Here the completed monument is privileged above all else. Consequently, ideas of Neolithic engineering as being commensurate with principles of least effort, seem perfectly appropriate. A similar set of assumptions underpins Thorpe and Williams-Thorpe's argument that 'the megalith builders utilized the simplest and most obvious methods for stone selection, transportation and construction', leading to the inevitable conclusion that the situation 'of megalithic monuments was therefore determined by the local availability of building material' (1991, 72).

As these views are bedded in contemporary discourses of conservation, efficiency and 'common sense', it is of little surprise that the experimental archaeology of construction works towards similar goals. As always Stonehenge takes centre stage in such scenarios. If a graph were drawn through time, from Atkinson's (1956, 109–10) initial experiments through to more recent attempts (*e.g.* Richards and Whitby 1997), concerning the various estimates of numbers of individuals required to drag or move a stone of forty tonnes, it would show a steady decrease from 640 to 100 people. Such preoccupation with efficiency has led to numerous reconstructions, each of which attempts to outstrip earlier efforts in terms of arriving at a greater economy of effort. As noted above, this obsession is linked to western industrial concepts of labour efficiency, time management and profitability. However, when we turn to ethnographic

FIGURE 1.3. Transporting a large stone in the Naga district of northeast India.
COURTESY OF THE PITT RIVERS MUSEUM, OXFORD

examples of stone dragging and monumental construction within traditional societies (*e.g.* Hoskins 1986), we find this whole line of reasoning is totally flawed (see Chapter 2). Indeed, the exact opposite frequently appears to apply whereby labour and materials are resources to be consumed in excessive quantities as part of competitive social strategies to enhanced status (Fig. 1.3). Rather than how few people are necessary to move a stone, it is the ability to gather the largest possible labour force that provides an index of the status of the organising or sponsoring social group (Fig. 1.4). Yet again, uncritical contemporary ideas and assumptions appear to dictate the way materials and labour are understood in the context of building a stone circle.

If the acts surrounding construction provide a context for the negotiation of social position, then it follows that construction transcends a process of facilitation. In the context of erecting a stone circle, we should perhaps consider a reversal where instead of architecture being built to be used, an actual 'use' lies in the making. Whilst it cannot be disputed that there is clearly an intended outcome, for instance, the erection of a monolith within a stone circle, the transportation of the stone may have constituted the primary social focus. The idea of construction as representing some form of 'ongoing project' is hardly new in archaeology. A number of years ago Christopher Evans (1988) employed this idea to account for the temporal sequence of Neolithic causewayed enclosure ditches, an idea that was further developed by Mark Edmonds (1999, 98–103). In similar vein, John Barrett (1994, 13) criticized the privileging of final form in the large Wessex henges of Avebury and Durrington Walls when he suggested that the final plan did not reside in someone's head, 'but rather in the practice and in the project. It existed and it was known only through the moment of its execution. The project was guided by relatively simple principles

of spatial order and it was upon these that it worked itself out' (Barrett 1994, 23). Here, through human labour, monumental architecture as a project unfolds (cf. Evans 1988), or emerges with subsequent components drawing on previous construction. As Ingold suggests 'final form is but a fleeting moment in the life of any feature, when it is matched to a human purpose, likewise cut out of the flow of intentional activity' (2000, 188). It is the social consequences of this intentional activity that I wish to consider next.

The social risk of megalithic construction

Characterized by scale, a latent view of late Neolithic monumentality, including stone circles, has been that its creation reflects a centralized political authority of some form or another (*e.g.* Renfrew 2000). Such a view was evident in a number of earlier interpretations of the late Neolithic (*e.g.* Renfrew 1973; 1979; Bradley 1984; Thorpe and Richards 1984). Among others, Barrett (1994, 29–32) departed from this assumption in his discussion of the late Neolithic Wessex monuments, suggesting that an outcome of constructing monuments was to provide the conditions under which social differentiation may occur, as opposed to it being a prerequisite. This was an important re-orientation of thinking as it focused attention on the social and material conditions under which such enormous monuments could be built. If it is accepted that the final form or physical completion of a stone circle may not have been of principal concern to the builders, then the focus shifts to the construction process. For me, perhaps the most enticing, but elusive, qualities of stone circles are those that are, in the main part, archaeologically invisible, particularly the extended web of social practices surrounding the building of a monument. This also extends to the (pre) historical circumstances under which monument construction becomes a viable social strategy.

Although 'building' may constitute an important social focus, there are numerous reasons for raising a stone circle, or rather a series of discrete monoliths erected in a circle. For instance, a vocalized need to honour dead kin and to create a permanent material marker. This lies behind megalithic architecture in Sumba and Nias, Indonesia (*e.g.* Hoskins 1986; Bonatz 2002), the erection of which is accompanied by much ceremony (Fig. 1.4). Alternatively, monoliths may be erected and sponsored by living members of a community acting as a memorial to, and *locale* for, their spirit such as occurred on Vanuatu up to the early twentieth century (Layard 1942).

The stone circle as a monument may be considered to be of a different order to individual monoliths. However, among the Sa'dan Toraja of Sulawesi, Indonesia, the creation of stone circles is composite in that 'a new stone is set up for each person who dies and it must be dragged to the ritual ground…. accompanied by crowds and much festivity' (Kis-Jovak *et al.* 1988, 52). In this example, the stone dragging and erection of the monolith forms part of a lengthy ritual process spanning several years. This underlines the fact that in

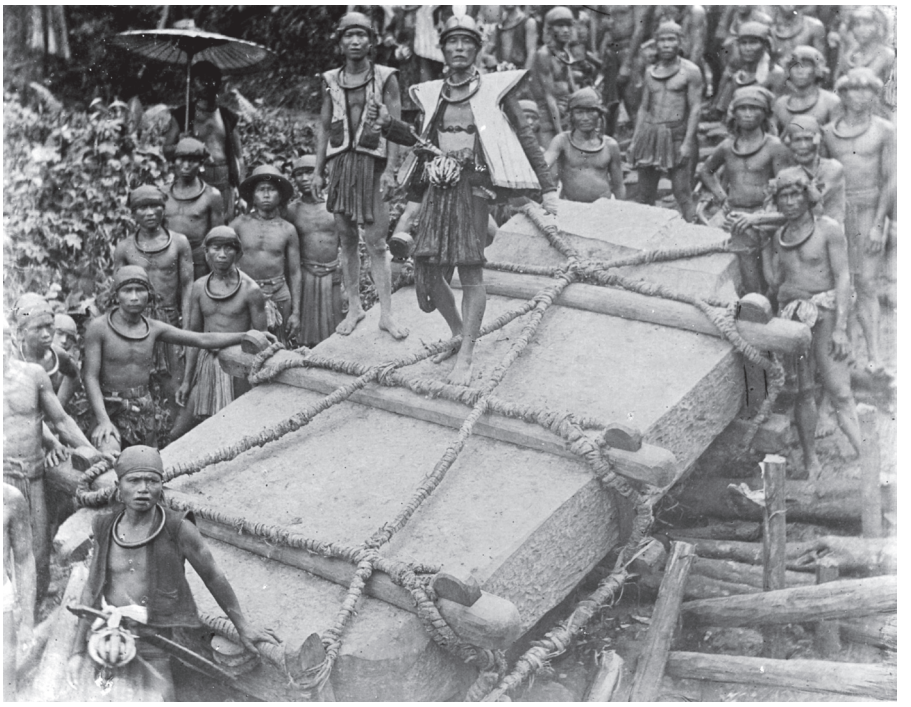


FIGURE 1.4. Dragging the stone Darodaro for the dead Saoentigeho of Bawamataloea, Nias, Indonesia. The stone is dragged in a manner of great ceremony over 3km from the riverbed from where it was extracted.
PHOTOGRAPH BY LUDWIG BORUTTA, REPRODUCED BY KIND PERMISSION OF TROPENMUSEUM, NETHERLANDS

virtually every ethnographic context, regardless of stated motive, once such an undertaking was announced, much planning would be required. This is because monumental construction begins not with a large labour force gathered together, but the creation of the social and material conditions under which such a labour force can act and work together. Hence, the building of a monument is exposed as layered practice, fusing publicly stated reasons with a variety of social strategies involving negotiations of status and discourses of honour (*e.g.* Bourdieu 1966).

Accepting such social complexity, clearly it was not simply practical questions concerning the presence of a flat area or nearby stones that allowed a great stone circle to be built (*contra* Burl 1977, 71). Rather, erection relied on the successful negotiation of social relationships. Here it is worth recalling the Sulawesi example to make the point that a stone circle is essentially composite in nature in that it consists of a series of individual standing monoliths. Hence, labour will inevitably be organized around the procurement and movement and erection of a particular stone. With many of the great stone circles, the monoliths were enormous and demanded a substantial labour force for their manoeuvre and transportation.

Such consumption of labour unavoidably involved reaffirming networks of relationships between people. Not all the participants, however, were going to be intimately involved in the quarrying or dragging of the stone. Instead, the numerous 'projects' of the stone incorporated many different people in a range of places all combining to complete the necessary preparations – be they

the production of tools, ropes, food, offerings, or the clearing of forest and vegetation. In this sense they were unified in the production of things that were both products of their individual labour and yet formed part of something far greater (cf. Thomas 1996, chapter 5). Woven around the hearth in the long winter evenings, many lengths of strong rope, such as that recovered from excavations at the late Neolithic Orcadian village of Skara Brae (Clarke 1976), were necessary to drag the monolith. Levers, rollers and the sledge required specific types of wood, the procurement of which involved the felling of large numbers of trees over potentially wide distances. Scrub and woodland required clearing to create broad paths to drag the stones. This work scarred the land providing a mnemonic of both physical labour and the route of the monolith.

From the range of tools specially fashioned, to animals fattened for the subsequent feasts, all these tasks and more created a web of relationships and relatedness including the reaffirmation of kinship ties through practice (Carsten 2000, 25–9). Based on debt and obligation, these relationships enmeshed many people in many places. These projects of the stone necessarily created their own specific rhythms and temporalities merging with the time cycles of production and daily life. In this way the activities surrounding the quarrying and dragging of a single large stone brought a physicality and practicality to otherwise abstract or symbolic social categories such as kin or community.

Although not yet actually moved, the monolith was already exerting a form of influence in re-defining and ordering social relationships (cf. Gell 1998, 66–72). For substantial stones being dragged over some distance, the amount of preparation was likely to have been of great magnitude and in some cases these projects may have taken generations to organise and fulfil. Once construction is conceived as a social process and the complexity of specific tasks and requirements identified, the sequential practices involved in building the great stone circles clearly contain a huge array of uncertainties and dangers. This element of risk has received virtually no attention in studies of monumental architecture, yet a high degree of risk is clearly inherent in all megalithic constructions. The questions to be asked do not solely concern the degree of risk present within particular building projects as an objective measure, but to what extent was risk acknowledged as a concept in late Neolithic society and also, how it was understood in relation to specific practices (see Douglas and Wildavsky 1982).

Briefly diverting to another place and time during the early European Neolithic, I will detail one interpretation of the tragic events surrounding the hauling and erection of the largest menhir in Brittany which seems to have occurred at some time during the fifth millennium cal BC. This will serve to illustrate the unpredictable and dangerous nature of megalithic construction and the layered nature of risk manifest in such undertakings.

In Locmaraquer, Morbihan, adjacent to the Table des Marchands passage grave, lie the four broken pieces of an enormous standing stone known as the Grand Menhir Brisé (Fig. 1.5). Of all the monuments raised during the early

FIGURE 1.5. Excavations at the Table des Marchands and Grand Menhir Brisé.
SERGE CASSEN

Neolithic period of northwest Europe, the Grand Menhir Brisé undoubtedly represents the most spectacular achievement. Yet, according to Hornsey (1987), the unfolding of this construction project set in motion a sequence of events that would culminate in a disaster of unprecedented magnitude. The possibility that this undertaking could end in such a catastrophic failure must have been anticipated in one way or another – but this was relational to the social consequences attached to the whole enterprise.

The chain of events began with the decision to quarry, haul and erect a massive block of granite, the size of which was beyond any other known Breton menhir. The selected stone was destined to become the Grand Menhir Brisé, a monstrous monolith measuring 20.3 m in length and staggeringly weighing over 300 tonnes (Burl 1985, 135). It was intended to form part of a stone alignment, which may have already included up to 18 substantial menhirs (Cassen 2010).

While the alignment may well have served a commemorative role, the enormity of the social practices surrounding its creation were almost certainly rooted in strategies of enhancing prestige and status acquisition through the vast conspicuous consumption of labour and materials. The addition of the Grand Menhir Brisé to the alignment therefore exceeded a scale of construction ever before attempted.

The project of the Grand Menhir Brisé necessarily involved the labour of many thousands of individuals. Hornsey (1987, 199) estimated a huge labour force of at least 3800 people for the erection alone. This number is, of course, just the tip of the iceberg since as described above, ropes have to be woven, trees felled, rollers shaped, and so forth. Suffice to note that the preparations alone are likely to have extended over many years and generations (for general discussion of duration of monument construction see Whittle *et al.* 2011), and involved a huge number of people. The realization of the construction project would subsequently involve thousands more. Given the size of the Grand Menhir Brisé and the number of people involved, its quarrying, dragging and erection would have constituted an amazing spectacle, attracting spectators from far and wide. It also constituted an enormous social, symbolic and physical risk. Nonetheless, the success of this construction project would ensure the elevation of the organizing or sponsoring group to an unassailable social position because it is unimaginable that the erection of such a vast monolith could ever have been surpassed. Alternatively, failure would be catastrophic given the multitude of resources, human and material invested and deployed in conjunction with the inauspicious nature of such a calamity.

Initially, all appears to have gone well. The Grand Menhir Brisé is a hard granite monolith, probably derived from an outcrop near Kerdaniel, over 4km to the north of its destination (S. Cassen pers. comm.). The massive pillar of stone was successfully detached from the parent rock and hauled along a prepared route way by thousands of people. Such an incredible spectacle of stone-dragging, especially in the context of fifth millennium cal BC Brittany, is hard to imagine, but undoubtedly represented an occasion the like of which had never been witnessed before. Finally it arrived at its destination and at this point it was probably shaped and decorated. How long this extensive work took is unknown, but eventually it was deemed suitable for erection.

The erection required an estimated four thousand people to labour in unison to manoeuvre the stone into position. Whether employing an earthen ramp or a ramped socket to angle the menhir into position, things suddenly and dramatically went wrong. As it was being hauled upright, almost invisible fault lines opened in the granite and the massive stone literally pulled itself apart due to internal stresses. Alternatively, the workers may have lost control of the enormous stone as it was being elevated. Either way the result was the same, with a terrible roar, the twenty metre long Grand Menhir Brisé crashed to the ground and broke into several pieces. The number of people who were injured or killed in the catastrophe is impossible to know but there must have been

many. Today, its broken remnants lie positioned where they fell over 6000 years ago, as a testament to that epic failure (see Fig. 1.5).

This is an extreme example, and it should be noted that this account is but one interpretation of the fate of the Grand Menhir Brisé, nor is it uncontentious (cf. Mohen 1989, 121; Hill 1993; S. Cassen pers. comm.). Nevertheless, if we follow Hornsey's (1987) account of the destruction of the Grand Menhir Brisé, the fractured remains of the monolith lie as a monument to a truly calamitous event. They also serve to expose the inherent risks involved in such an endeavour.

In this context risk may be considered multifaceted, crudely embracing three inter-related areas. First, is the obvious *physical* risk of quarrying, transporting and erecting massive stones. This is a visceral endeavour and within the technological parameters of the Neolithic period relied heavily on human toil and muscle. As exemplified in the above account of the Grande Menhir Brisé, manoeuvring megaliths would have been extremely hazardous and must have resulted in numerous injuries and fatalities.

Second, is the *symbolic* risk manifest within any ritual performance (*e.g.* Howe 2000). From lying recumbent in the ground or attached to the rock outcrop, the extraction of the stone, its transportation or journey, and subsequent erection as a standing stone must be understood in terms of transformation or *rite de passage*. Performance and structure are crucial to such rituals of transformation, as that occurring to the monolith. The ritual process itself is fraught with peril partly because of the supernatural powers encountered in such transformatory contexts. Any failure in this process is extremely inauspicious besides allowing potentially dangerous and uncontrollable forces into the world (Howe 2000, 72–4). In order to alleviate this danger the ritual process is highly prescriptive and we may assume similar measures surrounded the practices involved in the transportation of the monolith from quarry to stone circle.

Finally, and in part embracing the two forms of risk outlined, is what may be loosely termed *social* risk. The successful movement of a monolith can at one level be ascribed to a strategy of social advancement, whatever the vocalized reasons advanced. Conversely, failure is inevitably disastrous for social elevation. This is not entirely due to the wasted consumption of vast resources necessarily deployed to facilitate the construction process, nor to the accelerated social debt accrued through the gathering of a substantial workforce, and the shame attached to failure. Of course, taken together these elements do constitute substantial social liability. Rather, it is the public arena in which the performance of monumental construction occurs which is so problematic because failure – as exemplified in the fate of the Grand Menhir Brisé – is only too obvious for all to see.

There is also another facet of risk inherent in such public strategies of social advancement. Because the construction of a stone circle can be identified as a context for potential social advancement, and that mechanism is dependent on the co-operation of other people, it can also be a context for social resistance. For whatever reason, certain elements within the workforce may feel that the social elevation being attempted through megalithic construction is misplaced

or unwarranted. Janet Hoskins (1986) describes a stone dragging ceremony in Sumba, Indonesia, that goes horribly wrong. In this example, the relatives of the man sponsoring the stone-dragging feel he is unworthy of the enhanced status that such a successful operation would bestow – he is attempting too much. Consequently, when the stone is being floated across a small estuary some people simply let go of the ropes and the stone slowly floats out to sea.

Given the potentially high level of risk incorporated in the construction of megalithic monuments, particularly the great stone circles, the question arises as to how that risk was understood. Giddens (1990, 30) identifies a distinction between notions of 'risk' in traditional societies being attributable to external agencies, such as *Fortuna*, which lie beyond the control of humanity, whilst within late or high modernity, characterized as 'risk society' by Beck (1992), misfortune is assigned directly to people and their actions. This also represents a shift in the characterization of the individual and the direct responsibility of action (*ibid*., 135–8). Here, the notion of 'risk society' leads directly to a culture of culpability and blame (Douglas 1992).

Such a clear distinction between high modernity (risk society) and pre-modern or 'traditional' societies is vital for both Beck and Giddens, as they are presenting an analysis of high modernity as being qualitatively different to other, and earlier, social formations (Lupton 1999, 6–7). This difference is mainly predicated on the scale of contemporary risks and their apparent removal from everyday contexts, for example, the dangers of nuclear power. Yet, as we all know, the notion of risk as intrinsic to agency, and its management, has today totally permeated our day-to-day lives.

Putting aside the complexities attached to the understanding and portrayal of risk in any given context, can an awareness of the direct relationship between risk and social practices (Nugent 2000, 234–7) be justifiably confined to high modernity? Furthermore, is it possible that during the fourth and third millennium cal BC, a concept of risk was widely acknowledged as being intrinsic to discourses of honour and status advancement articulated through megalithic construction?

Stone circles: geometric designs or wrapped places?

So far, a heavy emphasis has been placed on issues surrounding megalithic construction in general and stone circles in particular. Try as I might to minimize the significance of the final architectural form of a stone circle, it remains like a spectre at the feast. Consequently, it is necessary to engage with the architecture and constitution of the stone circle and to accept that to some degree construction necessarily anticipates form. The question should not be phrased in terms of that asked by Burl, for instance, 'what they were used for and what happened in them' (2000, 64). Instead, the idea of building as an ongoing project should be expanded to accommodate architectural intention and spatial representation. It is also necessary to understand that

such representation may operate at a level of practice that disclaims typological logic and accommodates different materials and architectures within a socially strategic monumental project.

More than any other Neolithic monument, the layout and design of stone circles has been subject to scrutiny in minute detail (*e.g.* Thom 1967; Thom and Thom 1978; Case 2004). Regardless of the validity of the results of such enquiries (Barnatt and Moir 1984), or claims that such studies misunderstand the experiential qualities of any form of architecture (Bradley 1998a, 120), a focus on layout and design has been extremely potent in providing an alternative discursive field for the interpretation of stone circles.

The group of stone circles at Calanais on the Isle of Lewis in the Outer Hebrides provides an excellent example of such discourse (see also Chapter 7). Of all the stone circles in northern Britain, those at Calanais have been the objects of claims for an architecture embodying a high degree of geometric precision (*e.g.* Thom 1967; Curtis 1979; Ponting and Ponting 1984). Much of the responsibility for this line of reasoning lies at the feet of Alexander Thom (*e.g.* 1967; 1971), who not only produced a 'catalogue' of geometric shapes for British stone circles, including, eggs, ellipses, flattened circles, and so forth (see Burl 2000, 48), but also identified a standard unit of measurement – the 'megalithic yard'. Here the finished object, the stone circle, is understood as an architectural manifestation of relatively complex geometric principles.

Two related paths of enquiry present themselves, both of which offer effective critiques of Thom (1967), and provide more convincing lines of interpretation. First, experiments by Barnatt and Herring (1986) demonstrated that the majority of stone circles in the British Isles could have been, and probably were, set out purely by eye. Remember, a perfect circle is easy to achieve by walking its circumference clutching a taut rope held at a central point (Fig. 1.6). These authors also make the interesting observation that for 'megalithic builders' stone circle design was not about sophisticated geometry, it was about relevance (Barnatt and Herring 1986, 445). In other words, architecture is about desire, aesthetics and intention. This point reinforces the second perspective that stone circle design was strategically influenced by social discourse, as opposed to the application of abstract geometric principles, a point suggested over thirty years ago by Andrew Fleming (1972, 58–61).

When we speak of stone circles as a type of late Neolithic monument, together with sub-types such as eggs, ellipses, flattened circles, and so on, what are we actually referring to? As with all other archaeological monuments, stone circles hang in a typological web. Of course, it is important to define terms, in this case the identification of a number of architectural features and material properties which together provide the typological definition of a stone circle. Although classification may simply be a 'tool for archaeologists to bring order out of chaos', (Kytmannow 2008, 58), such a heuristic is not neutral but actually influences the way an entity is conceived. At base level, the grouping of monuments into types is an exercise in homogeneity. Once this occurs, ludicrous ideas of hybridism, proto-

FIGURE 1.6. The Rollright Stones, Oxfordshire, are set in an almost perfect circle.
ADAM STANFORD – AERIAL CAM

types and sub-types are invoked to account for non-conformity and deviation from the ideal type. As Lucas (2001, 96–7) notes, there is always a tension within typological ordering between individuality and uniformity.

For the late Neolithic period in Britain and Ireland apparently there exists a very limited range of monument 'types', for example, passage graves, henge monuments, stone circles and timber circles. Sometimes one type may co-exist with another, for example, Arbor Low, Derbyshire, may be described as a stone circle within a henge monument (Fig. 1.7). In other examples a typological metamorphosis occurs as exemplified by Bryn Celli Ddu, Anglesey, where a passage grave appears to replace a stone circle and possible henge monument (see discussion in Bradley 1998b, 8–10). Here lies the potency of typological understanding where by default a certain conceptual logic is imposed on things, 'attributing characteristics to material culture which they do not have' (Lucas 2001, 81). Here I find it irresistible to slightly alter the phrase by Brew (quoted by Lucas 2001, 81) to remind those obsessed by typology 'that monuments don't actually breed'!

Clearly, circle size and shape were an important issue of form and presentation, but I would suggest that uniformity between sites was not. Nor should this observation be mistaken to suggest a lack of architectural sophistication on

FIGURE 1.7. Arbor Low, Derbyshire, a fallen stone circle within a henge monument.
COLIN RICHARDS

the part of those who toiled in its creation. It is simply that the nature of such sophistication was not predicated on mathematics or geometry but on practice and ontology.

In providing a critique of monument typology, Richard Bradley (1998a, 124–8) emphasises the consequences of different forms of monumental architecture on human experience, specifically contrasting the openness and permeability of the stone circle with that of the closed and restricted nature of the passage grave (cf. Garnham 2004, 205–13). This is an important observation as it emphasises the effects of architecture on practice and experience. Bradley's examples are the passage grave and stone circle, but it should be recalled that there are other 'types' of late Neolithic monuments. With the exception of single standing stones, the remaining monuments all seem to highlight enclosure. Indeed, enclosure appears to be a dominant theme of third millennium cal BC monumental architecture. Here it is worth considering Alasdair Whittle's request for 'a more subtle vocabulary of construction and the differentiation of space' (2006, 16). Taking this observation further, it seems useful to introduce the idea of binding or wrapping to produce skins or surfaces as an aid to providing a different and richer appreciation of the theme of enclosure in late Neolithic monumentality.

Wrapping things

Everyone is familiar with wrapping things, be it rubbish being collected for the bin or the more pleasurable activity of wrapping presents at Christmas. Indeed, the gift wrapped in paper displaying comforting images of holly, robins and Santa, lying beneath the tree on Christmas Eve is an iconic image

of the festive season. However, the idea of wrapping is not restricted merely to presents and presentation, but, as a mode of practice 'wrapping' has been described as constituting a structuring or ordering principle of society (Moeran 1990, 2; Hendry 1993, 1), or a 'stimulating analytical metaphor' (Ben-Ari 1990, 225). Another consequence of thinking about the process of wrapping things is that it stresses the critical importance of interfaces, skins and membranes in discourses of binding and containment (*e.g.* Gell 1993, 23–31). If, instead of conceiving different monumental forms as architectural types, we introduce the notion of architecture as a mode of wrapping, then Bradley's (1998a, 124–8) observations concerning representation and practice take on deeper significance. Hence, the possibility exists that the practice and method of wrapping a thing or place can, under certain circumstances, be of greater consequence than what is actually being concealed (cf. Moeran 1990, 2). More broadly, such an interpretative scheme introduces practical and metaphorical correspondence between the constitution of disparate entities, such as bodies, things, architecture and places. However, here the investigation is restricted to late Neolithic monumental architecture. Initially, it is worth considering why something should be wrapped. The possibilities of wrapping include:

1. Concealment (which allows for the potential of disclosure) – a wrapped Christmas gift.
2. Protection – wrapping food to prohibit germs and limit contamination.
3. Containment – lead shielding in a nuclear reactor.
4. Unification – wrapping fish and chips together.
5. Re-presentation – the decorative aspect of wrapping paper.

Thinking about skins and membranes as forms of wrapping is important for a number of reasons. First, the emphasis is on practice – the wrapping of something. This leads directly to the converse possibility of unwrapping as a practice of disclosure and revelation. It also places greater interest on the mode and manner of wrapping; it is not merely something that separates or divides but constitutes a skin or membrane that holds significance in its own form and materiality.

Skins or membranes are potentially paradoxical entities in that although physically containing and concealing, they also advertise and draw attention to that being concealed. Just consider the image of someone in a wetsuit or wearing swimwear. This can be best described as wrapping as a mechanism of *indication* where that which is being indicated is also necessarily hidden or obscured. Clearly this relates back to the physical qualities and 'architecture' of the manner of wrapping. Included here are both sensory qualities, for instance, visual accessibility or restriction, and also substance, which may be partially understood in terms of associated cultural meanings. Perhaps, under such circumstances wrapping may additionally be conceived as an *embrace* of that which is concealed. This propagates a conjunction and intimacy between the wrapping and that being wrapped.

The mode of wrapping may also determine the manner of unwrapping

and consequently structure the experience of that which is concealed. This is particularly evident when considering architecture as a form of binding (*e.g.* Hendry 1993, 98–122). In an architectural context, the unwrapping process is based on practice, to move through various layers and skins, but in a very ordered and controlled manner. Under such circumstances final revelation comes only after a sequence of physically structured experiences have been negotiated.

The different complexions and qualities of wrapping are informative in that they reveal many permutations to a phenomenon that has tended to be considered rather one-dimensionally. This is the phenomenon of enclosure, an architectural device that describes virtually all forms of late Neolithic monumental architecture. The penchant here is to consider enclosure in Neolithic sites to be merely a division or boundary, as opposed to a skin or membrane, defining a qualitatively different inner and outer area. For example, in pondering the spatial characteristics of timber circles, Alex Gibson notes that 'enclosure itself defines space and creates a difference, the area within and the area without' (1998a, 90). Although entirely different, the architecture of henge monuments is similarly described as dividing 'space into that which is "inside" and that which is "outside". The act of enclosure creates a place which is different or separate' (J. Harding 2003, 39). Almost identical words have also been used to describe the spatial organization of the passage grave (*e.g.* Richards 1988). In these examples different authors use virtually the same language to describe the spatial qualities of strikingly different late Neolithic monuments.

No stone circle in Britain displays a more elaborate sequence of concentric ordering of space than Stonehenge (Fig. 1.8). In this respect, Stonehenge represents an excellent example in which to explore the complexities of wrapping as architectural and practical strategy. Here, with its exaggerated monumentality, we are immediately faced with the possibility that at Stonehenge the method of wrapping is of equal or greater import than that which is being wrapped.

Unwrapping Stonehenge

In its final form, Stonehenge can be represented as a sequence of stone bindings wrapping the central feature – the Altar Stone.

- Bluestone horseshoe
- Trilithon horseshoe
- Bluestone circle
- Sarsen circle
- Z holes
- Y holes

Unfortunately, we possess little information regarding either the erection or exact position of the Altar Stone at the heart of the monument, but some assume it to have stood centrally from an early time and to have been the focal point of the entire monument (*e.g.* E. H. Stone 1924, 1; Atkinson, 1979, 206). The bluestone horseshoe is likely to be either contemporary with, or later than,

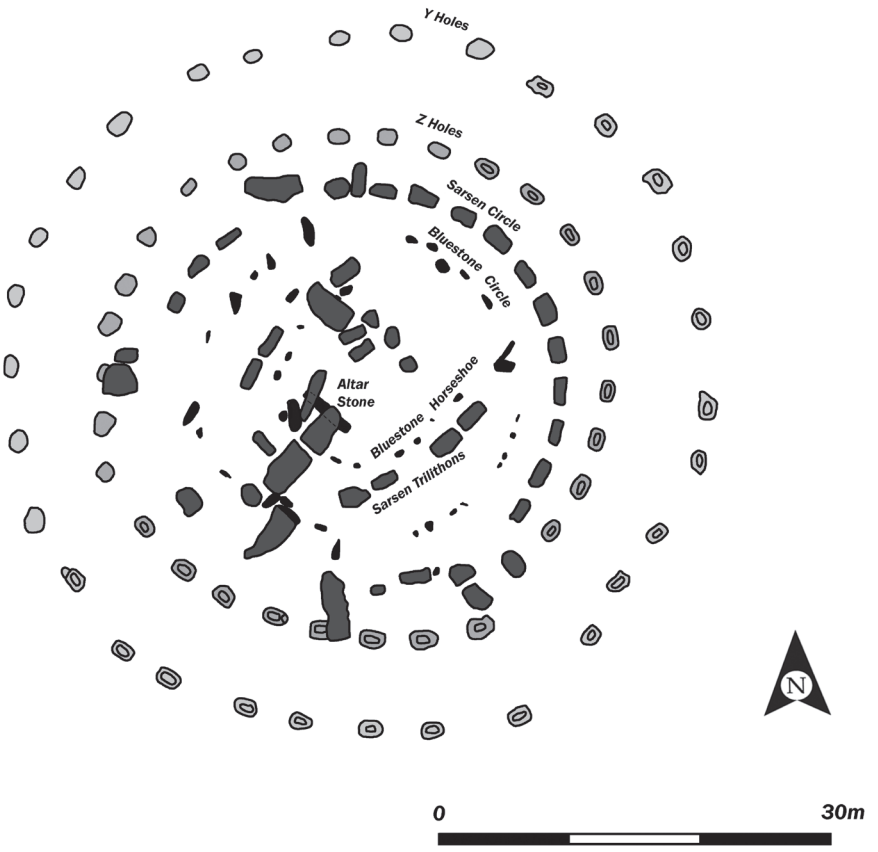


FIGURE 1.8. Plan of Stonehenge showing different architectural elements of wrapping.

the erection of the trilithons. Like the Southern Circle in Durrington Walls (Fig. 1.9), Stonehenge was constructed from the inside out. Of the excavated stone sockets of the sarsen circle and trilithons, with the exception of stone 21, where ramps are present they all run down from the exterior (Case 2004, 116). The striking aspect of Stonehenge is just how distinctive each form of wrapping is when considering the monument as possessing an 'onion-skin' spatial structure.

In its final form, the vertical dolerite pillars of the bluestone horseshoe serve to *embrace* the Altar Stone, wrapping it in reconstituted monumental architecture. Not only is the bluestone horseshoe composed of a particular material, dolerite, but in their dressed state the monoliths were clearly derived from a pre-existing monument. Yet, to attain this new function the stones were re-dressed obliterating the specifics of their previous role. This is the paradox of the bluestone horseshoe; in essence it refers to an earlier monument, but the specific architecture of this earlier monument is transformed and rendered unrecognisable. For want of a better description, this is very much a mnemonic wrapping that both draws on and manipulates memory.

The bluestone horseshoe is dwarfed and sheltered by the massive sarsen trilithons. The architecture of the sarsen trilithons is ironic in that it references

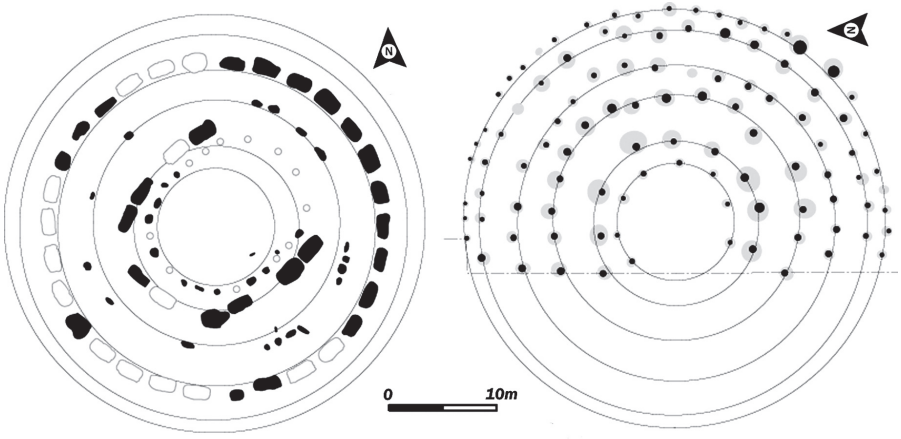
and replicates something that no longer exists: the original trilithon architecture of the obliterated bluestone monument. This is an interesting example of *indication*. Sympathetically, the graduating heights of the sarsen trilithons mirror the graduating height of the bluestone horseshoe. Equally, the stones themselves display through differences in colour and texture (see Whittle 1997a), diversity in places of origin (and the journeys they have undertaken). In short, the bluestone horseshoe is dwarfed and wrapped by the greatest manifestation of monumentality exhibited in the late Neolithic world.

This spectacular display of dressed stone monumentality is in turn completely encircled by a ring of small, unmodified monoliths, the bluestone circle. While the two inner horseshoes may be described as open, in contrast the bluestone circle is undoubtedly closed. A recognisable entranceway, formed by a larger gap between stones 31 and 49, does exist to the northeast, however; overall this circle is remarkably uniform. With the exception of the two shaped dolerite lintels, the circle is formed by undressed bluestones of diverse lithologies and sources in Preseli. While the bluestone circle maintains an order in the deployment of different lithologies, a symmetry noticed by Atkinson (1956, 37), it also presences the 'foreign' and ancestral landscape of Preseli as a feature of wrapping (cf. Bradley 2000, 92–5).

The bluestone circle is physically overshadowed in every respect by the sarsen circle. Conjoined by lintels, the sarsen circle hardly acknowledges a point of entry (Fig. 1.9). This is powerful architecture of *containment* and as a form of wrapping it physically provides a unified and dominant monumental skin to Stonehenge. In this respect it serves the purpose well, as it is the imagery of linked 'trilithons' that characterises the imagery of Stonehenge. Wrapping also operates at the level of *re-presentation*. For example, the sarsen monoliths are all dressed to shape but the outer surfaces tend to retain their natural patina or skin. Conversely, the inner surfaces are extensively dressed, an occurrence that would originally have provided a bright white, inner-facing, sparkling surface.

Finally, the Z and Y holes maintain the closed quality noted for the bluestone and sarsen circles as they *unify* the diversity displayed in the inner skins. Tradition is strong and critical thought weak in the extraordinary interpretation of the two concentric rings of pits or stone-holes situated beyond the sarsen circle, known as the Z and Y Holes. Always considered as odd components of Stonehenge (Pitts 2001, 164–6), understandings of these features reveals the potency of assumptions regarding the nature of Stonehenge as a monument and the apparent 'phases' that characterize its construction. Supposedly dated to the second millennium cal BC, these features have been considered almost unconnected with the stone monument. This is despite the observation that each pit strongly resembles a stone socket and corresponds with monoliths of the sarsen circle. Equally, Thomas (2007b) has drawn attention to the similar spatial configuration of the Southern Circle within Durrington Walls and Stonehenge. In this observation, Stonehenge is represented as including the Z and Y Holes in its overall form (Fig. 1.10). The implicit assumptions underpinning this

above: FIGURE 1.9. The sarsen circle dominates the external imagery of Stonehenge.
ADAM STANFORD – AERIAL CAM



right: FIGURE 1.10. Plan of the Southern Circle at Durrington Walls and Stonehenge (after Thomas 2007b).

comparison are that the spatial organization of the two monuments is related and that both forms date to the mid third millennium cal BC.

It is suggested here that these concentric rings contained monoliths, probably bluestones primarily of rhyolite. This would serve two purposes. First, it maintains the different forms or order and symmetry that are crystallized within the architecture and materiality of Stonehenge. For example, a rhyolite outer skin contrasts with and opposes the dolerite core of Stonehenge. Second, a homology of the Preseli landscape is recaptured in monumental form with the rhyolites being peripheral to the dolerites. Hence, Stonehenge is wrapping itself in a wider mythological world.

Obviously, a number of these interpretations of Stonehenge may seem contentious. But this is not the point. What I have attempted to expose is the

complexity of late Neolithic monumental architecture through the heuristic of wrapping. In describing these extraordinarily sophisticated and divergent forms of wrapping, Alasdair Whittle astutely recognizes that Stonehenge 'drew on a basic symbolism of the circle, which served to both include and exclude, to separate and unite' (1997a, 163). In thinking about the circles as sequential skins, or a series of wrappings, we can see that the qualities attributed by Whittle form only part of the picture.

At a general level, I would suggest that discourses of wrapping are strongly manifest in third millennium cal BC architecture and material culture, being particularly emphasised in monumentality. This ranges from the concentric rings of wooden posts at Woodhenge, to the surrounding kerbstones of Newgrange, County Meath, or the massive bank of the Giants Ring, Belfast. Stone circles undoubtedly participate in this strategy, but is it a discourse concerned with concealment, protection, containment, unification or transformation? Of course, these are not necessarily exclusive categories of wrapping but when extended to architectural representation allow a common theme to be manipulated according to intention.

There are two further inter-related points of consideration concerning wrapping in relation to monumental architecture. Such an emphasis on interfaces, skins and membranes serves to highlight the ambiguity and problematic nature of transgression and unwrapping. I have only to remind the reader of the trauma of injections and situations when the skin of the human body is punctured or penetrated. Injections are not really painful, yet many people cannot even bear to watch the insertion of the needle. Frequently, specialists perform this act and antiseptic is liberally applied to prevent contamination and pollution. The significance and sanction attached to the penetration of spatial boundaries is well known, and such transgression may be reformulated, with entry constituting a form of unwrapping and exit re-wrapping. This also provides a slightly different perspective on the frequent embellishment of entrances in late Neolithic architecture since this is the point of penetration (cf. Bradley 1989). Hence, it is of little surprise that the outer entrances of passage graves are frequently embellished or emphasised in some way (*e.g.* Robin 2009, 177–80), or that movement along the passage involves a highly structured journey traversing several masonry 'skins' (Robin 2008, fig. 7.21). In similar vein, a number of entrances into timber circles are elaborated (Gibson 1998a, 117–8) and the ditches of henge monuments swell and deepen at the entrance causeway (J. Harding 2003, 66). Invariably the deposition of material also concentrates in this area (*e.g.* Barrett *et al.* 1991, 96).

Moving to the second point, neither are the practices of wrapping or unwrapping confined to monumental architecture. A shared feature of individual monuments and architecture in the landscape is the way space is structured, for instance, being physically graded on the approach to special or sacred places. Such heterogeneity is to enable the transformation of the subject as structured space is encountered and negotiated. Just as with transgressions of the skin so to physically

approach the innermost place (the sacred), involves heavily sanctioned passage and a change in state. A good example of this process operating at a larger scale is the way Neolithic rock art is strategically placed at valley entrances and along paths facilitating entry into monumental complexes such as the Milfield Basin, Northumberland and Kilmartin, Argyll (Bradley 1997, 132–5).

Finally, the question must be posed as to why wrapping appears to become such a pervasive feature and structuring principle of late Neolithic life. In some places, for example Polynesia and southeast Asia, wrapping is synonymous with protection against powerful animistic forces, specifically when objects and places are 'activated' by the arrival or presence of deities. Consequently, this principle tends to be manifest as transient practices within ritually secured and separated places, for instance, body painting, tattooing, and covering representations of deities and people in special fabrics. Moreover, the requirement for such heavy ritual prescriptions and taboos is precipitated by the need of people to interact with dangerous supernatural forces; forces that if not controlled and restrained through strategies of wrapping are extremely destructive. This may highlight the importance of what is being wrapped, but it also diverts attention to the method of wrapping and its materiality.

The materiality of stone circles

Beyond Stonehenge, if a stone circle is conceived as a form of wrapping, why are particular stones deemed appropriate for inclusion? It will be recalled that Burl considers this to be a matter of convenience; 'an important factor may have been the nearness of stone', he states (1977, 71). Of course, at one level Burl may be correct, but such an assumption conceals a number of key issues concerning not only stone, but also the status of all materials in the Neolithic world.

A direct consequence of the promotion of phenomenological analysis within archaeology over the last few years (*e.g.* Tilley 1994; 2004) is a focus on the nature of the engagement between people and things, in particular, how an experience of the physical qualities or materiality of substances and things constitutes practical knowledge of the inhabited world. Of course, the same tension exists in discussions of materiality as that inherent in phenomenological encounters: between embodied experience and cultural mediation. Hence, in discussions of materiality (*e.g.* Ingold 2007), the concept of 'material culture' has come to be questioned as constituting a form of containment of cultural meaning (Olsen 2003; Thomas 2007a). However, a more nuanced understanding of material culture reveals that knowledge of the world is derived through physical engagement, a unification and transcendence of subject and object (Tilley 2004, 17). Agency, however, is never neutral and serves to generate and reproduce a social world of meaning where individual experiences are woven through social practices into complex webs of signification (*e.g.* Bourdieu 1973; 1977). Some form of resolution comes in an acknowledgement that a salient feature of daily life, and the encounters it entails, is memory. Hence, knowledge is generated

as 'past experiences become selectively conjoined with present perceptions and serve to colour them' (Tilley 2004, 26).

For me the most important outcome of discussions of materiality is to direct attention towards the physical qualities of things and the manner in which they are encountered and experienced. When materials and substances are given a degree of scrutiny it becomes apparent that any stability is illusory (Ingold 2007; 2011, 19–32; Sandino 2004, 290–1). For example, the character or attribution of particular materials as 'elements' is paradoxically predicated on both their essential characteristics and transformatory qualities (Finlay 2008, 163–5). Ironically, the analytical strength of notions of materiality may well revolve around the transience and transmutability of things (cf. Pollard 2004). Well before any concept or appreciation of materiality had emerged in archaeology, Atkinson, in describing the Stonehenge monoliths managed to grasp the extraordinary fluid 'materiality' of the stones:

> Of the stones themselves no words of mine can properly describe the subtle varieties of texture and colour, or the unaccountable effects of shifting light and shade. From a distance they have a silvery grey colour in sunlight, which lightens to an almost metallic bluish-white against a background of storm clouds, an effect so notably recorded by Constable in his well-known water-colour. When the ground is covered in snow in midwinter, with a dull leaden sky threatening further falls, they seem nearly black; and at sunset in midsummer their surfaces glow, as if from within, with a soft warm pinkish-orange light.
>
> At a nearer view, each stone takes on its own individual pattern of colour and texture. Some are almost white, like coarse marble, with the sparkling grain of white lump sugar, and so hard that even thirty-five centuries of weathering has not dimmed the irregular patches of polishing executed so laboriously by the original builders. Others are a dull matt grey, streaked and lined by close-set vertical cracks and fissures, like the grain of some vast stump of a petrified tree; and others again are soft, buff or even pink in colour, and deeply eroded into hollows and overhangs in which a man may crouch, the compact curves of his limbs and the rounded thrust of shoulder and hip matching the time-smoothed protuberances of the stone around him. Here and there, the fine smooth grain of the stone is broken by small nodules of creamy or pinkish flint. And in places patches of a natural siliceous cement, like a thick weathered layer of amber lacquer marks where the rock has split along a natural plane of cleavage.
>
> (1956, 2–3).

In describing the ever-shifting qualities of the Stonehenge stones, Atkinson anticipates debates concerning the idea of materiality. The above passage also illustrates how the physical properties of stone are of great interpretative significance in their own right. Consequently, it comes as little surprise that Chris Tilley (2004, 33–86) chooses the Breton menhirs as his initial object in studying 'the materiality of stone'. The texture, colour, shape and size of the Breton menhirs are convincingly identified as being features which were of fundamental importance to their deployment as monumental architecture. The point to consider here is whether monoliths forming the great stone circles of Britain and Ireland were equally selected for their physical attributes.

FIGURE 1.11. Beautiful gneiss monoliths within the central stone circle at Tursachan, Calanais (Circle I).
COLIN RICHARDS

Surely, the answer must be in the affirmative (Fig. 1.11). Moreover, if the idea of materiality seeks to embrace and unify the engagement between people and the world, apart from acknowledging the physical qualities of materials, it must also embrace the sociality of such an engagement. In many ways, it is an exploration of the inter-relationship between embodied experience, social relations, things and substances, and culturally reproduced structures of meaning.

Questions of materiality have been employed in relation to interpreting stone circles, particularly Stonehenge. The apparently differing qualities of wood as soft, growing and decaying as opposed to stone as hard, static and immutable, feature strongly in Parker Pearson and Ramilisonina's (1998) account of monuments and mortuary practices in the Stonehenge area (see also Whittle 1997a, 163). Here the characteristics of wood and stone are interpreted as material metaphors for different states of the human body. In suggesting that different materials in different monuments participate explicitly in the transformation of living person to dead ancestor, Parker Pearson and Ramilisonina (1998) attempt to expose the intersection of substances and late

Neolithic structures of meaning. The potency of such a conjunction is revealed in Bradley's (2002, 89) assertion that the sequential deployment of different materials in the architecture of monuments may have been an intentional strategy to create finite monumental biographies.

Clearly, durability is a key feature of this scheme because the sequence of timber circles being replaced by stone circles is used as an example of materials of decay being succeeded by materials of permanence. Consequently, monuments of stone are seen as durable and their longevity and 'continued presence and re-use brought the past into the present' (Thomas 2000b, 86). Equally, the transience of wooden construction may be likened to the human life cycle (Noble 2006a, 99–100; 2006b), and consequently, such a process of decay effects 'a radical reconfiguration of substance' (Pollard 2004, 57).

I wonder, however, whether stone is always recognised as durable and immutable. Or more basically, was stone even understood as a unitary material? This characterisation is certainly implied in the above accounts of the 'materiality' of Neolithic monumentality. Yet, under certain circumstances wood may be as physically hard as stone, if not harder; just consider the difference between mudstone and oak. In the context of stone circles, such questions shift attention to the qualities of the individual stones themselves; not only physical characteristics but also their provenance and what significance they already held as material entities (*e.g.* Gillings and Pollard 1999). The importance of different types of stone composing the circles seems to have been curiously overlooked in stone circle studies. For example, even though geological variation has been carefully noted by Burl (*e.g.* 1976, 105), a privileging of the finished entity causes this important observation to be diminished – almost ignored. Where the possibilities of sourcing rock types has been considered it has been portrayed in a very pessimistic manner, for example Barnatt notes that, 'the study of movement of stones over … distances would frequently require detailed geological analyses which have never been undertaken. This would be of limited value over much of Britain because glacially derived deposits have been affected by millennia of clearance' (1989, 20).

It is not simply a question of geological provenance, but of different stones possessing different qualities and being derived from specific places in the landscape. For instance, such places may already possess special or sacred associations, and be inextricably intertwined with the construction of social identities (see A. Jones 2005). Alternatively, such places may have absolutely no associated history or tradition and only assume significance during the actual quarrying of a stone. In short, lurking behind the monumental type (the stone circle) is heterogeneity in materials, architecture and social practices, which requires closer scrutiny. A broader appreciation of the materiality of stone can therefore be recognised to extend well beyond the immediate physical qualities of any given monolith or standing stone.

Stone circles as animate entities

A related consideration concerning the immutability and permanence of stone is the cultural knowledge attached to certain substances. The proposition that things may posses agency would appear unconvincing, although notions of agency in this context are clearly multifaceted (see Miller 2005a, 11–5). For instance, it could be argued that what Gell (1998, 7) describes as agency is actually little more than the effect an object has on an audience (Bradley 2009, 34–5). Consequently, rather than agency, a thing may be said to posses efficacy (Gosden 2001, 165; J. Thomas pers. comm.). Would this characterization apply, however, if an object were considered to be truly alive?

A range of ethnographic accounts describes stone as being attributed a manner of life (*e.g.* Kahn 1990). But such animation occurs in a variety of forms and under very specific social and ritual conditions. For example, Polynesian ancestry is characterised by elaborate genealogies that are not restricted to people: 'Maori used the complementary structure of sexual union, followed by the production of offspring, to conceptualise the origin of things as diverse as gods, insects, plants, fire, humanity and flat rocks (and even in other lines of descent, rounded rocks)' (Hanson and Hanson 1983, 25). This statement makes it clear that generally in pre-contact Polynesia everything was related socially and no categorical difference existed between people, ancestors, deities and things (cf. Shore 1989, 164). It also exemplifies that what we recognize today as 'stone' was during the Neolithic period quite probably more than a unitary category of material. This fluid categorization may not have been merely a consequence of different textures, hardness, colour or location, but also of periodic animation.

Take for example, Janet Hoskin's (1986) account of dragging capstones in the construction of megaliths in Sumba, Indonesia. Here, the stone does become animated and gendered – but only over a relatively brief period of time. After it is quarried, as it is dragged through the Sumbanese landscape, 'the stone begins as a young bride, praised for her beauty and fine chalk-white skin, but as it continues on its way across the estuary and up to the ancestral villages, it is transformed into a representation of a dead soul, and finally a victorious warrior' (*ibid.*, 33). Yet, before it was quarried and removed from the ground, the stone was a non-thing, effectively un-materialized and unacknowledged (J. Petrie pers. comm.). This short period of animation recalls the finite character of 'living' as expressed in the carved images in *malanggan* as described by Küchler (1992).

These examples serve to illustrate that the sharp division between things and substances as inanimate entities and humans as living beings is culturally and historically contingent (cf. A. M. Jones *et al.* 2011). Hence, although in contemporary western thought, including archaeological material analysis, things are conceived as inanimate, such ontological segregation is unlikely to have featured in late Neolithic understandings of the world. However, this acknowledgement does not directly translate into the dissolution of a

FIGURE 1.12. Excavation of the Balbirnie stone circle in 1970–1, showing stones 10, 1, 2 and 4 in the foreground.
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culture-nature (animate-inanimate) distinction (Thomas 2004, 202–3), rather it demonstrates the possibilities of blurring categories and forms.

Over the last decade, archaeologists have begun to explore these issues in an imaginative manner. For example, with regard the great sarsen stone circle at Avebury, Gillings and Pollard draw on the biographical qualities of individual stones to suggest the existence of personalities. The contention here is that the assembly of stones in the circle represents a gathering of individual sarsens; 'living entities' each constituting 'the physical embodiment' of ancestors (2004, 69). Of course, material biographies do not necessarily render things animate, but evidence is now accruing that in particular instances the erection of a stone into a vertical position may well effect animation. When Graham Ritchie (1975) excavated the small stone circle of Balbirnie, Fife, he encountered cremated human bone in several of the stone-holes (Fig. 1.12). In re-dating the Balbirnie stone circle to the very beginning of the third millennium cal BC, Gibson (2010, 52–3) notes that, in stone-holes 1 and 2, deposits of cremated remains are recorded from the base of the socket or low within it, in stone-hole 9, one deposit was found in the lower fill. A similar association of monoliths and human cremations within an early third millennium cal BC stone circle is present at Stonehenge now the Aubrey Holes have been re-interpreted as containing bluestones (Parker Pearson *et al.* 2009).

The juxtaposition of human remains, in the form of cremations and standing monoliths in stone circles is tantalizing. As noted above, the setting up of a monolith into a vertical position draws an analogy with the human body. When monoliths are directly associated with human remains, can we assume some form of fusion where the human remains meld with the monolith and it becomes

FIGURE 1.13. Castlerigg stone circle is composed of rounded glacial boulders.
ADAM STAMFORD – AERIAL CAM

animated? The idea that standing stones within circles were conceived as 'living things' imbued with an essence is seductive. While potentially taking numerous forms, such animation need not constitute a permanent state and could assume a degree of transience. When animated, however, the stones may have become extremely dangerous and strategies of binding or wrapping, as discussed earlier, would be essential. Indeed, imagine an animate world (see A. M. Jones *et al.* 2011), composed of living things and dangerous forces, where the need to contain and control was of paramount concern. Under such conditions, the consistent deployment of architectural devices of wrapping, as manifest in virtually all areas of late Neolithic monumentality, become comprehensible.

To draw this rather open-ended discussion of animism and its relevance to understanding stone circles to a conclusion, we travel full circle to Burl's (1977, 71) original dictum concerning the requirements of building a stone circle. Here the monoliths comprising the circle appear at best neutral, with convenience being the imperative. Certainly, many stone circles may have been built from local stone, even glacial boulders as witnessed in some of the Cumbrian stone circles (Fig. 1.13), but, on erection a transformation undoubtedly occurred and these benign entities suddenly became potent, dangerous and perhaps living things.

Understanding stone circles

In this introduction I have raised and discussed a number of themes and ideas which provide alternative ways of thinking about the nature of the great stone circles of northern Britain. With regard to the creation of monumental architecture, such themes focus attention away from typology and towards

FIGURE 1.14. Robert Nunn examines breccia monoliths, as identified by Morgan (1887), in the southwestern circle at Stanton Drew Somerset. COLIN RICHARDS

social practices and the strategies they embody. The construction of stone circles is suggested to be a social process of great consequence as opposed to a manifestation of principles of least effort or an exercise in efficiency. Indeed, the building of a monument may often, though not always, have been of greater import than the completed form.

Although building is a generative process, the outcome of any building project is to a degree uncertain. Part of this uncertainty, especially with megalithic architecture, is due to the many things that can go wrong. Consequently, the multifaceted nature of risk is an intrinsic quality of stone circle construction. How such risk was portrayed and managed in Neolithic society is open to debate. Nonetheless, the high level of risk manifest in megalithic construction – dragging and manoeuvring large stones – may well have been an acknowledged component of status enhancement on the part of those who instigated and participated in the erection of a stone circle.

Following on from these observations comes the realization that the material composition of a stone circle is of far greater significance than has previously been recognized, both in the way different stones are deployed as a strategy to wrap a given place, and to provide in their constitution a microcosm of distant and removed places. Ironically, this lack of interest has not always been the case, as exemplified by Morgan's (1887) research at Stanton Drew, Somerset (Fig. 1.14). Hopefully, an appreciation of the material qualities of stone and the discourses in which that knowledge was constituted enables the material composition of stone circles to be similarly understood in social terms. Stone circles are not merely the amalgam of locally available blocks of stone but to borrow the title of Mark Patton's book, highly meaningful *statements in stone*. Nor should such statements be seen as unitary. On the contrary in the following chapters the stone circles of the north will be found to display a heterogeneity that fractures the uniformity of typological ordering.

CHAPTER 2

Monuments in the Making: the stone circles of western Scotland

Colin Richards and Joanna Wright

Cultoon: an unfinished stone circle on Islay

Islay is a beautiful island with its versatility of landforms. It is also an island of two halves with blue-grey hills rising in the east and to the west; outcropping stone outcrops punctuate large expanses of peat moorland (Fig. 2.1). The west of the island is known as the Rhinnes of Islay, and it is here on a grassy knoll overlooking moorland that the remains of Cultoon stone circle are to be found (Fig. 2.2). Today only two stones and a broken stump are standing, and twelve monoliths lie prone. Together, the monoliths appear to form more of an oval than a circle (Fig. 2.3). This impression was confirmed during excavations undertaken over two seasons in 1974–5 by Euan MacKie (1974; 1975; 1976). One of the objectives of the fieldwork was to uncover additional stones and locate the sockets from which they fell, with the ultimate intention of rebuilding the circle. However, as often happens things did not work out as planned. After about half a metre of peat had been removed, MacKie notes with some astonishment, 'it soon became clear that prone monoliths had not in fact fallen out of their sockets … some stones had no sockets next to them and a number of sockets were found without adjacent stones' (1976, 1). Initially, it was considered that the circle had been destroyed, with some of the stones having being removed before the peat began to form (MacKie 1974, 10). The same remains were subsequently re-interpreted as constituting an unfinished circle (MacKie 1977, 45). 'The project may simply have been given up', muses Burl (1995, 135).

Commenting on the unfinished nature of the circle, MacKie (1976, 1) also observes that apart from two phases of Stonehenge, Cultoon represents the only incomplete stone circle in Britain. However, Burl considered that Tursachan, Calanais (Circle 1), Lewis 'was probably never finished… Only the NNE avenue was completed' (1977, 153). Equally, as we will see in the following chapter, at the Stones of Stenness, Orkney, at least one monolith was never erected (J. N. G. Ritchie 1976, 10). How can such eventualities be understood, especially as both Stenness and Calanais represent two of the most impressive and well-known stone circles in Scotland? It is instructive at this point to hear Atkinson's

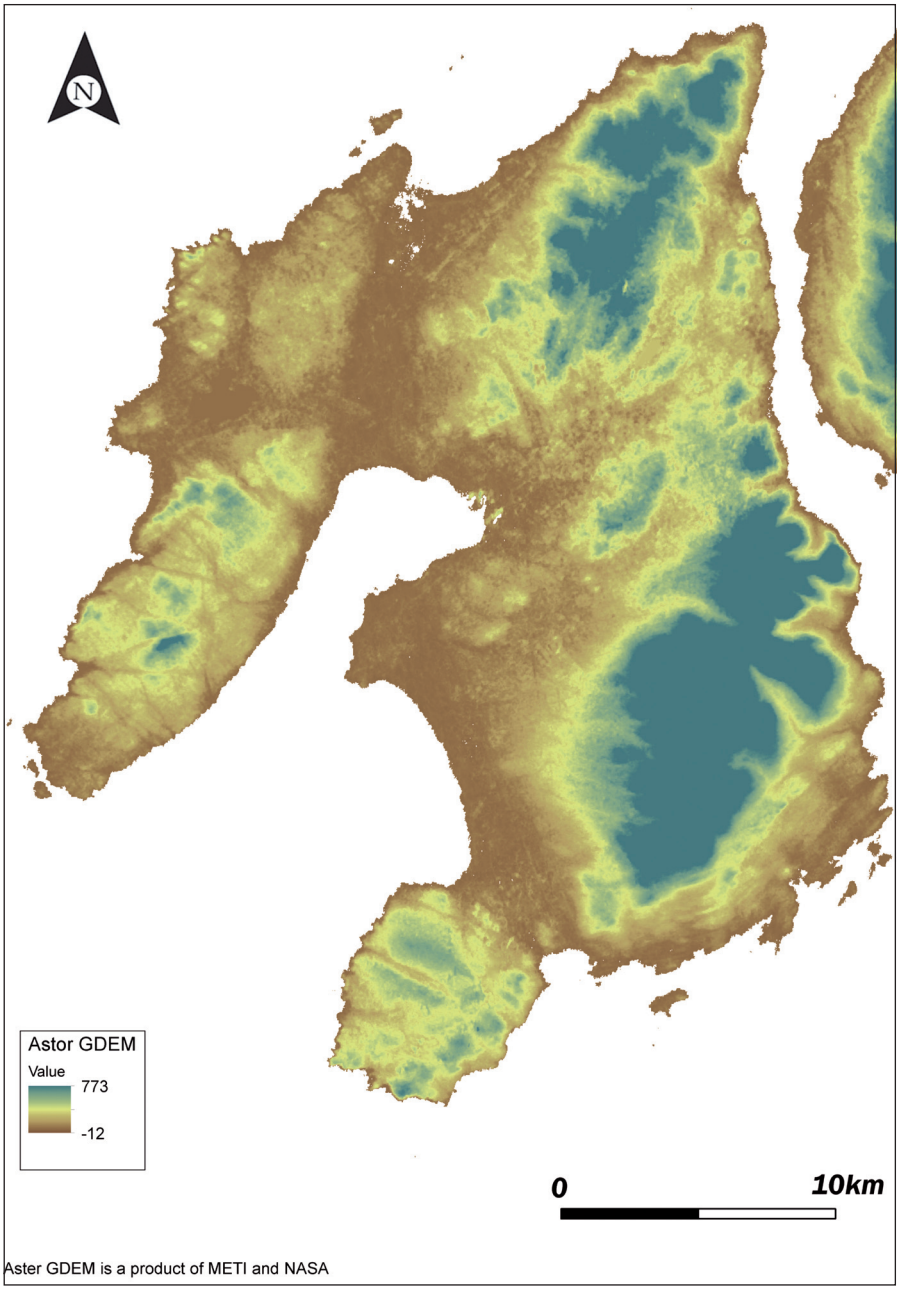

FIGURE 2.1. Islay, an island of two halves.
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response to an apparently similar situation of non-completion encountered during investigations of the Z and Y circles at Stonehenge,

> one feels that for some reason the builders suddenly lost their sense of purpose, struggled on for a little in a half-hearted way, and finally abandoned their work.... We shall never know what it was that induced this state of apathy or despair, whether it was some natural calamity such as the collapse of some of the stones, the death of

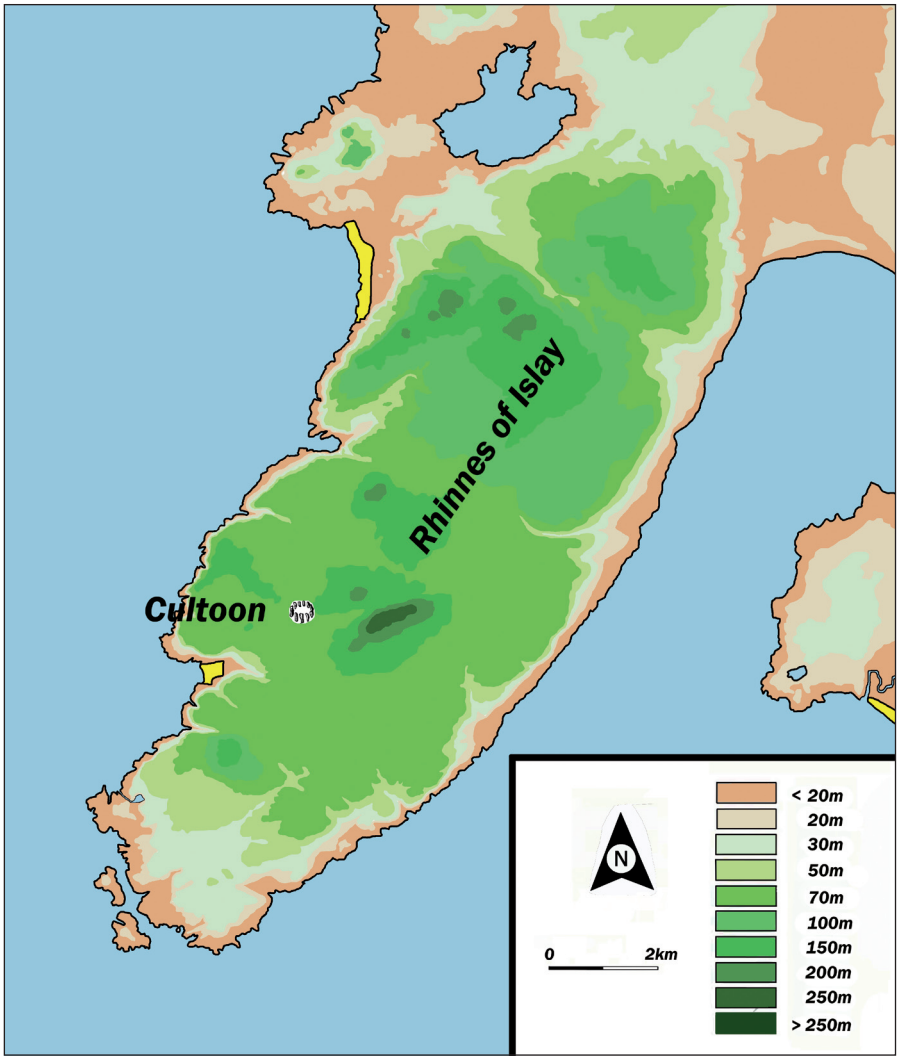

FIGURE 2.2. Location of Cultoon stone circle, in the Rhinnes of Islay.

> a priest or chieftain, or some portent presaging disaster and the wrath of the gods. But clearly it was something considerable, if it could lead to the abandonment of a plan projected on so large a scale.
>
> (1979, 83–4).

While this quote partially anticipates the consequences of risk in megalithic construction to be discussed in Chapter 5, it also expresses a prevalent assumption of monumental construction: that the main purpose of building is to create a finished object or architectural entity. In short, Atkinson's voice serves to reveal as much about our expectations of architecture as it does about third millennium BC building strategy, specifically the teleological basis of 'completeness'. It also tells us something about the assumed temporality of monumental construction, in that once a project is initiated it is expected to continue unabated to its fulfilment.

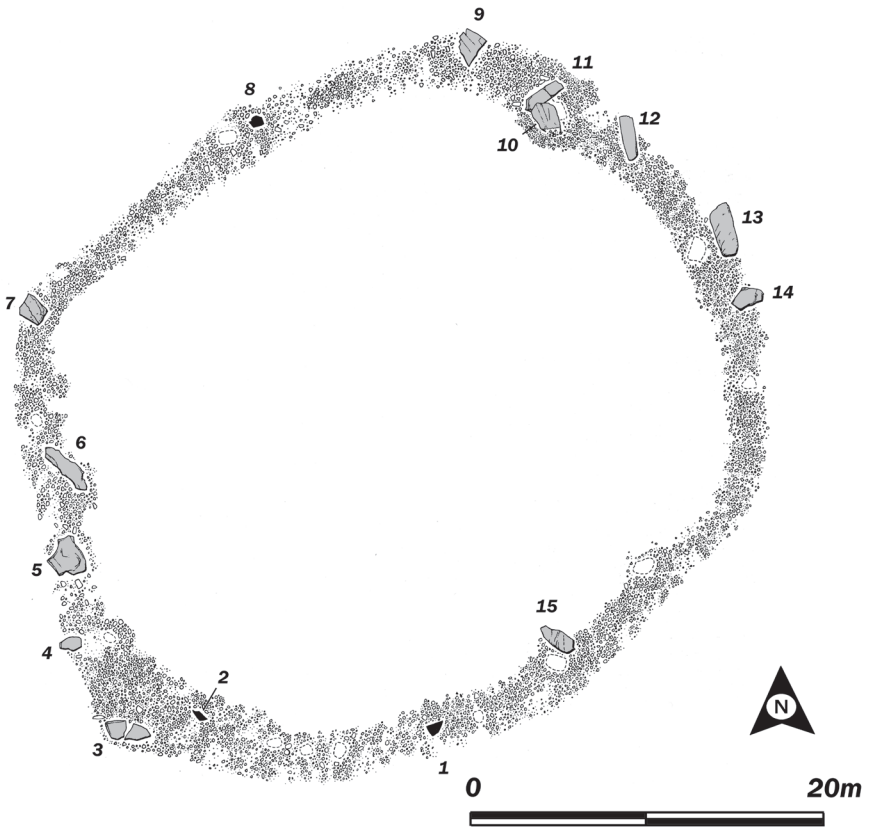

FIGURE 2.3. Plan of Cultoon, Islay (after MacKie 1977 and RCHAMS 1988).

In this chapter we will explore these issues further in regard to the building of stone circles in western Scotland. Our point of departure does not begin with the question of how a stone circle can be recognized as finished or unfinished. Instead we wish to consider the stone circle as something other than an architectural object. If stone circle architecture is seen as an object, then the process of making is not only rendered a mere act of facilitation, but is also finite. Consequently, the life-path of the object is demarcated into clearly defined segments in being made, used and abandoned. For example, this view of architecture allows MacKie to interpret the caches of flint flakes found adjacent to the two erect monoliths at Cultoon as evidence that the stone circle 'retained its sanctity for some centuries after its abandonment' (1976, 1).

Alternatively, monumental architecture can be considered as a product of social discourse realized through strategic practice. This characterization intersects perfectly with the research on chambered tomb architecture undertaken by Lesley McFadyen, particularly when she ponders 'what if architecture is not defined exclusively in terms of an object-like building that is then used but is truly as a medium for action. What of an architecture that exists through construction, through practices of making?' (2008, 309). We suggest that particular stone circles are just such an architecture, and to fully engage with this proposition it is

necessary to combine an appreciation of the biographical nature of construction and reconstruction (*e.g.* Gosden and Marshall 1999; Gillings and Pollard 1999) with an acknowledgment that social practices are both strategic and transformatory (*e.g.* Barrett 1994, 9–37). Specifically, in regard to making stone circles, people, things and places are bound in a mutual relationship involving transformation (Miller 2005a, 38). In short, architecture and social relations emerge together out of the widespread and diverse acts of building.

To illustrate this different perspective it is worth briefly considering the building of tombs within villages on Sumba, Indonesia (Hoskins 1986; Petrie 2012). The tombs are essentially small dolmen-like structures with large capstones. Normally, the articulated reason for building a tomb is one of commemoration, perhaps to honour a deceased family member. As always there are layers of significance attached to the multiple activities surrounding construction. The principal occasion, however, is the dragging of the large capstone on a journey from quarry to village. It is this context that is one of ceremony and unsurprisingly the stone dragging attracts large numbers of people as both spectators and participants. The stone dragging ceremony also constitutes a juncture in the Sumbanese ritual calendar when social relations are negotiated and transformed, specifically involving the potential elevation in status of the family sponsoring the stone dragging, which of course has relational consequences and necessitates a re-ordering of the broader social world.

With regard to the performance of stone dragging, once the rock-cutting specialists detach the stone from the outcrop, a large gathering of kin (both real and fictive) is called. The number of people who attend is a gauge of respect, honour and status, as is the material contributions of the visitors together with the successful transportation of the stone. Consequently, the stone dragging ceremony transforms both people and things in the mutuality noted above. Here, it is the transportation of the stone that defines the construction process, *not* the ultimate completion of a monument. Indeed, a great feast ensues after the stone is brought to the village, as opposed to when it is placed upon its supports to form the tomb. Obviously, there are greater subtleties and implications involved, and these will be explored further in Chapter 5. Here it is sufficient to identify acts of construction as potentially dominant social practices; embracing performances which in some instances represent ends in themselves.

Thinking about building in this way almost reverses our logic of construction from architectural facilitation to one of an architecture of construction. Many years ago, Chris Evans captured this notion perfectly in a paper addressing the design and digging of Neolithic causewayed enclosures:

> it may be more appropriate to consider prehistoric constructs as *projects* rather than in the criteria of formal architecture/geometries. By this it is meant that to a greater or lesser extent they were resolved (conceived) only through their construction and that given spatial qualities may have only been 'emergent' in the sequence of their construction
>
> (1988, 88).

From the above discussion several paths of enquiry present themselves. First, in some cases elements of construction such as stone dragging may have held more prominence in terms of performance and social significance than a completed monument. Second, the practices that enabled and provided the social conditions under which monumental construction may take place can be described as dispersed or distributed (McFadyen 2008). Third, the building of a stone circle may be conceived as a project with architecture effectively emerging through constructional practice (Evans 1988; Edmonds 1999, 98–102). Finally, specifically regarding stone circles, we may have to concede that 'not all human constructions are directed at posterity' (Bradley 1993, 98). This situation is particularly ironic in that the final forms or design of stone circles, above all other prehistoric monuments, have been studied in precise and minute geometric detail (*e.g.* MacKie 1977, 43–52; Curtis 1979; Scott 1989).

So let us think again about the nature and status of the Cultoon stone circle. It is the only recognized stone circle on Islay but due to its forlorn appearance is unfortunately unmarked and rarely visited. It should be recalled that it was a combination of prone monoliths with no adjacent stone-holes and in other areas, stone holes with no adjacent monoliths, which caused MacKie to postulate that Cultoon was an uncompleted monument. The monoliths actually lie on a broad stone bank that runs around the circumference of the circle (Figs 2.4 and 2.5). Judging from their current position there must remain the possibility that many of the monoliths were originally erect, being supported by a small cairn of stones packed around their bases. This form of construction has been identified as being characteristic of an embanked circle by Burl (2000, 180–1). The instability of upright monoliths supported by stones piled around their base (see Chapter 9) would almost certainly lead to their ultimate collapse. In particular, such an occurrence would account for the breakage of Stone 3, a monolith of metagabbro (David Webster pers. comm.), which MacKie considered to have broken intransit, because 'no trace of a socket for this stone was found' (n.d., 6).

FIGURE 2.4. Southern area of the Cultoon stone circle uncovered in the 1975 excavations.
COURTESY OF THE MUSEUM OF ISLAY LIFE, ISLAY

For MacKie, there was clearly an interest in establishing the presence of geometric precision on the part of the builders, both in design and astronomical alignments (*e.g.* 1975, 6; 1977, 92–4). However, the seemingly incomplete condition of the circle was clearly perplexing and ultimately designated to have been a consequence of 'strange events' (MacKie 1975, 9). Regardless of whether the idea of embanked construction accounts for the remains uncovered, or if the monoliths were never erected, we should consider to what degree this leaves the circle as incomplete?

In addressing this question it is worth considering a number of points. First, is the question of longevity, a quality assumed to be associated with stone as opposed to timber monuments (*e.g.* Parker Pearson and Ramilisonina, 1998). Of course, we are all conversant with stone employed as a metaphor of permanence as exemplified in such phrases as 'written in stone'. If the stones were not actually erected as MacKie assumed, or conversely, they were erected and merely supported

FIGURE 2.5. Stones 14, 13 and 12 in the eastern area revealed in the 1974 season of excavations at Cultoon.
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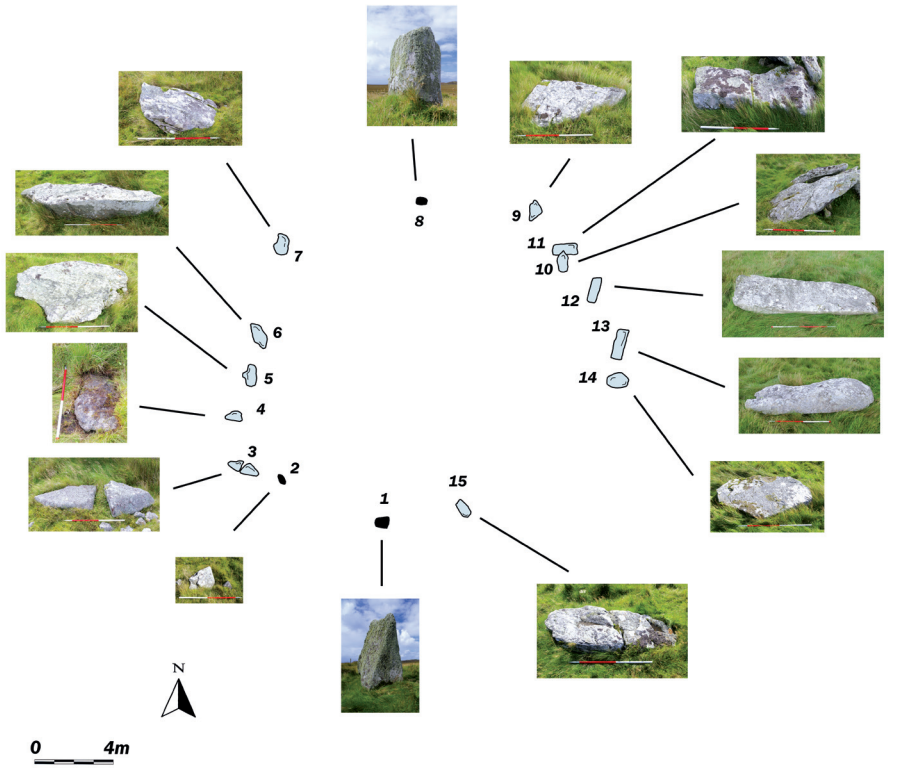

FIGURE 2.6. The stones forming the Cultoon stone circle.

by the stones within the bank, neither occurrence would seem to be directed towards the constitution of permanent monumental architecture. Instead, we can recognise a short-term architecture, potentially very pragmatic in nature.

Second, despite lying around the perimeter of the circle, and being partially covered by lichen, the monoliths themselves are really quite beautiful, being mainly composed of metagabbro and a single stone of pink gneissose syenite (Fig. 2.6). Moreover, all the monoliths have sharp edges and cleaved faces. Hence they appear to have been quarried, as opposed to being easily accessible glacial erratics. This recognition indicates that each stone was extracted from a specific outcrop and transported to the circle. Given the lithologies of the stones present, the outcrops may have been local but could have been more spatially dispersed across the Rhinnes of Islay.

If the stones were once standing at Cultoon, the manner of erection and support within a stone bank was clearly not aimed at posterity. Under these circumstances, the stone circle appears to be a monument of the moment, something both expedient and strategic, more about performance and imagery than permanence. Equally, if the stone circle was never completed, as MacKie (1977, 45) originally suspected, the principal practices were the quarrying and dragging of stones from different outcrops to Cultoon. Unless we invoke some dreadful calamity, the social purpose was apparently accomplished through the transportation of stones, as opposed to the completion of a monument. Within

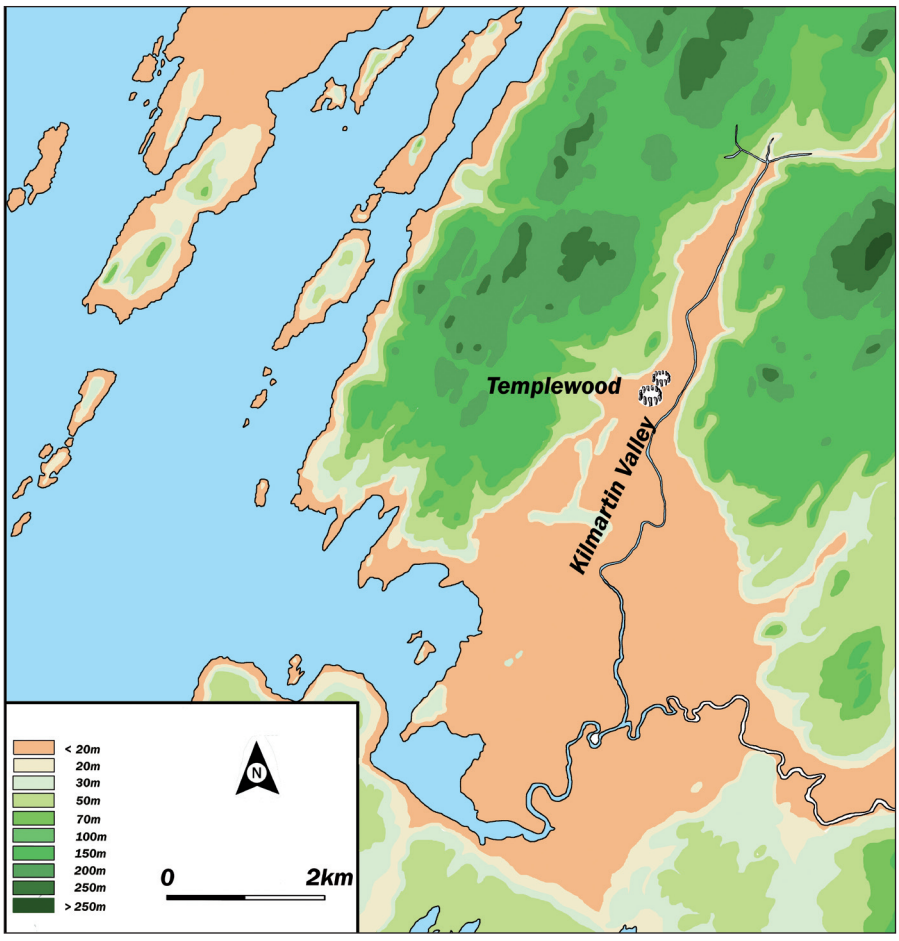

FIGURE 2.7. The location of the Temple Wood stone circles.

either scenario, we appear to be witnessing an architecture of construction, the creation of which maintains a temporal rhythm less attuned to edifice, and more towards social expediency and 'making'. Different temporalities of construction and their linkage to architectural intention will be explored in the following section. Significantly, here we are confronted, for the first time, with stone architecture that emphasized surface appearance over substance and longevity.

Temple Wood, Argyll: questions of temporality, intention and design

In 1974, at the same time as Euan MacKie was completing his first season at Cultoon, excavation began at another stone circle: Temple Wood in the Kilmartin Valley, Argyll. At first sight it is hard to imagine a greater contrast between the stone circles of Cultoon and Temple Wood. The recumbent stones of the former are situated on a small knoll surrounded by open moorland, while the latter lies on flat ground, shaded by the trees of Half Moon Wood, and enclosed by the narrowing fertile Kilmartin Valley (Fig. 2.7). As with

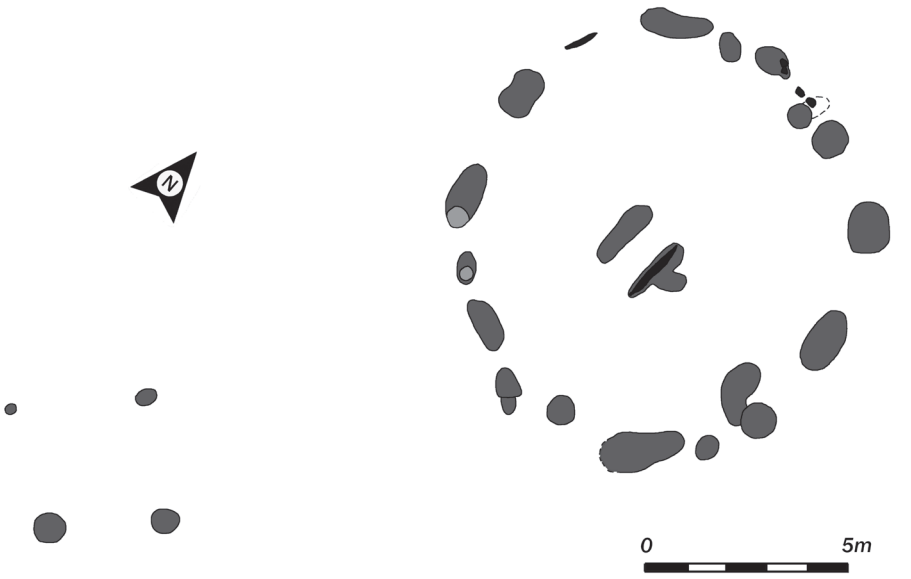

FIGURE 2.8. Plan of the northern circle at Temple Wood (after Scott 1989).

Cultoon, it was the desire to obtain more information to aid understanding and presentation that underpinned the excavations supervised by Jack Scott (Scott 1989, 53). However, this was not the first archaeological examination of Temple Wood. The southern circle had already been partially investigated by Craw who accomplished the work over 'half a day with two men' (1930, 130–1)! When excavation began in 1974 only the southern circle was known. A northern circle was identified later and its excavation began in 1976. On completion of the seven-year excavation project, the two Templewood stone circles were found to have entirely different biographies, embracing both material and functional disparity.

Of the two stone circles, only the northern circle was found to have a timber component and seems to have begun life as a circle of standing posts (Fig. 2.8). However, the excavator felt 'that any plan for a post circle was discarded in favour of a plan for a stone circle' (Scott 1989, 93–5). Nonetheless, the construction of the stone circle apparently fared little better than its timber predecessor when it was 'abandoned in its turn' (Scott 1989, 95). There was clearly a high level of ambiguity concerning the temporal and spatial relationships between the timber and stone circles. Indeed, it was reported that the enigmatic 'Dr Orkney, however, would visualize a phase during which a combined post and stone circle existed' (Scott 1989, 95). Such architectural co-existence seems unlikely (see Pollard 1992, 214–6 for a similar discussion), as in some instances the monoliths of the stone circle appeared to be set into the postholes of the timber circle (Fig 2.9).

Like Cultoon, the northern stone circle is described as being unfinished and abandoned (Scott 1989, 93; Burl 1995, 112). The basis of this interpretation lies

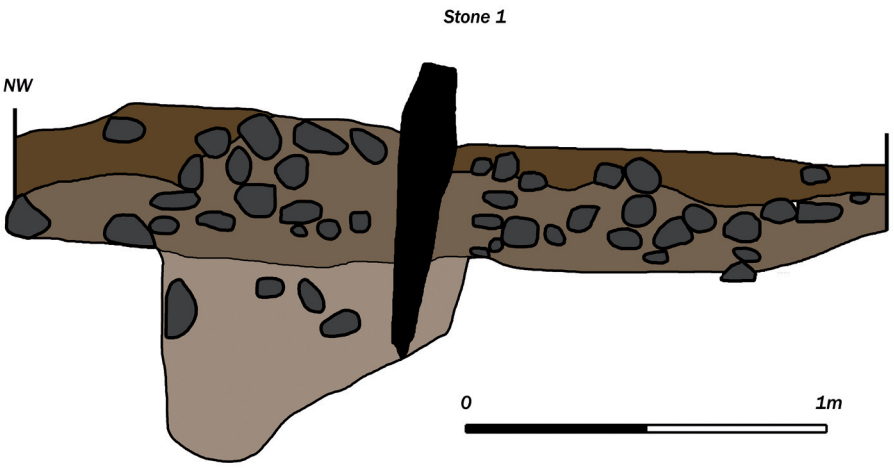

FIGURE 2.9. Section drawing of Stone 1 of the northern circle sitting in an earlier ramped post-hole (after Scott 1989).

in the observation that 'sockets nos 6, 7, 8 and 9, with their uniform content, do imply that they may have been backfilled before they ever received standing stones' (Scott 1989, 93). Indeed, Scott considered that 'the intention to build a stone circle is clear, as is also the decision to dismantle, except for stone no. 1' (Scott 1989, 93). Accepting the ambiguity of the evidence, the constructional history of the northern circle appears confused in that it embraces a transition in materials yet displays an apparent lack of concern for completion. Recently, Alison Sheridan has suggested that the stone circle was dismantled at the end of the third millennium cal BC 'and its stones deployed in cists elsewhere' (2012, 177). This is an interesting interpretation, especially, if individual stones were distinctive and related to specific people or kin-groups.

The southern circle at Temple Wood affords an entirely different picture of monumental construction to that seen in its northern neighbour. Today, the stone circle is partially concealed by a covering of cobbles and the projecting monoliths appear relatively insubstantial and low in height (Fig. 2.10). This is deceptive. During excavation, when the cobbles were removed, the stones were revealed as standing up to a height of 1.6 m above the old ground surface (Scott 1989, 59). Moreover, the sockets are unusually deep and between a half and third of the length of the stones are actually buried below ground level, thereby giving total lengths of up to 3 m for each of the monoliths (Fig. 2.11). The absent stones on the southeastern circuit (Fig. 2.12) were the objects of Craw's investigations in 1929, and the sockets were located in what could be described as a good afternoon's work!

Once revealed in their entirety, the monoliths comprising the circle are described as 'massive' by Scott (1989, 59), while Craw comments on 'the great size of the stones' (1930, 279–80). Craw also noted that there were many outcrops in the locality capable of providing such slabs (1931, 279–80). Of these, he identified Torbhlaren Hill, Kilmichael Glassary, as the probable

FIGURE 2.10. The southern stone circle at Temple Wood as seen today.
ADAM STANFORD – AERIAL CAM

FIGURE 2.11. View of the standing monoliths during the excavations by Jack Scott.
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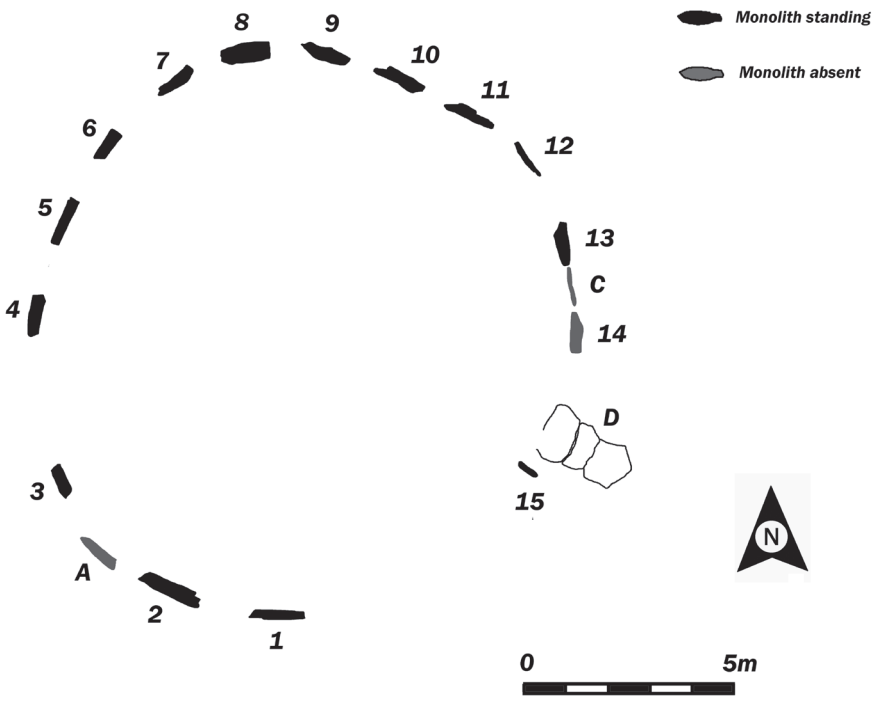

FIGURE 2.12. Plan of the southern stone circle at Temple Wood (after Scott 1989 and Craw 1930).

quarry due to the striking outcrops (Craw 1931, 280). Actually, at least three different lithologies were recognized among the monoliths of the southern circle (Campbell 1989, 112). Despite extensive lichen coverage, a re-examination of the lithology of the stones by Roger Anderton revealed another interesting pattern. Many of the stones are variations of epidiorite, all of which are available locally (Fig. 2.13). However, by carefully examining the jointing and cleavage surfaces, monoliths derived from the same outcrop were detectable. Moreover, their deployment within the circle revealed a tendency towards juxtaposition and pairing (Fig. 2.14). This observation is important because it reveals a particular strategy at work in the positioning of monoliths in relation to one another in the southern circle at Temple Wood.

During the geological survey, it soon became apparent that it was not just the relational positioning of monoliths that was planned but individual stones were strategically set. Each stone is situated so that its flattest and smoothest surface, whether quarried or of natural cleavage, faces outwards (Fig. 2.11). These observations reveal at least two different strategies; one determines the relative position of individual monoliths, and a second is to enhance the appearance of the circle when viewed from the outside. Such imagery may have been augmented by the elliptical shape of the stone circle, which measures 13.3 m × 12.1 m, and originally comprised 21 substantial monoliths, with a smaller, radially set, monolith (Stone 15) to the south (Fig. 2.12). The spacing of the monoliths is fairly regular, although three (Stone 13, C and 14) were contiguous in the eastern circuit.

FIGURE 2.13. Epidiorite outcrops along the eastern side of the Kilmartin Valley.

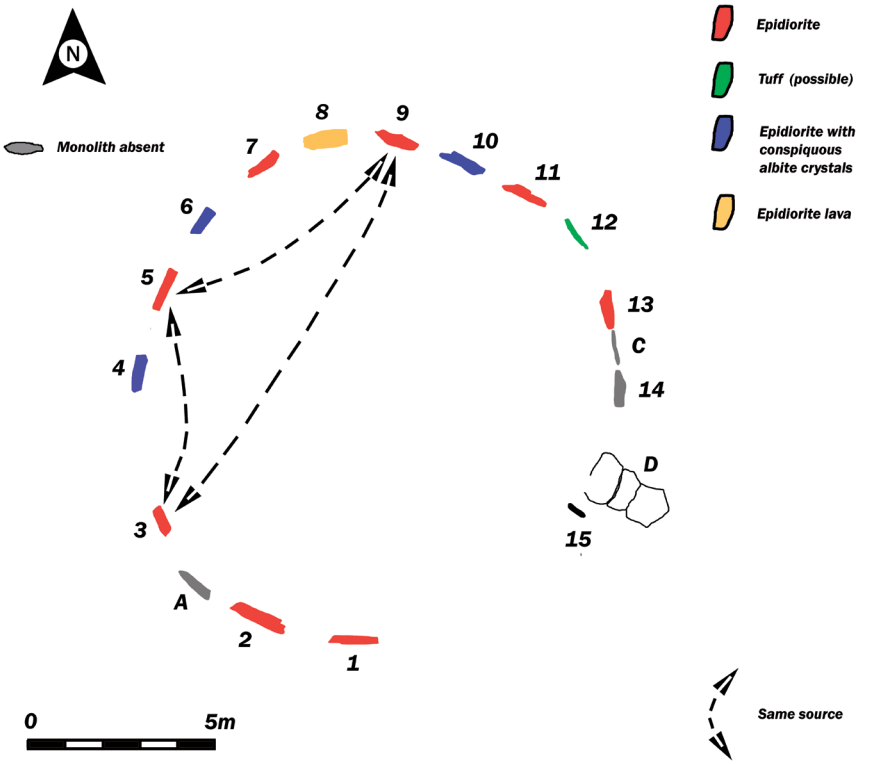

FIGURE 2.14. Geology of the Temple Wood southern circle (information Roger Anderton).

This occurrence raises another interesting question. If only contiguous stones formed a short section of the circle does this mean that the stone circle was incomplete? The question concerning completion takes on additional significance at Temple Wood southern circle due to the architectural changes that occur after the stone circle is erected. Towards the end of the third millennium cal BC (see Sheridan 2012, 175–7), the stone circle was conjoined through the insertion of 'interval' stones wedged between and rebated into the monoliths (Scott 1989, 59). This is an interesting development because substantial effort was put into dressing the sides of the monoliths to ensure a close fit in much the same way as occurs in stone burial cists (Scott 1989, 88; Noble 2006, 222). Additional walling was subsequently added between the monoliths to reinforce the unity of the outer skin of the monument. Now the circle is fused into a single entity that wraps the central area, and it is suggested that this alteration concurs with the beginning of the deposition of the dead (Fig. 2.15). This takes the form of a central cist formed of 'unnecessarily massive' slabs (Scott 1989, 70). Sheridan (2012, 177) suggests the massive slabs deployed inside the Temple Wood southern circle, together with equally large stones comprising the a cist in the nearby Ballymeanoch henge were derived from a dismantling of the monoliths of the northern stone circle. If the individual monoliths erected within the Temple Wood northern circle were associated with specific persons or social groups, their extraction and redeployment is clearly an attempt to physically link the recently deceased with the long dead. Such a strategy of constructing social identity through material display indicates a growing concern at this time with establishing particular lines of descent. The material dimension of this scheme, especially the intimacy of physical contact created between people (the deceased) and stone (old monolith) is not such a dissimilar action to that discussed in the next chapter concerning the reuse of hearth stones in the dwellings at the Neolithic village of Barnhouse in Orkney.

Later still, further cists are inserted in the interior of the stone circle, together with cremation deposits (Cook *et al.* 2010, 203–4; Sheridan 2012, 180). Significantly, the dead are consistently rested within cists, some of which are also wrapped by another skin of small 'contiguous upright slabs' (Scott 1989, 59). This wrapping creates a homology with that seen in 'the rebuilt perimeter of the monument' (Bradley 1998, 136). The building and demarcation of cists within the stone circle therefore simulates a 'Russian doll' form of wrapping.

The southern of the Temple Wood stone circles is interesting because it stands in stark contrast to both its northern partner and Cultoon. Specifically, it raises questions concerning the nature of construction, the degree of anticipation concerning future transformations, and the tempo of building. In discussing the construction of the stone circle of Cultoon, Islay, an open-ended view of building was proposed: an ongoing project which could potentially run over many years. Here, the actual practices of making the stone circle can be understood as its *raison d'être*, and the notion of a 'finished' monument becomes almost irrelevant. Alasdair Whittle has challenged this interpretative position, wondering whether it need be 'universally true that each phase of building was

carried out without a sense of design' (2006, 21). At one level he is perfectly correct, but in the example of stone dragging in Sumba, Indonesia (Hoskins 1986), we saw that an emphasis of 'making' should not be construed as 'a kind of agency-less lack of purpose' (Whittle 2006, 21). Nonetheless, it is difficult to not concede that the practices involved in the architectural transformations at Temple Wood southern circle do appear both strategic and to ensue with a clear sense of purpose and design.

To understand the architectural changes at Temple Wood requires a distinction to be made between what can be described as the efficacy of erect monoliths (*e.g.* Gell 1998, 133–43), and the requirements of binding and containing places of transformation. Earlier, the erection of monoliths at Temple Wood was suggested to be extremely strategic in terms of imagery and situation. Hence, any efficacy that the monoliths exert is articulated through appearance and encounter, and is concerned solely with effect (cf. Bradley 2009, 34–41). Then comes the arrival of the physical remains of the dead at Temple Wood, who require to be materially bound and constrained (Figs 2.15 and 2.16). The duality manifest in the presence of inhumations buried outside the stone circle and of cremated human remains deposited inside is very illuminating. This situation is suggested to be a consequence of a sequence of practices or performances, which enable a transformation in the state of the dead person. Through the spatial metaphors of a journey, such a process necessarily opens a conduit between different realms that is intrinsically dangerous and demands strict rules and controls through choreographed ritual practices and material containment or wrapping.

Recently, Jane Downes (forthcoming) has noticed that in Orkney during the second millennium cal BC not only are human cremation deposits incomplete in terms of skeletal remains (cf. Brück 2006, 77–84), but also that the human cremated bone is consistently dated older than the charcoal from the pyre. This suggests that inhumations buried in stone cists, which are by definition accessible, are at a later date exhumed and cremated. This important observation provides us with a fascinating insight into what may be occurring at Temple Wood stone circle. As part of the initial mortuary rites of separation, people are being inhumed in cists located within and beyond the stone circle. At a later time skeletal remains are exhumed and cremated. The final component of the *rites de passage* involves the re-deposition of cremated remains within the confines of the circle. Here the material metaphors of binding are deployed through the practical addition of cobbles to form bank. Hence the appearance of the stone circle appears to transmute into a cairn-like structure. In this respect, the modifications to Temple Wood do represent a change from an open to a closed monument, as envisaged by Bradley (1998, 136–7). However, such a change is realized through a continual process of physically wrapping the dead at the end of their journey to another world.

FIGURE 2.15. Cist construction inside the southern stone circle at Temple Wood.
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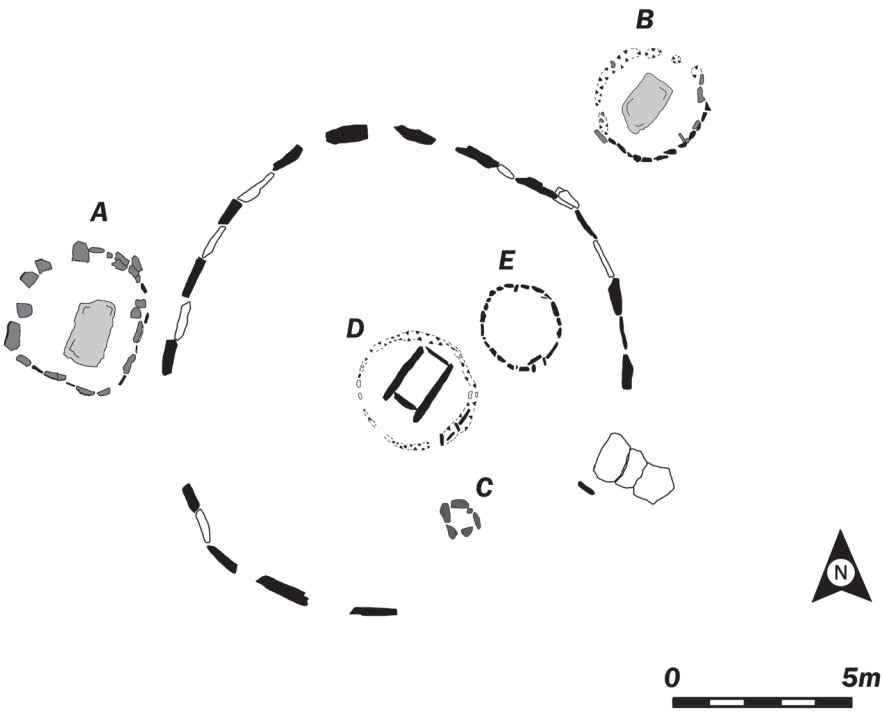

FIGURE 2.16. Plan of cists in and around the southern circle at Temple Wood (after Scott 1989).

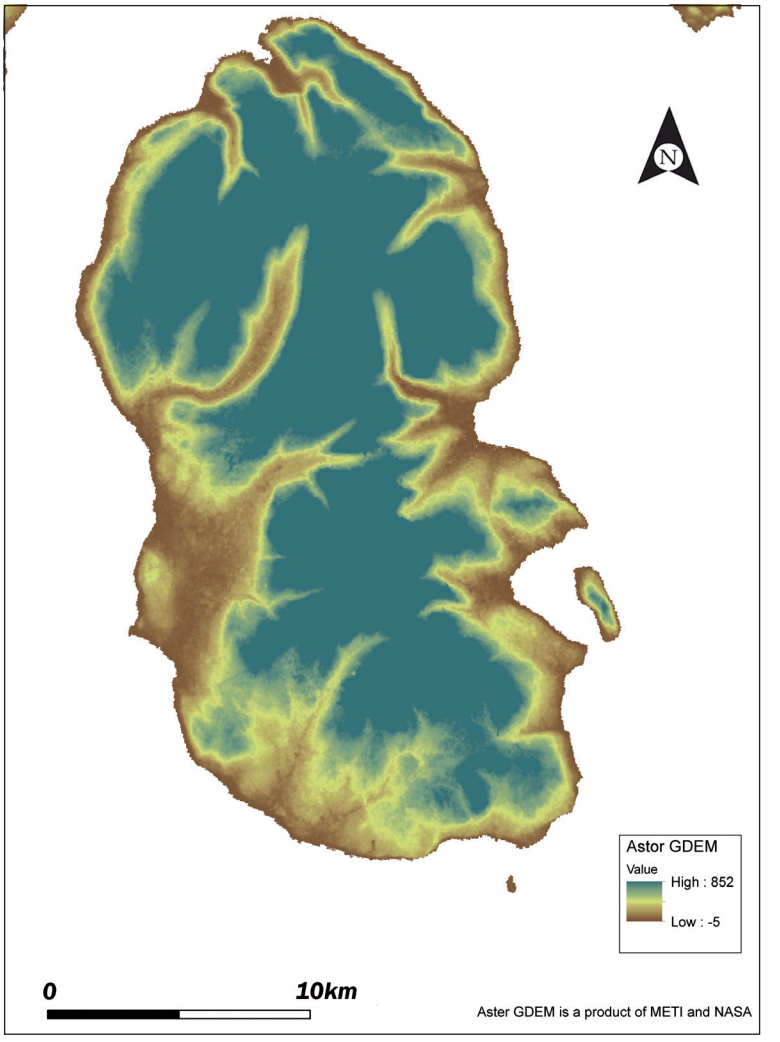

FIGURE 2.17. Map of the Isle of Arran showing topography and zoning of high ground.
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Machrie Moor, Arran

The Isle of Arran rises 'with Alpine dignity from the broad expanse of the Firth of Clyde' says Geikie (1910, 3), and the reason lies in the amazing range of geology that forms this relatively small island (Fig. 2.17). Indeed, the 'father of geology' James Hutton partially based his ideas of 'unconformity' and the geological history of the earth on rock formations observed at Locranza, on the north coast of Arran, in 1787. Indeed, the island is virtually 'a microcosm of Scottish geology' claim Meigham and Simpson (2001, 347). Equally, different geological events have created an island which is subdivided in topography and lithology. Much of the northern area is dominated by a series of dramatic peaks such as Goatfell, Beinn Tarsuinn (Fig. 2.26), Beinn A'Chliabhain and Cir Mhor. This is the Northern Granite Complex, an area of tertiary pale coarse-grained biotite granite (Meigham and Simpson 2001, 348). The lower hills of the

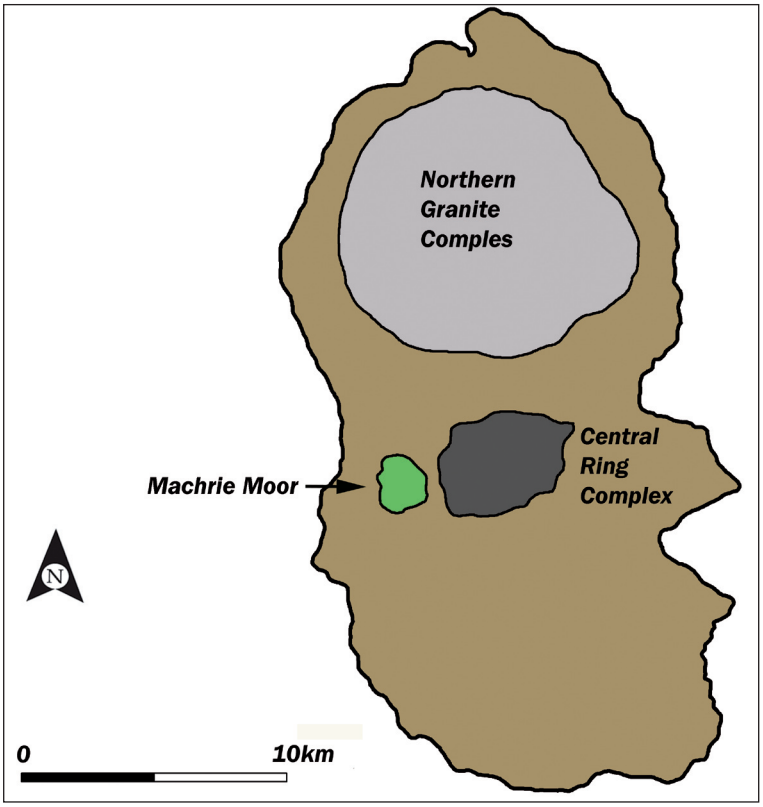

FIGURE 2.18. Simplified geological map of Arran (after Meigham and Simpson 2001).

central area (Central Ring Complex) are also tertiary microgranites and felsites, basically finer grained granites. The southern area of Arran is more disparate with lower undulating hills and valleys composed of sedimentary rocks, such as sandstones and limestones, punctuated by igneous intrusions.

Not only does the geological history influence the topography of the island, it also produces distinctive rocks of different colours. As Andrew Jones highlights, 'the island is thus composed of rocks of three main colours: white, black and red, each with contrasting lithologies' (1999, 341) (Fig. 2.18). In examining chambered cairn architecture and the deployment of colour/rock type, Jones recognizes patterning, but accepts that 'to a large extent the stones employed are those found locally' (1999, 343). In this we can recognize a potential tension existing between the metonymical relationship of a stone and its source, for instance, the white granite of the prominent northern mountains or the red sandstone coastal cliffs, and a metaphorical relationship between a social group and its local materiality. Without lingering too long in this area, we can begin to appreciate a conjunction of the colour and texture of rock with specific dramatic island locations in Arran, which to some degree appears to transcend a direct association with local identities (the opposite will later be argued to exist in Neolithic Orkney). Instead, places and their materiality articulate very different and particular experiences of the island world (cf. A. Jones 1999, 348).

In a broader discussion concerning the selection of appropriate places for rock art, Tilley (2004, 222) asks the following questions:

1. Was it the shape, surface texture, colour, intrinsic characteristics such as cracks of fissure lines of the rock that were of significance?
2. Was it the particular relationship of rock to others in the surrounding landscape that made it important?

We may suggest that these questions are also pertinent in understanding the selection of monoliths that are deployed in the construction of stone circles on Machrie Moor (Fig. 2.18). Particularly, the relational features of stone colour and texture, and dramatic landscape features with cosmogonic structures and sacred island geography (cf. Bradley 2000, 85–96). This situation does not wholly subordinate local identities since cosmological events partly constitute the histories of social groups.

Machrie Moor can be a somewhat bleak setting for a group of six closely situated stone circles (Fig. 2.19). In terms of imagery, however, the circles on Machrie Moor rival those at Calanais, Isle of Lewis or Stanton Drew, Somerset. There are two different characteristics of the Machrie Moor stone circles that are salient to our enquiry. The first mirrors the discussion of the history of Temple Wood southern circle, and concerns contrasting views of construction either being an open-ended project, or architecture that is created quickly over a shorter duration (see discussion in Whittle *et al.* 2011, 891–3). This can be directly linked to a distinction between monuments that appear incomplete or undergo numerous transformations, for instance Stonehenge, as opposed to monuments whose biographies appear preordained (see Bradley 2002, 91–6) with a clear sense of purpose (Whittle 2006, 21–2). It also touches on the changing materialities of monumental architecture, particularly a sequence of timber to stone.

Unlike Bryce, whose workmen dug into three of the Machrie Moor circles 'on a bright day in May' (1862, 506), Aubrey Burl was less fortunate. His excavations at Circle I began during the wet autumn of 1978 (Burl 1995, 117). Despite discovering the unknown Circle XI (confusingly Circle IX is labelled Circle 6 in the revised Historic Scotland guidebook), after an equally depressing season in September 1979, fieldwork on Machrie Moor was finally abandoned. Given the enormous contribution to stone circle studies by Aubrey Burl it seems perverse that his fieldwork was consistently plagued by inclement weather. A new period of excavation on Machrie Moor, to complete Burl's fieldwork, was undertaken by Alison Haggerty and ran over two seasons in 1985–6. The results of these investigations were exciting, not least in the discovery of prolonged histories for each of the two stone circles I and XI, including preceding timber monuments (Figs 2.20 and 2.21).

There was, however, a problem. After earlier activities, the sequence of timber circles (phase 2) being followed and obliterated by a period of cultivation (phase 3) before the erection of the stone circles (phase 4) appeared difficult to accept. This is because the combination of ard marks

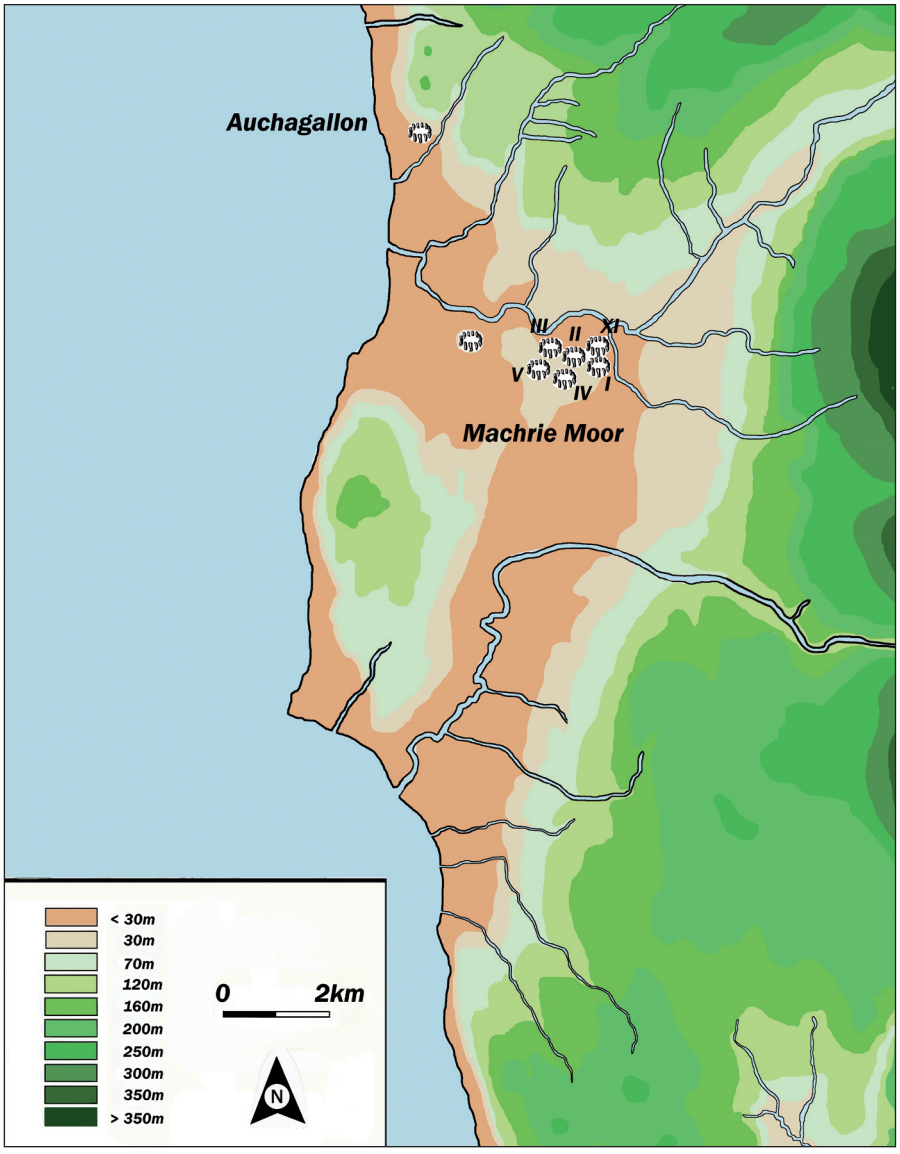

FIGURE 2.19. Machrie Moor stone circles: local topography.

and fences, represented by lines of stakes (Haggarty 1991, 67–72), would have annulled any trace of the timber circles. Just to compound the issue, the ard marks and stake lines were along different axes 'suggesting that these elements may not have been in use together' (Bradley 2002, 91); the implication being a substantial period elapsed between the building of the timber and stone circles. If this is the case, it is difficult to account for the exact correspondence between the position of timber circles and subsequent stone circles as apparently no traces of the former would have survived the apparently extensive period of cultivation.

As can be imagined, this situation has caused considerable interpretative discomfort. For example Richard Bradley rightly questions the totality of the

FIGURE 2.20. Excavation of stone circles I and XI on Machrie Moor in 1986.
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cultivation and notices that the ard marks tend to avoid the positions of the timber circles (2002, 90–1). From this observation he suggests that 'it seems more likely that the positions of the two timber settings were left untouched after the buildings themselves had decayed' (2002, 91). Almost in desperation, Alex Gibson suggests that:

> It may also have been because the detritus from the decayed structures was mounded up in the centres of the original sites. If this is the case, then the accuracy with which the stone circles coincide with the timber ones is more easy to understand and the circles having been erected around slight mounds or sites of mounds
>
> (Gibson 2004, 76).

Clearly, the site of the timber circles was not cultivated and vestiges of either the timber circles, or some object marking their position, remained extant since the stone circles were erected exactly over their respective timber settings (Fig 2.20). The material qualities of timber and stone and the common sequence from the former to the latter have received extensive comment over the last few years (*e.g.* Whittle 1997a; Parker Pearson and Ramilisonina, 1998; Barrett and Fewster 1998; Parker Pearson 2000; Thomas 2000b; 2006; Noble 2006a; 2006b; Bradley 2012, 93–112; Richards and Thomas 2012). Particularly, qualities such as hardness and longevity have been opposed to softness and decay to illustrate the potency and deployment of material metaphors in third millennium cal BC monumentality.

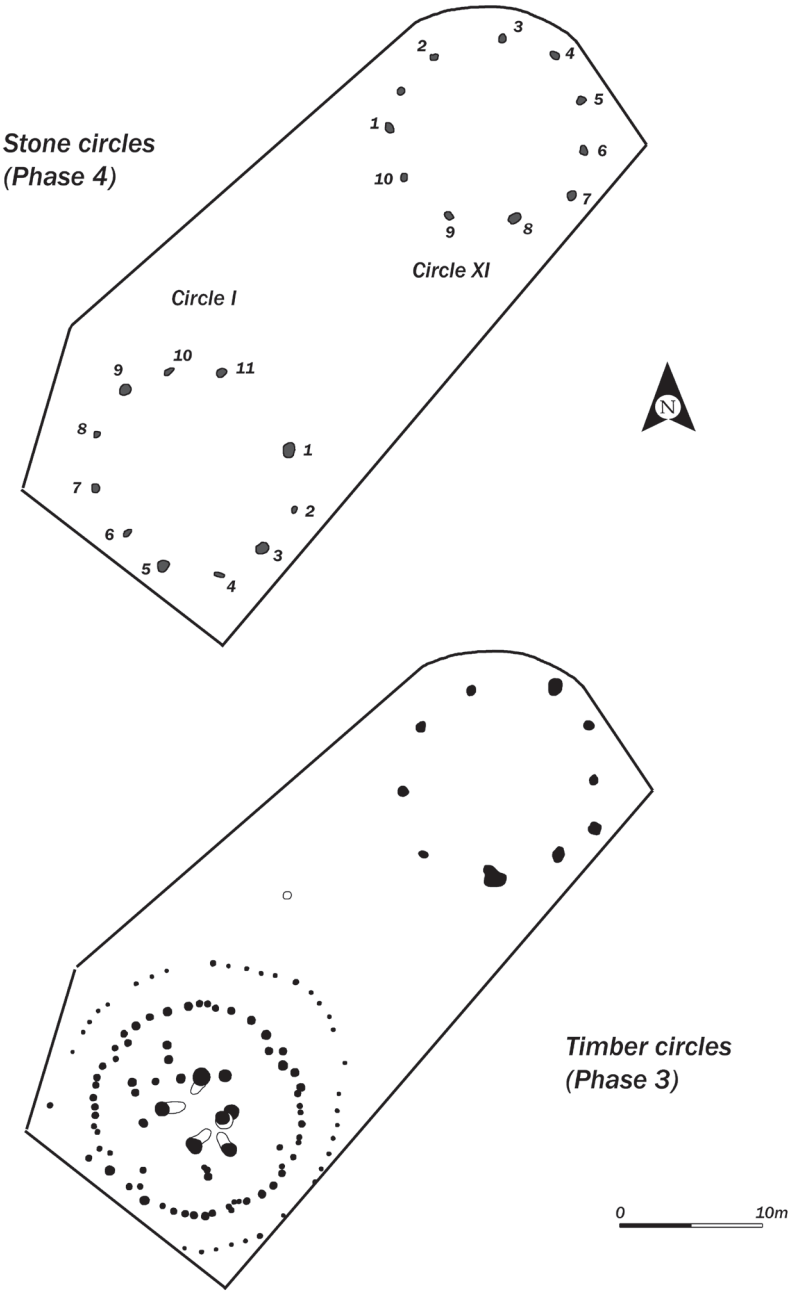

FIGURE 2.21. Excavation plans of timber settings and stone circles I and XI on Machrie Moor (after Haggarty 1991).

As discussed in the first chapter, whilst the physical characteristics of materials represent a rich resource for metaphoric extension their localized context is essential (Tilley 1999). Moreover, materiality is neither static nor constant (*e.g.* Ingold 2011, 22–4), and considerations regarding its presence in monumental architecture need to take such 'flows' into account.

However, this debate is not something we wish to pursue here. A more pertinent and recurrent question concerns the degree to which such a transition represents a pre-planned constituent of the Machrie Moor circles. Bradley (2002, 91; in press) interprets the timber setting at Circle I as a representation of a house (cf. Thomas 2010). Moreover, a degree of longevity is also discernible in the replacement of a number of timbers (Fig. 2.21). Furthermore, Bradley is convinced that the sequence is strategic; 'it seems as if this sequence was preordained, in the sense that people had always been aware that the timber circles would eventually be replicated in stone… It also seems likely that the creation of the stone circles was always intended as the final stage in the history of these monuments, even though they may have been reused for burying the dead' (2002, 92). This is an interesting statement as it tends to privilege the transformation of timber to stone, with the addition of internal burials, an occurrence we have already encountered at Temple Wood, relegated to mere 're-use'. Is this characterization of the transitional monument justified?

Let us re-orientate the discussion. Accepting that the central timber arrangement of the four large posts is a representation of the house, the surrounding rings of posts can therefore be characterized as a form of wrapping (see Chapter 1). There are two areas of interest in the subsequent replacement of timber by stone. First, the lithology of the stone is differentiated, both at an intra- and inter-site level. Second, certainly at Circle I, the stone monoliths only replace the wrapping, not what is wrapped, in this case the internal timber arrangement.

The different lithologies composing the Machrie Moor stone circles have always been a point of interest (*e.g.* Bryce 1862, 501–3) (Fig. 2.25). The tall pillars of red sandstone comprising Circle II (Fig. 2.22) and Circle III (Fig. 2.23) contrast in every respect with the circles that are composed of white granite boulders, such as Circle V (Fig. 2.24). In fact the circles appear so different that Burl ponders 'that the group is unlikely to be entirely insular in origin and their dissimilarities are best explained by traditions from outside the island' (2000, 89). Equally, because of the same disparity, he suggests they may have been erected over a considerable period of time (Burl 1995, 114). Admittedly, apart from the different lithologies, Burl is considering the architecture of the circles in typological terms, but overall there is no evidence to support either interpretation. On the contrary, a degree of differentiation in lithology is also a feature of individual circles (Meagham and Simpson 2001).

It has always been assumed that the white granite boulders constituting Circles I, IV, V, and XI are glacial erratics (*e.g.* Bryce 1862, 504; Meighan and Simpson 2001, 349), which is consistent with Thorpe and Williams-Thorpe's (1991, 72) sentiments concerning the building a circle from readily available stone, an assumption that entirely misses the point of megalithic construction (see Chapter 1). Granite boulders as glacial erratics are indeed present across Machrie Moor, and it remains a reasonable possibility that the boulders

FIGURE 2.22. The red sandstone 'pillars' of circle II on Machrie Moor.
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FIGURE 2.23. The remaining red sandstone monolith of circle III on Machrie Moor.
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FIGURE 2.24. The rounded white granite boulders of circle V on Machrie Moor.
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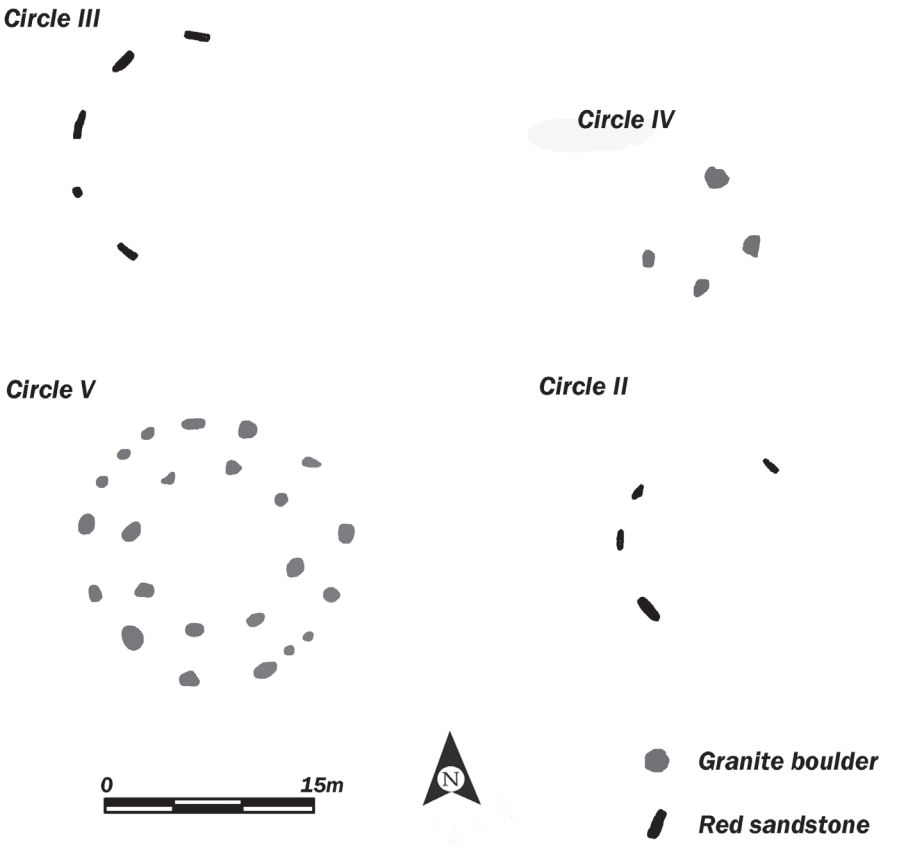


FIGURE 2.25. Different lithologies in the stone circles excavated by Bryce (1862).

constituting Circles I, IV, V and XI were obtained from the immediate locality. However, rounded boulders are also present high up on the mountain peaks (Fig. 2.26). Whether the boulders were obtained from the mountain summits or from the lower moorland, they still indexed the dramatic northern mountains and associated cosmological qualities.

The remaining standing red sandstone monoliths, comprising Circles II and III, have long attracted admiration and curiosity regarding their origin. For example Bryce noticed that red sandstone is visible in the nearby burn, Machrie Water, but baulked at the practicalities of extraction; 'one can hardly see', he says, 'how masses of such size could have been taken from the bed of this stream' (1862, 503). Instead, a source nearer the coast is suggested, but acknowledged as being formed of rock of a different colour and fabric; 'I was unable to discover in the immediate neighbourhood any outcrop of the sandstone rock from which they could have been taken' (1862, 503). The lithology of the remaining monoliths displays considerable variation in fabric, particularly inclusion size and frequency (Fig. 2.27). A potential source displaying all the lithologies present within the circles, and appropriate bedding planes, occurs further up the coast at Auchagallon (Fig. 2.28). Perhaps oblique confirmation that this is the source of the Machrie Moor sandstone monoliths comes from the observation

that a stone circle directly above Auchagallon is composed of monoliths clearly derived from the cliffs (Fig 2.29).

Overall, the Machrie Moor stone circle complex can be described as a gathered landscape; a landscape imbued with cosmogonic import, and reconstituted at Machrie Moor early in the third millennium cal BC. Even if the granite boulders were not directly obtained from the heights of Goatfell or Beinn Tarsuinn (Fig. 2.26), they were originally derived from, and indexed, these spectacular locations. Geological analysis by Ian Meighan (Meigham and Simpson 2001) has revealed a more complex picture in regard the lithologies present within Circle I. An original identification of the smaller stones as sandstone was incorrect. Instead, the stones are a mixture: biotite granites coming from northern Arran, and microgranites derived from the Central Ring Complex (Meigham and Simpson 2001, 348–9). Meigham and Simpson finally decide that 'the overriding factor was the shapes of the stones' (2001, 349), however, as has already been discussed with reference to the building of stone circles, and the materiality of the constituents represents far more than a concern for shaped stones. It is truly microcosmic architecture.

Finally, we need to return to the earlier observation concerning the stone circle 'phase' of the Machrie Moor circles. Bradley seems quite happy to attribute a preordained order to the transition from timber to stone circles, but merely attributes the burial of people internally in stone cists as 're-use' (2002, 92). This sequence can be re-interpreted as changing materialities of wrapping and what is being wrapped. The timber circle at Circle I wraps a central setting of four large timbers (Fig. 2.21), an arrangement that has been interpreted to be a representation of a house (Bradley 2002, 91; 2005, 65–80; in press; Thomas 2010). This entire architecture decays and is ultimately replaced by a ring of stones, but the stones wrap nothing. Instead of claiming an anticipation in regard to the replacement of timber by stone, we would argue that the sequence reveals something a little different. The long decayed 'big house' (Bradley 2005, 74–5; in press) is both wrapped and contained, and commemorated by the erection of a stone circle. The stones of the circle gather landscape and in doing so index spectacular and significant places on the island. In this way monumental architecture can create a microcosm of the experienced late Neolithic world.

However, the anticipatory character of this architecture concerns a convergence of past, present and future, where the ring of stones will continue to provide necessary containment. In this instance, the placing of the dead in the context of an ancestral 'big house' is the anticipated future event. In this respect, at least one of the Machrie Moor stone circles maintains an interesting and diverse biography from wrapping an ancestral house to containing a series of large stone cists (cf. Sheridan 2012, 177), which through their accessibility require additional binding.

above: FIGURE 2.26. View of the mountainous northern area of Arran from Beinn Tarsuinn, with rounded granite boulders in the foreground.
JIM FOTHERGILL

left: FIGURE 2.27. Stuart Jeffrey examines a sandstone monolith in circle II. Note the pebble inclusions.
COLIN RICHARDS

right: FIGURE 2.28. The sandstone fabrics comprising circles II and III at Machrie Moor are all present at Auchagallon cliffs. Note the parallel bedding planes allows monolith-shaped stones to be easily quarried.
COLIN RICHARDS

below: FIGURE 2.29. The red sandstone cliffs lie directly below the Auchagallon stone circle. All the sandstone lithologies present within the circle can be matched at the cliff.
COLIN RICHARDS

Different buildings

In the examination of three typologically similar monuments in western Scotland, Cultoon, Temple Wood and Machrie Moor, we have seen substantial variation in site histories and material composition. At each stone circle a persistent question emerged concerning the notion of 'completion' and the temporality of construction. For Cultoon, its apparently unfinished state was suggested to be a consequence of a very open-ended project of construction. Here, the point or *raison d'être* of the monument was realized in its building, primarily the gathering of the monoliths. This is not to say that the stone circle was of no consequence, but rather of ancillary import.

Temple Wood southern stone circle represents a total contrast to Cultoon in displaying an extensive history of construction and reconstruction. While questions concerning 'completion' remain, attention is redirected towards the nature of the changing architecture in terms of practices and performance. The latter is an element examined by Bradley (1998, 136–7) where a process of 'closing' the monument through time is recognized. Since building is the theme of this chapter, it is the different social practices of construction and their tempo which is brought into sharp focus through the changing architecture and materiality of Temple Wood. If we give precedence to the building of a stone circle as the outcome of a series of dispersed and situated practices (cf. McFadyen 2006c), as opposed to the creation of an archaeological object, how do such practices diverge within the architectural variation seen at Temple Wood?

Clearly, the changing architecture, or closing, of the Temple Wood southern stone circle appears to us as a sequence of discrete 'phases' or disjunctions. Again, this is a consequence of typological reasoning. Could there be a degree of anticipation in the unfolding architecture of Temple Wood? Also, to what degree is the architectural and material form of the monument a product of pre-determined or teleological practice? In discussing the generative nature of knowledge construction in Papua New Guinea, Fredrik Barth (1987) details how 'the pulsation in the modality of cosmological knowledge between long periods of secrecy and non-communication, and concentrated bursts of public manifestation and revelation' (1987, 78) produce an uneven temporal pattern in discourses of social reproduction. If monument construction formed part of such discourses then we may envisage a situation where the different 'phases' of Temple Wood southern stone circle resulted from a mixture of long-term practices punctuated by short bursts of intense activity.

Remaining with Barth's account of Ok communities in *Cosmologies in the making*, we should consider the possibility that monuments may be 'in the making' as a result of indirect action. For example, in discussing male rites of passage, it is mentioned that 'the rebuilding of the temple is the recurrent, culminating event of initiations' (1987, 49). Accepting that such ritual practice involves a degree of experimentation and improvisation (1987, 26), we are left

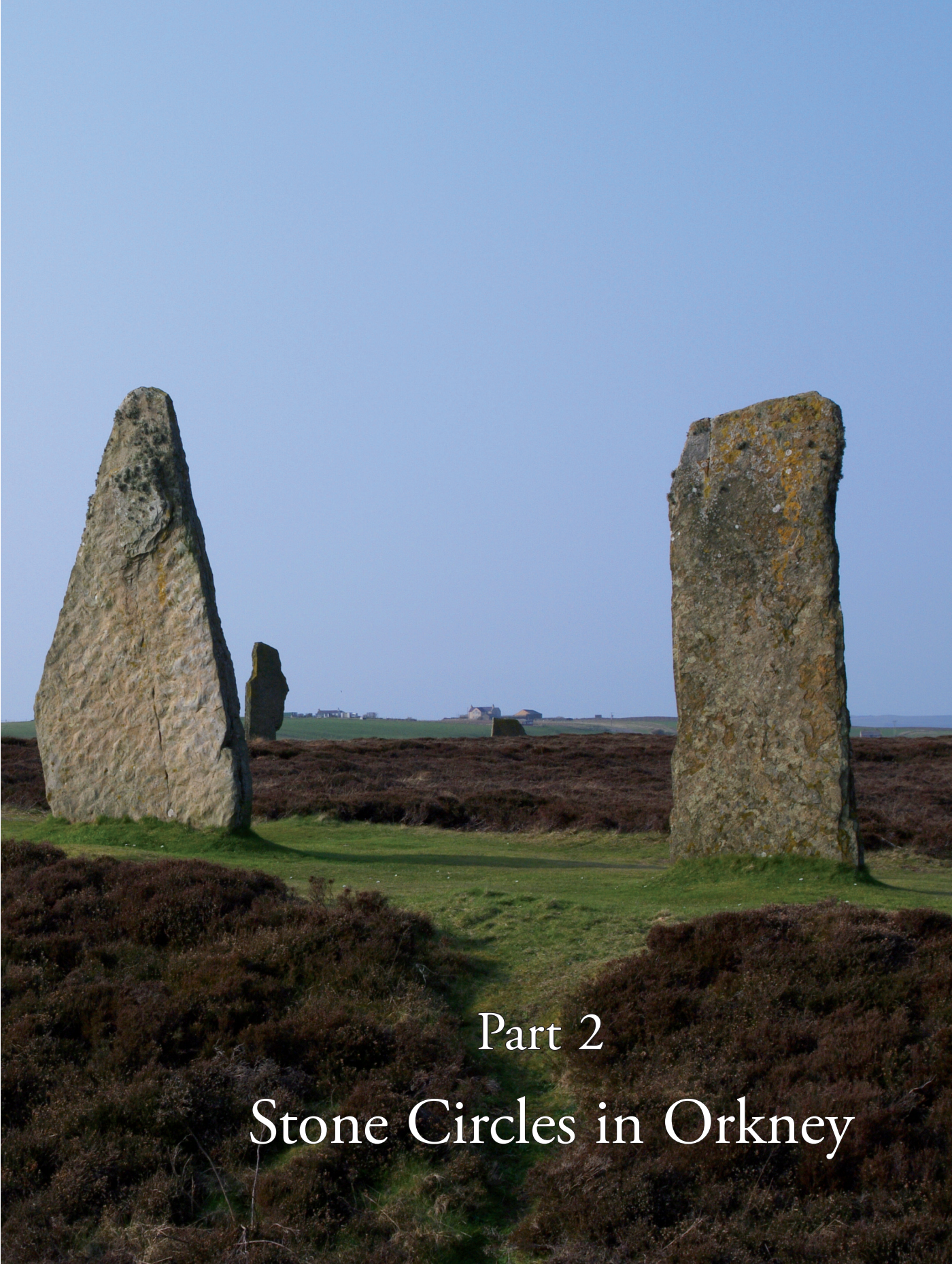
with a situation where (temple) construction is temporally regularized in being situated in a continuous process of life cycle ritual. Indeed, the Ok world is prophesized to end after the 27th rebuild! However, in this context it is ambiguous whether building practices can be characterized as being aimed at a renewal of monumental architecture, or alternatively, successful male initiation. The creation of architecture in this respect could be described as the outcome of indirect practices. To borrow a phrase from Whittle *et al.*, regarding the building of earlier causewayed enclosures, 'what emerges is something more complex' (2011, 892), and given the above discussion it is clear that the shifting architectural form of Temple Wood could in fact be a muddled outcome of very different practices of construction.

The transformation from wood to stone is a component in the history of Temple Wood northern stone circle, but it is brought into sharper focus at the complex of stone circles on Machrie Moor, Arran. Here, stone circle I replaces an elaborate timber circle which itself has several phases of reconstruction. Apart from questions concerning the metaphoric nature of shifting materiality, the same issues discussed above of differential constructional practices apply. There were two important elements drawn out of the monument sequences on Machrie Moor. One related to a very particular local 'cosmogonic' geography being created in the erection of juxtaposed stone circles on the moor, through the gathering of different stones which indexed broader landscape locations. These locations were undoubtedly imbued with cosmogonic significance through their spectacular imagery. A further observation concerned the replacement of timber circles, which had wrapped representations of the house by rings of stone. The deployment of monoliths in circles was interesting in that ultimately they came to wrap the dead, who were deposited in stone cists. The architecture of the cists alters access and therefore wrapping and binding would have been of prime concern.

This chapter has raised a number of issues concerning the different temporalities of monument construction (Bradley 1998, 88–104; Whittle 2006; Whittle *et al.* 2010, Chapter 15). In some cases, the practices surrounding construction represent major events in themselves. On the other hand, quick construction may be necessary to create expedient architecture (see Chapter 9). It is these different practices of construction that will be explored further in subsequent chapters. By focussing more closely on two different groups of stone circles in two different areas, Orkney and the Isle of Lewis, Outer Hebrides we will draw out the complexities that surround building the great stone circles of the north.

The Ring of Brodgar

COLIN RICHARDS



Part 2
Stone Circles in Orkney

CHAPTER 3

Wrapping the Hearth: constructing house societies and the tall Stones of Stenness, Orkney

Colin Richards

Introduction

Orkney is an archipelago of relatively small islands lying off the north-eastern tip of Scotland (Fig. 3.1). Although geologically formed by the ubiquitous Caithness flagstone series, each island has a slightly different character. In general, Orcadian landscapes are mainly waterscapes with unfolding hills framed beneath vast open skies. Where the sea is out of view, freshwater lochs punctuate the land. In western Mainland, Orkney, a large natural bowl defines such a waterscape, containing the lochs of Stenness and Harray (Fig. 3.2). Separating the lochs are two projecting strips of land, or isthmuses, which today are conjoined by Brodgar Bridge. It is on these isthmuses, in open and treeless terrain, that the two great Orcadian stone circles, the Ring of Brodgar and Stones of Stenness, were built (Godwin 1956; Caseldine and Whittington, 1976; R. L. Jones 1979, 27).

There are differences between the stone circles. The Ring of Brodgar, which will be examined in detail in the following chapter, is much larger and is enclosed by a visibly massive rock-cut ditch with two small opposed entrances. The smaller Stones of Stenness is also enclosed by a rock-cut ditch but has just a single northerly entrance. Unlike its larger companion, the Stones of Stenness is situated on level ground adjacent to the loch of Stenness (Fig. 3.3). Today, both the Stones of Stenness and Ring of Brodgar maintain a slightly dislocated position, being removed from areas of dense habitation. Such isolation enhances their monumental architecture and encourages a sense of their projection from another place and time. In this open aspect, the skies seem enormous and the lochs stretch into the distance. Under such circumstances it is easy to sympathize with Anna Ritchie's appeal that 'the spiritual node of Orkney 5000 years ago lay in a place where water, land and sky had a special interwoven relationship' (1995, 73).

Although today the stone circles may appear to be set apart, the idea of

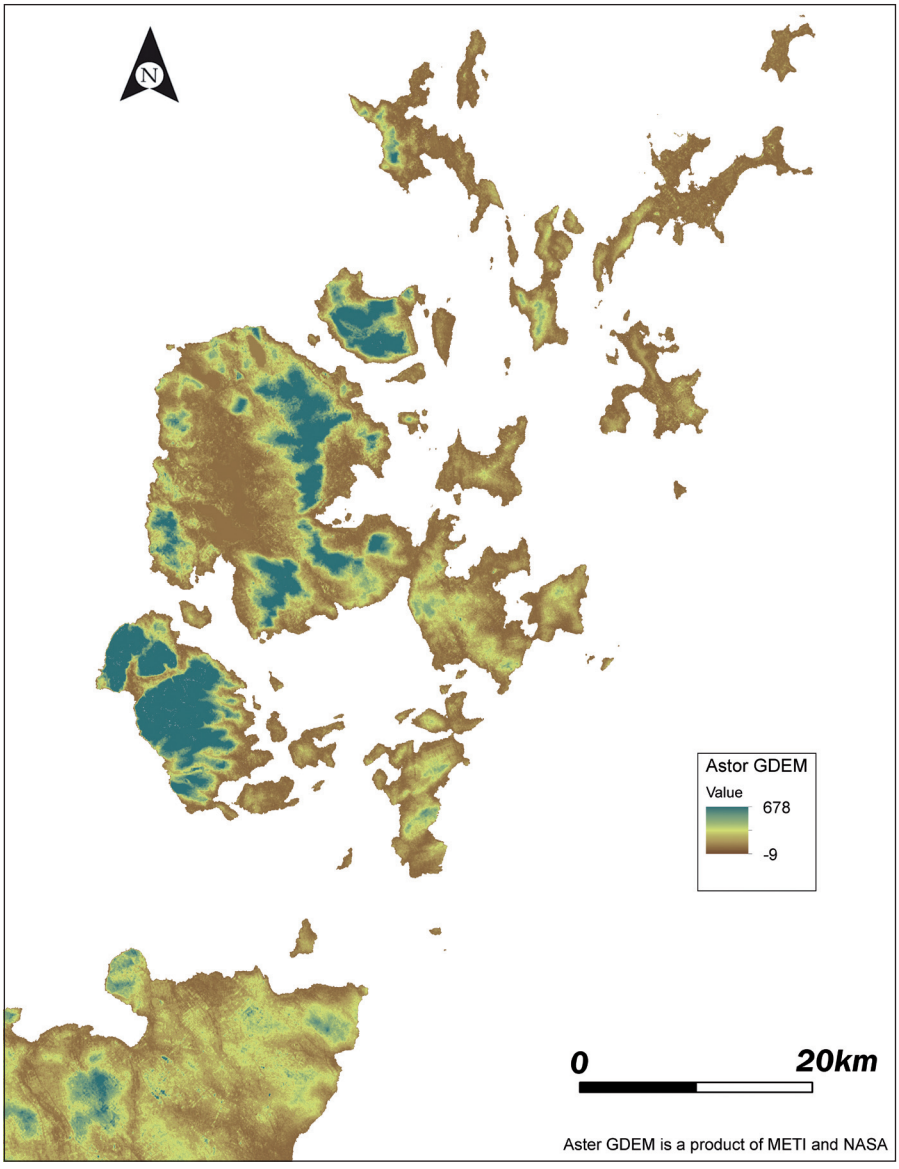


FIGURE 3.1. Orkney lies off the north coast of Scotland and comprises numerous islands.
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landscape isolation, in the context of the third millennium BC, is totally illusory. One of the many reasons that made the investigation of the late Neolithic village of Barnhouse (Richards 2005c) such an exciting venture was that it was the first settlement recognized as being directly associated with a stone circle. Barnhouse is positioned a mere couple of hundred metres north-east of the Stones of Stenness (Figs 3.4 and 3.5). Nor is there any doubt that elements of Barnhouse and the Stones of Stenness were contemporary, both being dated to the very beginning of the third millennium cal BC (Fig. 11.2). So rather than being an isolated 'ritual' monument, the Stones of Stenness was actually situated within the everyday world of the inhabitants of Barnhouse. Moreover, in the same locality, a variety of social

FIGURE 3.2. The Stenness-Brodgar landscape from the west.
COLIN RICHARDS

FIGURE 3.3. The Stones of Stenness from the east.
COLIN RICHARDS

practices and constructional activities were unfolding, including the erection of discrete groups of standing stones such as those associated with the Stone of Odin and Watchstone (Fig. 3.6).

There can be no better way of introducing a re-examination of the Stones of Stenness, than to envisage the Stenness – Brodgar area not as comprising completed monuments and places of habitation, but as a place of unfolding building projects, including the erection of numerous standing stones, and a range of structures at Barnhouse, Ness of Brodgar and villages further afield. Archaeologically, sites and monuments may be said to have phases, but in the context of the Stones of Stenness and the Ring of Brodgar, this convention translates into the periodic

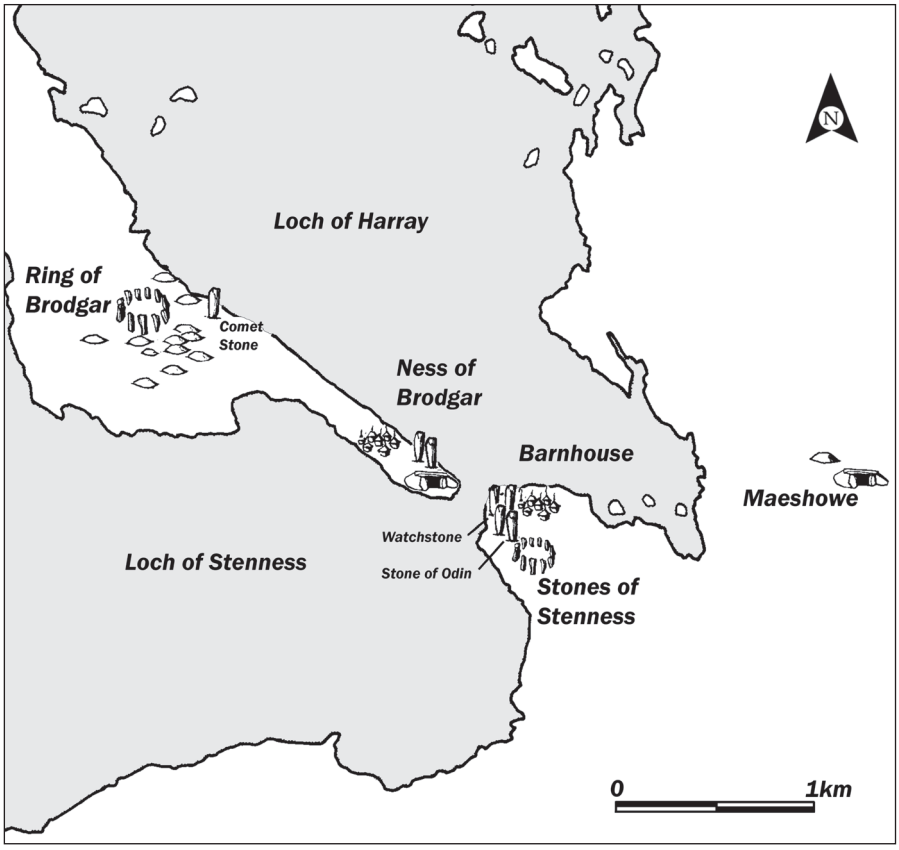

FIGURE 3.4. Map showing the location of late Neolithic sites in the Stenness-Brodgar area of Mainland, Orkney (after Parker Pearson 1993).

FIGURE 3.5. The village of Barnhouse under excavation.
JANE DOWNES

consumption of massive amounts of human labour as stones were dragged in and erected, and vast ditches excavated, passage graves erected and house structures built. In other words, for many years this area was an enormous populated building site.

In thinking about the stone circles themselves, the typological gaze in archaeology tends to create a very particular image of architectural form (Bradley 1998a, 116–8). For instance, the Ring of Brodgar and Stones of Stenness are consistently described as henge monuments with internal stone circles (*e.g.* J. N. G. Ritchie 1988, 337; J. Harding 2003, 12). That each site appears to comprise two different 'types' of monument allows various writers, according to preference, to elevate a single element and give it primacy. For instance, Garnham states, 'the Stones of Stenness form the remains of a henge monument, a class of structure found throughout Britain' (2004, 146). Hence, Jan Harding (2003, 10–17) is able to confidently discuss the Stones of Stenness in relation to the origins and chronology of henge monuments. The exegesis is aided by the recognition of both the Stones of Stenness and the Ring of Brodgar as constituting 'classic' types of henge monument (Atkinson 1951, 94–5; A. Harding with Lee 1987).

FIGURE 3.6. The Watchstone.
COLIN RICHARDS

Alternatively, in stone circle studies, the Stones of Stenness features strongly in the quest for architectural sequences and a chronology of stone circles (Burl 1976, 98–102; 2005, 19). Richard Bradley (1998a, 117–8) identifies this line of typological thinking as unhelpful in understanding the architecture of a monument. Instead, conceiving monumental architecture as a medium of social discourse and practice is surely more productive than any recognition of different types, which by definition remain categorically isolated.

Given the presence of the Barnhouse village and its inhabitants in close proximity to the Stones of Stenness, it is obvious that any re-assessment of the stone circle requires situating it in the broader social context of late Neolithic Orkney, particularly, the status and nature of the monumental architecture present within Barnhouse itself. However, before this can be achieved, it is necessary to go back in time and explore the architecture and history of the Stones of Stenness as revealed through the excavations conducted by Graham Ritchie and his team in 1972–3.

Excavations at the Stones of Stenness 1972–3 revisited

As part of a floruit of excavations occurring in Orkney during the early 1970s, Graham Ritchie began directing excavations at the Stones of Stenness in 1973

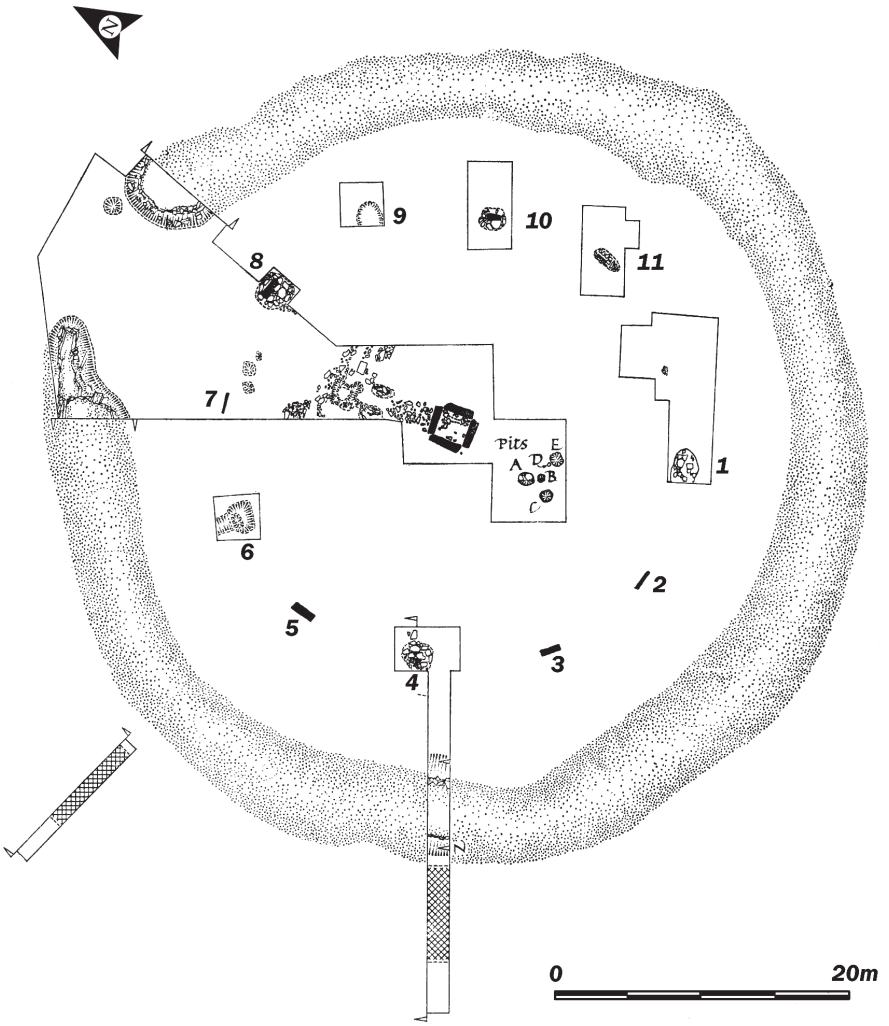

FIGURE 3.7. Plan of the Stones of Stenness (after J. N. G. Ritchie 1976).

(Fig. 3.7). These must have been thrilling times with several teams working at a range of famous Orcadian Neolithic sites such as Quanterness, Maeshowe, the Ring of Brodgar (Renfrew 1979), and Skara Brae (Clarke 1976). Nonetheless, to my mind it is hard to imagine any site that could have been more exciting to excavate than a large proportion of the interior of a completely unexplored stone circle.

Graham Ritchie was relatively fresh from excavating another stone circle at Balbirnie, Fife in 1970–1 (J. N. G. Ritchie 1975), when he ventured north to Orkney. After the toppling of the capstone of a 'dolmen' within the Stones of Stenness, which was suspected to be a nineteenth century construction, it was considered necessary to 'examine the structure of the 'dolmen'… and discover more about the plan of the stone circle, bank and ditch' (J. N. G. Ritchie 1976, 3) Over the next two summers in 1973–4, the excavations must

have exceeded all expectations when an extraordinary range of interior features came to light. Once the 'dolmen' was revealed as a recent fabrication, the focus of the investigations centred on the stone circle, specifically locating the stone sockets of the absent monoliths. Immediately, there is a crucial point to be raised concerning the status of a 'stone circle' as conceived as a type of archaeological object. Because of this understanding, Burl (1999, 176–9) is able to portray the construction of the stone circle at Swinside, Cumbria, as a unitary event to create a specific form of monument. How does this observation relate to the excavation of the Stones of Stenness? One effect was to refer all the internal features to the stone circle. This is not so much an unacknowledged form of reductionism as one of subordination. If, however, the stone circle at the Stones of Stenness is no longer seen as a dominant archaeological object but rather is the result of a series of practices which form part of a broader process of construction and reconstruction, then to some extent the stone circle loses its dominant position and unitary status.

Returning to the 1973–4 excavation, within the centre of the monument a surprising feature was unearthed; a massive square-shaped stone feature which was subsequently recognized as a large hearth (Fig. 3.8). The presence of a 'monumental' central hearth was unexpected and its presence soon invited comparisons between the spatial organization of the house and the Stones of Stenness (*e.g.* Hodder 1982, 224–6; 1990; Richards 1990). Aubrey Burl (1995, 147–8) went one step further in suggesting that originally an actual house had stood within the site. Even today, when walking around the monument, there is a noticeable doming of the ground surface towards the centre; this is a genuine feature of the site, as opposed to a consequence of later activities such as differential ploughing (Fig. 3.9). Indeed, the results of a contour survey, undertaken in 1972, clearly show an elevated area that was noticed to bear an 'uncanny resemblance' (Challands *et al.* 2005, 222) to the form of a later Neolithic Orcadian house (Fig. 3.10). That is essentially a square building with rounded corners of similar proportion to Structure 8, the 'big house' at Barnhouse (Fig. 3.11).

Just like the house, the monumental hearth at the centre of the Stones of Stenness is typically formed, albeit on a massive scale, by four slabs of sandstone set in the distinctive square arrangement (Fig. 3.8). With thin slithers of stone wedged beneath each slab to maintain a level surface, the hearthstones were clearly very carefully set in position to enclose an internal area measuring two metres square. However, this hearth had an interesting biography. Initially, it was of smaller size, enclosing an internal area of *c.*1.3 m square. It is also likely that several minor modifications occurred, each time its size being increased until finally graduating to the monumental form seen today (Richards 1993, fig. 4.11). Through morphological similarities of the stone slots, it has also been suggested that one set of hearthstones at the Stones of Stenness was either derived from or moved to Structure 8 at Barnhouse (Hill and Richards 2005, 162–4; Challands *et al.* 2005, 221).

above left: FIGURE 3.8. Excavation revealed a monumental hearth in the centre of the stone circle at Stenness.
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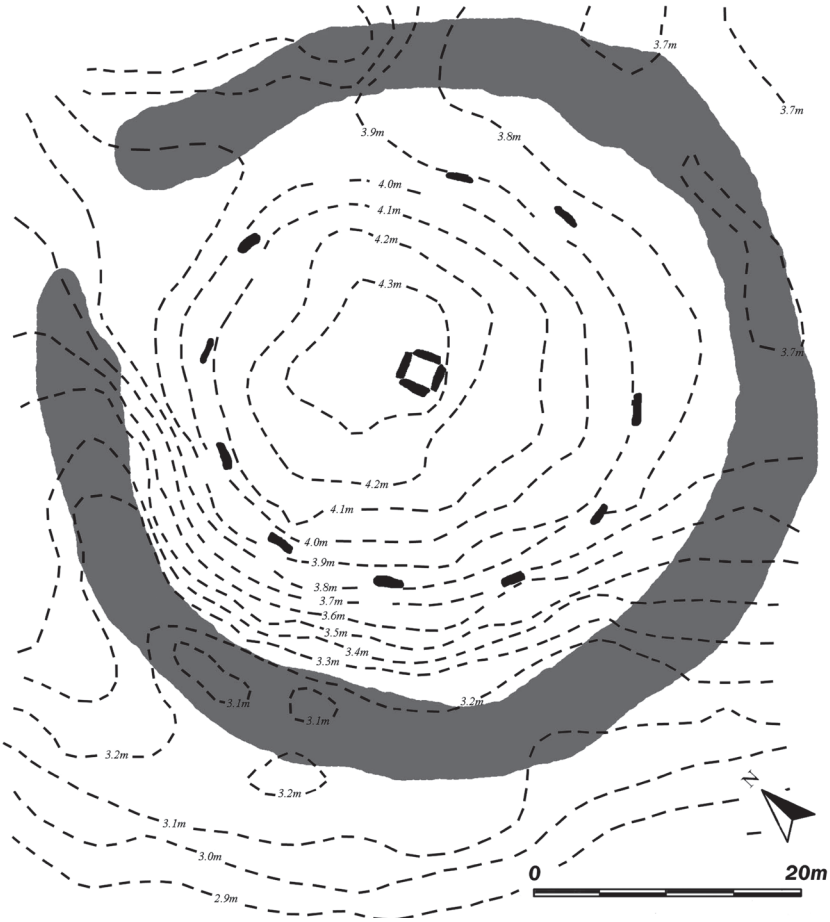
above right: FIGURE 3.9. The Stones of Stenness in 1921. Note the strong domed profile of the internal area.
ORKNEY PHOTOGRAPHIC ARCHIVE



right: FIGURE 3.10. Detail of the 1973 pre-excavation contour survey within the Stones of Stenness.
AFTER J. N. G. RITCHIE 1976

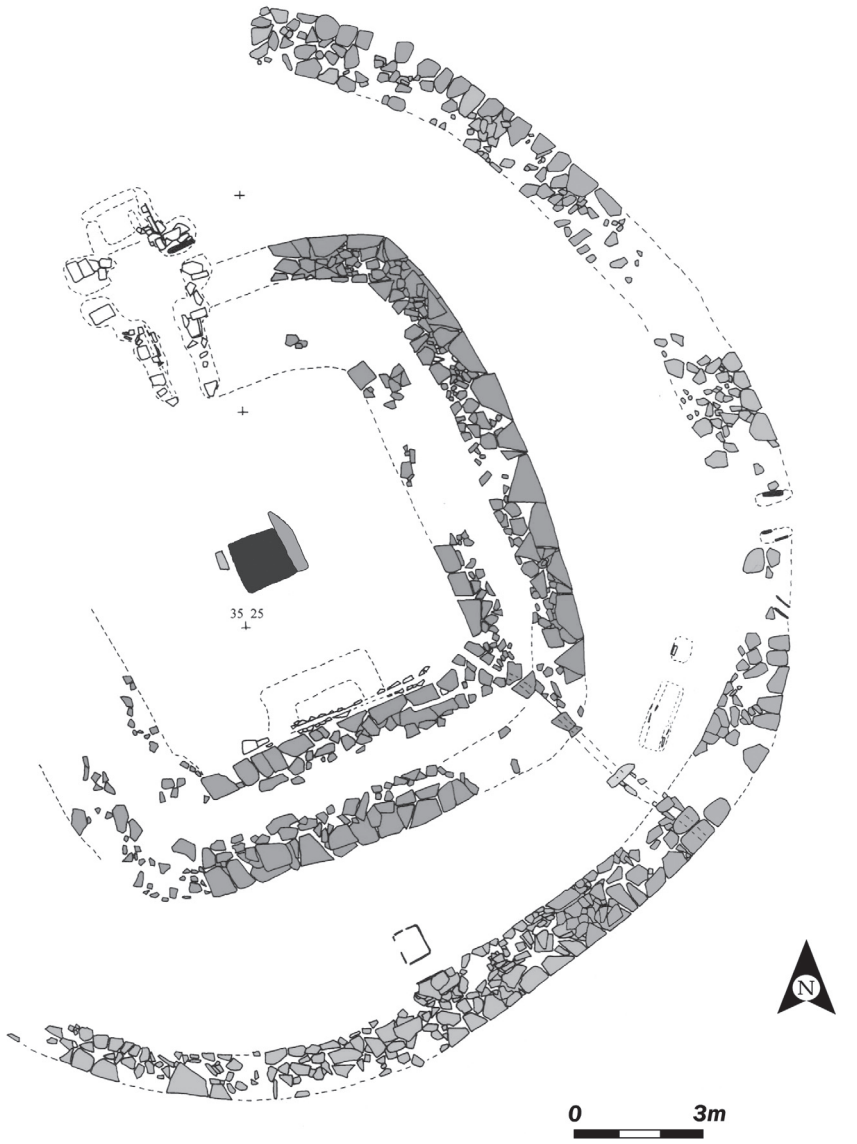


FIGURE 3.11. Plan of Structure 8 at Barnhouse (after Richards 2005).

Indeed, the inter-relationship between the Stones of Stenness and Structure 8 at Barnhouse seems to extend beyond the central hearth. Linked by a flagstone 'path' to the north of the central hearth, a series of features within the Stones of Stenness appear to constitute an entrance to the inner area around the central hearth (Fig. 3.12). On the basis of observations made during the excavations at Barnhouse, the square 'entrance feature' at the Stones of Stenness (Fig. 3.13) can be convincingly re-interpreted as the negative impression of another large hearth with its stones extracted (Challands *et al.* 2005, 222). Therefore, the Stones of Stenness entrance arrangement of a threshold hearth flanked by two stone uprights exactly replicates the entranceway to Barnhouse, Structure 8 (Fig. 3.14).

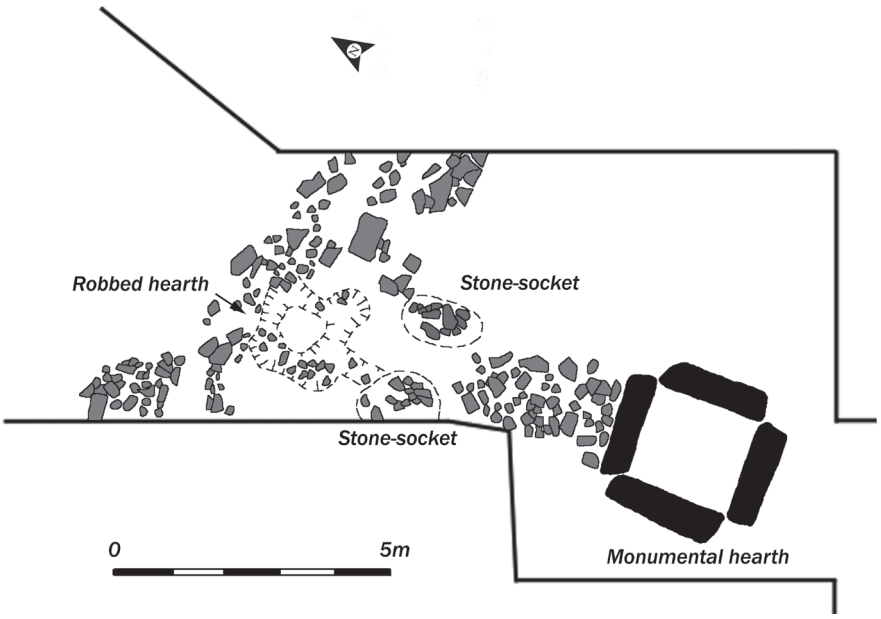


FIGURE 3.12. Internal features uncovered within the Stones of Stenness (after J. N. G. Ritchie 1976).

FIGURE 3.13. The square structure uncovered adjacent to two stone sockets within the Stones of Stenness.

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Finally, remnants of exterior house walling, represented by lines of disturbed masonry, extended from the entrance features, running beyond the excavated trench (Fig. 3.12). Overall, the evidence is compelling that a 'big house' of similar size to the inner building of Structure 8 at Barnhouse once stood on this site (Fig. 3.14). Furthermore, it is suggested that the domed topography of the internal area of the Stones of Stenness is a consequence of a thick clay platform being laid over the demolished remnants of that building. Such a practice of laying a clay platform to cover earlier truncated structural remains to create a level surface for subsequent constructions is a common Orcadian Neolithic building practice, present at both Barnhouse Structure 8 and Maeshowe passage grave.

FIGURE 3.14. The slots of a square hearth adjacent to stone sockets forming part of the entrance to Structure 8 at Barnhouse. COLIN RICHARDS

Open house at Stenness: erecting the stone circle

At a later date the wall of the 'big house' within the Stones of Stenness was demolished. However, the hearth remained, and was probably enlarged at this time. An effect of the removal of the wall was to allow a degree of public scrutiny to practices centred on the aggrandized hearth. But in the absence of the wall an alternative form of wrapping was deemed necessary and this came in the guise of encirclement by large monoliths. Although visually assessable, activities around the hearth were now dwarfed by the ring of monoliths, towering over six metres into the air (Fig. 3.16). In actual fact, the stone circle is not strictly of circular plan but is an ellipse of evenly spaced monoliths, *c.*7.5 m apart (Fig. 3.7). The 'flattening effect' of the stone circle, as an ellipse, provided directionality roughly towards the north (Curtis 1976, Table 9), replicating the orientation of the earlier large house.

One of the main misconceptions surrounding the Stones of Stenness is that it once comprised a 'complete' stone circle of twelve monoliths (*e.g.* A. Ritchie 1995, 76; Burl 2000, 210; J. Harding 2003, 74). Locating the stone sockets for the absent monoliths was one of the main objectives of the 1973–4 excavations (J. N. G. Ritchie 1976, 9–10). The majority of the missing monoliths represented either by deeply dug sockets or broken stone stumps were apparent on removal of the

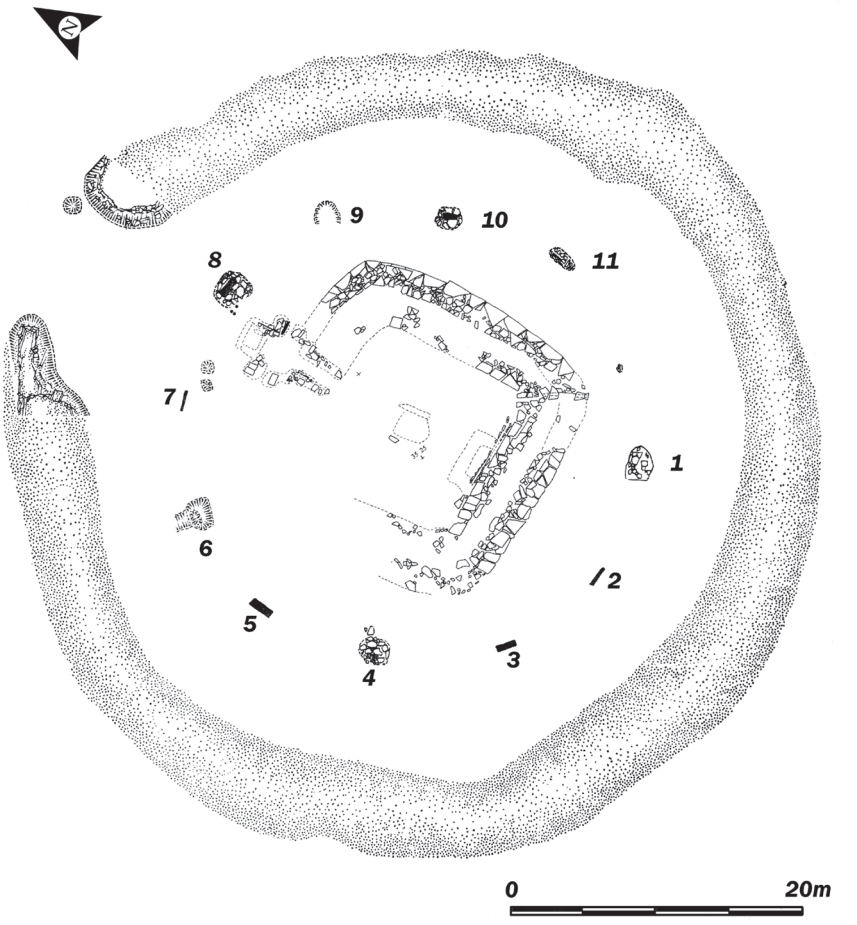

FIGURE 3.15.
Reconstruction plan of the suggested large house structure within the Stones of Stenness.

FIGURE 3.16. The remaining monoliths forming the Stones of Stenness.
COLIN RICHARDS

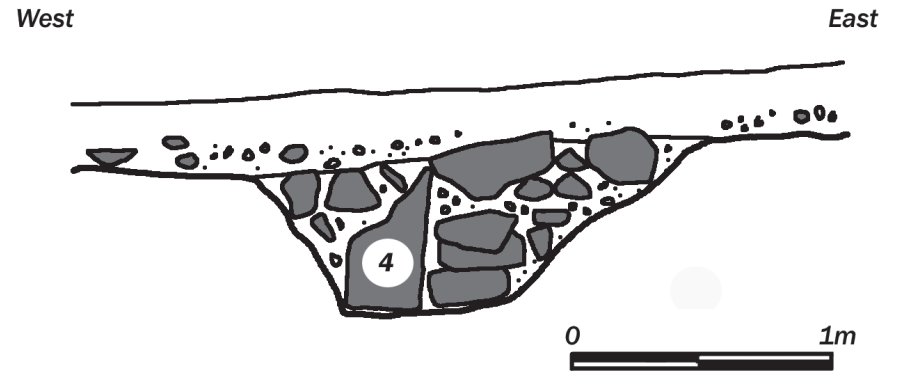

FIGURE 3.17. Section of Stone 4 socket excavated during the 1972–3 excavations at the Stones of Stenness. Note the depth of the cut (after J. N. G. Ritchie 1976).

FIGURE 3.18. The excavated socket for the famed stone of Odin, originally standing *c.*60m north of the Stones of Stenness.
COLIN RICHARDS

turf. There were however, two exceptions. In the estimated position of Stone 12, no socket was found, instead a small 'steep sided hollow' was encountered, forcing Graham Ritchie to conclude that there was no good evidence for Stone no. 12' (1976, 10). Furthermore, the pit uncovered in the estimated position of Stone 9 was of inconclusive nature, in that no convincing evidence was obtained for the erection of a monolith. Although the pit was found to be of circular shape, measuring 1.6 m in diameter and 0.75 m deep, it merely contained 're-deposited till with only a few small slabs and no sign of either stone stump or choking stones' (J. N. G. Ritchie 1976, 10). The evidence is unequivocal; to all intents and purposes the stone circle at the Stones of Stenness was never completed.

Each monolith was well set, being firmly embedded in deep sockets with substantial, well-laid, packing stones (Figs 3.17 and 3.24). The stone sockets at Stenness range in depth from 0.7 m–1.2 m, which compares with those dug for single standing stones, such as the stone socket of the nearby Stone of Odin

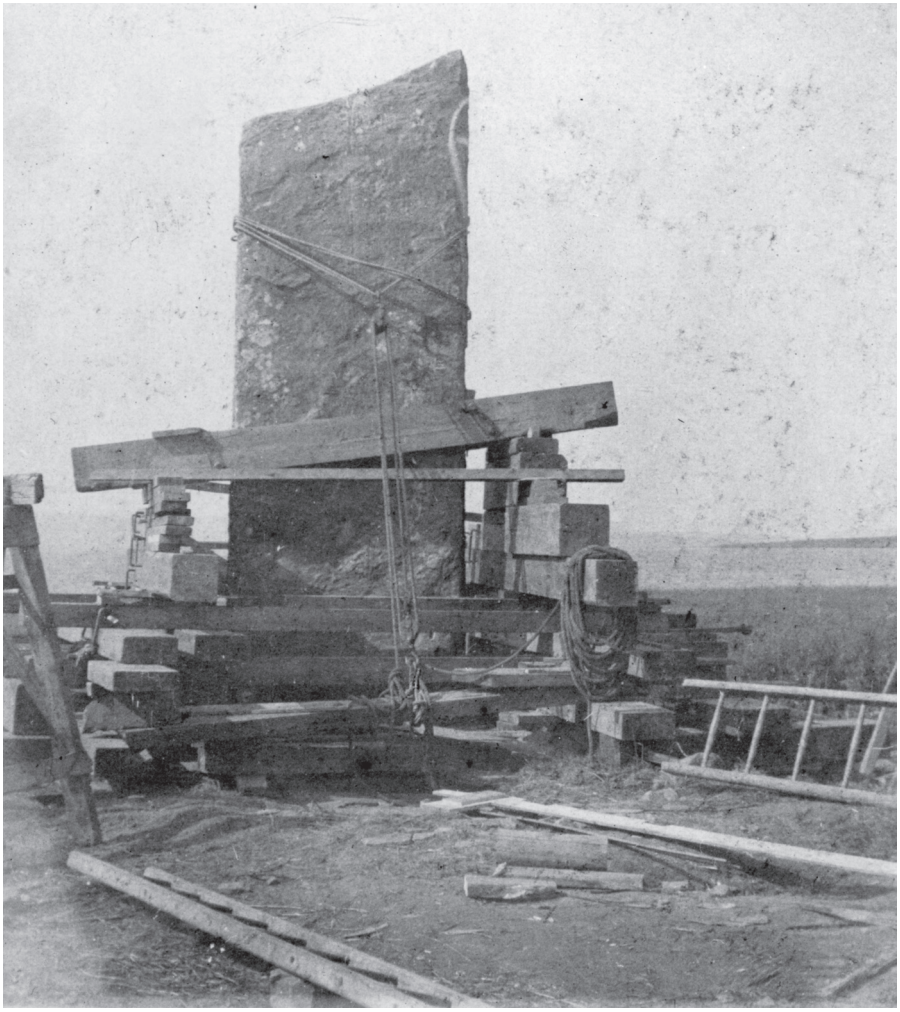

FIGURE 3.19. Re-erection of Stone 5 in 1907.
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(Fig. 3.18), which had a depth of *c.*0.6 m and was equally well packed (Challands *et al.* 2005, 214). Erecting well-packed monoliths in deeply dug sockets ensures stability. In this security, the builders were creating a timeless architecture, which both referenced the past and yet extended into the future. Indeed, four of the stones have stood the test of time, though others having fallen through 'natural causes' (Collins 1976, 44)) or been toppled with 'considerable purpose' (J. N. G. Ritchie 1976, 3–6) (Fig. 3.19). The main conclusion to draw from the method of constructing the stone circle at the Stones of Stenness is an intention of permanence.

In drawing together various threads of evidence from the 1973–4 excavations of the Stones of Stenness, the stone circle is seen in a slightly different complexion. Whether the central 'big house' (cf. Bradley 2005, 74–5) remained standing or had already been levelled, it still appears to have determined the layout of the stone circle, in mirroring a northern orientation. The stone circle

was never 'finished' but paradoxically the builders erected the tall angular monoliths in well-packed, deep sockets with the clear intention to produce a monumental form that would last forever. From these observations it is clear that the stone circle was composite in nature and seemingly piecemeal in construction, although the duration is impossible to determine. Suffice is to note that during this time the Stones of Stenness is 'used'; the central hearth is the focus of practices involving food consumption and the use of Grooved ware vessels (J. N. G. Ritchie 1976, 10; Challands *et al.* 2005, 223–4).

Islands within islands: digging the Stenness ditch

While the 1973–4 excavation of the internal features at Stenness was comparatively easy, excavating the ditch caused substantial problems. Water consistently flowed into the bottom of the ditch in all cuttings (Fig. 3.20). In fact, to prevent the trenches from flooding, Graham Ritchie actually shared a pump with Colin Renfrew, who was encountering similar difficulties excavating the ditch at the Ring of Brodgar (see Chapter 4). It was also noticed that prolonged waterlogging at the Stones of Stenness ditch had changed the basal deposits and bedrock to a blue-grey colour. Subsequent analysis of botanical remains revealed the presence of submerged water-loving plant species in the basal deposits indicating that the ditch has been permanently wet (J. N. G. Ritchie 1976, 17; Dickson and Dickson 1976, 42–3).

FIGURE 3.20. The excavated ditch terminal at the Stones of Stenness. Note the collection of water at its base.
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The digging of a ditch through horizontally bedded flagstone is extremely strenuous work. Judging from photographs of the ditch under excavation, the bedrock was heavily fissured by a series of fault lines, and as observed during the 2008 excavations of the Ring of Brodgar ditch (see Chapter 4), these fissures would have been exploited to prise out fragments of the laminate rock. A description of the detachment of large blocks from level bedding planes (*e.g.* Ralston 1976, 50) belies the realities of the necessary hard labour and the visceral nature of

quarrying and the extraction of heavy stone rubble. Muscles strain to prise out large blocks of stone, sharp edges cut flesh and the body tires from extended periods of removing stone debris from an ever-deepening ditch. One thing is for sure; the close fracturing prohibited this stone from being a viable source of monoliths for the stone circle, an uncritical suggestion that is occasionally mooted (*e.g.* Collins 1976, 45; Renfrew 1979, 41; Thorpe and Williams-Thorpe 1991, 69). The size of the trenches excavated in 1973–4 was simply too small to determine if the ditch was of segmented construction, but the differential character of the ditch observed either side of the entrance causeway caused the excavator to comment on the disparity (J. N. G. Ritchie 1976, 11).

At a more general level, it is now becoming increasingly apparent that enclosure by an internal ditch and external bank, architecture which defines a 'henge monument' (Atkinson 1951), represents a later element of construction for certain monuments (see Gibson 1998, 54–5; 2010b, 242–5; Thomas 2010). To some extent this explains the variety of internal features such as timber circles, pit circles, stone circles, house structures, and so forth, which have caused such classificatory difficulties to earlier generations of archaeologists (*e.g.* Burl 1969; Catherall 1971; Clare 1986; 1987). A later temporal position is also suggested for the Stones of Stenness ditch. Certainly Graham Ritchie felt the ditch at Stenness was subsequent to the stone circle (1976, 16). This final wrapping of the site created an extreme form of physical boundary through the quarrying of a penannular-shaped ditch, up to 4m wide at ground level and achieving a depth of 2.3 m, through solid bed-rock (Fig. 3.20). Admittedly, only a relatively small area of the ditch was excavated in 1973–4, but this included both ditch terminals flanking the entrance causeway. The ditch terminals were very disparate in the way they had been quarried. Particularly intriguing was the presence of a narrow and shallow cut that partially extended the line of the ditch across the western area of the causeway (Fig. 3.7). This can be seen as either an attempt to restrict the entranceway or as the remains of an earlier, slighter ditch.

The presence of an outer bank outside the ditch at the Stones of Stenness is contentious, existing almost as a typological necessity rather than a physical reality (see for example, Renfrew 1979, 43; J. N. G. Ritchie 1985, 124). The quantity of stone debris mixed with glacial till produced by digging a ditch *c.*4 m wide and *c.*2.3 m deep around a circuit of over thirty metres diameter is enormous: an estimated 1,270 tonnes to be precise (Ralston 1976, 51). If this rubble was piled up around the perimeter to form a bank its total removal confounds belief. Excavation did encounter a thin band of clay-silt, 6.5 m in width and with a paltry thickness of 0.15 m, which was interpreted as the denuded remains of an outer bank (Ritchie 1976, 12). Alternatively, this layer could have provided a foundation spread for an encircling wall as opposed to a bank. Unfortunately, the evidence for either an outer bank or wall at Stenness remains inconclusive (Ralston 1976, 51). It is worth noting that the slight bank seen running around the site today was constructed by Historic Buildings and Monuments (Historic Scotland) in the late 1980s.

The Stones of Stenness: wrapping the hearth

Just as within a late Neolithic Orcadian house, the central hearth at the Stones of Stenness lay at the core of its being. In house building, setting the four hearthstones in the ground constituted the primary performance of construction (Downes and Richards 2005, 59–60). Through this act, the house was sedimented into its place in the world. In being a square setting, the hearthstones also provided alignment and orientation to both the circular house and its inhabitants. Furthermore, that hearthstones were inextricably linked with household identity is clearly revealed in the rebuilding of houses at Barnhouse. Here hearthstones were consistently extracted from the old house to be reinserted and incorporated in the new (Downes and Richards 2005, 67). In this act the relational qualities of the hearthstones are unmistakable in providing material and metaphorical linkage and continuity with the founders of the earlier house. In this respect, hearthstones were conduits to the past.

From this point onwards, the building of the house can be conceived as a process of wrapping. For example, the hearthstones, stone furniture and the living area are embraced by up to three concentric skins of masonry forming the house wall (Childe 1931, 8–10), and sometimes by an additional outer 'turf jacket' (Downes and Richards 2005, 60). This process may be even stranger and more sophisticated than imagined. Recent investigations at the late Neolithic settlement of Links of Noltland, Westray, have uncovered a house where a large number of cattle skulls, in some cases with interlocking horns, were encased within the circumference of the wall core (S. Fraser 2011, 51). In this deposit we may be seeing the results of an expenditure of wealth, through mass slaughter and consumption. However, the actual conjoining of the skulls betrays a desire to unify and encase the house in another skin; in this case physically absorbed into the fabric of the house. This discovery also raises the possibility of such extraordinary contents having been present, but unrecognised, in the wall cores of other late Neolithic houses at settlements with no faunal preservation, which to date form the majority of those excavated. Each form of wrapping constituted a different skin or membrane, containing and protecting the inhabitants in a variety of ways. This is especially appropriate if the house is conceived as a living entity (*e.g.* Waterson 1990). Indeed, this argument can be extended to cover the many late Neolithic monuments, the architecture of which can be defined as the wrapping of places by multiple layers of material skins (see below).

The apparent social potency invested in the materiality of the house is clearly an important aspect of Neolithic life in Orkney. However, what makes the house an appropriate building for such ritual elaboration and why should even a large house mutate into the monumental architecture of the Stones of Stenness? At a general level there have been numerous claims that the 'domestic' house provides a prototype for a range of monumental architecture (*e.g.* Deboer 1997; Kirch 2000). But why should the dwelling be a model for monumental reproduction? One viewpoint envisages the house as constituting

FIGURE 3.21. Skara Brae, an Orcadian village of the third millennium cal BC.

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a sacred centre or *axis mundi* and consequently, ritual architecture is simply a monumental materialization of this concept (*e.g.* Eliade 1965, 5). This line of argument acknowledges that the monumental construction of the *axis mundi* also represents a re-enactment of the creation of the world, and consequently 'ritual' architecture is cosmogonic in nature and microcosmic in practice (*e.g.* Eliade 1959, 51–2; Richards 1990; Downes and Richards 2005, 59–60). A second line of argument is drawn on by Bradley (2005, 80) when he states that the significance of the house transformed into a 'big house' may well equate with a projection of the family to the community by way of metaphoric extension. In this scheme, the monument stands for the community in the same way that the dwelling stands for the household.

I would like to extend Richard Bradley's argument and situate it in the changes occurring in Orcadian society at the end of the fourth millennium BC. At this time individual houses and their occupants are engaged in a process of social and physical convergence. This process culminates in villages such as Skara Brae (Childe 1931) where individual houses are physically conjoined (Fig. 3.21). Clearly, the shift from loosely knit settlement as is demonstrated at Stonehall, Mainland (Richards and R. E. Jones in prep.), to the famous Orcadian late Neolithic villages such as Barnhouse and Skara Brae is an interesting phenomenon. In addressing this occurrence, Mike Parker Pearson ponders whether the Neolithic 'villages' of Orkney could 'have been consciously constructed as material manifestations of communal living for households who might not necessarily have been close kin

with each other' (2004, 138). This is an interesting idea which indirectly alludes to a version of *société à maisons* or house societies as defined by Lévi-Strauss (1982; 1987). The notion of house societies was offered by Lévi-Strauss (1982) to account for a variety of social groups that could not be defined in traditional kinship terms. In house societies, the cohesion of the social group is not underpinned by strong principles of biological kinship but by property and residence pattern. Overall, I would agree with Parker Pearson's characterization, but stress that the vital point is that the 'construction of community' actually occurs in the social practices of building houses and the daily activities of living together (Carsten 2000, 14–8). Whether the Neolithic villages of the third millennium cal BC can be described as 'communities of strangers' (Parker Pearson 2004, 138–9) is another matter, since house societies are frequently constituted through the language of genealogy and descent (Lévi-Strauss 1983, 187; Gillespie 2000, 27–37). Nonetheless, the small size of the villages effectively required a continuation of the practice of exogamy for social reproduction, thereby creating unstable and fluid horizontal social categories.

As the process of convergence resulted in images of stronger, larger and more cohesive social units, so house-ordered villages such as Barnhouse came into existence. Here we can draw on an argument recently advanced by Sissons (2010, 374–5), in suggesting that as external contacts beyond Orkney increased towards the end of the fourth millennium cal BC (see Henley 2005), so the social units constituting the village (house) identified themselves as coherent genealogically established descent groups. Such material manifestations of a social strategy of collective identity include decorating differentially manufactured Grooved ware pottery in a similar manner and with identical designs (A. Jones 2005b). At a village level, descent and genealogy were materialized monumentally through the building of 'big houses' (cf. Bradley 2005, 65–80), such as House 2 at Barnhouse (Fig. 3.22). These big houses were constructed in a manner that merged ancestral dwellings with passage grave architecture (Richards 2005b, 129–31). In the big house, we recognize both the importance of building practices as establishing social relations and of the physicality of the house in terms of its architecture and constituents.

A lack of attention to architecture and the materiality of the house by Lévi-Strauss in his conception of *société à maisons* has been recognized as being a particular weakness (*e.g.* Carsten and Hugh-Jones 1995, 12), as indeed it is. In the case of the Barnhouse big houses, House 2 and Structure 8, an understanding of the role of architecture as bridging past and present, and the different realms of life and death, is crucial for understanding the materialization of group identity through descent. In this observation we can begin to see the strategic import of Bradley's emphasis on the 'big house' where 'rather than houses occupied by particular groups of people, they are conceived in metaphorical terms as those of the entire community' (2005, 65). This is essential for a social group that defines itself in the language (and architecture) of descent, yet is structured on the basis of proximity and alliance.

FIGURE 3.22. House 2 at Barnhouse, a 'big house' that merges passage grave architecture with that of the dwelling.
COLIN RICHARDS

By thinking about late Neolithic Orcadian society in terms of developing village (house) societies (Richards and R. E. Jones in prep.), we can begin to understand the significance and presence of a big house at the site of Stenness. In the context of shifting social relationships, both internal and external to Orkney, we begin to appreciate the removal of the house wall in a context that is both external, and yet related to, the village of Barnhouse. Such 'opening up' is clearly to allow a different form of discourse through a degree of access to the very centre, the *axis mundi*: the central hearth. Of course, wider access (cf. Bradley 1998, 124–8) may lead to the enhancement and elaboration of ritual practices, but to which audience is this strategy directed and for what purpose? Nor should it be forgotten that the opening up of the centre of the Stones of Stenness almost certainly coincides with the erection of monoliths forming the stone setting.

Wrapping up the Stones of Stenness

Potential analogies between the wrapped house and hearth, and clothing or skin of the human body, in terms of protection and identity, are obvious (see Gell 1993; Hendry 1995). In conceiving architecture as a skin or membrane which both separates and bounds, and provides an interface between realms, it is interesting that in Britain and Ireland the most consistent characteristic of the different monuments built throughout the late fourth and early third millennium BC is the consistent emphasis on concentric 'enclosure'. Because of this occurrence, there is a notable tendency to emphasize the duality between the interior and exterior, regardless of architecture or material composition. For example, when discussing the spatial order of henge monuments, Jan Harding notes that the bank and ditch divides 'space into that which is 'inside' and that

which is 'outside'. The act of enclosure creates a place which is different or separate' (2003, 39). Now, compare Harding's interpretation to that provided by Alex Gibson in regard to a completely different monumental form, the timber circle, when he muses that 'enclosure itself defines space and creates a difference, the area within and the area without' (1998a, 90).

In similar vein, Alasdair Whittle's comments regarding the spatial representation of Stonehenge could equally be extended to encompass all stone circles when he says, that it 'drew on a basic symbolism of the circle, which served to both include and exclude, to separate and unite' (1997, 163). Interestingly, a similar reading of spatial order based on separation and division has been used to interpret passage graves (*e.g.* Sharples 1985). Once again, the inside – outside division of space is highlighted in terms of inclusion and exclusion, in the case of the passage grave to an extreme degree (Richards 1988, 54). This repeated interpretation cannot be attributed to a lack of imagination on the part of Neolithic archaeologists. Surely, the reason lies in the observation that all these monuments are effectively homologous in being predicated on a spatial order emphasizing interfaces and division. Nor is this simply a characteristic of individual monuments. Even with much larger monumental installations, for instance, the massive palisade enclosures such as Dunragit, Dumfriesshire, or the henge enclosure of Durrington Walls, the architecture emphasises containment (Gibson 1998b, 77). It would seem that Bradley (1993, 103) is correct in characterizing such monumental configurations as a 'series of Chinese boxes' (see also Thomas 1993, 43).

This line of interpretation also underlies a notion of correspondence or rather its corollary that different monuments are somehow interchangeable with one another. In this way, Aubrey Burl can identify that stone circles were probably the counterparts of henges in those highland areas where it was hard to dig ditches (2005 [1979], 10). Elsewhere, Burl considers that timber circles were the equivalent of stone circles in wood (1977, 32). Gibson is more circumspect when he comments that 'the link between stone and timber circles is at times contradictory' (1998a, 24). Acknowledging the structural similarities between late Neolithic monuments, Bradley (1998a) draws out architectural variability in terms of agency, particularly the differential experiences of people inhabiting passage graves, henge monuments and stone circles (see also Barratt 1994, 15–19; Richards 1993; Thomas 1992; 1993). Here we re-encounter the strategies of inclusion and exclusion as described to characterize the spatial organization of Stonehenge (Whittle 1997, 163). At this point it is worth considering, or rather heeding, Alasdair Whittle's plea for 'a more subtle vocabulary of construction and the differentiation of space' (2006, 16).

If we follow the suggestion made in Chapter 1, in conjunction with a more subtle vocabulary, it is necessary to deconstruct the differential qualities of the Stones of Stenness as a wrapped place. The innermost skin of the 'open house' at the Stones of Stenness is also the most visible and permeable (Bradley 1998, 124–6); the stone circle is striking in its geometric 'tall' stones. Apart from the

Group	Stone No	Description
1	2 and 3	Blue-grey calcareous flagstones of fine to medium grain size. Carious weathering is present and is best developed on the north-facing edges. Ripple laminations, stained with limonite are visible on the smoother surfaces and indicates that the rocks were deposited in shallow water conditions. Subordinate partings parallel to the bedding planes are present but not conspicuous.
2	5 and 7	Stones of slightly coarser grain and are more siliceous and less micaceous than those just described. Very thin laminations are absent and the stones are more resistant to weathering. With the exception of 7, all the stones in this group are of similar thickness and exhibit load castings on the bottom surfaces of the bedding planes.
3	8	Carbonate-rich siltstone and appears to be more micaceous than any previously described. Thin laminations parallel to the bedding planes are very pronounced, occurring from between 6mm and 75mm apart, making these stones very much weaker than the others.
4	11	A grey flagstone, probably siliceous and with no visible lamination.
5	4, 6 and 10	These stones exhibit strongly developed laminations and are richer in iron oxide – probably limonite. The closeness of the laminations would make these stones very much weaker than any of the others, and numbers 4 and 10 may well have fallen by natural causes.

TABLE 3.1. Lithologies at the Stones of Stenness (after Collins 1976).

crooked Stone 7, which has a doubtful pedigree (J. N. G. Ritchie 1976, 7), the remaining monoliths are towering, angular stones, standing between 5–6 m in height (Fig. 3.16). Such magnificent stones are not easily procured from the multi-fissured sandstone beds forming the Caithness flagstone series that dominates the geology of Orkney (Mykura 1976). In a little noticed appendix to the Stones of Stenness excavation report, Collins (1976, 44–5) characterizes the lithology of the remaining standing stones and remnants exposed by excavation. The results of his analysis were extraordinary; five different lithologies were identified as being present among the remaining stones, stumps and fragments representing nine stones (Table 3.1; Fig. 3.23). The differences in lithology seem to have impacted on the survival of monoliths within the circle. Hence, Stones 4, 6 and 10 of the heavily laminated group 5 sandstone have all snapped and fallen, with only their stumps remaining (*e.g.* Fig. 3.24). In contrast, Stones 2, 3 and 5, of the finer-grained sandstones groups 1 and 2, remain intact and are standing today (although the toppled Stone 5 was re-erected in the early 1900s – see Fig. 3.19).

As can be seen from the spatial distribution of stone types there is little clustering within the circle (Fig. 3.23). Such a pattern indicates that stones from different sources were added piecemeal one by one. In the following chapter the broader social significance of the presence of different lithologies within the Ring of Brodgar will be discussed further. It is sufficient to acknowledge here that potentially at least five different quarries were being exploited to provide monoliths for the construction of the stone circle at Stenness.

While the social significance of the stone circles at the Stone of Stenness and Ring of Brodgar comprising different lithologies will be pursued further over the next two chapters, it is worth recalling that a dominant characteristic

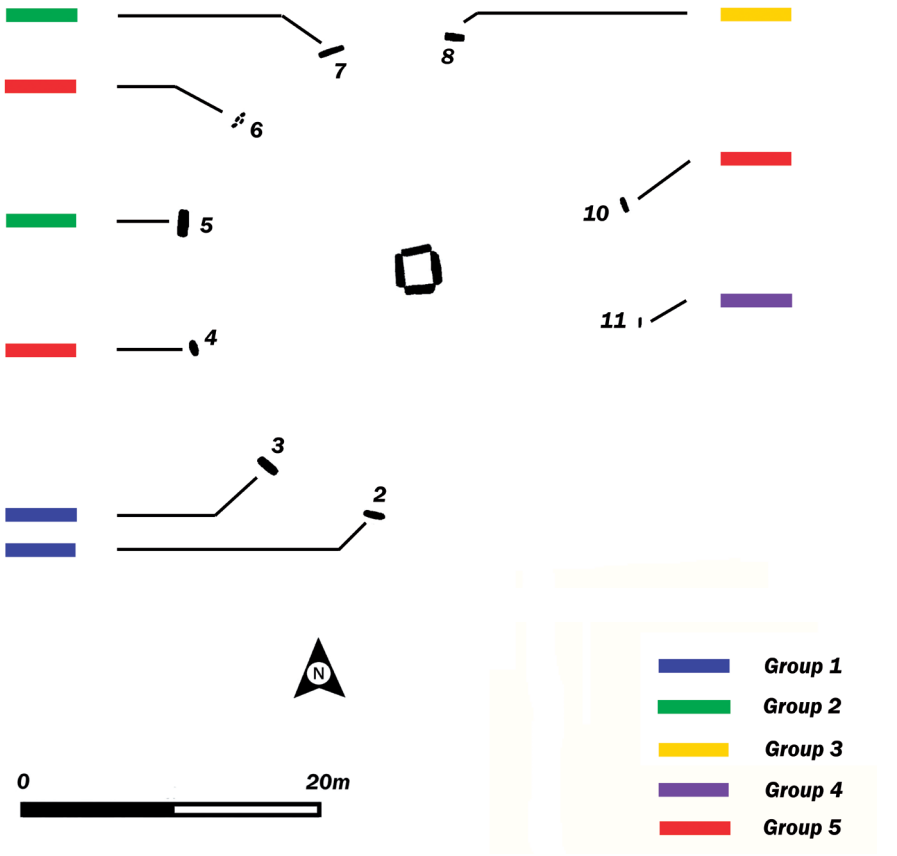

FIGURE 3.23. Diagram showing the spatial relationship of the five lithologies at the Stones of Stenness (data from Collins 1976).

of house-societies is the definition of the social group through the discourse of genealogy and descent (Lévi-Strauss 1983, 187). Furthermore, the 'house' reunites and transcends the apparent contradictory principles of descent and alliance (Carsten 1995, 105–6).

If, as will be agued later, an equation exists between monoliths, the dead and geographically distinct social groups, then the juxtaposition of monoliths of different lithologies can be understood as a materialization of the antagonistic principles of genealogical descent and alliance. Here, through the deployment of material metaphors, different social groups are engaging in essentially competitive strategies to establish common and unified claims of descent. Yet, at the same time, horizontal social relationships are being negotiated. This transcendental quality attributed to the 'house' by Lévi-Strauss (1983, 155) assumes material expression in the big houses of late Neolithic Orkney. Just as the village (house) 'projects an outward façade of unity, one that masks these underlying tensions and conflicting loyalties' (Gillespie 2000, 8), so does the material composition of the 'big house': the Stones of Stenness stone circle.

The presence of a stone circle at the Stones of Stenness would seem self-explanatory, given the recognition of a discourse of circularity dominating

FIGURE 3.24. Stone 10, of the heavily laminated group 5, had snapped in antiquity.
COURTESY OF RCAHMS

late Neolithic architecture in Orkney (*e.g.* Richards 1996a; Bradley 1998, 116–26). Despite the quarrying and erection of substantial monoliths which act as orthostatic divisions within the stalled cairns (Davidson and Henshall 1989, 19–25), there is no tradition in Orkney of erecting stone rings. Such encirclement by monoliths is, however, a feature of later fourth millennium cal BC Hebridean chambered cairns, or rather simple passage graves (Henshall 1972, 141), in the form of the peristalith (see Chapters 7 and 8). As has been argued elsewhere (*e.g.* Bradley and Chapman 1986; Muller 1988, 35; Henley 2005, 103–4; Cummings 2009; Thomas 2010), strong ties were being forged between disparate communities at precisely the time the Stones of Stenness was being constructed. Inevitably, under such conditions social identities begin to be constructed in relation to the 'other' (see discussion in Chapter 10). Manifest in the sequential erection of the circle of monoliths at the Stones of Stenness was the negotiation of local social relations through labour and resources (see Chapter 5). Equally, through the architectural representation of the stone circle, the negotiation of identities was couched and articulated in discourses of the 'other'. Here an additional aspect of the Stones of Stenness is revealed, a local materialization of a much broader and 'exotic' imagined community.

Wrapping the stone circle is the rock-cut ditch. In this context I have previously argued that the ditches around the Stones of Stenness and the Ring of Brodgar were essentially understood as containers of water (Richards 1996a; Garrow *et al.* 2005, 256–7). Nor was this quality restricted to the Stones of Stenness. Exactly the same mode of division occurs at the passage grave of Maeshowe (Fig. 3.25). This monument is commonly considered as being entirely surrounded by a deep ditch. Yet, with some surprise, Colin Renfrew (1979, 34) discovered that the ditch

FIGURE 3.25. Aerial view of the great passage grave of Maeshowe.
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FIGURE 3.26. Water-filled ditch surrounding Maeshowe.
NICK CARD

was only partially dug around the passage grave, and that the remaining northern portion was an illusion (Davidson and Henshall 1989, 143), being created by actually incorporating low-lying ground. This occurrence is illuminating because on the one hand it reveals a lack of concern on the part of the passage grave builders to cut an encircling 'ditch'. On the other, the real intention appears to have been more to surround the passage grave platform with low ground facilitating its definition by encirclement with water (Figs 3.26 and 3.27). This area, however, was initially only periodically flooded with 'marsh' plants predominating, but at a later date open water continually surrounded Maeshowe (Godwin 1956, 171). There is no causeway or point of access across the 'ditch' at Maeshowe, and with

this absence we gain some indication of the potency of the employment of water as an outer skin. Beyond Orkney, the building of stone circles in elevated locations, allowing them to be contained by water (Fig. 3.28), may be more common than supposed (cf. Burl 1976, 6).

FIGURE 3.27. Water collecting in the ditch at Maeshowe was a constant problem during the 1954–5 excavations directed by V. G. Childe.
COURTESY OF ORKNEY ARCHIVE

Just as with the stone circle, there is no tradition of ditch digging in the Northern Isles (Clare 1987, 470). Yet, Orkney is an island world, and the employment of water to create a boundary around the Stones of Stenness is a 'natural' strategy of wrapping. As such, it both draws on and references the experiences of Neolithic people inhabiting a waterscape where engagement with the sea and lochs occurred more often than not on a daily basis. The situation of the two circles on elevated land that is effectively surrounded by water has been argued to determine this monumental architecture in the creation of a social and topographic microcosm (Richards 1996a; 1996b). Equally, in the case of Stenness and Brodgar there is no other landscape position in Mainland, Orkney, which would enable and activate such an effect. But of course, water is ambiguous and contingent in constituting division or conduit according to situation and context, and in all probability both were manifest in the materiality of wrapping the Stones of Stenness and the Ring of Brodgar, and it is to the latter that we will now turn our attention.

FIGURE 3.28. Temple Wood stone circle in the Kilmartin Valley, Argyll, with standing water to the west.
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CHAPTER 4

Investigating the Great Ring of Brodgar, Orkney

Jane Downes, Colin Richards, John Brown, A. J. Cresswell, R. Ellen, A. D. Davies, Allan Hall, Robert McCulloch, David C. W. Sanderson and Ian A. Simpson

Situating the Ring of Brodgar

Situated on rising ground on the isthmus separating the lochs of Stenness and Harray, the Ring of Brodgar (Fig. 4.1) is a truly dramatic monument. It is the largest stone circle in Scotland and is perhaps the most impressive of the 'Heart of Neolithic Orkney' World Heritage Sites. The stones form a true circle, as opposed to an oval or ellipse, and are surrounded by a rock-cut ditch with an immense diameter of *c*.123 m. Two opposed causeways are positioned in the northwest and southeast. The internal stone circle has a diameter of *c*.103 m, and is thought to have originally incorporated 60 monoliths (Renfrew 1979, 39; A. Ritchie 1995, 78; Burl 1995, 145). In the Alexander Thom memorial volume *Records in Stone* (Ruggles 1988), Graham Ritchie goes so far as to suggest that 'the henge monument known as the Ring of Brodgar is perhaps one of the most impressive prehistoric sites in Britain' (1988, 337). Yet, until recently very little was known about the monument, allowing Burl to lament that in contrast to the Stones of Stenness, 'despairingly, little has been learned about the age and purpose of the ring since 1694' (1995, 145).

In assuming a high point along the spine of the isthmus, the topographic situation of the monument has always aroused curiosity (Fig. 4.1). 'Why was a more level site not chosen' muse Thom and Thom (1978, 123), who go on to provide an unpersuasive answer in terms of the requirements of an astronomical observatory (cf. Burl 1995, 146). Surely, if visibility and prominence were determining factors, should not the great circle have been erected on higher ground to straddle the ridge? Returning briefly to the Stones of Stenness, it was suggested in the previous chapter that its location was predetermined by the presence of a large house structure. Could the same be true of Brodgar? No recorded excavation has ever taken place within the centre of the monument although several detailed geophysical surveys have been conducted (Figs 4.3 and 4.4). Although hints of internal anomalies are present, none of the surveys,

FIGURE 4.1. Aerial view of the Ring of Brodgar and isthmus from the northwest, note the irregular Dyke of Sean running across the foreground.
NICK CARD

which include magnetometry and resistivity, have provided convincing evidence for the existence of any coherent internal features as are present at Stenness. So we are left with the question of what factors influenced the positioning of the Ring of Brodgar. Equally, why was it built on such a huge scale?

The Ring of Brodgar is conventionally classified as a Class II henge monument (*e.g.* Atkinson 1951, 82). Regardless of the dubious status of such typology, the defining characteristic of this group is the presence of two opposed causeways across the ditch. The provision of two causeways, especially in an opposed arrangement, indicates points of entry and exit (Fig. 4.2). In a general discussion relating to double entrance henge monuments, this architecture has been suggested to relate to movement through the monument. 'Unless we envisage two separate groups entering by the opposed entrances and meeting at the centre, the logic of these is of passage through them, whether directly or cyclically' notes Loveday (1998, 17). More recently, Harding (2012) has discussed double-entrance Yorkshire henges as punctuating longer journeys, which he characterizes as a form of pilgrimage. In following this line of reasoning, it is interesting that when examining the micro-topography directly outside the Ring of Brodgar, small, flattened ridges seem to emanate externally from both causeways. It is almost as if a relatively modest pathway, originally running along the isthmus, had, at a single place, become enveloped and aggrandized by the construction of a huge stone circle and deep rock-cut ditch.

If passage through the Ring of Brodgar was a defining feature, it is curious, especially given its substantial size, that the widths of the causeways are so narrow (Fig. 4.2). The northern causeway measures a mere three metres in width while its counterpart in the south is even smaller in being little over a metre wide. The narrow southern causeway is particularly restrictive in forcing any presumed passage down to single file (see Bradley 2011, 100–5).

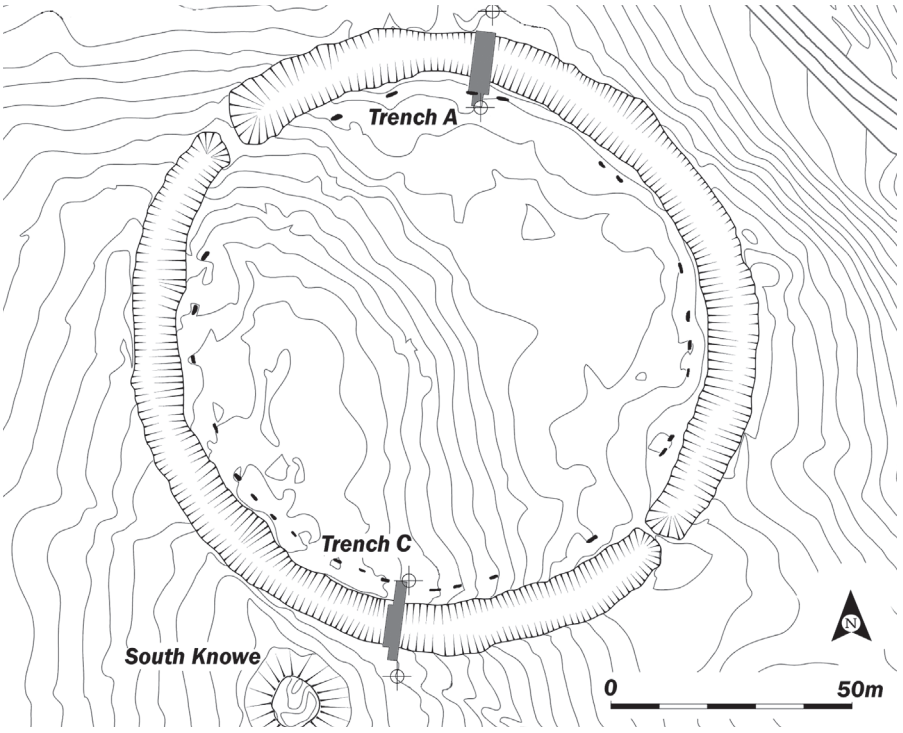

FIGURE 4.2. Plan of the Ring of Brodgar, showing the location of the 2008 excavation trenches.
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While the enclosure of a section of pre-existing pathway may account for the unusual topographic position of the Ring of Brodgar, it does not provide any direct indication as to its geographic location or massive scale. Significantly, the Ring of Brodgar actually lies at the end of a much broader and elevated section of the isthmus before it suddenly constricts and drops down into a relatively thin neck of land (Fig. 4.1). When moving southeast, because of the elevated position, once the monument is traversed, the isthmus stretches away below for just over a kilometre until it terminates at the confluence of the lochs of Harray and Stenness. Leaving aside the nature of envelopment, if the purpose of building the monument was to punctuate movement in an extremely dramatic manner along a pre-existing route, then the isthmus was effectively being subdivided into sequential qualitatively different spaces (see Fig. 4.1). In this scheme, the Ring of Brodgar acted as an awe-inspiring form of transitional architecture, effecting a change in state to those who entered and passed through its confines.

The Ring of Brodgar appears not to have been the first division encountered when passing along the isthmus in a southeasterly direction. The Dyke of Sean is a large bank that meanders laterally across the isthmus (Fig 4.1). Today, the dyke acts as a parish boundary between Stenness and Sandwick, and has always been assumed to be of later prehistoric origin. Cattle erosion in 2009 scuffed away some of the earth from the northwest face of the bank, exposing a section of sophisticated masonry adjacent to an in-turned entrance (Fig. 4.5). Not only

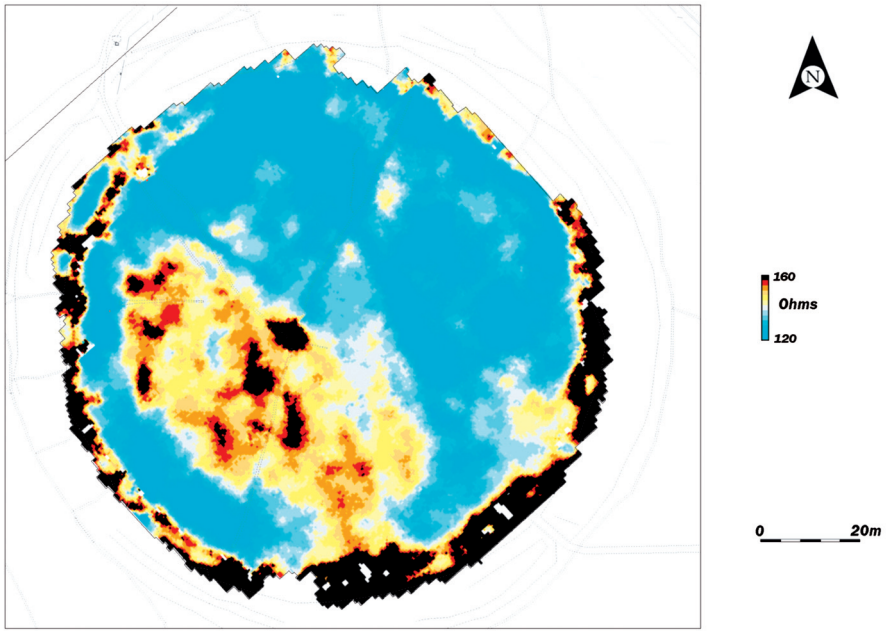


FIGURE 4.3. Internal resistivity survey of the Ring of Brodgar.
ORCA

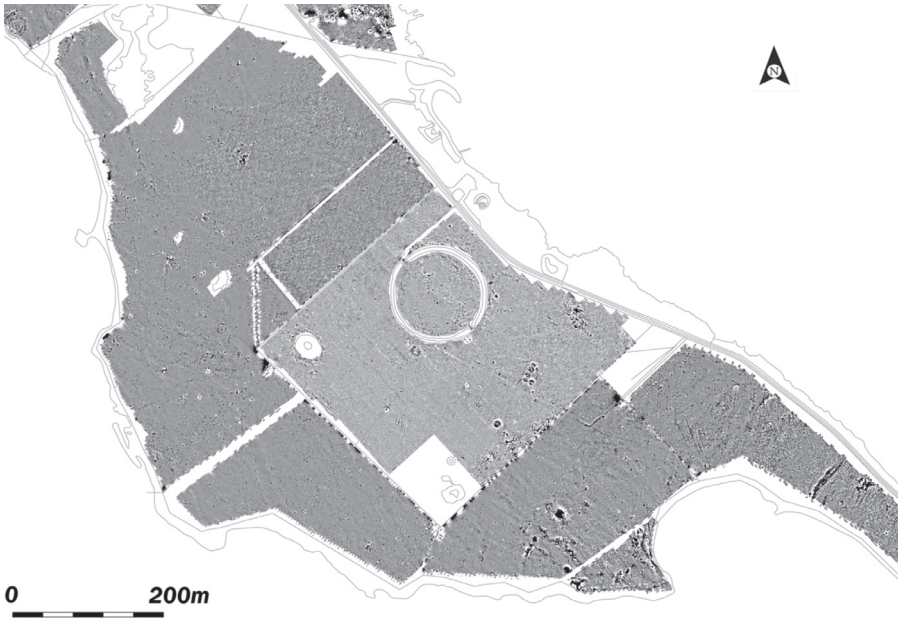


FIGURE 4.4. Internal and external gradiometer survey of the Ring of Brodgar.
COURTESY OF GSB PROSPECTION: ORKNEY WORLD HERITAGE SITE, GEOPHYSICAL REPORT, PHASE 1 – GSB REPORT 2002/61: BRADFORD

is the masonry of distinctive late Neolithic quality, the courses are of a slightly stepped structure reminiscent of the wall discovered beneath the earthen bank surrounding Maeshowe passage grave (Challands *et al.* 2005, 233–5). Such linear ordering along the isthmus creates a graduation of space invariably accentuating the significance of the final destination. Once through the initial division, the Dyke of Sean, the monumentality of the Ring of Brodgar is encountered.

FIGURE 4.5. An eroded section of the Dyke of Sean.
NICK CARD

However, to what extreme goal does the construction of this great monument relate?

Towards the end of the isthmus lies the recently discovered Ness of Brodgar settlement complex (Card *et al.* 2007). Although still in the process of excavation enough of this site has already been exposed to provide clear evidence for the extraordinary architecture of the structures (Fig. 4.6). In terms of spatial organization, the northern end of the settlement area appears to be defined by a substantial wall, *c*.4 m in width, running laterally across the isthmus (Fig. 4.7). Like the Dyke of Sean, its entranceway appears to be curved inwards towards the area of occupation. Unsurprisingly it is the point of entry into the settlement, when approaching the Ness from the direction of the Ring of Brodgar, that is enhanced.

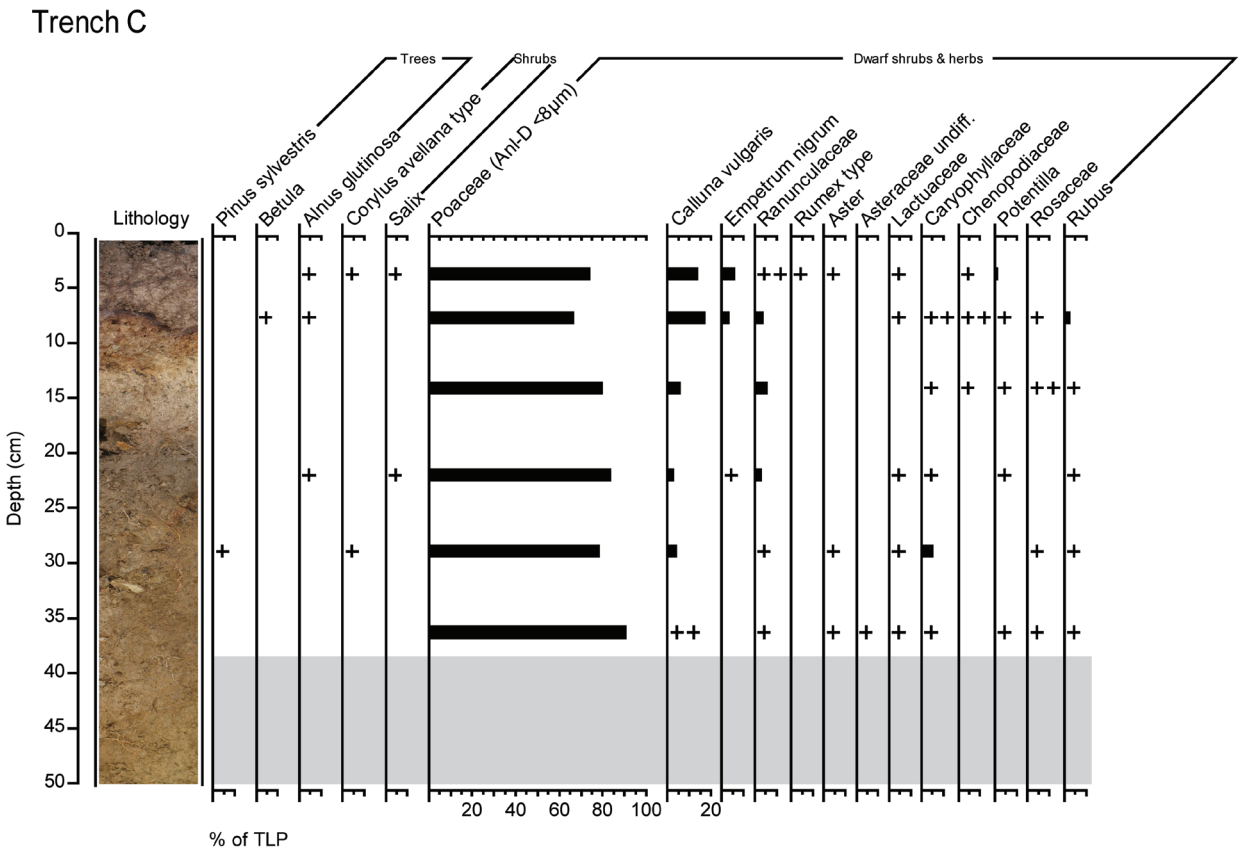
Passing through the entrance and into the area of habitation, at least seven monumental house structures (Fig. 4.6), resembling larger versions of House 2 at Barnhouse are sequentially revealed. Consequently, it seems likely that the structures at the Ness of Brodgar are equivalents or analogues of the 'big houses' located within the different settlements (see Chapter 3), perhaps being the perogative of separate and distinct social groups occupying particular villages across Orkney. As will be seen in the composition of the stone circle at the Ring of Brodgar, this strategy of gathering people, places and things together is a common theme of the Stenness–Brodgar landscape. At this place, through architecture and materiality, a microcosm of the Neolithic Orcadian world is constituted.

However, the Ness of Brodgar habitation is not positioned at the tip of the isthmus. In Orkney, large mounds are frequently interpreted as Iron Age brochs,

FIGURE 4.6. The Ness of Brodgar under excavation.
ADAM STANFORD – AERIAL CAM

FIGURE 4.7. The monumental wall at the Ness under excavation.
COLIN RICHARDS

and the large, denuded mound at the extreme southern tip of the Brodgar isthmus is no exception. Standing to a height of over two metres, it lies just over thirty metres beyond the southern wall of the Ness. This mound, however, has previously been identified as a ruined cairn and noted to have produced a



number of 'relics' (RCAMS 1946, 304). A recent investigation of the mound has produced Grooved ware and flint and pitchstone flakes (Nick Card pers comm.). Two interpretations present themselves; either the mound represents the remains of a massive standing building, or alternatively, a large passage grave. Whichever is preferred, this monument represents the final place, the ultimate destination, to which all the monumental architecture of the Brodgar isthmus, including the Ring of Brodgar, is referenced.

Even if the Ness of Brodgar settlement has a history of conventional dwellings, its graduation into monumental status, in tandem with the building of the great Ring of Brodgar, drastically altered the imagery of the isthmus. But into what landscape was this monumentality inserted? In terms of vegetation and tree cover in the early third millennium cal BC, it seems to be not so dissimilar to the open aspect present today. The 2008 excavations of two trenches across the Ring of Brodgar ditch (Fig. 4.10) allowed pollen samples to be taken and the following report on the immediate environment is by Robert McCulloch.

Southern Trench C

The southern margin of the Ring of Brodgar is higher than the northern side and so water flows away from Trench C. This has resulted a relatively drier site

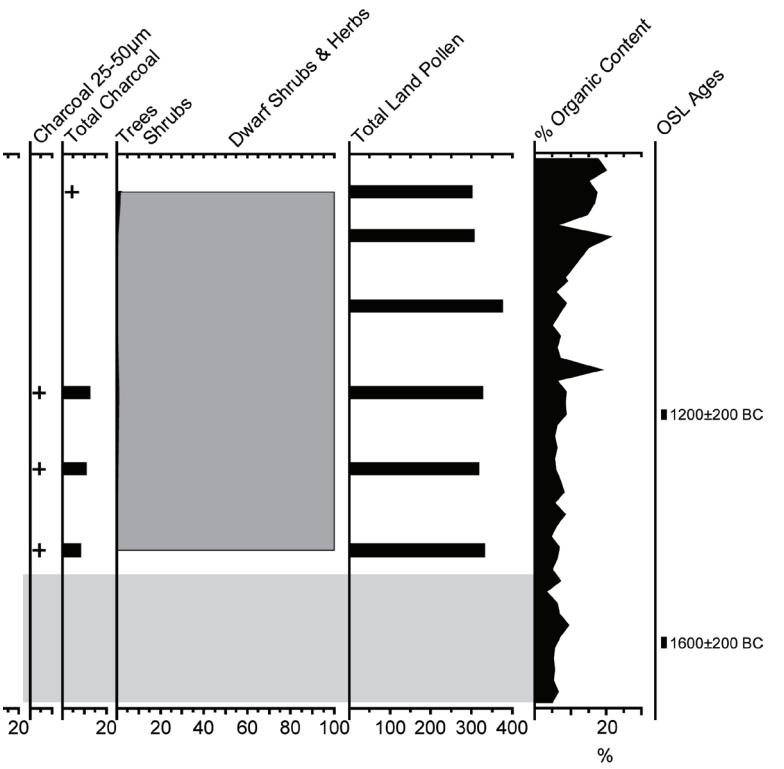


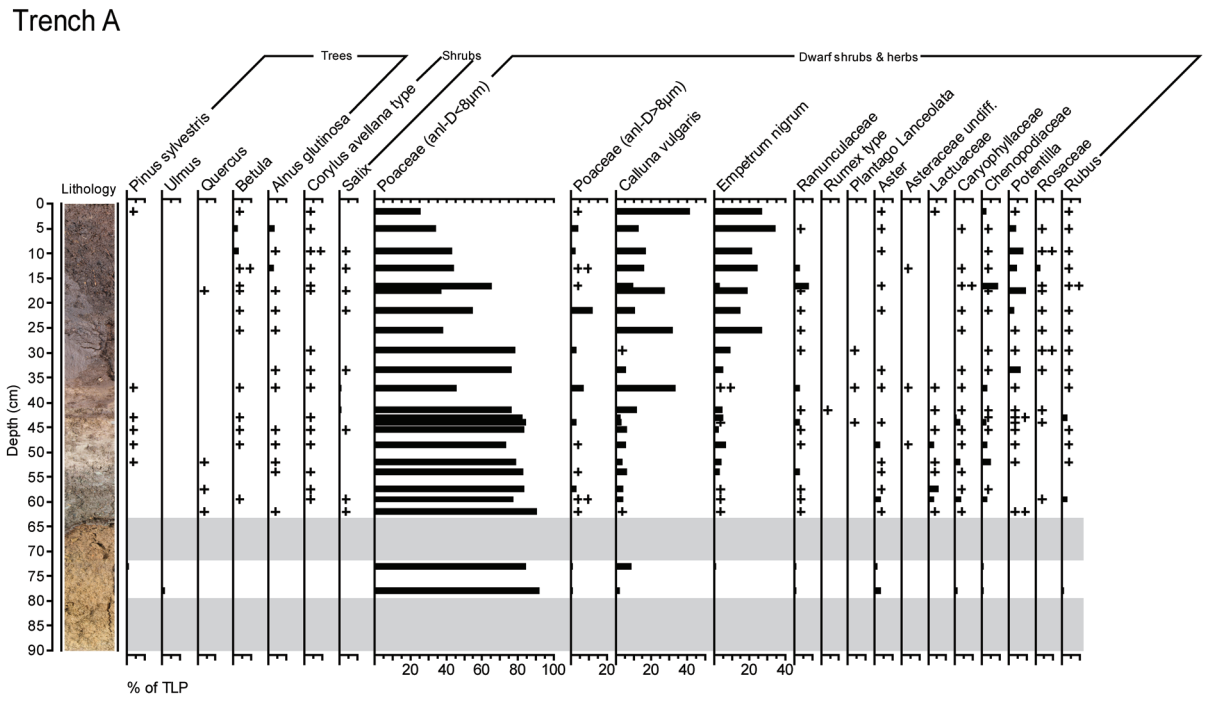
FIGURE 4.8. Ring of Brodgar pollen diagram from Trench C.
ROBERT MCCULLOCH

with the accumulation of less organic material resulting in a shallower section. The basal two pollen samples were found to be barren at the assessment stage (indicated by the shaded bar across the pollen diagram, Fig. 4.8). After *c*.1400 cal BC six pollen samples contained sufficient TLP (Total Land Pollen) to provide satisfactory results.

The pollen assemblages are dominated by *Poaceae* (grasses) with rare occurrences of tree, shrubs and other herbaceous types. In the lower (*i.e*. earlier phase) sediment infill there are indicators of human activity in the vicinity of the site in the form of *Hordeum*-type pollen (this includes barley and oats but may also signify wild cereal types) and this is contemporary with low but consistent proportions of charcoal. The charcoal is predominately <25 um in size so may represent more distal burning. In the upper sediment infill there is a relatively small increase in heathland taxa and the virtual absence of cereal type pollen and charcoal, which is representative of the present vegetation cover.

Northern Trench A

The more waterlogged site at Trench A is better suited for organic accumulation and preservation and this has resulted in a deeper profile. Twenty-three pollen samples contained sufficient TLP to provide satisfactory results. One basal



and two lower pollen samples were found to be barren at the assessment stage (indicated by two shaded bars across the pollen diagram, Fig. 4.9), and the lower pollen samples counted exhibited signs of severe deterioration due to aerobic conditions preceding the development of more bog-like environment. After *c.*1600 cal BC the broad pattern of vegetation change at Trench A is very similar to that of Trench C. However, the increase in sample resolution for this profile enables a more detailed reconstruction of the vegetation record. The lower (*i.e.* early) part of the record is dominated by Poaceae (grasses) and although there are still only rare occurrences of tree, shrubs and other herbaceous types the site is more floristically diverse, perhaps a result of better preservation of organic material. In the lower sediment infill there are also indicators of human activity in the vicinity of the site in the form of *Hordeum*-type pollen and this is also contemporary with relatively higher and consistent proportions of charcoal. The charcoal particles are <50 um in size so may also represent more distal burning but it does suggest a more significant fire event or period of higher fire frequency. After *c.*200 cal BC, in the upper sediment infill, there is a rise in heathland taxa (*Calluna vulgaris* and *Empetrum nigrum*) but differing from Trench C in the apparent continuity of cereal-type pollen. This may be an artefact of the focusing of the pollen input received by the ditch around the Ring of Brodgar to the deposits recorded at Trench A.

The vegetation history of the isthmus around the Ring of Brodgar during the early to mid-third millennium BC appears to be consistent with that around the Stones of Stenness and Barnhouse (Caseldine and Whittington 1976, 40;

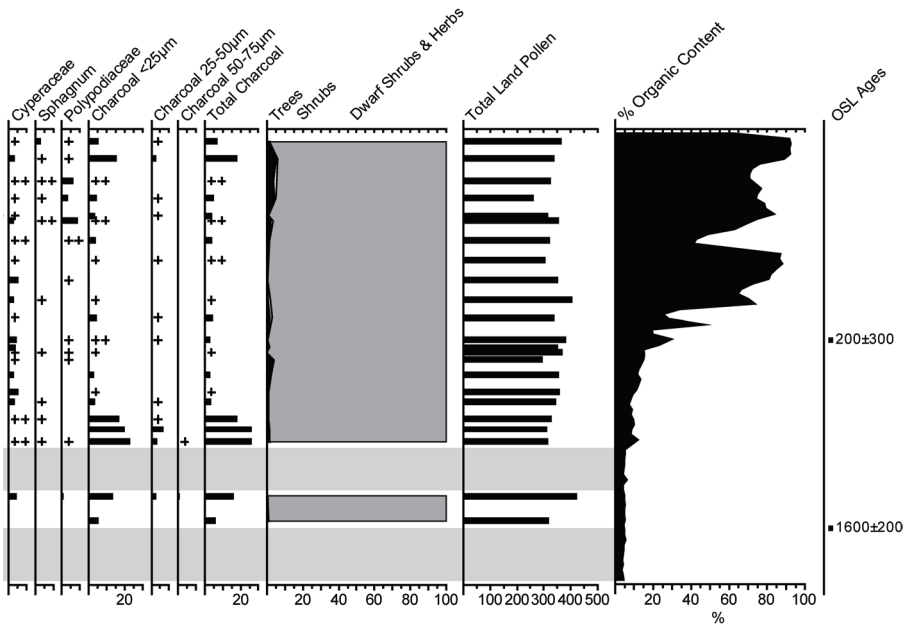


FIGURE 4.9. Ring of Brodgar pollen diagram from Trench A.
ROBERT MCCULLOCH

Hinton 2005, 342). The stone circle was erected and the surrounding ditch dug in open grassland. Traces of cereal pollen suggest small garden plots, consistent with the small amount of charred cereal recovered from Barnhouse (Hinton 2005). This is essentially an open grassland landscape where cattle and sheep graze, cereal agriculture is minimal and probably limited to small plots around settlements. During construction, open views from and to the Ring of Brodgar would probably have been very similar to the present, ensuring that not only the Ness of Brodgar, but also Barnhouse, the Stones of Stenness and Maeshowe would have been visible to the east.

Raising the stone circle

'Yet there must have been more to these henges than just routeways and exchange', reflects Harding (2012, 47), when considering the large Yorkshire henge monuments. The same concern can be directed towards the Ring of Brodgar, which apart from anything is a truly enormous monument. It is worth remembering that after the Outer Circle at Avebury, Wiltshire, and the Great Circle at Stanton Drew, the stone circle at Brodgar is the third largest in the British Isles, possessing a diameter of *c*.103 m. Such magnitude is surely a clue. The question to be asked therefore is for what reasons would a stone circle be erected on such a great scale. One avenue to explore is the architecture and geological composition of the stone circle.

The ring of stones at Brodgar is consistently stated to have been originally

FIGURE 4.10. Aerial view of the Ring of Brodgar stone circle.
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composed of 60 monoliths (Renfrew 1979, 39; J. N. G. Ritchie 1985, 124; A. Ritchie 1995, 78; Burl 1995, 145; *etc*.). Wisely, the Royal Commission were a little more cautious in its estimation:

> the original number of stones is uncertain. At the present time the position of at least forty can be identified, and there are spaces for twenty more, if it is assumed that they were erected at approximately equal distances apart. This would bring the total in the original plan to sixty, the number suggested by Thomas many years ago (1946, 299).

Today, the stone circle comprises 21 erect monoliths (Fig. 4.10). The position of a further ten is represented by either stumps or packing stones projecting through the turf. Two more stones lie prone just inside each causeway respectively. Of the standing monoliths, eight were re-erected in 1906–7, and we can have confidence in their accurate position as the H. M. Office of Works were scrupulous in locating the appropriate sockets at both the Stones of Stenness and the Ring of Brodgar (J. N. G. Ritchie 1988). Nonetheless, it is clear that out of *c*.60 stones only 13 remained standing.

Because it is one of the largest stone circles in Britain claimed to be truly circular in plan, the Ring of Brodgar is renowned for its overall regularity (*e.g*. Burl 1995, 145). Regularity also extends to the stone spacing of the circle. Indeed, accuracy was the cornerstone of the surveys of Alexander Thom. After surveying the Ring of Brodgar, it was noted that 'the 60 stones were equally spaced 6° apart (probability level = 0.05 per cent) starting from an azimuth of 9°' (Thom and Thom 1978, 24). Given that the original position of many of the assumed 60 stones is no longer visible, it is difficult to understand how this observation was obtained. There is, however, a deeper problem with this analysis.

At first glance, the remaining stones do seem to conform to the claimed spatial regularity. For example, mid-way between the opposed entrances, on

FIGURE 4.11. View of Stones 11 and 12 in the southeast circuit of the Ring of Brodgar.
COLIN RICHARDS

the eastern side of the circle, the distance between Stones 5 and 6 is *c*.4.25 m. Corresponding standing stones (Stones 23, 22, 21 and 20) in the western circuit are also regularly spaced at *c*.4 m apart. Indeed, when walking around the perimeter of the circle many of the stones appear remarkably consistently spaced in relation to their neighbours. But this impression is more a consequence of survival than design, and is in fact illusory.

Isolated in the southeastern circuit of the stone circle, close to the causewayed entrance, is a pair of standing monoliths (Stones 11 and 12). They have divergent histories; Stone 12 had fallen and was re-erected in 1906–7, but Stone 11 is one of the thirteen to have remained standing since the third millennium cal BC. Their juxtaposition catches the eye because, atypically, the angled tops of the stones are opposed (Fig. 4.11). Yet there is another reason why this pairing attracts attention. In contrast to the remaining stones within the circle, Stones 11 and 12 are very closely set in being only 2.5m apart. Nor is this an anomaly caused by careless re-erection. The remaining packing stones of an absent monolith adjacent to Stone 11 are similarly only 2.3 m distant. Clearly, in this area of the stone circle, the stones become progressively closer spaced as they approach the southeast causeway.

As part of the 2008 fieldwork at the Ring of Brodgar, Adrian Challands and Susan Ovenden undertook geophysical surveys employing Resistivity, Electrical Resistance Pseudosection Imaging and Ground Penetrating Radar (Figs 4.3 and 4.12). The results were mixed but two different trends soon became apparent. First, supporting the observations concerning Stones 11 and 12, the monoliths appear to become more closely spaced as the causeways are approached. Second, the size and frequency of some of the anomalies adjacent to the southeast causeway suggest that a façade-like arrangement of posts may once have also been present. This architecture appears very different from that seen at the Stones of Stenness where the stones are very evenly spaced around the circle.

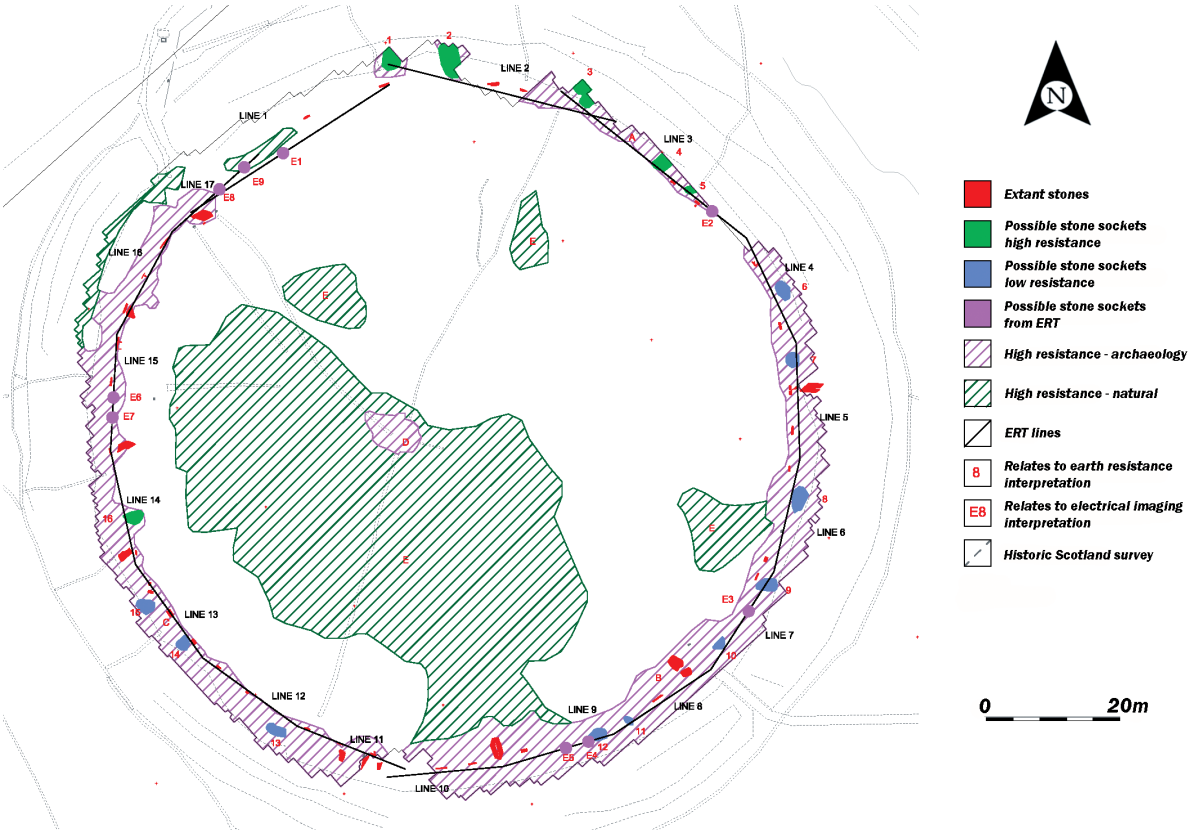


FIGURE 4.12. Geophysical survey along the line of the stone circle.
ADRIAN CHALLANDS AND ORCA

Since it is the causeways that are the focus of more closely spaced stones, it seems that the position of monoliths in the Ring of Brodgar is determined more by imagery than regularity in plan. Here, the plan is of great importance, but not in the traditional sense of geometric precision (cf. Thom and Thom 1978, 24; Case 2004). Indeed, the positioning of stones is subtly controlled to provide the external appearance of a massive stone circle, which is dramatically enhanced at the points of direct encounter, entrances and exits.

The manipulation of the stones adjacent to the causeways was not just restricted to the increased frequency of stone spacing. A further strategy of augmentation was the selection of broader-faced monoliths positioned adjacent to the two causeways (Fig. 4.13). In conjunction, these architectural devices must have effected a dramatic and contrived experience of the monument on encounter – in either direction. Obviously, imagery and display are principal elements of stone circle architecture, but at the Ring of Brodgar additional strategies were implemented to facilitate an architecture of illusion.

At this point yet another strand of evidence demands consideration. In both the 2008 excavation trenches at the Ring of Brodgar a stone socket was encountered and examined (A. Thomas *et al.* 2009). The southern Trench C caught part of the socket of a missing monolith that was centrally positioned

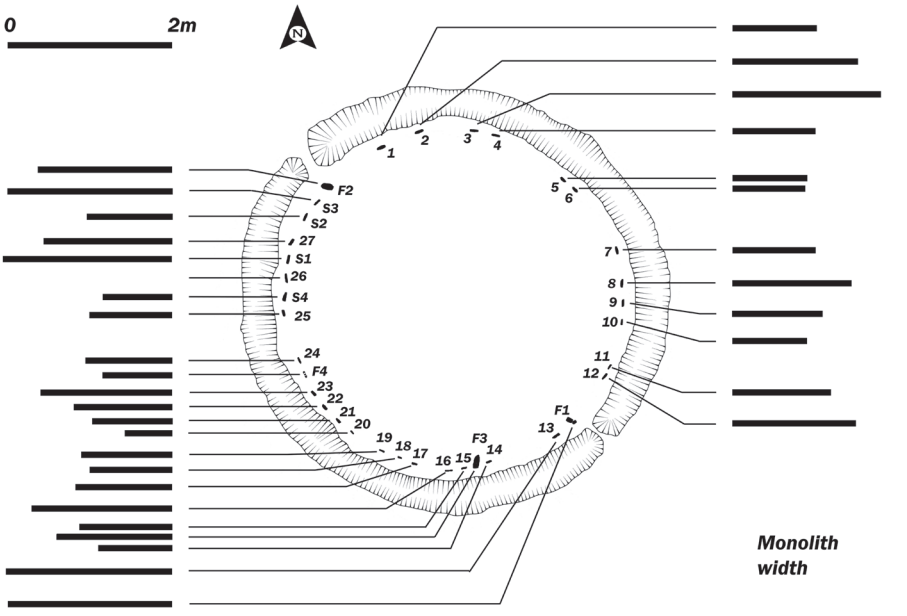


FIGURE 4.13. Diagram showing widths of monoliths within the Ring of Brodgar.

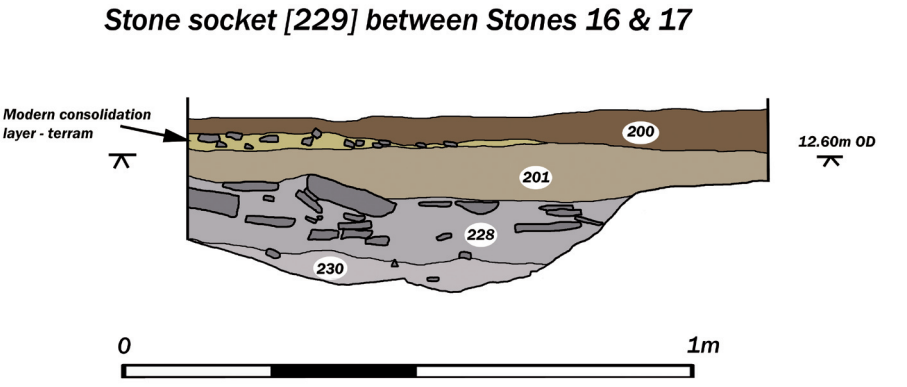


FIGURE 4.14. Section drawing of stone socket [229] in Trench C.

between Stones 16 and 17 (Fig. 4.14). Excavation revealed the ragged-edged socket to be extremely shallow, having a depth of only 0.27 m. The irregular shape of the socket together with the displaced packing stones could be attributed to damage incurred through the collapse or removal of the monolith.

On the opposite side of the circle, the stump of Stone 3, which is famous for its runic inscription, was partially uncovered in Trench A. Running around its inner surface a concrete collar had been employed to re-attach and consolidate the laminated section with the runic inscription to the remainder of the stump (Fig 4.15). At the rear of the stump was an area of stone paving. These paving stones also served to fill an elongated hollow cut into the natural till which resembled an irregular ramp to facilitate erection of the monolith. Partial examination of the stone socket revealed it also to be extremely shallow in having a depth of only *c*.0.18 m.

FIGURE 4.15. Stone 3 as revealed during the excavation of Trench A. Note the stone paving [106] behind the broken monolith.
COLIN RICHARDS

Even when stone sockets have been exposed to constant ploughing, such as the Stone of Odin and its adjacent monolith, they retain depths of between 0.60 m and 0.75 m (Challands *et al.* 2005, 213–4). Extrapolating from the stone sockets examined as part of the 2008 excavations, monoliths within the circle appear to be inserted into very shallow sockets, far shallower than those at the Stones of Stenness or outlying standing stones. Thus, it should come as no surprise that a large number of the Brodgar stones fell in antiquity.

Taken together, different strands of evidence create a surprising divergence between the stone circles at the Stones of Stenness and the Ring of Brodgar apart from scale. The regular spacing of stones in the former is manipulated in the latter to create an illusion of greater frequency and size. Such an augmentation of the circle at the causeways is a manipulation of encounter. Indeed, erecting broader stones closer together towards the causeways creates an image of a 'wall of monoliths'.

The erection and positioning of monoliths at the Ring of Brodgar appears paradoxical. On the one hand there is clearly a great concern with imagery, in terms of encounter. Yet, little concern with longevity is demonstrated through the erection of monoliths in shallow sockets; a procedure that could be described as haphazard. Overall, the architecture of the stone circle within the Ring of Brodgar appears to be more concerned with representation than substance or longevity. It is tempting to go further and see this architecture as representing both immediacy and expediency in the creation of the massive stone circle. Under these circumstances, the erection of individual monoliths appears to embody what can only be seen as a form of 'quick' architecture as described by McFadyen (2006a).

Group	Stone No.	Description
1	1, 2, 3, 4, 7, 25, 26, 27	Massive medium-bedded, laminated fine-grained sandstone. Weathering indicates that the layers are calcareous in places. Some stones display disturbed layering with load casts in the outer third. Internal joints (sealed), parallel the joint producing the sloping top of the stone. The stones indicate that the spacing of the joints may be relatively close in the source quarry but as long as the joints are tight (sealed) and strong enough, long slabs may be produced.
2	5, 6, 11, 14, 17, 20, 21	Massive thick bedded fine-grained sandstone**.** Wispy cross bedding with frequent angled joints running lengthways through stone. In some cases this has led to angular vertical fracturing. Closer spaced jointing also leads to this class of monolith being of relatively smaller height than Group 1.
3	9, 10, 19	Thinly laminated fine-grained flagstone. Monolith faces demonstrate peeling (due to thin lamination) and cross-joints are present. There are patterns in the laminations reminiscent of tension gashes – a few mm thick and few cm long. These are probably small 'injection dykes', the more brittle clay-richer layers fracturing, perhaps on drying out of the sediment in the lake, perhaps by earthquake shock, and the fine sand being fluidised up the open fractures.
4	8, F3, 16	Massive layer, laminated fine-grained sandstone. Similar lithology to Groups 1 and 2 except displaying no closely set vertical jointing (Group 2), and greater disturbed layering with more extensive load casts than Group 1.
5	22, 23	Massive laminated lithology with one stone (23) split parallel to length and bedding into two main slabs. Reddish brown staining in places, edge shows solution weathering similar to limestone and is indicative of carbonate content. Very dark brown-black millimetre-sized pellets weathering out of the surface are probably goethite (iron oxyhydroxide), which forms on weathering/oxidation of original pyrite in the rock (iron pyrites).
6	12, 13, 15, 18, 24, Stump1, Stump 3, Fallen 1, Fallen 2	Heavily laminated iron-rich sandstone, incorporating mudstone layering with cross-hatch pattern of 'injection dykes' on outer faces. Highly distinctive, golden-brown colouring.
7	F4	Fine-grained, soft, sandstone of Eday sandstone series. Originally yellow in colour.

TABLE 4.1. Lithologies at the Ring of Brodgar, (Groups 1 and 2 = Vestra Fiold, Sandwick; Group 4 = Staneyhill, Harray; Group 7 = Houton, Orphir).

Constituting the stone circle

Given the differences in stone type noted by Collins (1976) at the Stones of Stenness, a macroscopic geological analysis of the remaining Ring of Brodgar monoliths was undertaken by John Brown and Allan Hall (Table 4.1).

Although there are difficulties in accurately characterizing the broken stones, as represented by stumps and fallen monoliths, and allowing for variation in bedding characteristics within specific quarries, there appear to be at least seven different strata of sandstone present. Groups 1–5 are variations on a theme in being fine-grained laminate sandstone of grey-brown colour. Apart from Groups 1 and 4, which appear to embrace a degree of diversity, when the jointing characteristics and bedding profiles are examined through width and particularly thickness, Groups 2, 3 and 5 display considerable coherence and uniformity (Table 4.2). Group 6 is visually distinctive in its honey-brown

colouring, banding and cross-hatch injection pattern on the outer surfaces of the stones. This group includes the broadest stones within the circle. Group 7 is only represented by the broken pieces of a single stone, but when standing, this monolith would have been very distinctive in displaying the yellow colour and fine-grained texture of Eday flagstone.

The broader practical and social implications of the presence of stones from at least seven sources will be pursued in the following chapter. Suffice is to note that as recognized at the Stones of Stenness, the stone circle within the Ring of Brodgar is clearly of a composite nature. Indeed, the different lithologies are readily discernible when walking around the stone circle, through variation in colour, texture, and shape. This is an important observation as it demonstrates that the material qualities of different types of stone would always have been appreciable to those visiting the Ring of Brodgar. Such divergent materiality embodied more than physical characteristics, however, but related back to labour, people and place, and a form of material habitus (cf. Meskell 2005, 3).

The location of the different lithologies within the circle reveals a tendency towards grouping (Fig. 4.16). Since each lithology was derived from specific sources or quarries, and as these places were inevitably associated with, and referenced, specific social units (A. Jones 2005), then it seems that different sections of the Ring of Brodgar were the prerogative of particular social groups equating to house, or village societies (see Chapter 3). This leads to a very different view of the construction and imagery of the stone circle. Rather than building a unitary monument, work would be punctuated, both temporally and spatially. If there was a commemorative or corporeal component to the addition of monoliths, then the sequence of building was based on discrete projects of individual stones, as opposed to the construction of the circle as a whole. Such practices were both situated and dispersed in that the erection of a monolith constituted the final act in a series of activities stretching web-like away from the Ring of Brodgar (see Chapter 5).

We can suggest that within such a complex and piecemeal process, a 'complete' stone circle at the Ring of Brodgar becomes almost illusory. At any given time in the early-mid third millennium cal BC, a visit to the site would have presented an appearance that is not so very dissimilar to that seen today. Different sections of the great ring would be standing, short arcs of stones, large gaps, isolated pairs and individual stones (Fig. 4.10). Ultimately, an entire ring

Lithology	Stone No.	width	breadth	height
Group 1	1	1.02m	0,38m	2.83m
	2	1.52m	0.37m	3.62m
	3	1.84m	0.40m	broken
	4	1.07m	0.35m	broken
	7	1.16m	0.34m	3.50m
	25	1.03m	0.15m	broken
	26	1.52m	0.26m	4.25m
	27	1.58m	0.31m	broken
Group 2	5	0.82m	0.43m	2.07m
	6	0.87m	0.38m	2.11m
	11	0.74m	0.43m	2.51m
	14	0.88m	0,46m	2.82m
	17	1.19m	0.42m	broken
	20	0.59m	0.42m	2.61m
	21	0.98m	0.37m	2.63m
Group 3	9	1.10m	0.22m	2.60m
	10	0.90m	0.22m	2.04m
	19	1.12m	0.23m	2.92m
Group 4	8	1.47m	0.33m	broken
	16	1.72m	0.23m	3.13m
	F3	1.39m	0.27m	broken
Group 5	22	1.22m	0.54m	2.53m
	23	1.60m	0.58m	2.55m
Group 6	12	1.40m	0.22m	2.72m
	13	1.92m	0.24m	2.20m
	15	1.11m	0.24m	3.06m
	18	0.98m	0.23m	broken
	24	1.11m	0.20m	broken
	Stump 1	2.07m	0.30m	broken
	Stump 3	2.08m	0.22m	broken
	Fallen 1	1.96m	0.21m	broken
	Fallen 2	1.63m	?	broken
Group 7	F4	broken	broken	broken

TABLE 4.2. Jointing characteristics and bedding profiles of the different lithologies within the Brodgar stone circle as represented by stone dimensions (for position see Fig. 4.16).

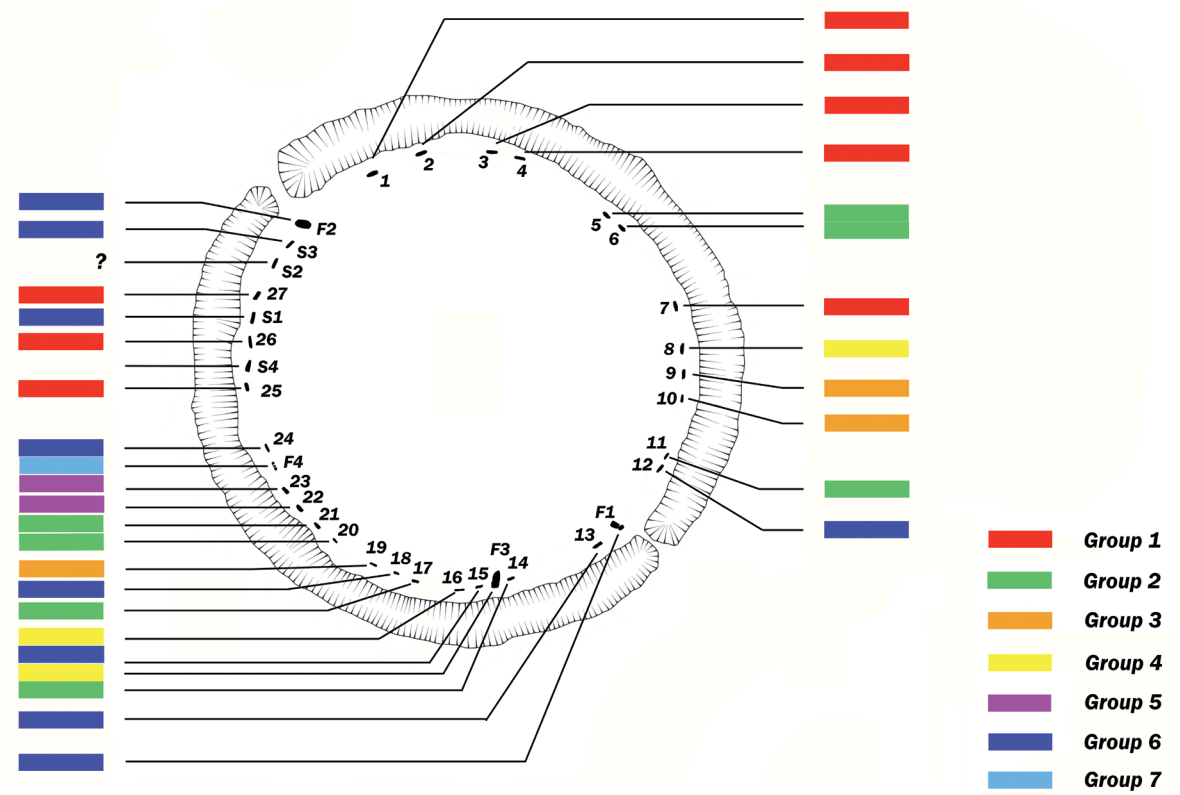


FIGURE 4.16. Spatial distribution of lithologies within the Ring of Brodgar (numbering after RCAMS 1946).

of stones may have been accomplished – the geophysical surveys are mute on this point – but given the very shallow sockets uncovered during excavation the possibility exists that stones may have already begun to lean precariously, when others were still being hauled to the circle.

Digging the great ditch at the Ring of Brodgar: time and method

If the erection of monoliths at the Ring of Brodgar represents the closing episode of practices which in their entirety were distributed across the social and physical landscape (see McFadyen 2008), then the digging of the great Brodgar ditch can be characterized as more situated practice. Although wider resources are obviously necessary to support a workforce, apart from the procurement of tools, the principal focus of labour was at the Ring of Brodgar. The ditch is enormous. It entirely bounds the stone circle, its circuit only being broken by two opposed causeways in the northwest and southeast (Figs 4.2 and 4.10). When freshly excavated, the ditch surrounding the stone circle would surely have constituted the most impressive component of the monument. It has a diameter of *c.*123m, a width of ten metres at ground level and a depth of over four metres, of which the lower portion is cut through solid bedrock (Fig. 4.18). It has been calculated that

some 4700 cubic metres of rock and glacial till were excavated, involving at least 80,000 person/hours (Renfrew 1979, 213). Given the magnitude of this figure, it is unsurprising that a centralized political formation in the third millennium BC was postulated by Colin Renfrew (1979, 218). Whilst the scale of the Brodgar ditch is unequivocal, the social conditions and working practices that allowed such a monumental undertaking are less certain.

The main objective of excavations undertaken in July-August 2008 was to investigate the method and date of digging the Ring of Brodgar ditch. This fieldwork involved re-excavating and extending two trenches (A and C) across the ditch previously excavated by Colin Renfrew in 1973 (Fig. 4.2). Trench C in the eastern circuit had been completely excavated in 1973 and was simply re-excavated for sampling purposes. In contrast, the lower ditch fills in Trench A had never been exposed because the trench was abandoned due to waterlogging (Renfrew 1979, 40). As the weather was hot and dry before and during the 2008 excavations, waterlogging did not constitute a major problem and a 4 m wide section through the ditch was opened. A smaller section, 2.3 m in width, was excavated to the base of the ditch (Fig. 4.19). Initial removal of the upper peat and silt layers confirmed the shape of the ditch to be fairly regular, a feature that is observable around its circuit. As the lower fills were sequentially removed, the character of the ditch changed dramatically. In contrast to the regular, parallel-sided cut exposed in its upper section, the lower ditch was formed by a clearly defined rock-cut segment (Fig. 4.19). The rock face displayed a rounded form which narrowed giving a clear indication that the ditch had been dug in sausage-shaped portions, the ends of which were subsequently broken through to create the continuous ditch form encountered now.

FIGURE 4.17. View of monolith 16, derived from Staneyhill, Harray, in the western circuit of the Ring of Brodgar. COLIN RICHARDS

Moreover, just as was observed at the Stones of Stenness (J. N. G. Ritchie 1976, 10), the basal deposits and bedrock were stained a blue-grey colour due to prolonged periods of standing water. Despite numerous colour changes due to hydrological fluctuations, the ditch stratigraphy in Trench A tells an uncomplicated story of it having silted and filled naturally, with no evidence of re-cutting. Standing water had created numerous lenses of iron-pan, which confusingly ran between and through deposits at all levels (Fig. 4.18 and 4.20). Substantial amounts of merging stone debris in the form of chips and fragments,

and silts formed the primary fill. Curiously, the stone debris had mainly fallen in from the inside of the monument soon after the ditch segment was dug. Again, from the interior, some larger blocks of stone had subsequently slipped down and collected in the inner-central area of the ditch. Micromorphological analysis of the silts by Ian Simpson revealed this infilling process had occurred shortly after the ditch was dug. Finer silts resulting from glacial till eroding and washing into the ditch had accumulated around and over the stone debris. Prolonged periods of silting, including fine mineral material and vegetation resulted in the deposition of a sequence of homogenous layers *e.g.* [111] and [112], filling

right: FIGURE 4.18. East-facing ditch section in Trench A.
COLIN RICHARDS

below: FIGURE 4.19. Vertical view of Trench A, note the segmented appearance and blue colour of the ditch base.
COLIN RICHARDS

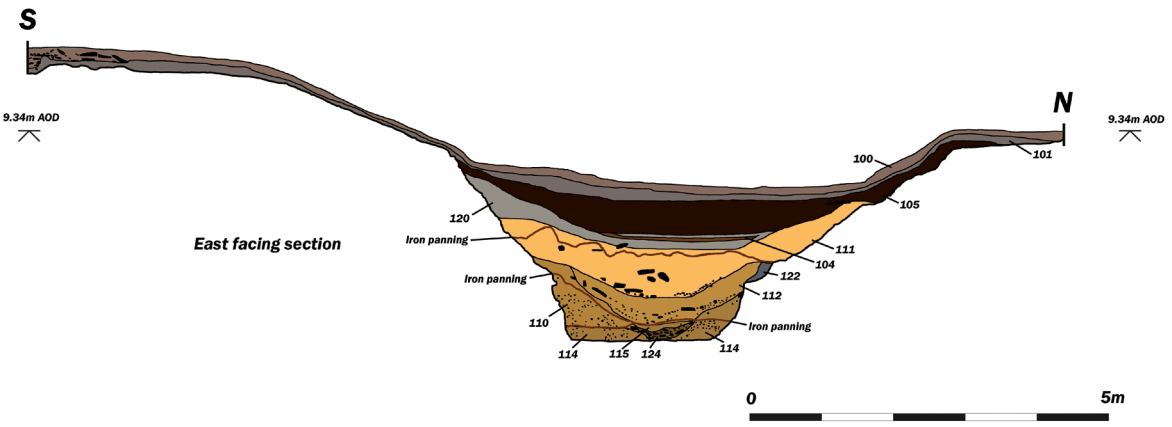


FIGURE 4.20. Drawing of east-facing ditch section in Trench A.

the bulk of the ditch (Figs 4.18 and 4.20). All through these layers ferruginous material, bands and nodules provided further evidence of periodic wetting and drying. Above a stabilization level a thick layer of peat grew towards the top of the ditch providing the gently rounded profile seen today.

In the second trench (C) on the southern side of the monument, exactly the same process of ditch filling occurred (see Renfrew 1979, fig. 15). However, soil micromorphological analysis by Ian Simpson of the lower silts in this trench found evidence of cultural disturbance at the base of the ditch. The occurrence of 'dusty' silt infill and rubified mineral materials may be interpreted as evidence for periodic clearing out of the ditch and the burning of vegetation to keep the base of the ditch clear. Of significance is the similar occurrence of stone rubble in a primary context which had clearly fallen into the ditch from the interior of the monument. In the southern trench the amounts of rubble seen in layer [212] exceeded that of the northern trench (Fig. 4.20). While a small amount of eroded rock fell into the ditch from the outside, *e.g.* layer [214], the reminder of the ditch is filled with consecutive layers of silt.

Intriguingly, these same characteristics of ditch filling, with stone rubble falling from the interior and accruing on the ditch floor, is replicated in the stratigraphy of the Stones of Stenness ditch (J. N. G. Ritchie 1976, fig. 3). Given that no evidence exists for an outer bank (see below), we suggest that this occurrence may indicate the presence of an internal platform, possibly laid to level particular areas of the interior.

One of the biggest surprises of the 2008 excavations was the discovery of segmented ditch construction. If the segmented construction exposed in Trench A is truly representative, then the ditch was originally dug as a series of interconnected, elongated pits. The technique of ditch digging employed was by following the closely set angled fissures present within the laminar bedrock (Fig. 4.21). This entailed the use of substantial hammer-stones to fracture and fragment each stratum of rock working along the fault lines.

Two broken hammer-stones (SFs 05 and 08) were recovered from the lower silts of the ditch in Trench A (Table 4.3), one of which was of considerable size and weight (Fig. 4.22). Besides hammer-stones, antler picks and wedges,

FIGURE 4.21. Outer face of the ditch in Trench A, note the angled fissures running through the sandstone bedding planes.
COLIN RICHARDS

FIGURE 4.22. Hammer stones (SFs 5 and 8) recovered from the lower ditch silts.
COLIN RICHARDS

TABLE 4.3. Details of hammer-stones (SFs 05 and 08) from the lower silts of the Brodgar ditch.

Small Find	Trench	Context	Weight (Kg)	Description
005	A	114	9.990	broken hammerstone
008	A	114	0.504	broken hammerstone

to open fissures and prise out stone, almost certainly featured strongly in the digging process. Just as the stone circle was erected in a piecemeal manner, so the massive enclosing ditch was also the product of a large number of discrete constructional events.

Dating the great ditch at Brodgar

As opposed to the Stones of Stenness, 'there are no dates for the building of the great circular ditched enclosure and stone circle at Ring of Brodgar in Orkney' laments Ashmore (1996, 86), and suggests 'it was probably built at some time between 3000 and 2000' BC. This broad estimation followed Colin Renfrew (1979, fig. 54) and Graham Ritchie (1985, 127), both of whom considered the Ring of Brodgar to be built in the third millennium BC. Anna Ritchie is a little more precise in stating 'it is likely to have been built during the early or middle centuries of the third millennium BC' (1995, 79). The general tendency to provide a slightly later date of construction than that of the Stones of Stenness (see Chapter 11) can be attributed to typological and culture-historical reasoning which placed Class I before Class II henge monuments (see Atkinson 1951, 90–1).

One of the principal archaeological aims of the 2008 excavations was to locate material for dating purposes. Obviously, the absence of a chronology for the Ring of Brodgar, especially in relation to the Stones of Stenness and the habitations Barnhouse and the Ness of Brodgar, is unacceptable for a major monument with World Heritage Site status. Just as had occurred in the 1973 excavations (Renfrew 1979, 42), the 2008 excavations failed to locate material from the basal ditch silts for radiocarbon dating. However, during fieldwork David Sanderson collected a set of 40 small samples from the two trenches to permit field and laboratory appraisal of the luminescence profiles. The field measurements were undertaken with a portable OSL instrument. Samples for laboratory profiling were collected in small opaque tubes in the same positions. A set of 15 larger tube samples was also collected for Optically Stimulated Luminescence (OSL) dating analysis, accompanied by bulk material for laboratory gamma spectrometry. *In situ* field gamma spectrometry (FGS) measurements were also recorded from the 15 tube sampling positions.

For most of the samples collected, the quartz mineral grains displayed low sensitivity and as a result the number of aliquots measured is relatively small, with low precision for most of the samples. This has reduced the ability of OSL methods to produce high precision dates for the samples analysed. Nevertheless, a set of dates with reasonable precision and confidence has been determined. Profile measurements conducted in the field and in the laboratory indicated that there was a relatively small change in stored dose for the lower part of each trench, indicating a rapid build up of sediment, with a more rapidly changing stored dose in the upper sections of each trench. It was also observed that the top section of the trenches had quartz with higher sensitivity than that further down implying a different sediment source for this later material.

A small number of aliquots from profile samples crossing the interface between the higher and lower sensitivity materials were analysed using a single-aliquot regeneration (SAR) procedure. For Trench A, samples just above and just below this interface all give a similar date of 1900±150 BC, within layer [III] (Fig. 4.23).

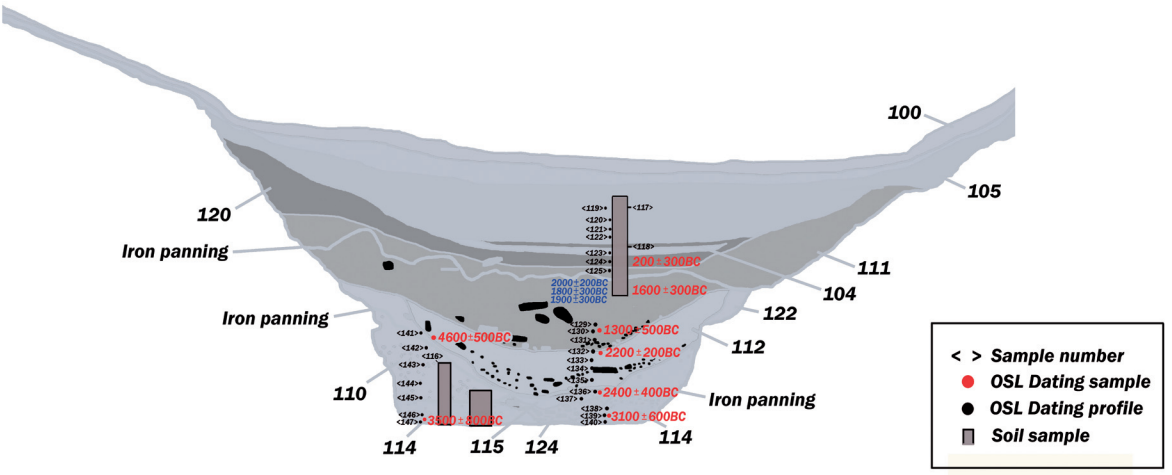


FIGURE 4.23. Sample positions and OSL dates obtained from Trench A
DAVID SANDERSON

For Trench C, the profile samples date the interface as before 2000±300 BC and after 1200±200 BC, consistent with the 1900 BC date from the Trench A profile samples. The tube samples give a date of 1600±300 BC just below the interface in Trench A, and between 1600±200 BC and 1800±300 BC in Trench C. These would imply a slightly younger date for the transition from low sensitivity to high sensitivity material of around 1700±200 BC. Taken together, these suggest a date for this transition at 1800±200 BC.

With some samples producing very few usable data points, some composite samples were generated combining data from two or more samples in similar stratigraphic locations. For the composite sample at the bottom of Trench A, there is evidence that both samples are indeed contemporary, but with some aliquots showing ages consistent with the inclusion of minerals with residual luminescence signals. With the outliers removed, these samples give a date of 3700±300 BC, which is older than anticipated. With large aliquots there may be residual geological signals present in most of these aliquots, increasing the apparent age.

Composite samples for the middle sections of both trenches, between the bottom layers with evidence of significant residual geological signals and the high sensitivity layer, show evidence of a smaller number of minerals with geological residual signals, and age estimates consistent with a rapid infill of the ditch at a similar rate and time in both ditches. The mean date for these layers is 2000±200 BC.

On the basis of the data presented here, it is concluded that a reasonable estimate for the date of the digging of the ditch is 2600–2400 BC (Fig. 4.23). The ditch then rapidly fills with sediment that is mostly reset with little residual signal over the next 500 years. A transition occurs around 2000 to 1800 BC, with a change in the sensitivity of the quartz probably reflecting an environmental change affecting the source of the wind blown sediment, and subsequently much slower accumulation of sediments in the ditch.

The elusive outer bank

Finally, there is the question of the presence of an outer bank. Its expectation is obviously predicated on the recognition of the Ring of Brodgar as a Class II henge monument (*e.g.* Atkinson 1951). Given the huge amount of debris, mainly sandstone rubble, removed while digging the ditches at both Stenness and Brodgar, it seems almost inconceivable that if a bank had once existed at either site, no evidence would survive. In an attempt to resolve this question, Renfrew cut a third trench (B), over a slightly raised area beyond the ditch to the northeast, to search for the remains of an outer bank. The raised area turned out to be a result of the 'configuration of the bedrock' (Renfrew 1979, 41), and despite a greater depth of topsoil being encountered no evidence of an outer bank was obtained.

Such is the power of typology to influence perspective, that on the basis of an old account providing the unlikely occurrence of people removing the bank for 'manure for the infield' (Thomas 1852, 103), Renfrew concluded that 'on balance I am inclined to regard the faint trace found outside the ditch in trenches B and C as the remnants of an outer bank now effectively destroyed by erosion and deliberate removal' (1979, 43). In a way, such arguments maybe irrelevant because on stratigraphic grounds the presence of an outer bank is improbable.

Approximately seven metres beyond the ditch, in its southern circuit, is the denuded barrow known as South Knowe (Fig. 4.2). Although this mound has been excavated no records survive, but presumably the barrow dates to the early second millennium cal BC. If a substantial bank of mixed stone rubble and glacial till had been present, either the barrow would have been positioned elsewhere or erected over the bank and assume an elevated position. This is exactly the situation present at Arbor Low, Derbyshire, where a barrow is constructed on the henge bank. At Brodgar, the barrow is neither elevated nor displaced; thus, an outer bank of any form was absent when the barrow was constructed. The evidence appears strong. An outer bank probably never existed around the Ring of Brodgar.

Making the Ring of Brodgar: situated and dispersed practices

Like the other monuments within the Stenness-Brodgar area, the Ring of Brodgar was built in a fairly open and treeless environment. Given the proposed date range of between 2600–2400 BC for the digging of the Brodgar ditch, the Stones of Stenness and two settlements of Barnhouse and the Ness of Brodgar would already have been present. Although the ditch of the Ring of Brodgar appears to have dug 400 years after the Stones of Stenness, it is difficult to be absolutely certain of the relative chronological relationships of the stone circles. Accepting that no excavation has occurred within the Ring of Brodgar, there do appear to be magnetic anomalies within the Ring of Brodgar (see Fig. 4.4).

FIGURE 4.24. Water collecting in the northern section of the ditch at the Ring of Brodgar.
COLIN RICHARDS

However, these do not seem to possess the regularity of the features encountered within the Stones of Stenness. Although it cannot be discounted, it seems unlikely that the Ring of Brodgar has such an extensive biographical depth.

Following Graham Ritchie (1976, 16) and Alex Gibson (1998, 54–5; 2004, 75; 2010b, 243–4), it is possible to assign the ditches at both Orcadian stone circles to a latter stage in their lives. For Julian Thomas, the digging of a henge ditch to form the western enclosure in Durrington Walls represented a 'means of sealing off a location that was imbued with memory of powerful past events and performances, creating a rift between past and present' (2010, 11). Accepting, as argued in the previous chapter, the ditches enclosing the two stone circles were actually dug explicitly to contain water (Figs 3.20, 3.26 and 4.24), then the imagery of islands and their watery definition provided a potent means of sealing off, or rather forming a 'natural wrapping' (Richards 1996a and b). If the ditches at both the Stones of Stenness and the Ring of Brodgar are subsequent to their respective stone circles, they constitute the final demarcation and containment of each site.

The stone circles at the Stones of Stenness and the Ring of Brodgar display similarities and differences. It was noted in Chapter 3 that the monoliths at the Stones of Stenness are of different lithologies, but the circle (apart from Stone 12) is regularly set and generally the stones are well bedded in deep sockets. Like the Stones of Stenness, but on a greater magnitude, the stone circle at Brodgar comprises at least seven different lithologies. As Barrett notes,

'architecture is a material technology enabling the regionalization of a place to emerge through practice' (1994, 18). If the recognizable lithological differences manifested in the juxtaposition of monoliths can be said to act as material citations (A. Jones 2007, 182), or material metaphors for different places and peoples, the importance of their gathering within the stone circle transcends social microcosm (Richards 1996b). This is because through the performance of construction, such material metaphors 'revitalize and empower… connect things together, establish and re-establish … a sense of wholeness and the relatedness of things' (Tilley 1999, 10). Hence, the variant lithologies of the monoliths and their juxtaposition within the Ring of Brodgar attempt to resolve the paradoxical nature of village or rather house-societies (see Chapter 3). It could be argued that through the erection of the stone circle we see a tangible materialization of imagined communities and an ordering of their underlying social relations. Here it is worth recalling the claimed *communitas* of pilgrimage and ritual gathering (*e.g.* Turner and Turner 1978).

Overall, the erection of monoliths may well have been piecemeal, and can perhaps be best described as an ongoing project. Nonetheless, there can be little doubt of the strategic and planned nature of its architecture (see Whittle 2006, 21–2). Accepting the social expediency of the erection of such material metaphors, it is difficult to ignore the overall design and deployment of the monoliths within the circle. Here we encounter the broad fusion of themes woven into the architectural representation of the Ring of Brodgar.

The more closely positioned, broader monoliths set up adjacent to the opposed causeways betray a very definite attempt to enhance the grandeur of the circle and manipulate the experience of those entering and exiting the monument. The fairly haphazard manner of monolith erection, not only provides an important contrast with the Stones of Stenness but also indicates both expediency in architecture and lack of concern with longevity.

The Brodgar ditch is segmented. This indicates a series of discrete events, as opposed to a unified general effort, combined to create its immense perimeter. However, this need not be the case. It has long been suggested that the digging of early Neolithic causewayed enclosures represents 'gang construction', that is that different gangs or social groups were responsible for the different ditch sections (*e.g.* Mercer 1980, 36; Startin and Bradley 1981). The assumption here was that social identity was being articulated through spatial definition, with specific social groups being responsible for particular ditch sections. Regardless of the applicability of this idea to causewayed enclosures, the important point to emphasise is that the segmentation observed in the Brodgar ditch may have related to the social organization of labour as a manifestation of social identity. As noted earlier, Renfrew (1979, 213) estimated that at least a staggering 80,000 person/hours were employed in digging the Brodgar ditch. At first glance, it is hard to reconcile this input of labour with the seemingly hasty erection of monoliths. However, during the excavation of Trench A, it was noticed that there was a correspondence between the position of Stone 3 and the ditch

segment being excavated. Accepting the small scale of the excavated section in comparison to the massive size of the Brodgar ditch, it is suggested that the differential organization of labour as represented by segmented construction compares with the material citation embodied in different lithologies of the stone circle. Under such circumstances, both the distributed practices embedded in the construction of the stone circle and the situated practices of segmented ditch construction fuse to 'provide a basis by means of which communities create and understand their collective experience' (Tilley 1999, 10).

It is noticeable, however, that the two components constituting the Ring of Brodgar, the stone circle and surrounding ditch, embodied entirely different practices through space and time. The former involved more dispersed practices (cf. McFadyen 2008), in the quarrying and transportation of stones, while the latter can be characterized as the more situated practices of the digging of the ditch. But are these constructional practices commensurate or paradoxical?

Given the absence of evidence for the existence of an external bank surrounding the Stones of Stenness or the Ring of Brodgar, there would be no restriction of visual access into the centre of either monument (see Bradley 1998a, 124–8). At the Stones of Stenness, the large house was effectively opened and activities surrounding the central hearth that were previously obscured revealed as visual spectacles. Nonetheless, any suggestion that there is a general tendency towards more public-focussed ritual practices in late Neolithic Orkney is to some degree flawed (cf. Bradley 1998a, 109–15). Instead, there seems to be a greater emphasis on the wrapping of places in very different ways. Obviously, the means of enclosure is contingent on requirement; consequently, a substantial wall surrounds the inner building at Barnhouse Structure 8. No one could have seen or heard what occurred inside this building, and entry was restricted to a low narrow 'side-door' (Fig. 3.11).

Even Barnhouse Structure 8 is eclipsed by the mechanism of wrapping the passage grave at Maeshowe (Fig. 3.25). Here, an unbroken surrounding ditch or membrane of water and wall physically divided the monument from the world of everyday practices. Such enclosure is also internalised and manifest within the construction of the mound itself; as Kilbride Jones recognized, 'it could be argued, of course, that the Maeshowe mound contains three concentric walls. But they are not revetment walls because they support nothing… All three walls are so battered, *i.e.* leaning towards the centre of the mound, that they could never have stood without support, and that support is forthcoming from the mound itself. It is obvious they served no practical purpose, so perhaps they were symbolic' (Kilbride Jones 1973, 78). Interestingly, Robin (2008) observes a similar occurrence in the structure of the mound at Newgrange passage grave. Perhaps crucial in understanding the different sites and monuments comprising the extraordinary Stenness – Brodgar landscape is to recognize that, through the materials and architecture of wrapping they all participate in a process involving the strategic concealment and revelation of entities and places.

In bringing this detailed re-evaluation of the two great Orcadian stone circles to a conclusion, the main point to emerge is just how different these two monuments are. Putting aside differences in scale and date of construction for a moment, the places that the stone circle architecture served to envelope and monumentalise appear to have been of a completely different nature and possessed very different histories. Any assumption of equivalence or analogue between the two (*e.g.* Renfrew 1979, 39) is suggested to be a misplaced acceptance of typological reasoning. The common denominator between the two seems to be less about final morphology, and more about transformational practice.

Finally, at both the Stones of Stenness and the Ring of Brodgar stone circles, the physical form of wrapping employed different materials arranged in a different manner, referencing different qualities, associations and memories. However, in each case it was the deployment of labour that realized these different qualities through a variety of practices involving s*ubstantial numbers of people working in different places*. Hence, the linkage between both monuments is that they embodied both situated and displaced practices. In the following chapter, another facet of the construction of the Orcadian stone circles will be explored – the labour and risk involved in the quarrying of large monoliths and their transportation.

CHAPTER 5

Monumental Risk: megalithic quarrying at Staneyhill and Vestra Fiold, Mainland, Orkney

Colin Richards, John Brown, Siân Jones, Allan Hall and Tom Muir

The risk of megalithic construction

In the previous chapters, an architectural paradox was identified as existing at both the Stones of Stenness and the Ring of Brodgar. Specifically, it is difficult to reconcile the immense amount of labour expended in creating the rock-cut ditches, with the incomplete circle at the former and haphazard or hasty erection of individual monoliths at the latter. The idea of wrapping is again helpful here. It has been argued that the monumental composition of both the Stones of Stenness and the Ring of Brodgar constitutes a series of different methods of wrapping entirely different places. Consequently, beyond the supposed coherence of the 'monument', each mode of enclosure is in some ways incommensurate. This is not simply a question of morphology, but one of practice and substance.

In order to unravel this paradox it is necessary to understand that the construction of the stone circles was as much a social process as a practical endeavour. The subordination of form in favour of process is, as Andrew Jones (2007, 174) notes in relation to passage grave art, essential in situating practice in context. As we will see, with regard to stone circle construction, such practices emanated web-like through time and space away from the monument itself. Unfortunately, it is this fluidity of the construction process, in conjunction with the intangibility of prehistoric building practices, which has always appeared resistant to archaeological enquiry. As Atkinson recognised, in discussing the building of Stonehenge:

> In histories of technology the subject of early engineering is usually discussed mainly with reference to the achievements of the literate … the contemporary or even earlier feats of our own more barbarous ancestors in the west, in their way no less remarkable, have been passed over largely in silence, or at best with a brief reference to Stonehenge. There are, of course, good reasons for this disparity of treatment

> … in Europe we are compelled to infer the processes from their end products. The reliability of such inference is not increased by the virtual absence of surviving specimens of tools and equipment made from perishable organic materials, and particularly from timber. Moreover, it is obvious that some engineering operations, such as the movement of heavy stones, will leave few traces for the archaeologist to identify and interpret
>
> (1961, 292).

It is easy to understand the frustration expressed by Atkinson with regard to the absence of evidence for megalithic construction. But is he correct in relegating the evidence and interpretation of monumental construction to a lower order of inference than the 'completed' monuments themselves? Perhaps the question can be reformulated to ask whether understandings of a monument can actually be divorced from the social processes embedded in its construction?

For Aubrey Burl (1999), size is not necessarily a definitional characteristic of the Great Stone Circles. Nonetheless, the majority of stone circles, which are characterized as 'great', are actually composed of substantial monoliths. Similarly, although a number of features make stone circles attractive monuments to visit, frequently it is scale that tends to impress, where the sheer sizes of the stones overwhelm the visitor. If magnitude is a primary index of importance or 'greatness' in both the public imagination and archaeological discourse, then an interesting question mark hangs over the significance of megalithic architecture in a Neolithic context. As must surely have been intended, the size of the stones clearly affects perception of the monument. Even today, commonly asked questions regarding the weight of the stones frequently result in answers of considerable overestimation. Moreover, an awareness of weight and mass generates musings of how such large and heavy stones could have been obtained and moved. Thus, appreciation of a stone circle is inextricably linked to construction, particularly themes of intention and achievement; two issues which form the main strands of this chapter. Construction, in the case of stone circles, was undoubtedly physically demanding and practically challenging. Extending like threads from the stone circle to other places and times, construction fused labour with intention, ingenuity with aesthetics, and identity with materiality.

Essentially, construction is a social performance. Because of its emphasis on the transportation of stones, in many cases the size of which had never been moved before, stone circle construction would ideally have been a highly orchestrated and structured public performance – but not always. Within such performance, not only are stones quarried, dragged and erected, but also social relationships negotiated and reformed. From this it can be seen that in numerous ways the practices involved in building the Orcadian stone circles provided an extremely public arena in which competitive and other social strategies were choreographed. Such strategies were undoubtedly directly linked to status enhancement. This observation resonates with Barrett's claim, that an 'elite did not simply initiate the building of Avebury, Durrington or Stonehenge but was, instead, created out of the realization of those projects' (1994, 29).

Nonetheless, there remains a central question concerning how people combined 'for the tasks of construction and what motivated them' (Whittle 1997b, 165).

The stone circle is an interesting example of a prehistoric monument where its realization rests on the ability to fuse the labour of many people for specific and sequential constructional events. The gathering of large numbers of people together to haul a large stone is necessarily a lavish and demanding public occasion. To provide the material conditions under which many people can combine and labour together requires a substantial period of organization and accruement of resources. These resources not only may have taken many years to accrue but also involved the work of numerous people. Such a reliance on others to successfully accomplish a building project brings with it a series of uncertainties and risks.

Today we live in a world of uncertainties. According to Giddens (1991), risk, as an appreciation of the direct consequence of human action, is a defining quality of high modernity. We truly live within a risk society (Beck 1992). In this vein it is hardly surprising that a necessary and essential quality of becoming, for instance, a 'Mountain Leader' is to 'identify and manage risk' (MLTUK 2006, 11). But an appreciation of risk is not restricted to such extreme endeavours, nor do we need to lead groups of people up mountains in order to identify and appreciate risk. Virtually all areas of contemporary life appear to incorporate the demands of confronting and containing risk. In some instances, this is formalized through the preparation of risk assessments, the idea being that through such assessments we become more aware of possible hazards and can take precautions to alleviate them. The central premise is that we understand unexpected eventualities and calamities in terms of our own actions – or lack of them.

Of course, risk is multi-faceted assuming many faces in everyday life. Being aware of risks supposedly helps us negotiate life more safely. Through risk analysis and assessment we are able to make informed decisions that avoid, or at least acknowledge, the potential dangers that threaten our lives and well-being. Surprisingly, this reasoning appears flawed in practice. When considering the appreciation of risk in everyday life, we find for instance that although someone may have stopped drinking alcohol, seeing it as a potential danger to their overall health and survival, they will not think twice about taking to the road in a car or on a bicycle. Of course, the possibility of death or serious injury is appreciably higher on the roads, but this risk is somehow absolved. The final conclusion must be that to a large degree risk is socially constituted and our perception of the dangers associated with different practices are expedient and do not necessarily concur with any objective measure of danger. This observation, or rather a lack of it, is suggested to be a weakness of Beck's (1992) characterization of risk society as no distinction is made 'between risks as hazards and the perception of risk' (Vera-Sanso 2000, 110); the objective-subjective distinction which forms a key dualism in Mary Douglas' understanding of risk (1992; Douglas and Wildavsky 1982, 6).

A major aspect of daily life is the potential rewards to be gained by risk-taking. In the face of strategies orientated towards social advancement, we recognise there are big risks involved but may be prepared to accept them. In such situations there remains a personal awareness of the uncertainties involved, often resulting in agitation and nervousness. This is because we are effectively gambling with our social position, integrity and reputation, and the outcome is by definition uncertain. Taking an exam is a good example, which will be familiar to many. The decision to sit a test of any form is generally predicated on a desire to achieve an elevated social position. To pass the exam will inevitably result in the achievement of this aim in one form or another. Alternatively, to fail is not just disappointing but equates with inadequacy and may effect an actual demotion in status and self-esteem. One may be seen as a dunce. Why such a disastrous course of action was embarked upon is a question that so many people ask of themselves when they fail to achieve the desired goal. To fail in such a public arena may also prove to be more than mildly humiliating. Whether real or imagined, it may destroy the ability to tread the same path again, effectively curtailing any further opportunities of social advancement. Yet, apparently many are prepared to take that step because ultimately risk reaps reward (Zaloom 2004).

With failure comes blame, a familiar accompaniment to risk (Douglas 1992). Blame is an interesting phenomenon in that its attribution cannot be disentangled from the social context in which the risk was taken (Vera-Sanso 2000, 113). Actually, the attribution of blame, and an altered understanding of risk, is central to the differences between high modernity and earlier social forms as envisaged by Giddens (1991). Our growing concern with the concept of risk is apparently grounded in modernity and the rise of technological forces that threaten the very existence of society, even the planet (Douglas and Wildavsky 1982; Beck 1992, 21).

With blame goes shame, and for those unfortunate people who are blamed for some misfortune comes a coupling with social castigation and in extreme cases expulsion. Here we are dealing with concepts of public honour and reputation. This is another manifestation of risk that would seem to transcend historical context. In what Vera-Sanso (2000, 109–10) implies to be naïve and inadequate, Beck suggests that risk perception is negligible in what is described as 'scarcity societies': third world or 'traditional' societies in which 'the distribution of socially produced wealth and related conflicts occupy the foreground' (1992, 20). It is not so much that Beck considers risk to be absent in traditional societies; rather it is qualitatively different in being 'personalized' (1992, 21), and by implication apparently of less consequence. However, in asserting such sweeping generalizations and characterization of 'non-western' societies (*e.g.* Said 1978), a necessary critical or reflexive edge to this area of Beck's analysis is lacking (Vera-Sanso 2000, 110).

One further aspect of the notion of risk raises a fundamental question concerning the ontological basis of third millennium cal BC Orcadian society. For instance, how were the many uncertainties of Neolithic life such as seafaring,

childbirth, subsistence and so forth, characterized? An appreciation of risk, and its alleviation, clearly depends on the manner in which the future is perceived. In particular, any attempt to limit risk surely betrays an attempt to bring the future under the influence of the present (Zaloom 2004, 366). The main point of contention therefore is whether such perception of the future and the ability to control or influence it is an exclusive condition of modernity as Giddens (1990), contends or can it be present in other social forms? We suggest it may not be an exclusive characteristic of high modernity but can be manifest in a range of different social and ideological formations, particularly those that give equal credence to the future as they do the past.

The questions posed here revolve around the degree to which the concept of risk was understood in the context of Neolithic monumentality, and how its comprehension governed the dynamics of the construction process. Moreover, were the risks attached to the process of construction really 'personalized' and of little consequence as Beck implies, or were they a strong feature in the practices surrounding the building of stone circles and subsequent understandings of such monumentality? In other words, to what extent did third millennium cal BC societies recognize that they were taking extraordinary risks when embarking on stone circle construction?

The Staneyhill and Houton sources

Since the social issues surrounding quarrying and transportation of large monoliths formed a major theme of the Great Stone Circle Project (Richards 2005d, 16–21), locating and investigating 'megalithic' quarries was an essential component of the Orkney research. As discussed in Chapters 3 and 4, following characterization of the lithologies present at the Stones of Stenness and the Ring of Brodgar, five types of sandstone were present at the former (Collins 1976), and seven at the latter. A crucial question concerning this variety of lithologies seemed to be whether the stones were all derived from a single location, for example, a cliff face where many strata would be exposed and available for extraction. Conversely, could each type of sandstone be derived from a discrete source? In short, were a number of quarries, and associated social groups, providing monoliths for the two Orcadian stone circles?

A quest for the location of potential quarries for the monoliths present at Stenness and Brodgar has resulted in some curious suggestions, not least that they were derived from the rock-cut ditches surrounding the two circles (*e.g.* Collins 1976, 45; Burl 1979, 117; Thorpe and Thorpe 1991, 69). Leaving aside the enormous practical difficulties of extracting 6–7 m monoliths from the relatively narrow rock-cut ditches, the close fissure pattern of the sandstone bedding planes in both the Stenness and Brodgar ditches prohibits the occurrence of appropriately sized slabs. Other sources for the stones had been suggested at the lochs of Stenness (Collins 1976, 44–5) and Clumly (Chalmers 2010), and Vestra Fiold, Sandwick (Wilson *et al.* 1935, 56; RCAMS 1946, 269; Collins 1976, 45).

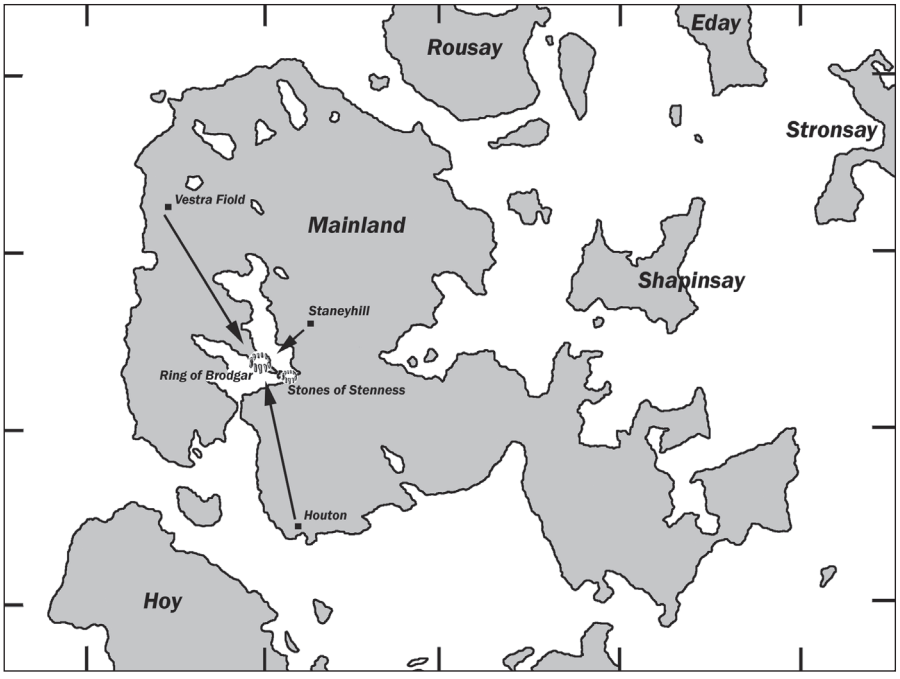


FIGURE 5.1. Map showing the location of three recognized sources of stones at the Ring of Brodgar.

The presence at the Ring of Brodgar of fragments (Stone F4; Fig. 4.16) of yellow Eday flagstone indicated a source at Houton, Orphir (Fig. 5.1), where this distinctive sandstone is present. Unfortunately, the outcropping rock at Houton has been considerably truncated due to it being the main terminal of the ferry to Hoy. Survey revealed no evidence for Neolithic quarrying of monoliths.

Overlooking the Stenness – Brodgar area to the northeast of the Loch of Harray is high ground known as Staneyhill. Here, a fine standing stone is positioned a few metres back from the rock-face of a disused quarry (Fig. 5.2). Surprisingly, a geological examination of the monolith revealed that it was not quarried from this outcrop; the pronounced load-casting within the strata of the standing stone is both distinctive and alien to the adjacent outcrop.

Of equal surprise was that the fine-grained blonde sandstone revealed in the Staneyhill quarry matched the lithology of the large blocks present within the central chamber of Maeshowe passage grave, which lies 3km to the southwest (Fig 5.3). Moreover, the bedding plain in the quarry is comparatively thick with vertical fissures, angled across the bed, which produces thick, angular, wedge-shaped blocks. Vertical joint spacing was measured along the exposed quarry face which generally varied between 0.27 m–0.86 m. Along the eastern stretch of the revealed rock-face joint spacing up to 4.60 m was observed. The smaller joint spacing compares well with the large blocks forming the lower courses beneath the rear and side chambers of Maeshowe (Fig 5.3). Of equal importance is the shape of the blocks available at Staneyhill. The fault lines are not parallel, but angular thereby providing blocks of stone of wedge shape. Again, this characteristic is present in the shape of the Maeshowe blocks, where

FIGURE 5.2. Staneyhill standing stone and adjacent quarry-face.
COLIN RICHARDS

FIGURE 5.3. Detail of Maeshowe interior masonry.
COLIN RICHARDS

the angled fault lines have been carefully filled with smaller stones to create the magnificent masonry of the inner chamber.

About 200 m north of the Staneyhill standing stone, the ground becomes uneven and begins to drop away. Among the humps and hollows, a shallow valley runs downslope to the northeast. Along its length a series of sandstone slabs are visible projecting from its sides (Figs 5.4 and 5.5). Although no excavation was undertaken along the valley, visual inspection of the geological characteristics of the outcropping sandstone revealed it to be markedly different from the fine-grained, homogeneous, blocky strata present within the disused quarry. Along the valley, the seams separating strata were thinner (giving slabs of 30–40 cm thickness)

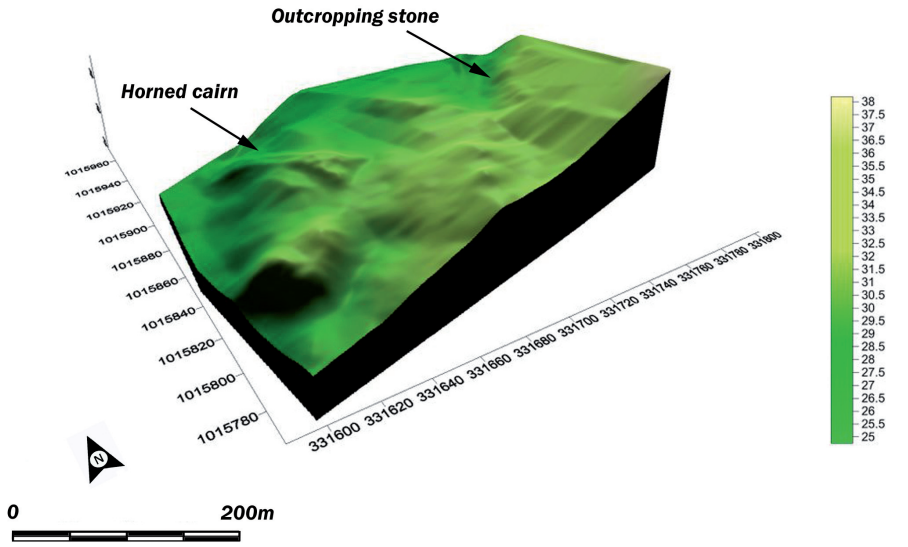


FIGURE 5.4. Topographic map of the Staneyhill valley adjacent to the horned cairn.
TRICIA EDWARDS

FIGURE 5.5. Looking up the Staneyhill valley from the north showing outcropping strata.
COLIN RICHARDS

and the strata displayed pronounced load-casts and rippling. This lithology mirrors both the standing stone adjacent to the quarry and the distinctively shaped Stone 16 at the Ring of Brodgar (Fig. 4.17). Adjacent to the valley lie the denuded remains of Staney Hill chambered cairn, the largest horned cairn discovered in Orkney (Davidson and Henshall 1989, 182–3). Examination of the exposed orthostats of the long horned cairn revealed them to be of similar lithology to that exposed in the outcropping along the valley.

Staneyhill has traditionally been recognized as a location of stone outcropping, hence the name. Unfortunately, more recent extraction of stone for building purposes at the quarry exhibiting the Maeshowe lithology has almost certainly

removed traces of any Neolithic exploitation. However, the outcropping strata along the northern valley, adjacent to the horned cairn, is less disturbed by recent quarrying. What is interesting is that Staneyhill appears to show a prolonged history of exploitation during the Neolithic period. For example, typologically, the long horned cairn should date to the mid-fourth millennium cal BC (Henshall 2004, 85). Although undated, Maeshowe passage grave is considered to be have been constructed at the end of the fourth millennium cal BC (Challands *et al.* 2005), while the Ring of Brodgar dates to the first half of the third millennium cal BC. Of particular significance is the observation that two discrete sources of different sandstone lithology provided monoliths for the interior of Maeshowe and the Ring of Brodgar respectively. Hence, at Staneyhill, specific outcrops were exploited for different monuments.

The Vestra Fiold megalithic quarry

Nestling in the sand dunes of Skaill Bay on the west coast of Mainland, Orkney, is the famous late Neolithic village of Skara Brae (Fig. 3.21). The village was founded *c.*3000 cal BC at a similar time to Barnhouse, but appears to be inhabited through the third millennium BC. Although vistas from the village to the south are restricted, to the north the hill of Vestra Fiold forms the horizon. The false-crested Vestra Fiold long cairn, discussed in the following chapter, is hardly visible when viewed from the direction of Skara Brae. But as Vestra Fiold is approached from the south a narrow outcrop of rock running diagonally across the slope comes into view (Fig. 5.6). The outcropping is exceptional although not visually striking (Fig. 5.7). Closer examination reveals the bedding plane to be parallel to the exposed rock-face thereby providing the possibility of prizing lengthy slabs of sandstone away from the exposure. An additional factor allowing slabs to be extracted from this outcrop is that the lateral fault lines are substantial distances apart. This is imperative for the

FIGURE 5.6. Outcropping stone running up the southern slope of Vestra Fiold.
COLIN RICHARDS

FIGURE 5.7. Detail of stratum exploited for monoliths at Vestra Fiold.
COLIN RICHARDS

quarrying of large monoliths because it provides stones up to 6 m in length. Furthermore, the cross fault lines are consistently angled between 45°–60° to the quarry face producing the characteristic angled ends which define the Orcadian Neolithic standing stones. Such qualities in sandstone bedding planes are relatively uncommon. An examination of old quarries across west Mainland, Orkney, showed that generally the cross fault lines are far more closely spaced, which obviously produce smaller lengths that are more desirable for building stone. Consequently, the outcropping at Vestra Fiold was ideally suited to the requirements of quarrying Neolithic stone monoliths.

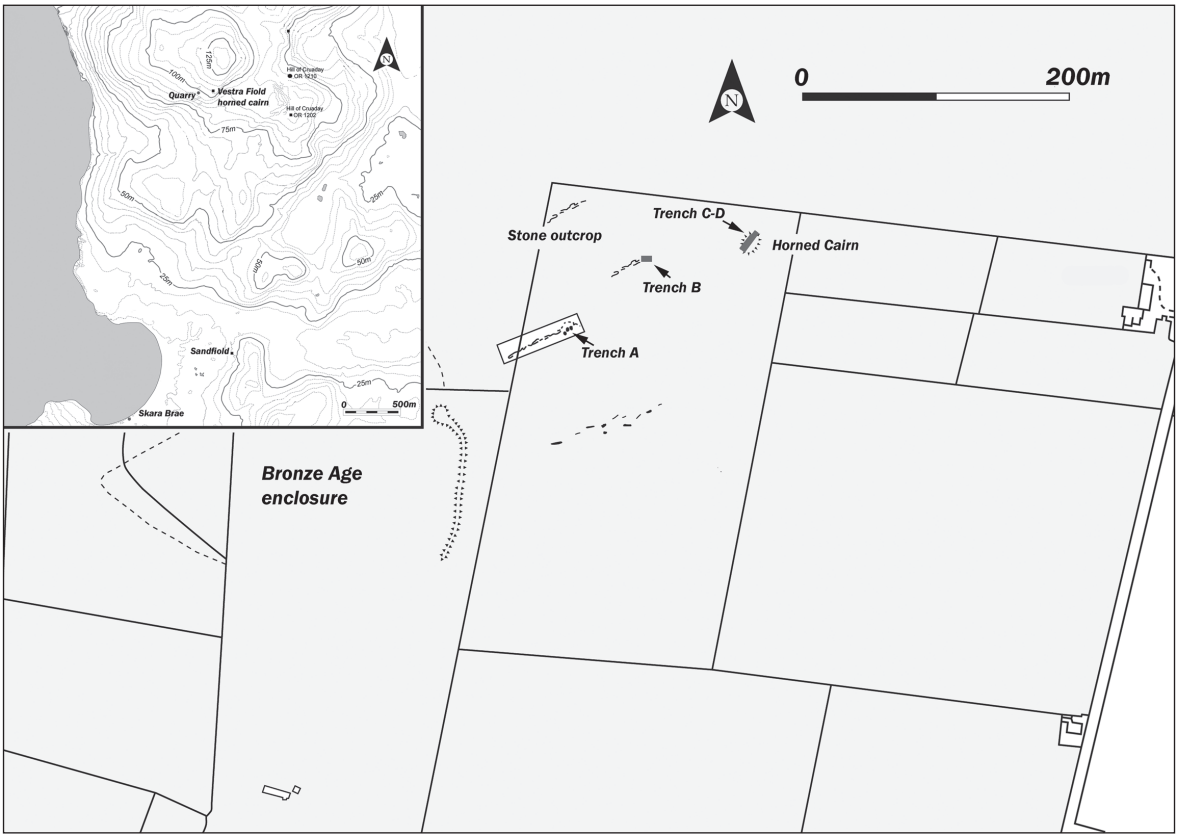
Actually, the outcrop at Vestra Fiold was first identified as a potential source of the standing stones at Stenness and Brodgar during the nineteenth century (Marwick n.d.). After a brief visit in 1928, the Royal Commission undertook the first recording of the 'ancient quarry' at Vestra Fiold. They identified two groups of prone monoliths, a higher northern group, and a lower southwestern group which contained three long stones, one of which appeared 'to have been roughly wedged up as if in readiness for removal' (RCAMS 1946, 269).

Together with Staneyhill, after the geological characterization of the Ring of Brodgar and the Stones of Stenness, Vestra Fiold was investigated as a potential source for some of the monoliths (Fig. 5.8). At Vestra Fiold a potential match for Brodgar stone groups 1 and 2 (Chapter 4), and the Stones of Stenness group 2 (Chapter 3), was confirmed by Allan Hall. In order to investigate the quarry further, three seasons of survey and excavation were conducted between 2001–3. From initial survey, two areas of the quarry were identified for further examination by excavation. Trench A was positioned in the Royal Commission's southern downslope group where two large monoliths lay prone adjacent to a semicircular depression in the hillside. The goal here was to obtain evidence for the movement and manoeuvre of the monoliths. In contrast, Trench B was located at the higher, northeastern section of the outcropping where monoliths appeared to break through the ground surface. This area was

selected to investigate methods of quarrying and may equate to the northern group of stones identified by the Royal Commission, although the stones they describe are no longer visible (Fig. 5.9). Geophysical survey (resistivity and gradiometer) was undertaken within the area of outcropping but no convincing archaeological anomalies were revealed.

right: FIGURE 5.8. Monoliths remaining on the surface at the quarry. COLIN RICHARDS

below: FIGURE 5.9. Vestra Field: local features and trench locations.



The precise location of Trench B was selected by the presence of a large broken sandstone monolith that projected through the turf. A trench measuring 9 m × 6 m was opened and after the removal of turf and topsoil the outcropping rock became clearly visible. Surprisingly, the expected regular strata of sandstone running back into the hillside in continuous beds were absent. Instead, multiple sections of outcropping rock, running roughly parallel on an east – west axis, jutted through the ground surface at a *c.*10° angle (Figs 5.10 and 5.11).

At this higher point on the hillside it was clear that the lower sandstone strata had been exploited for the extraction of monoliths (Table 5.1). In the northern

FIGURE 5.10. View of Trench B showing pattern of outcropping and broken monolith.
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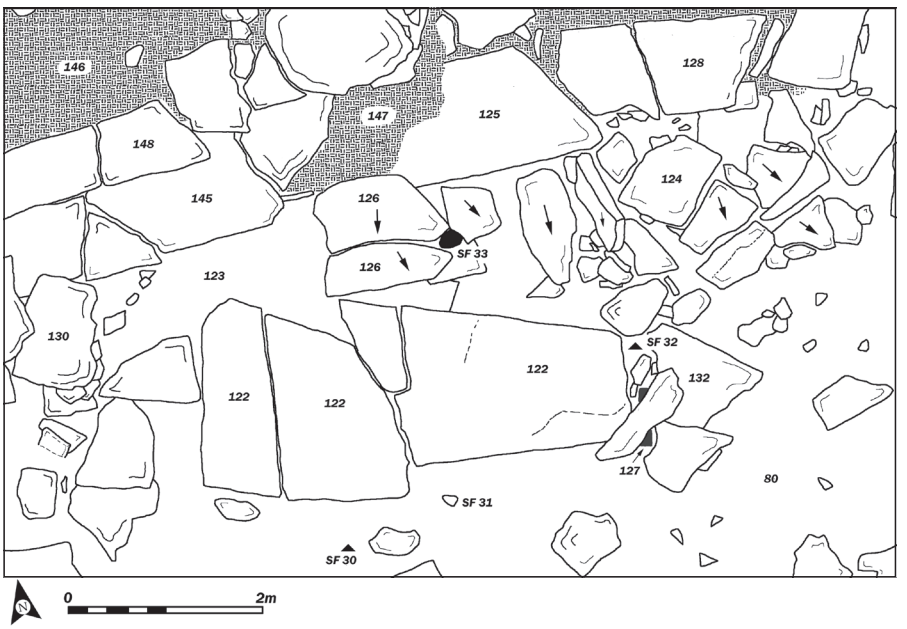

FIGURE 5.11. Plan of Trench B.

area of the trench the results of quarrying were clear to see. Broken stones derived from the overlying strata were spread haphazardly across the central-eastern area of the trench where they had been prised off the northern section of outcropping in order to reveal the lower bed. The glacial till which was sandwiched between the stone strata had also been stripped away and thrown downslope mixing with soil among the broken stones. A large broken hammerstone (SF 33) was recovered from this material (Fig. 5.25). The east section of the lower stone strata had closely spaced fault lines making it unviable for further working, but the adjacent stone section had an angled fracture making it ideally proportioned for a standing stone. This potential monolith had been partially cleared of overlying stone debris and glacial till (Fig. 5.10). To gain access to the glacial till a further section of intermediate stone had been pushed downslope where it lay broken and resting against the side of the lower bed (Fig. 5.12). But at this point quarrying appears to have ceased in this area.

A thin old land surface was present running across the southern area of the trench. Two flint flakes, one retouched (SFs 30 and 32) and a broken hammerstone (SF 31) were recovered from this layer (Fig. 5.24).

A possible reason that the northern section of outcropping strata had been partially exposed lies in the unfortunate results of attempting to quarry and move a massive monolith from the front of the outcrop. Originally, the monolith would have measured *c.*5.2 m in length, 2 m broad at its widest point near the base, and 0.4 m thick. Such a massive block of stone would have weighed in the region of

Context	Description
[148]	Upper strata of curved and deformed sandstone – frequent fractures and heavily load casting, *c.*25–30 cm thick.
[146]	Layer of glacial till.
[145]	Intermediate strata of more regular finer grained sandstone, *c.*0.2 m thick.
[147]	Layer of glacial till.
[125]	Lower strata of regular parallel sided fine grained sandstone with angular end fractures, *c.*0.3–0.38 m thick.

TABLE 5.1. Geological stratigraphy in Trench B at Vestra Fiold.

FIGURE 5.12. Broken piece of intermediate strata stone thrown down to gain access to the lower bed. In the background a longer section with an angled fracture (typical of Orcadian standing stones) can be seen partially cleared of glacial till.
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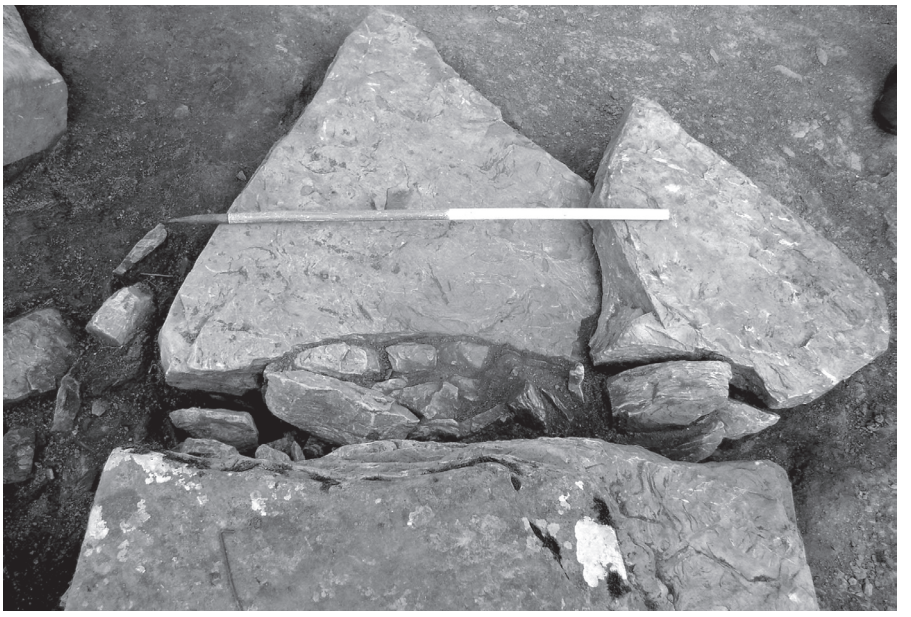

FIGURE 5.13. The broken remains of the angled top of the monolith adjacent to the supporting group of uprights.
COLIN RICHARDS

9 tonnes. During the process of prizing the monolith away from the parent rock a series of fault lines, barely visible to the eye, fractured and the monolith broke into at least four pieces (Figs 5.10 and 5.11). Simultaneously, a fault line at the base of the bedding plane split open leaving part of the lower surface still partially attached to the main strata. From the resulting gap between the bedrock and the fractured section of 'monolith' it is possible to gauge that the stone had only been moved approximately 0.3 m before it began to fracture and break apart.

Not only had the main body of the monolith split into four pieces but also its angled top section, presumably under the stress of the breaking stone, also sheared completely off and subsequently split into several pieces along the lines of lamination. The point of fracture here had been where its weight was supported by a series of packed upright stones running at right angles to the monolith (Fig. 5.13). As we will see, a similar arrangement of supporting uprights had been discovered at the southern end of the displaced monolith excavated further down the hillside in 2002.

Subsequent to the fracture of the large monolith, attempts were clearly made to break it up for removal, presumably to allow access to the rear strata. The method employed to dismantle the monolith involved initially splitting it longitudinally along a central lamination. As the monolith was already in four pieces the additional splitting allowed smaller sections to be removed with relative ease. Once wedges had opened the lamination, a small supporting stone was inserted to prop up the central section. Again, this process of dismantling the monolith seems to have been abandoned leaving this segment of the stone elevated (Fig. 5.14).

The second area of the quarry selected for excavation (Trench A) was *c.*75 m downslope of Trench B where several large slabs lay on the surface adjacent to a semicircular depression in the hillside (Fig. 5.15). These stones were identifiable

FIGURE 5.14. Middle section of the broken monolith split along a central lamination and elevated by wedge stone.
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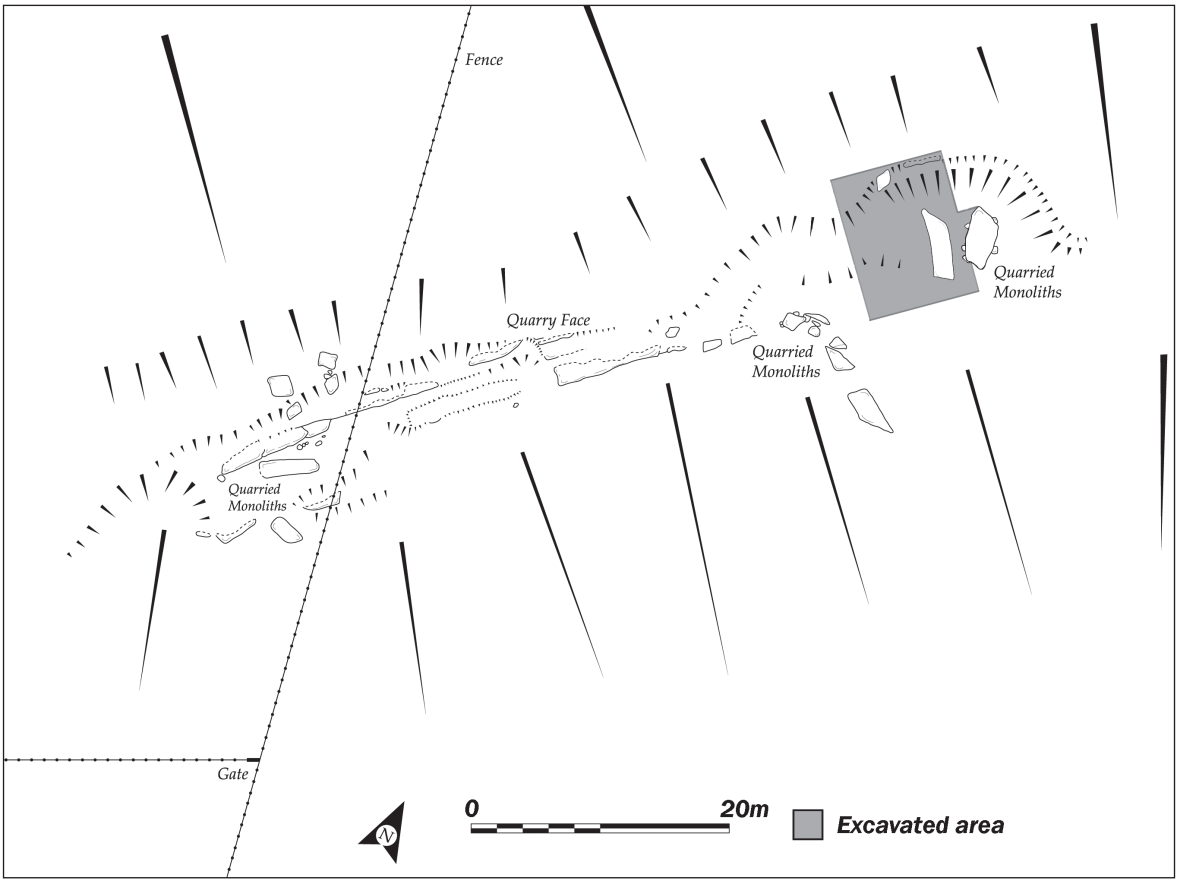


FIGURE 5.15. Location of Trench A among 'southerly group' of monoliths.

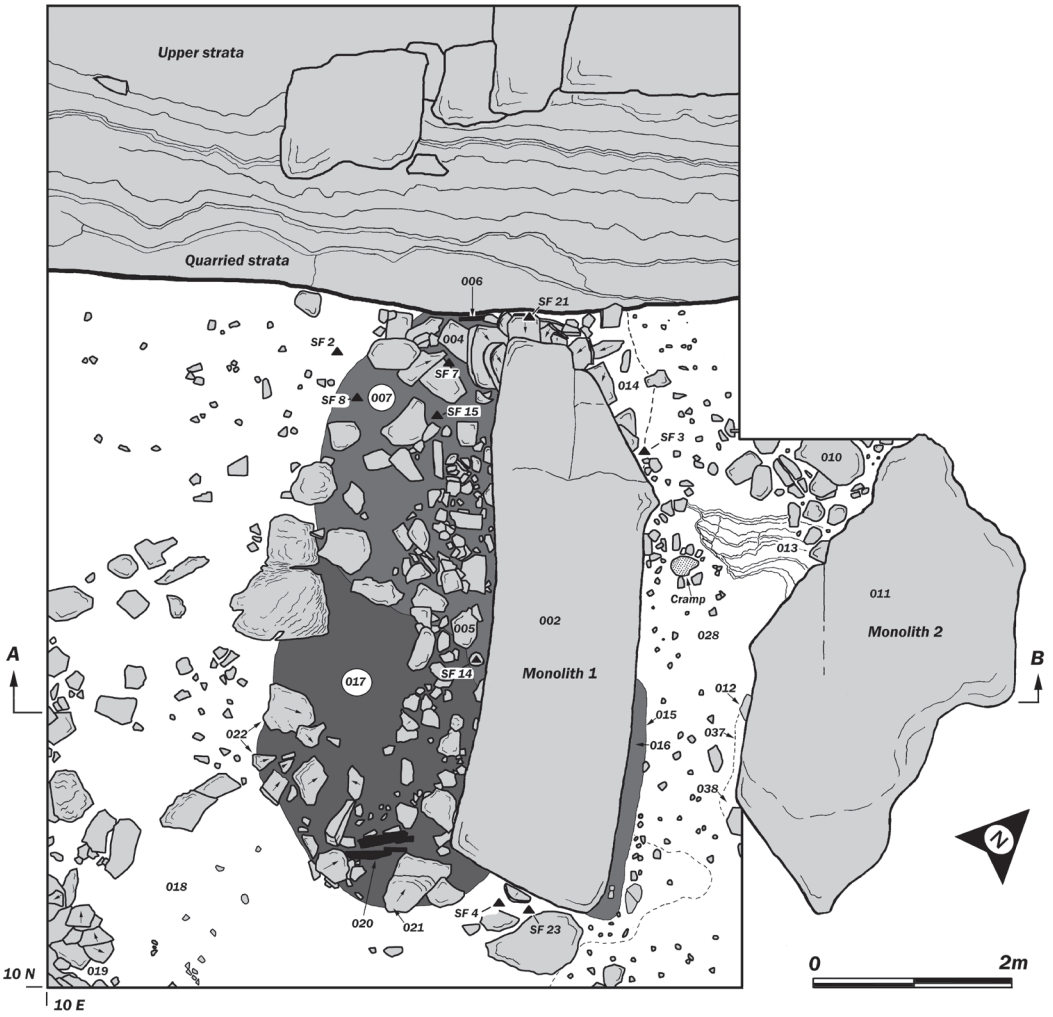
as the Royal Commission's 'southerly group' from a published photograph of the site in the Orkney Inventory (RCAMS 1946, fig. 397). Here, two groups of monoliths are positioned adjacent to one another. The easterly group comprises two massive monoliths, one of which is clearly the stone recognized by the Royal Commission 'to have been roughly wedged up as if in readiness for removal' (RCAMS 1946, 269).

The largest stone of the western group has the characteristic angled top of the Stenness and Brodgar stones but is much shorter in length, *c*.2–3 m. Here an account by George Marwick from the late nineteenth century is of particular interest in providing a description of how local farm-workers went up to the quarry at Vestra Fiold in order to obtain a large stone for Skaill Farm. In particular, he describes how they broke about eight foot off the base of a monolith that strongly resembled the Watchstone and carted it back down the hill (Marwick n.d.). This account may well provide the explanation for the short length of the angled stone observed during fieldwork. A further group of slabs, apparently unrecorded by the Royal Commission, were found lying at the extreme southwestern end of the outcrop. Here a number of stones have been detached from the rock-face and lie in various positions on the down-slope.

Measuring 7 m × 10 m, Trench A was positioned to incorporate the two prone monoliths comprising part of the eastern group (Fig. 5.15). In the northern area of the trench the rock-face was partially obscured by a layer of decayed sandstone which covered a series of highly laminated sandstone beds. Clearly these strata had been quarried back as they were irregular in appearance and some of the upper bedding of stone had slumped down where undercut. At the base of the revealed strata was a much harder grey, fine-grained, sandstone bed, which showed no signs of lamination. Our initial reaction was to identify this as the bed from which Monoliths 1 and 2 were derived. But on closer examination it became clear that what appeared to be a working face was actually the result of a geological fault-line. Hence, at this point the hard basal stratum was never actually exploited but all the indications were that the hollow was a product of quarrying back into the hillside. The possibility must remain that an extension of the lower strata, identical to that seen in Trench B, had been entirely quarried away at this point.

Monolith 1 projects at 90 degrees from the rock-face (Fig. 5.16), and in size and shape strongly resembles the standing stones seen today at the Stones of Stenness and the Ring of Brodgar. It measures 5.92 m long, 1.6 m wide and 0.44 m thick. After initial cleaning it became clear that the northern end of the monolith had originally been supported by at least three courses of stone slabs stacked to create a form of stone 'trestle'. This arrangement revealed yet another calamitous event in that the monolith had obviously slipped sideways off its supporting stones, partially crushing them in the process (Fig. 5.17).

Although we were unable to remove the collapsed stonework that was crushed beneath the monolith during excavation, it appeared to have originally been bonded by white-grey clay that ran between the stones. A further measure introduced to ensure stability of the 'trestle' structure was the provision of



above: FIGURE 5.16. Plan of upper deposits in Trench A showing Monoliths 1 and 2.

right: FIGURE 5.17. Detail of the collapsed stone 'trestle' crushed beneath the northern end of the slipped monolith, note the fine-grained lower stratum of the quarry face.
COLIN RICHARDS

FIGURE 5.18. General view showing outline and fill of elongated pit.
COLIN RICHARDS

a small orthostat wedged against the rock face to provide further support. Unfortunately, these precautions were to no avail as the weight of the monolith had obviously destabilized the trestle structure, which promptly collapsed. Slightly to the west of the small orthostat, also adjacent to the rock face, was a second linear slot cut into the natural till. This slot was of similar dimensions to that containing the orthostat and small fragments of stone remained in a vertical position along its eastern edge. This evidence indicates that it too originally contained a stone upright. The outer edge of the slot was ragged and the till was angled backwards consistent with the forceful forward removal of the earlier orthostat.

After revealing the Old Land Surface, from which several worked flints and broken hammer-stones were recovered (Fig. 5.25), a long darker filled feature was observed running the entire length of the monolith on its western side. A number of stone slabs also appeared to angle down, running into the silty-clay fill of the feature, which was clearly a substantial elongated pit (Fig. 5.18).

At the southern end of the elongated pit a dense group of stone blocks surrounded several snapped-off stone orthostats. On further investigation this arrangement was identified as the collapsed remains or a second 'trestle' stone structure (Fig. 5.19). On the eastern side of Monolith 1, the natural bedrock was much higher than the west and a sharp east – west drop in slope, either natural or cut away, occurred beneath the monolith. This slope allowed the monolith to be easily dragged sideways onto its northern and southern 'trestle' supports (Fig. 5.20).

Between the two monoliths a level surface of compact yellow clay had been laid down, possibly to facilitate the lateral movement of the monoliths. Running

FIGURE 5.19. Looking down onto the collapsed supports partially buried in the southern end of elongated pit.
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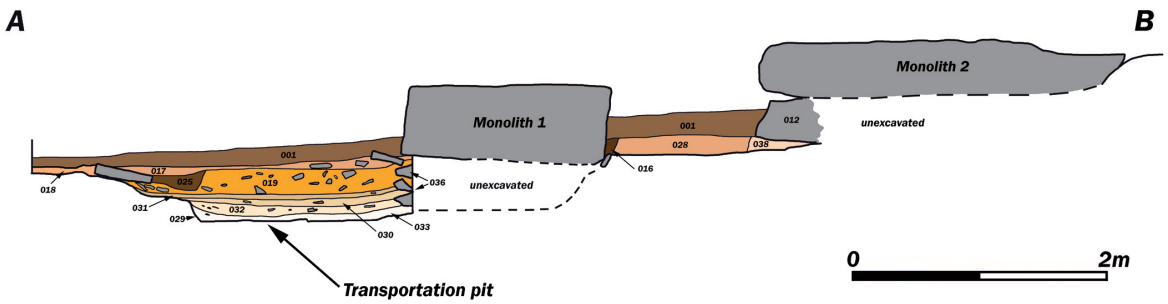

FIGURE 5.20. Southeast-facing section across Monoliths 1 and 2.

adjacent to each monolith were what at first sight appeared to be two linear cuts through the clay. On closer examination the possibility arose that the cuts were negative impressions of some form of stone or wooden structure that had been standing when the compact clay layer had been laid down.

Excavation of the elongated pit revealed it to have silted naturally. At its base was light-grey fine silty clay. Above this layer was a firmer mid-grey silty clay which in turn was overlain by a grey-green silty clay containing fragments of sandstone (Fig 5.20). The silts contained no humic material suggesting that any turf-line had been removed prior to operations, presumably to facilitate manoeuvring the large monoliths.

The excavation trench ran up to the western edge of the Monolith 2, which appeared also to be propped up and levelled by stone supports. This is a more irregular shaped stone, measuring 4.77 m long, 2.59 m wide and 0.37 m thick. Although difficult to see, it seemed as if the higher ground supported the eastern side while the western side was clearly supported by two stone blocks.

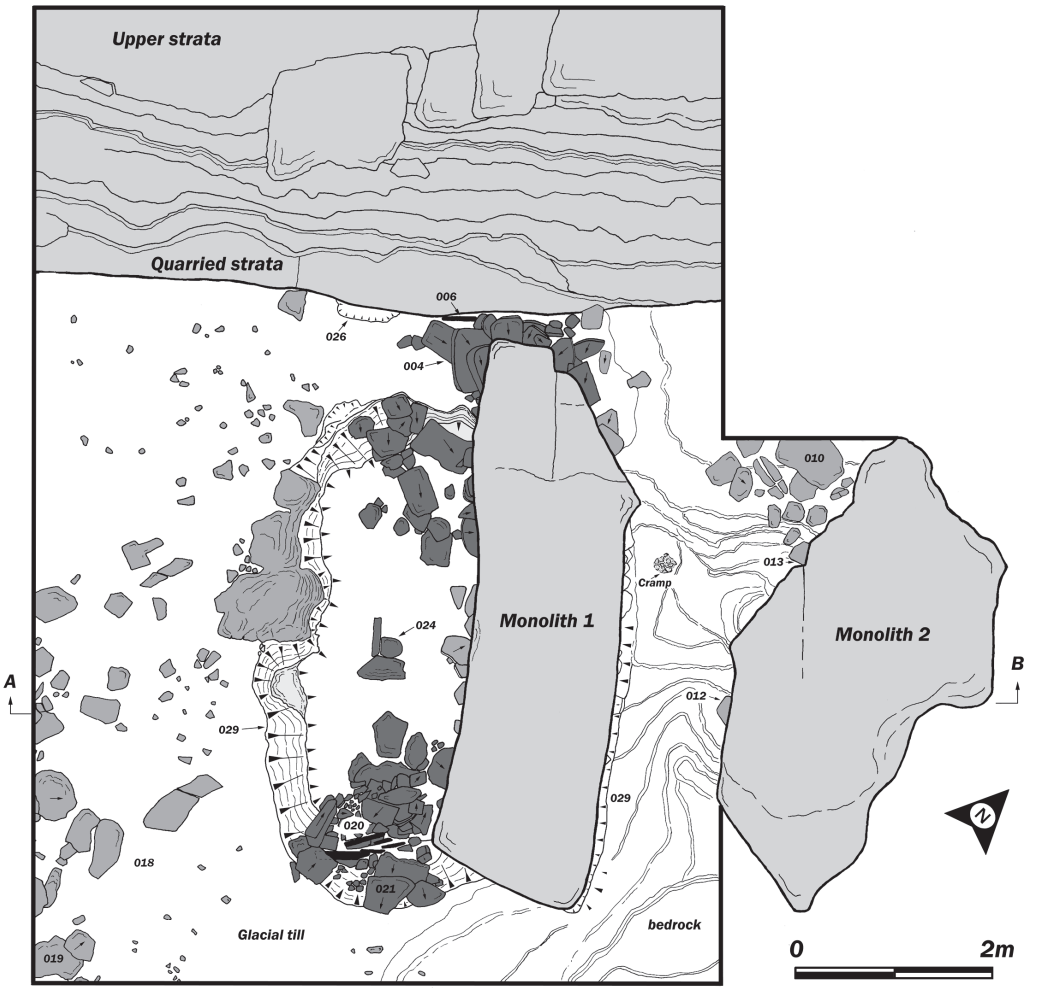

FIGURE 5.21. Plan of Trench A showing the elongated pit fully excavated.

Between the northern ends of the two monoliths a discrete deposit of the burnt slag-like material known as cramp lay on the natural bedrock (see Fleet 1976; Stapleton and Bowman 2005). At first this was thought to be a small hearth but a magnetic susceptibility survey across the trench at this level failed to provide the higher readings indicative of such burning. Consequently, this must be a small deposit of burnt material placed between the two monoliths. Cramp is light in weight and vesicular in texture, and is a residue of large scale burning. In some cases, it appeared to be virtually wedged beneath Monolith 1 on its eastern side and the small deposit of large pieces of cramp was placed on the natural bedrock. Because of this provenance, the suspicion is that its deposition may have been contemporary with the early period of quarrying at Vestra Fiold.

The lumps of cramp recovered at Vestra Fiold are substantial and reminiscent of the large sized pieces encountered at the Stones of Stenness (Fleet 1976, 46–8). Sizeable pieces are also frequently associated with Early Bronze Age cremation deposits. In this context it is interesting that Callander (1936, 444–5) identified

two locations on Mainland where it was found in substantial quantities. The first was around the Bronze Age barrow cemetery just north of the chambered cairn of Bookan and the second was at Vestra Fiold where cramp had been found in such quantity that it was observed to be used as 'copestones' on a garden wall (*ibid.* 445). While the association of cramp with the barrow cemetery is consistent with it being a residue of cremation pyres, its presence at Vestra Fiold is more intriguing especially as it is clearly a residue of substantial burning and high heat. Similar sized pieces to those found at Vestra Fiold were recovered from the central hearth within the Stones of Stenness and a hearth at Barnhouse Odin (Challands *et al.* 2005, 209–10) and have been interpreted as being a residue of large scale feasting (*ibid.*, 223–4). Since no sign of *in situ* burning was detected at Vestra Fiold it is safe to assume the cramp was placed as a specific deposit subsequent to the slippage of the monolith.

Quarrying and stone dragging at Vestra Fiold

Overall the results of the excavations were very exciting if not a little unexpected. Within Trench A, Monoliths 1 and 2 had clearly been quarried from the hard, fine-grained, lower sandstone bed that was partially revealed at the base of the rock strata in both trenches. However, they were not derived from the adjacent rock-face exposed in Trench A. Their origin was clearly further upslope in the direction of Trench B. Inspection of their outer surfaces showed that heavy weathering had occurred along the side and the upper surface of each monolith. This indicated that they were originally positioned on the outer rock-face of the exposed outcropping. Moreover, the fractured monolith in Trench B also assumed this outer position in the outcrop. Such a weathered profile is also a feature of the monoliths at both the Stones of Stenness and the Ring of Brodgar (see Chapters 3 and 4), demonstrating that they too came from the outer surface of exposed outcrops.

Both monoliths in Trench A had been dragged downslope. Monolith 2 assumed a stable position in being supported in a roughly horizontal position by several stone blocks. Monolith 1 had been dragged onto two stone 'trestles' set either end of an elongated pit (Fig. 5.22). At a certain point during this manoeuvre the monolith had slipped backwards trapping and crushing the northern trestle. The masonry constituting the southern trestle support was in equal disarray. The upper portion of a stone upright that was wedged in position by several vertical packing stones had snapped off and was surrounded by collapsed stonework.

Given the presence of a slot that had previously contained a small orthostat, adjacent to the supporting *in situ* orthostat, at the rear of the northern stone trestle, it seems likely that this location had been used previously for supporting at least one earlier monolith. This interpretation is supported by the observation that some of the stones wedged beneath the large monolith along its western side appeared to be bedded in the upper fill of the large elongated pit, as opposed to resting on its base. Under these circumstances the pit must have

FIGURE 5.22. The elongated pit fully excavated.
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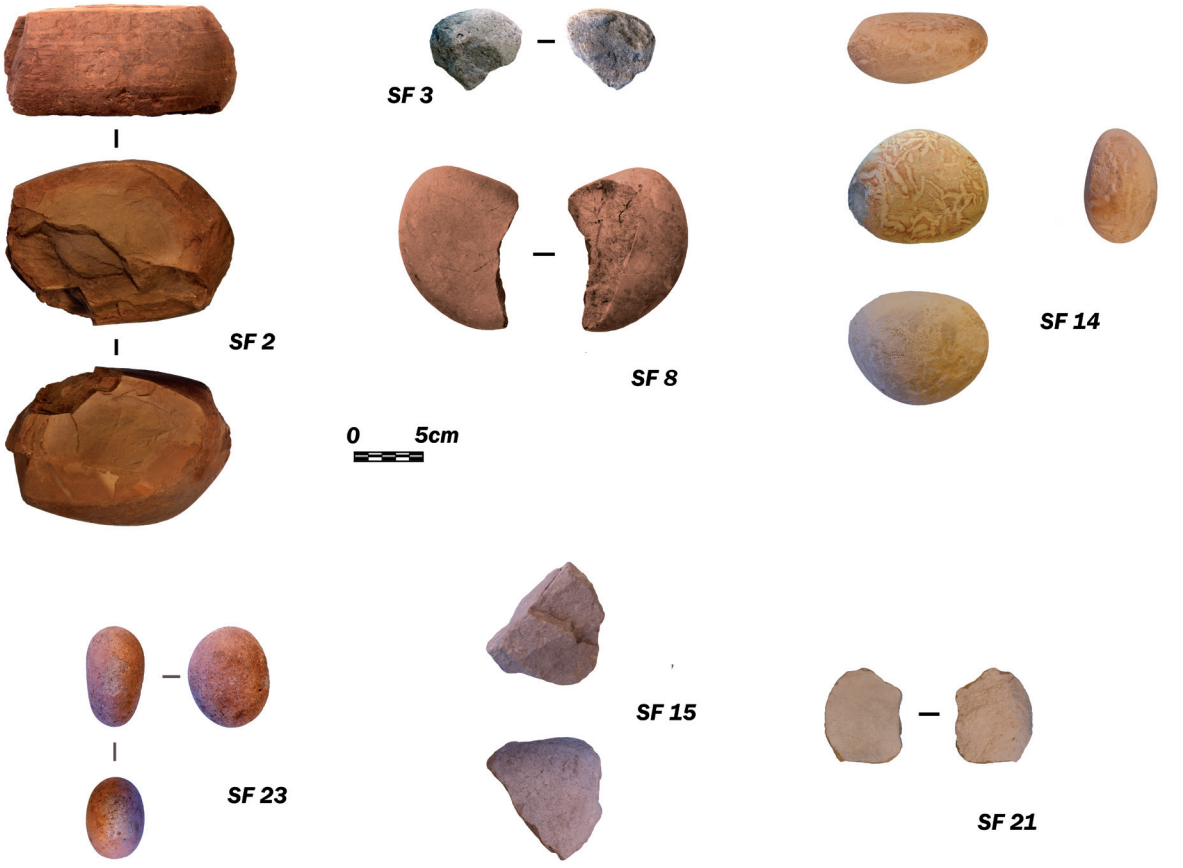
Small Find	Context	Trench	Description
4	008	A	Small irregular flake in honey-coloured flint, probably resulting from bi-polar splitting of a small pebble.
7	007	A	Chip in brown-coloured flint probably resulting from bi-polar splitting of a small pebble.
30	80	B	Small flake of grey flint. Traces of very high gloss/polish on part of the dorsal surface.
32	80	B	Broken knife on distal end of large flake in mottled grey flint, possibly of an Antrim source. Fine, regular marginal retouch along one edge, which is interrupted by a shallow notch at one point. The other edge possesses traces of micro-flaking resulting from use. There is smoothing wear and a patch of gloss on the tips created by the break at the distal end, suggesting burin-like use as well.

TABLE 5.2. Worked flint from the quarry areas at Vestra Fiold.

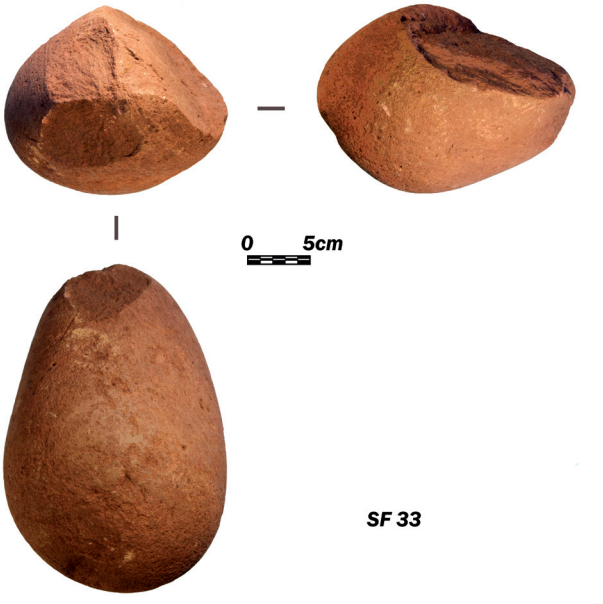
already been in a semi-silted condition when the unsuccessful manoeuvre of the monolith occurred. Therefore, it follows that this location had already witnessed a number of episodes of monolith transportation beginning with their elevation over the elongated pit to enable the insertion of wooden sleds and rollers.

An understanding of this procedure also provides insight as to why so few expected 'quarrying tools' were recovered from Trench A. The paucity of hammer-stones is a direct consequence of this being a place where the monoliths were mounted onto sledges, as opposed to extraction from the rock outcrop. Even where stones were quarried, for instance in Trench B, hammerstones would only be required to drive wooden wedges into jointing fissures and dislodge obstructing rock. Some of the flint flakes recovered from the quarry area display edge damage and may well have been utilized for a range of tasks associated with working with lengths of rope and hide (Table 5.2).



above: FIGURE 5.23. Hammerstones rcovered from quarry Trenches A and B.

above: FIGURE 5.24. Broken hammerstone SF 31.



right: FIGURE 5.25. The large chipped hammerstone SF 33.

Small Find	Trench	Context	Weight (Kg)	Description
2	A	008	0.590	broken hammerstone
3	A	018	0.220	broken hammerstone
8	A	007	0.425	broken hammerstone
14	A	007	0.556	hammerstone
15	A	007	0.230	broken hammerstone
21	A	004	0.102	stone flake
23	A	008	0.225	hammerstone
31	B	080	0.525	hammerstone
33	B	080	4.260	broken hammerstone

TABLE 5.3. Stone implements from the quarry areas at Vestra Fiold.

In the past, a number of authors have addressed the question of the practicalities of dragging large monoliths necessary for megalithic construction (*e.g.* Atkinson 1956, 108–9; 1961, 296–8; Garfitt 1979). All agree that the most likely method of transport would have been for the stone to be supported by a wooden sled that would run over wooden rollers. In discussing the transportation of stones for Stonehenge, Garfitt details the importance of constructing a substantial and rigid hard-wood sled to both support the stone and provide a smooth surface to run over the rollers. Almost anticipating the evidence from Vestra Fiold, he makes the following comment concerning the manoeuvre of the stone: 'the considerable and delicate task of mounting the stone on the sledge, by means of levers probably aided by partial cutting away of the earth below…' (1979, 190). Given the hillslope position of the monoliths at Vestra Fiold, it would have been relatively straightforward to ease the stone directly onto wooden rollers. Mounting a monolith onto a wooden sledge without damage is more problematic. Here Garfitt's suggestion of the need to dig an elongated pit or depression so that a sledge can be placed beneath the stone in the correct position has direct relevance to the features encountered at Vestra Fiold.

The following sequence of events can be suggested for the quarrying and preparation of monoliths for removal at Vestra Fiold. First, the monolith is detached from the outer face of the hard grey sandstone bed by inserting wooden wedges into the natural fissures. Applying water to these wedges and making them swell eventually splits the stone along fault lines. After extraction, the monolith is then dragged downslope from the outcrop where it is slid over the white grey clay sideways onto the two masonry trestles situated at either end of the elongated pit. Now the monolith is suspended, the wooden sled can be attached beneath it. Given the height of the monolith from the base of the pit (*c.*70–90 cm) it may also allow small wooden rollers to be placed directly beneath the sledge ready for removal. The relatively flimsy nature of the two trestles would create no real obstacle to the monolith as it was subsequently dragged forward and they would simply fall away allowing the full weight of the stone to be absorbed by the sledge and rollers. The interesting feature of this process is that a monolith is not actually elevated but merely dragged and manoeuvred into position.

But in the case of the two monoliths remaining within Trench A at Vestra Fiold this procedure was never fulfilled. The attempt to slide Monolith 1 on to its trestles had failed and it had slipped backwards. Certainly at this location, this unforeseen event effectively ceased operations. Whether the inauspicious nature of the accident was deemed sufficient to prevent another attempt at moving the monolith or whether someone was injured or killed by its fall is impossible to know, but both stones were abandoned.

A similar story of misfortune is present within Trench B. Here the outer monolith appears to have broken whilst being prised free of its bedding. In this case it fractured into several pieces. Overall, the remains encountered in both trenches at the megalithic quarry are a result of things having gone wrong. In this respect, the monoliths left at Vestra Fiold are monuments to failure, embodying the risks inherent in quarrying massive blocks of stone. The descriptions of moving stone monoliths, as recounted by Atkinson (1961) and Garfitt (1979), whilst accurate in a detached manner, do little to capture the visceral nature of labour, nor the physical, social and symbolic risks involved. Working alongside the massive Monolith 1 within Trench A provided an experience that is not replicated when visiting a stone circle or standing stone. Only when crouching beside this block of stone, touching it and sensing its massive presence, does the full impact of the enormity of the task of moving the stone strike home (Fig. 5.26). It seemed almost to represent an impossible challenge. Through this physical encounter a small window is opened through the millennia, invoking an appreciation of the many dangers attached to handling and manoeuvring a substantial stone weighing nearly ten tonnes. Equally, an appreciation is gained of the scale of the physical achievement attached to the quarrying and transportation of megaliths.

Socializing risk in megalithic construction

Through the materiality of its stone, Vestra Fiold as a place becomes defined by the labour of successive generations, stone that is quarried section by section to be hauled over several kilometres and erected at the Ring of Brodgar and Stones of Stenness. Stones that are visually and textually distinct and recognizably different to the other stones deployed in and around the great stone circles. Through the labour of stone dragging, the associations of Vestra Fiold are extended to and transplanted in another place being incrementally created in the heart of Neolithic Orkney. This resonates with McFadyen's (2008, 309–10) notion of architecture as distributed practice where, in this case, the two stone circles are produced by a sequence of actions dispersed across the social and material landscape. When Bradley (1993, 1) speaks of altering the earth, he is referring to the construction of monuments, and this is precisely what is occurring not only at Stenness and Brodgar but in a series of places across Mainland, Orkney. Unravelling the layers of social significance embedded in this process of construction requires returning to the discussion of risk and

FIGURE 5.26. Excavating the elongated pit adjacent to Monolith 1.
COLIN RICHARDS

an acknowledgement of a form of agency manifest in each monolith after it becomes detached from the parent rock.

The idea of centralizing risk in a characterization of high modernity seems both pertinent and valid, in terms of our day-to-day experience of the discourses of contemporary life. However, as a definitional phenomenon this claim is not without its problems. The analysis of risk by both Beck (1992) and Giddens (1990; 1991) has been heavily criticised as being incomplete due to a lack of specificity and context: a requirement to consider risk 'in particular times and places and through the voices of particular informants' (Caplan 2000, 25). Vera-Sanso (2000, 109–10) goes further arguing the concept of 'Risk Society' to be naïve and inadequate, because of the supposed inconsequential and unfocussed nature of risk appreciation in traditional societies. While archaeology may be deaf to Caplan's (2000, 25) 'voices', it is extremely effective in respect to providing a firm historical context to situate specific social practices. Moreover, if risk is conceived as 'the potential for realization of unwanted, negative consequences of an event' (Rowe 1977, 24), the events comprising megalithic construction provide both a fascinating and relevant context in which to explore the pertinence of this concept.

As discussed in Chapters 3 and 4, in third millennium cal BC Orkney a tension between clearly defined village communities and broader kinship relationships resulted in a highly volatile and competitive social order. The trajectory towards greater conglomeration witnessed within the villages through the third millennium cal BC, for instance as demonstrated by the later architecture of Skara Brae, Mainland, (Childe 1931) and Rinyo, Rousay, (Childe and Grant 1939; 1947), appears to represent the increasing dominance of social relationships constituted by spatial proximity over kinship. In other words the development of village-based, house societies. Certainly, in late Neolithic

Orkney, one of the most dramatic contexts in which such social relationships were negotiated and 'revealed in practice' was that of monument construction (cf. Carsten 2000, 17–20). Consequently, it can be argued that the multifaceted nature of risk was a dominant constituent of such contexts.

Transportation of the Vestra monoliths involved stones weighing up to 10 tonnes being quarried from outcrops and manoeuvred onto wooden sleds. Dragging a monolith over any distance on a timber sled exposes workers to unstoppable forces of implacable magnitude. Actions such as the relaying of timber rollers in front of a moving stone are fraught with danger. Particularly on sloping ground, the momentum of the stone could translate into a brief loss of control resulting in serious injury or even death. Similar dangers surround the erection of a ten tonne stone, over six metres in length, into a vertical position. In short, many of the practices of quarrying, hauling and erecting large stones involve an extremely high degree of physical risk to the participants. Here, it is worth pondering whether the second phalanx of a human hand found in the ditch at the Stones of Stenness (Clutton-Brock 1976, 36) was in some way a direct consequence of injury.

If the significance of monuments is bound up with material and human biographies (*e.g.* Bradley 1998; Whittle 2003, 123–4), then the events surrounding the quarrying, transportation and erection of a monolith within a stone circle are of great consequence. From lying horizontally attached to the parent rock, to standing vertically as part of a stone circle, the monolith undergoes a dramatic and public transformation (Fig 1.4). As noted above, before selection, the stone may have lain unnoticed, a non-thing, partially covered by soil and vegetation and hidden from view. Hence, the uncovering and extraction of a stone from the quarry may effect a coming into existence, potentially giving animation and form. Quarrying monoliths can therefore be conceived as a process of materialization (see Miller 2005b), realized through both labour and ritual. At one level ritual practices are performances undertaken to facilitate changes in state because such transformations create dangerous and ambiguous situations. Performance and structure are therefore crucial as the ritual process itself is also fraught with peril (Douglas 1966, 118–20). If the correct sequence of events is not adhered to, or mistakes are made, the actual *rite de passage* may be unsuccessfully completed and the transformational process placed in jeopardy and danger. This also embraces the participants. A negative outcome would be inauspicious and failure of ritual may incur numerous sanctions. It also potentially releases perilous and uncontrollable forces into the world (Howe 2000, 72–4). Consequently, the ritual process is highly prescriptive, and its performance frequently controlled by specialists.

The stone itself, through its physical movement and momentum, can be conceived as possessing a form of agency. Moreover, at any time during the transportation of the stone, and by any means, disaster can strike and thereby disrupt the proceedings, which effectively constitute *rites of passage*. Such a fracturing of the ritual process (and possibly the stone) in a public arena potentially creates substantial symbolic disorder and disunity, and it is this

aspect of risk that Mary Douglas has further investigated after the publication of *Purity and Danger* (*e.g.* 1992). Such disruption additionally introduces a form of ritual or symbolic risk to the proceedings, compounding the high level of actual physical risk inherent in any form of megalithic construction.

It has long been recognised that the performance of ritual, particularly mortuary practices, operates at a series of levels (*e.g.* Parker Pearson 1999, 84–6). Ritual performance is undertaken to allow a change in state to proceed and ostensibly this is the paramount objective. However, the manner in which the ritual is performed and the extravagance of the occasion are clearly related to the social aspirations of those responsible for its performance. Hence, regardless of the ritual event, a clear statement is being made on the social status of the organizing group, especially if articulated through a lavish consumption of resources. As Howe (2000, 70) astutely observes in regard to Balinese ritual performances, virtually every aspect of a ceremony takes on a competitive edge, and there can be few more public ceremonies than stone hauling (Fig. 1.4).

Apart from the physical and ritual risks, which are by no means mutually exclusive, the most basic risk embedded in megalithic construction is that pertaining to social position. The broad range of practices and labour surrounding the quarrying and dragging of a massive monolith to the Stones of Stenness or the Ring of Brodgar from Vestra Fiold necessarily involved the co-operation of an extensive network of people. Monumental construction begins not with the gathering of large numbers of people, but with the creation of the social conditions under which such a labour force could gather and act in unity. Consequently, the manufacture of tools and collection of materials necessary to quarry and transport the stone may potentially be of long duration but this is just the tip of the iceberg. Resources such as the food necessary for the obligatory feasts may embody years of procurement and gift exchange. From these observations it is clear that the occasion of transporting the stone involved the labour and input of numerous people, many of whom would not directly participate in the actual dragging of the stone. However, once the resources were accumulated construction has the potential to occur rapidly.

Under these conditions it is not merely the unpredictable and dangerous nature of stone dragging, in terms of personal and ritual risk, that is at issue. It is also a question of social risk, because this form of *rites de passage* is totally dependent on the 'agency' of the stone and co-operation of other people for success. Since it is under such public scrutiny, stone dragging can also constitute a context of social resistance. People can actively work against the successful completion of the project. Here we encounter a distinction outlined by Giddens (1990, 30) between notions of 'risk' in pre-modern contexts being attributable to external agencies such as fate or *fortuna*, as opposed to late modernity (risk society) where misfortune is directly attributable to people and their actions. Such clear-cut distinctions are necessary within the work of Beck and Giddens, since they both are attempting to define high modernity as 'risk society', and present it as being qualitative different to non-western (and earlier) social forms (Lupton 1999, 6–7).

However, such distinctions are ambiguous (see Caplan 2000). If, for instance, in the context of stone dragging, some misfortune should occur which culminates in the stone being damaged or even destroyed, how would this eventuality be viewed? If resulting from a direct act of sabotage by a disgruntled section of the work force, would that resistance be directly acknowledged? Or, as Giddens (1990, 30) suggests, would it simply be portrayed as an act of divine intervention or self-destruction? Janet Hoskins (1986, 41–2) actually describes the loss of a particular megalith during a stone dragging ceremony in Sumba, Indonesia. This loss is attributed to the actions of a particular social group unhappy about the claims to increased status by a rival group. A successful stone dragging would have achieved and legitimated such social enhancement. In this example the ropes were released whilst the stone was being hauled across an estuary and the stone floated away!

While it is clear that such misfortunes and acts of resistance would operate at a number of levels, a paradox concerning the understanding of risk lies at the heart of Hoskins' account. On the one hand it is clear that people actually knew about, and even participated in, this act of resistance – this enabled Hoskins to record the incident (*ibid.*). Yet, as Giddens (1990, 30) suggests, such misfortune may have been portrayed publicly and interpreted as an inauspicious occasion: a divine act, as opposed to the actions of people. Socially, it could be said that either way it amounted to the same thing, a very public loss of face, a squandering of precious social and material resources acquired over many years, and failure to achieve higher status. However, importantly, it exposes the presence of risk as an acknowledged component inextricably linked to megalithic construction.

Conclusion

The Orcadian stone circles have been portrayed as a monumental manifestation of a socially centralized polity (Renfrew 1979; 1990; 2000). Yet, the evidence can provide a contrary reading. Chambered cairn construction during the early Neolithic has been suggested to be a mechanism by which local social groups appear to have constructed their identity with regard to place and the materiality of that place (S. Jones and Richards 2005; Richards 2004; A. Jones 2005). One area of practice where this process of belonging is historically constituted is that of quarrying stone to construct both tombs and houses. Localized quarries are visible adjacent to chambered tombs.

Discussions of the construction of identities and their grounding in either place and/or social relationships can appear rather abstract in many accounts of Neolithic monumentality. With the quality of evidence for the Orcadian Neolithic we possess the possibility of grounding such interpretations in a more detailed canvas. Identities are forged through a range of material strategies that can be discerned in different arenas of social practices. For instance, within the late Neolithic villages, a 'community' identity is strongly expressed through the visual medium of ceramic decoration (A. Jones 2002; S. Jones and Richards 2005). While this may well relate to a degree of instability and fluidity manifest within

small-scale 'house societies' practising exogamy, it also introduces the potential of highly competitive village-based communities within late Neolithic Orcadian society.

Excavations at the quarry of Vestra Fiold and fieldwork at Staneyhill demonstrated that specific sources were being exploited for the extraction of monoliths. Each quarry produced physically distinctive monoliths that were discernible through differences in shape, colour and texture of the stone strata. Such places undoubtedly held local significance, in some cases as being traditional sources of stone for chambered cairns and house structures. It is argued that local identity and group affiliation were articulated through proximity and generational attachment to such localities. Alternatively, new quarries were opened, places that provided appropriate slabs of sandstone. At such places, as will be seen in the following chapter, associated monuments were erected which harked back to earlier times. Thus, new quarries acquired antiquity and social groups gained legitimacy through claims of descent from founding ancestors.

The Ring of Brodgar, in particular, was constituted of different lithologies representing many different places and associated social groupings. In many ways, the stone circle was an architecture of both displacement and convergence. Displacement was manifest in the indexed practices and people dispersed in space and time across the Neolithic island world. However, through the juxtaposition of the different monoliths of the circle, within the wrapped space of the monument, a convergence occurred that transcended everyday practices and social relations. Again, we may be seeing a materialization of imagined communities, perhaps in this liminal context representing a form of *communitas* (cf. Turner and Turner 1978).

It is in the arena of social competition that the concept of 'risk' is important. It is easy to speak of social groups, kin – house – or village-based, being involved in various forms of competition for honour and status in late Neolithic Orkney. However, just like the great stone circles, the social processes that lie behind such strategies embrace stories of human endeavour, endangerment, concern and worry leading to success or failure. In the context of building the Stones of Stenness and the Ring of Brodgar, the quarrying and dragging of a massive stone from the quarry to the monument are undoubtedly substantial feats. However, the complex and dangerous social strategies that are played out within this process are highlighted in an appreciation of risk as an integral component of those strategies. Here it is suggested that megalithic failure was understood not simply as an inauspicious occurrence but as calamitous event, which was potentially disastrous to the fortunes of a social group. The risks attached to gaining social status were broad and ever present and the choice to compete within the 'monumental' arena was clearly one of great consequence. Late Neolithic Orcadian society, in the context of monumental construction, could therefore legitimately be characterized as an extreme form of 'risk society'.

CHAPTER 6

Surface over Substance: the Vestra Fiold horned cairn, Mainland, Setter cairn, Eday, and a reappraisal of late Neolithic funerary architecture

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Chambered cairns of the north

Appearances can be deceptive. Indeed, deception is very much a theme of this chapter, and as will be argued below, is an appropriate description for certain elements of late Neolithic monument construction. At a general level, the Neolithic period is an epoch of monumental architecture, and a number of schemes of social development have been hung on the frame of monument sequences (*e.g.* Renfrew 1973; 1979). In many areas of western and northern Britain, the main monumental form which defines the fourth millennium cal BC is the chambered cairn, and entire narratives of particular regions have been constructed in relation to these spectacular monuments (*e.g.* Cummings and Whittle 2004; Cummings 2009). Indeed, for some areas of Britain, such as large parts of northern Scotland, chambered cairns constitute the only visual evidence of Neolithic habitation.

In terms of narratives of the Neolithic, an interesting phenomenon occurs at the end of the fourth millennium cal BC. In areas as wide apart as Wessex and Orkney, megalithic chambered tombs (or cairns in the north and west) suddenly vanish from accounts of social development. Obviously, they do not actually vanish. Instead, it is other monumental forms such as complex passage graves, henge monuments and stone circles that enter discourses on the Neolithic. Consequently, areas where Neolithic monumentality is solely represented by chambered cairns, such as the north of Scotland, are conceived as 'backwaters', suffering some form of social and economic stagnation due to an absence of typical third millennium cal BC monumental architecture. For somewhere like Caithness, the perception is even worse due to juxtaposition with what appears as the vibrancy of the Orcadian Neolithic.

There are several points of interest ensuing from these observations. First, a question arises of whether all monuments are of a similar order. By this we question the validity of speaking about monumental sequences within a given area, because implicit in such schemes is an assumption that the various forms of monument are somehow equivalents within a process of 'replacement' (Renfrew 1979). Within such discourses variation in architecture and purpose maintains no real analytical role. A good example of this is the way a chambered tomb such as West Kennet, which receives interments in the fourth millennium cal BC (Bayliss *et al.* 2007a), loses its 'presence' through time. For instance, in both deposits (Grooved ware) and architecture (extension of tail), West Kennet chambered tomb continues to be 'used' into the third millennium cal BC, yet it hardly features in accounts of this later period (*e.g.* Gillings and Pollard 2004, 60). Perhaps this neglect is a consequence of our conception of the *time* of chambered cairns (tombs), particularly that their *time* is in the mid-fourth millennium cal BC (*e.g.* Whittle *et al.* 2007) as opposed to the third millennium cal BC. Although, recent dating of human remains in burial monuments in some areas of southern Britain indicates initial short bursts of interment (Bayliss *et al.* 2007a; 2007b), a biographical approach to material culture stresses the webs of discourse that continually embrace things (see Gosden and Marshall 1999). In this respect, insisting on monuments having primary (very important), secondary (far less important) and so forth, phases of use entirely misses the point concerning agency and strategies of engagement with material culture.

In looking a little deeper into the position of chambered cairns within archaeological discourse, a strange contradiction emerges. For typological purposes, the architecture and constructional history of chambered cairns have been studied in minute detail (*e.g.* Henshall 1963; Davidson and Henshall 1989). This allows architectural modifications to be recognized as additional constructional phases. But despite the resulting 'multi-period' character of chambered cairns, which Corcoran (1972) envisaged running well into the late Neolithic and Early Bronze Age periods, these monuments are all but invisible in narratives of late Neolithic Britain. Clearly, this contradiction requires some form of resolution in the form of a re-evaluation of chambered tombs and the reason why the important role which they played, although frequently unacknowledged, continues during the third millennium cal BC.

It is often forgotten that the erection of chambered cairns and a subsequent change from wooden to stone houses did not simply result in quite different architectural forms; it radically reoriented and transformed the practices of building. For instance, a different array of physical skills was required to work and move large blocks of stone, and specifically the ability to successfully lay masonry. The presence and preservation of Neolithic buildings in Orkney promotes a view of their sophisticated construction. Indeed, a close examination of the chambers at Isbister, Midhowe or Unstan reveals a high level of skill in laying dry-stone masonry. However, a number of mid-late fourth millennium cal BC stone buildings were actually quite badly constructed. For instance, the

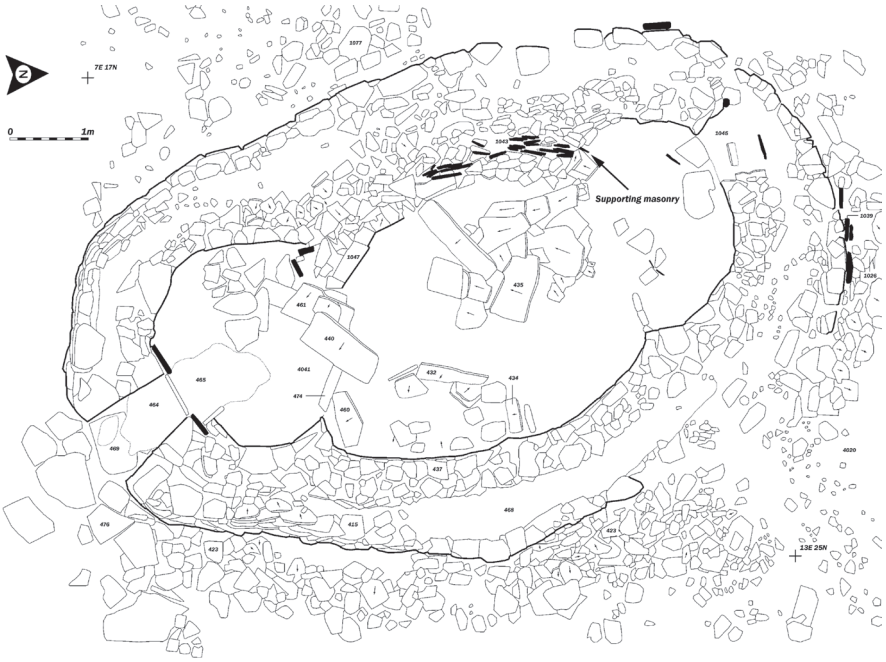

FIGURE 6.1. House 3 on Stonehall Knoll. Note the small stone uprights wedged to support the collapsing western wall.

stone structures encountered in the earliest Neolithic levels at Pool, Sanday, Orkney, were described as being of very poor quality (Hunter 2000, 121). Equally, House 3 on Stonehall Knoll, Mainland, constantly required additional buttressing to support its inward-leaning outer wall (Fig. 6.1), which eventually collapsed (R. E. Jones *et al.* forthcoming). What does this disparity in building quality reveal about construction skills? Clearly, the ability to build fine masonry could only be accrued through experience. However, once acquired, the skill to work stone and construct dry-stone walling allowed the Neolithic inhabitants of Orkney to build a range of buildings and monuments to whatever degree of sophistication was deemed appropriate.

Building in stone also demanded alternative strategies of material procurement. Large flagstones required for orthostats would be available at quite different places to those where stone with closely spaced fissuring outcropped. The practices surrounding stone procurement would focus greater scrutiny on particular rock outcrops across the islands, some of which may have previously attracted little or no attention. Not only would new places where suitable stone outcropped attain qualitatively different appreciation, but also the material characteristics of those 'places' would provide an index of their significance. Hence, changing practices of construction inevitably led to altered images and understandings of landscape. This was not merely an abstract cosmological re-rendering of the Orcadian world, but facilitated a changing taskscape (see Ingold 1993) which would necessarily re-orientate social relations.

In the context of chambered cairns, it is this different and specific engagement between people, raw materials and substances that was vital in the constitution

of a sense of belonging and social identity during the early Neolithic period (A. Jones 2005). Here an interesting link can be made between the geological characteristics of specific places, as textural and visual phenomena, and the laying of masonry in the chambered tombs associated with those places (cf. Cummings 2002). Examining three chambered cairns on the island of Rousay, Knowe of Yarso, Blackhammer and Midhowe, Andrew Jones (2005, 240) draws out the referencing of places through their material characteristics and notes the correspondence of localized outcrops of folded sedimentary strata with the oblique design of masonry displayed in the outer revetment walls of the chambered cairns built at those places.

The chambered tombs of Orkney are all stone cairns of varying size, shape and construction. Yet it is the chamber architecture which provides the main index of classification. The cairns themselves receive little attention, being merely seen as adjuncts to the sophistication and character of chamber architecture. Moreover, there is a general feeling that because these great monuments were constructed in stone they were built to last forever – but is this assumption justified?

The Vestra Fiold 'chambered' cairn

Less than fifty metres east of the outcropping strata at Vestra Fiold quarry is an elongated mound previously recognized as a possible chambered cairn by Davidson and Henshall:

> a much reduced turf covered cairn is prominently sited on a false crest when viewed from the E, in a field of pasture at 105 m OD. The cairn is oval measuring 22.5 m NE to SW by 15 m across. The present height is 1 m on the upper NW side, and 1.5 m on the lower side. The tops of two upright slabs protrude near the centre of the cairn, set more or less on the long axis and transversely to it. The larger stone, 10 m from the NE end, is 0.8 m long, 0.2 m thick and 0.75 m high with a broken upper edge. The other stone, 4.5 m to the SW, is a stump 0.3 m long and only just visible
>
> (Davidson and Henshall 1989, 185–6).

The presence of a Neolithic monument at the quarry is intriguing especially if, as was assumed, it was built in the mid-fourth millennium cal BC. One aspect of the megalithic quarry at Vestra Fiold which was not really addressed in the previous chapter was the nature of its status. For example, if a chambered cairn had been built upon the hillside would that have imbued the place with an ancestral presence which permeated the stone? Could that quality have been, as much as the geological characteristics of the stone, a reason why Vestra Fiold was selected as an appropriate place for monolith extraction? If so, it would certainly emphasize and enhance the linkage between social groups and the materiality of their surroundings. It should also be kept in mind that the extraction of substantial stones was not a new phenomenon in Orkney when the monoliths for the Stones of Stenness were first quarried at the beginning of the third millennium BC. Furthermore, substantial monoliths had already

FIGURE 6.2. Wheebin standing stone in Birsay, with outcropping on the hillside above.
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been quarried for divisional orthostats in chambered cairns for at least 600 years. Not all the monoliths from Vestra Fiold were destined for the great stone circles. Elsewhere in Orkney, standing stones were erected downslope from local quarries (Fig. 6.2). A similar situation appears to have existed at Vestra Fiold where a monolith, now destroyed, stood at the eastern base of hill.

The Vestra Fiold chambered cairn is false-crested when viewed from the lower ground to the east and southeast and although very denuded it remains strikingly clear over long distances (Fig. 6.3). The views from the long cairn are equally spectacular and extend across western Mainland to the Lochs of Stenness and Harray. The presence of a suspected chambered cairn at the Vestra Fiold quarry seemed to demonstrate a prolonged history of activity from the mid-fourth millennium cal BC. The cairn became of greater interest when it was noticed that the large protruding stone recognized by Davidson and Henshall was of the same stratum as that exploited for monoliths at the two stone circles. Also, a pre-excavation survey of the mound revealed what appeared to be horns projecting from the northern end (Fig. 6.4). Given the presence of a broken 'monolith' in conjunction with the uncertainty attached to the architecture of the chambered cairn, further investigation was considered essential in unravelling the history of stone extraction at the megalithic quarry.

A large trench, initially divided by a central transverse baulk, was opened along the main north – south axis. Excavation of a substantial proportion of the mound provided one surprise after another. First, after the turf was stripped the partial foundation of a circular structure towards the northern proximal end was discovered (Fig. 6.4). Second, no passage or stalled chamber appeared to be present. Instead, a rectangular box-like chamber, represented by linear cuts, abutted the large broken standing stone (Figs 6.5, 6.6 and 6.7). Chamber may

above: FIGURE 6.3. View of the false-crested Vestra Fiold horned cairn from the east.
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left: FIGURE 6.4. Beneath the turf an upper revetment wall for a superimposed circular cairn was encountered.
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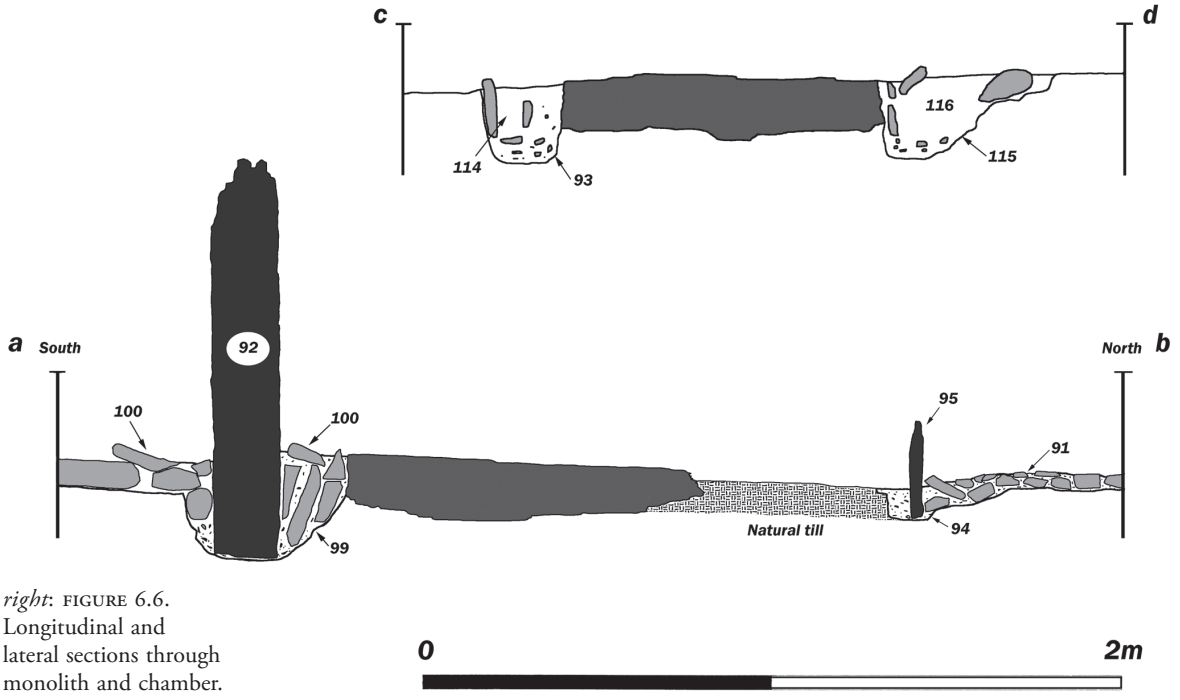
be a false description because if free-standing, this arrangement would have resembled a raised box or cist. Furthermore, the cist or chamber was flanked by what appeared to be poorly constructed horn-works. Indeed, the entire cairn appeared to be haphazardly built and try as we might to find it, there was no signs of the expected 'stalled' architecture (Figs 6.6 and 6.7). Instead, a medium length horned cairn, displaying an unusual dual method of construction was erected around a rectangular cist or chamber. The latter incorporated a single standing monolith in its construction.

below: FIGURE 6.5. View of monolith from the north. Note the *in situ* packing stones at front.

Building the horned cairn: the chamber

The initial act of construction was to clear the turf and topsoil across the area of the primary cairn to reveal and create a level surface of glacial clay and areas of horizontal outcropping bedrock. A stone socket, measuring 1.03 m long, 0.42 m wide and 0.29 m deep, was cut into the clay adjacent to a small section of horizontal bedrock. Into this socket a substantial monolith was inserted. The monolith was the large projecting stone noticed by Davidson and Henshall (1989, 185–6) and on excavation it was found to be *c*.1.12 m high, 0.93 m broad and 0.24 m thick, with an angled



right: FIGURE 6.6. Longitudinal and lateral sections through monolith and chamber.

FIGURE 6.7. Plan of the rectangular burial chamber.

base (typical fracture plane). The original height of the stone is unknown due to subsequent breakage. However, it was highly conspicuous in possessing the distinctive pale grey colour and laminate structure of the stratum exploited for the Stenness and Brodgar monoliths (Fig. 6.5). This stratum appears to have been selected exclusively for monoliths, and no further stones exhibiting this lithology were discovered in the entire cairn.

The monolith was heavily wedged in its socket by several small vertical stones. From the narrow dimensions of the socket it appears that the monolith was inserted laterally. At some time after the monolith was raised, a small rectangular cist or chamber, measuring *c*.1.8 m (north–south) and 1.10 m (east–west), was erected against its southern face. It is difficult to know whether this episode of construction was concurrent with the erection of the monolith or represented a later addition. The two linear slots cut to receive the upright flagstones that

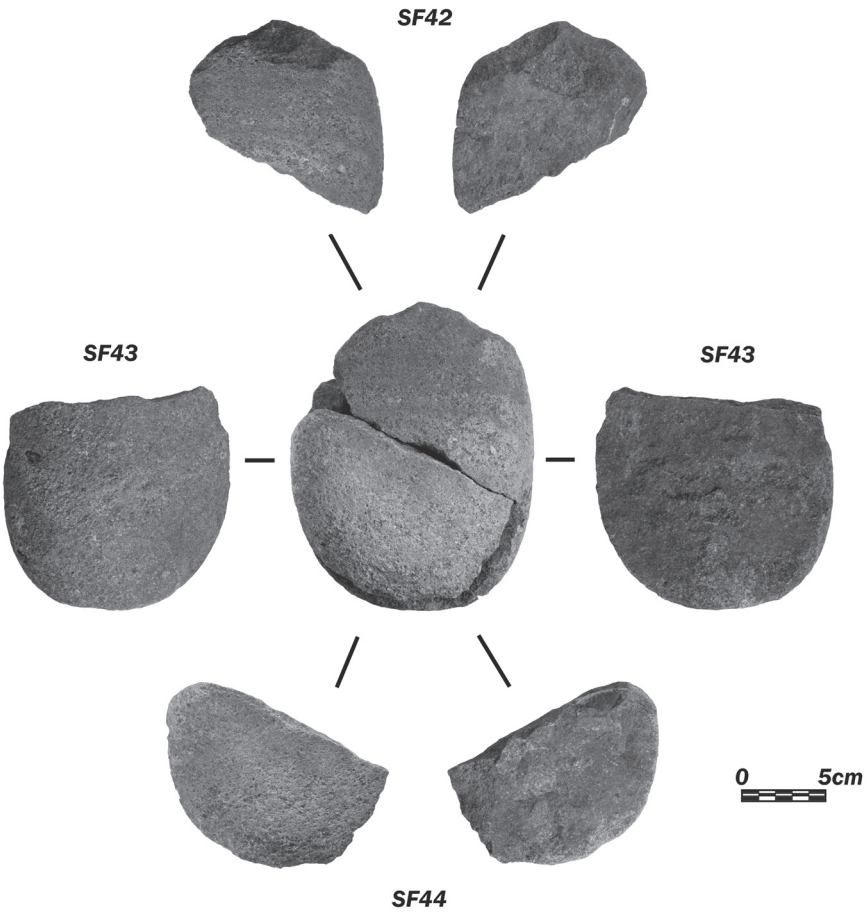


FIGURE 6.8. Three pieces of the broken hammerstone (SFs 42, 43 and 44) found on the rammed stone surface.

TABLE 6.1. Details of hammerstone (SFs 42, 43 and 44).

Small Find	Trench	Context	Weight (Kg)	Description
42	C	091	0.615	broken hammerstone
43	C	091	1.340	broken hammerstone
44	C	091	0.580	broken hammerstone

formed the western and eastern sides of the chamber respected the packing stones of the large monolith. Both linear slots were filled with a dark-brown loam and several packing stones remained *in situ*. As mentioned, when standing, the chamber would have taken the form of a rectangular stone box floored by flat horizontal bedrock. Of the entire structure just a broken laminated section remained *in situ* at the southern end of the chamber.

To the north of the chamber, a rammed surface of small sandstone blocks and fragments ran for approximately 1.5 m; this was clearly a laid 'floor' constructed after the northern chamber upright was in position. Upon this floor three pieces of a single broken hammerstone (SFs 42, 43 and 44) had been deposited (see Fig. 6.8; Table 6.1). No collapsed masonry or rubble overlay this surface, providing some evidence that this was an open area directly in front of the burial chamber.

The rammed stone floor continued north where a band of softer mid-brown silty loam mixed with some stones cut across in an E–W direction. Beyond this band the floor continued until it was delimited by a line of larger flagstones, which marked the edge of construction.

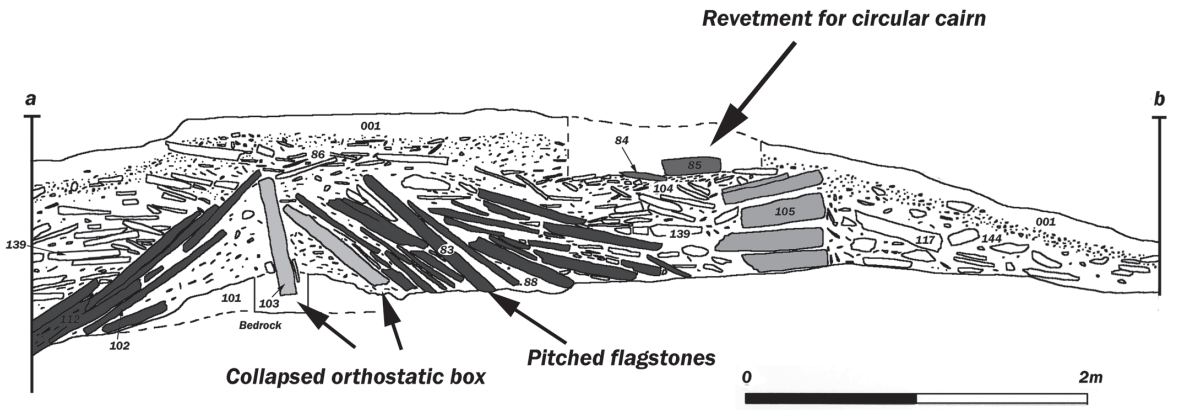
During excavation of this area it was noticed that the stone slabs forming the cairn material described a semi-circle around the chamber in a horn-like arrangement. Consequently, the actual structural integrity of the chamber would have been quite insubstantial. Indeed, even with their large packed slots, the side uprights would have had a thickness of no more than *c*.0.07 m. If the construction of the chamber of the long cairn resembled that of other Orcadian Neolithic structures, such thin uprights would be no more than facing slabs against a masonry wall (*e.g.* see Hill and Richards 2005, 167–8). Because of its ruinous condition the frontal area of the cairn is difficult to interpret. It is not beyond the realms of possibility that the monolith and cist-like chamber were freestanding in a forecourt area.

Building the horned cairn: the primary cairn

Although the relationship between the monolith and cist-like chamber, and the long cairn, is difficult to establish the construction method of the latter is of considerable interest. The cairn took the form of a rectangular mound measuring *c*.6 m wide and *c*.16 m long. Originally, it had an elevated circular mound at the proximal northern end with projecting hornworks. Initial construction involved the common practice of stripping the topsoil and laying a spread of yellow clay across the area to provide a level and stable foundation. Beyond this basic preparation, the remaining construction of the long cairn was anything other than typical (for the construction methods of other long cairns see discussion in Davidson and Henshall 1989, 19–36).

The spine of the cairn comprised a series of single orthostats or paired orthostats to form box-like or cist-like arrangements. Within the excavated area, these had frequently lost structural integrity and lateral pressure had forced a number of orthostats to slump sideways (see Fig. 6.9). Our initial interpretation was that these boxes represented some form of additional chambers or cists within the centre of the mound. During the excavation of the horned cairn at Point of Cott, Westray (Barber 1997), similar constructional box-like arrangements of orthostats were encountered, and generated the same debates concerning function (Niall Sharples pers. comm.). However, it soon became clear that the collapsed stone boxes at Vestra Fiold, like Point of Cott, were actually a method of construction. Moreover, as the cairn was excavated, irregular arrangements of orthostats, for example those present in the western hornwork, were also recognized to function merely as constructional devices.

A series of pitching and overlapping large flagstones leant against the orthostatic spine and formed the main body of the cairn. Some of these flagstones were of considerable size (Figs 6.9 and 6.10). The largest flagstone, however, was



above: FIGURE 6.9. Section across the body of the cairn, showing the angled flagstones method of construction.

right: FIGURE 6.10. Excavating the pitched stones that formed the proximal body of the cairn. Note the way the flagstones lean inwards from each side.
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encountered at the rear of the cairn (southwest corner) and measured 1.79 m high, 1.6 m wide and 0.12 m thick. It was of little surprise that under the weight of the pitched flagstones, several of the spinal orthostatic boxes had slumped and collapsed, and the flagstones forming their northern and southern ends had splayed outwards (Fig. 6.10). Additionally, many of the freestanding orthostats had slumped under the lateral forces or weight of the leaning flagstones. Consequently, in a few places the pitched flagstones were still in position but the majority had slipped as their support shifted. As may be expected with this manner of construction, voids were present between the pitched flagstones and very loose shillet material was frequently encountered partially filling these voids. It was primarily within this shillet material that deposits of disarticulated animal bones were discovered. Although it is likely that some of the faunal remains from the

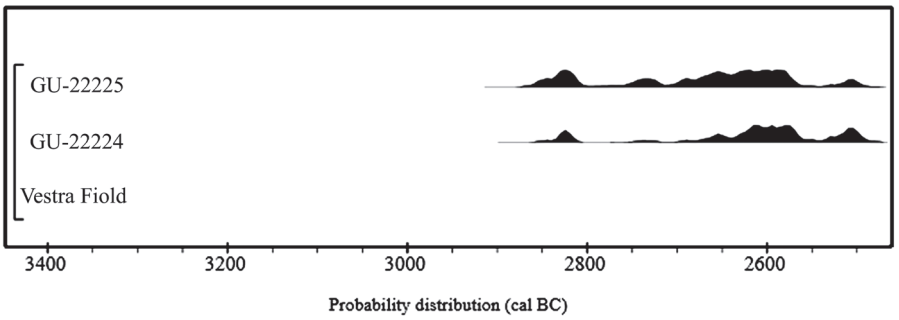


FIGURE 6.11. Radiocarbon dates obtained on deer metatarsal and cattle metatarsal for the orthostatic construction of the proximal body of the horned cairn (modelled by Seren Griffiths).

smaller mammals, gull and fulmar may be present due to natural processes, the disarticulated remains of the larger mammals had clearly been deposited and completely sealed between the pitched and angled flagstones during construction as part of the cairn makeup. Two radiocarbon dates were obtained from the animal bone in order to date construction. These produced a consistent date range of 2800–2500 cal BC (Fig. 6.11).

In the northwestern area only part of the horn-works was examined where the outer revetment wall splayed outwards (Fig. 6.14). A series of stone uprights, some slumped, continued the structural support provided by the spinal orthostatic construction in a northwesterly direction. Again, pitched flagstones had been heaped against the supporting orthostats. The same arrangement was present within the small area examined of the eastern horn-work, but here slumped orthostats had mainly collapsed.

To prevent outward or lateral slippage of the leaning flagstones, a single skin of masonry forming a revetment wall of between 2–4 courses was built around the cairn. In overall plan, the slightly splayed revetment wall was consistent with a horned trapezoidal cairn. Beneath the revetment wall, adjacent to the southeast corner, a polished stone axe (SF 75) was placed as a foundation deposit (Figs 6.12 and 6.13). The axe is of a siltstone/mudstone composition and clearly of Orcadian origin. Due to the softness of this rock, the axe would have been of little utility for any practical task, and unsurprisingly, the blade was sharp and virtually no damage was present across its cutting edge. Consequently, it is assumed that the axe had been ground and polished specifically for deposition beneath the outer revetment wall of the primary cairn.

The original height of the revetment wall is impossible to establish; however, given the single skinned masonry construction facing the long sides of the cairn, together with overall poor construction, any great height is unlikely and probably little more than the 0.5m observed during excavation. At the southern end, where the revetment wall ran transversely to form the rear of the cairn, it increased to a double skin arrangement, *c*.0.8 m in thickness (Figs 6.14 and 6.15). From the rear revetment walling, a further series of flagstones, laterally aligned, rested inwards against the stone box uprights, effectively squaring off the rear of the inner cairn. The encircling revetment wall was primarily a stabilizing device because no real attempt had been made to present a neat external face. It should

FIGURE 6.12. Jane Downes uncovering the polished stone axe from below the outer revetment wall.

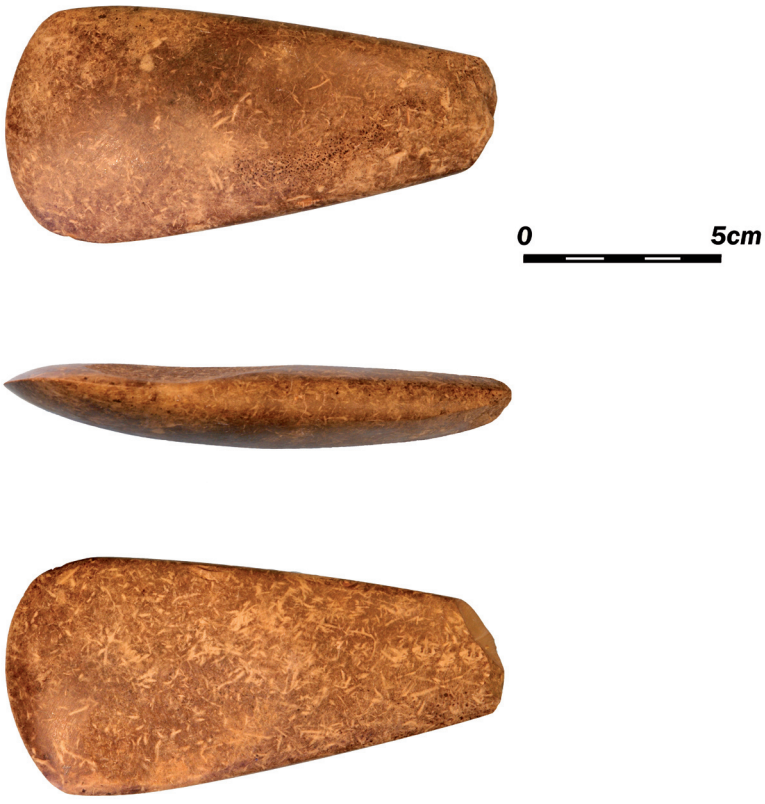


FIGURE 6.13. The polished stone axe (SF 75).

FIGURE 6.14. View of the long cairn under excavation. Note differential construction between tail and proximal cairn.
COLIN RICHARDS

be noted, however, that the wall facing the eastern side of the long cairn, the side from which it was primarily meant to be viewed, was not examined as it had collapsed down slope. Given the clear concern with presentation and selective imagery that we have witnessed emerging in the late Neolithic (see Chapter 4), it is quite possible that the eastern side exhibited superior masonry.

To build up and stabilize the cairn, the gap between the vertical primary revetment wall and the angled slabs forming the central body was filled with horizontal laid stonework. In order to maintain structural integrity, the upper course of the revetment wall employed larger slabs to bond with the internal horizontal slabs (see Fig. 6.9). On excavation the primary revetment wall remained standing to a maximum height of *c*.0.5 m. Presumably, the horizontal slabs would have continued upwards and inwards running over the angled

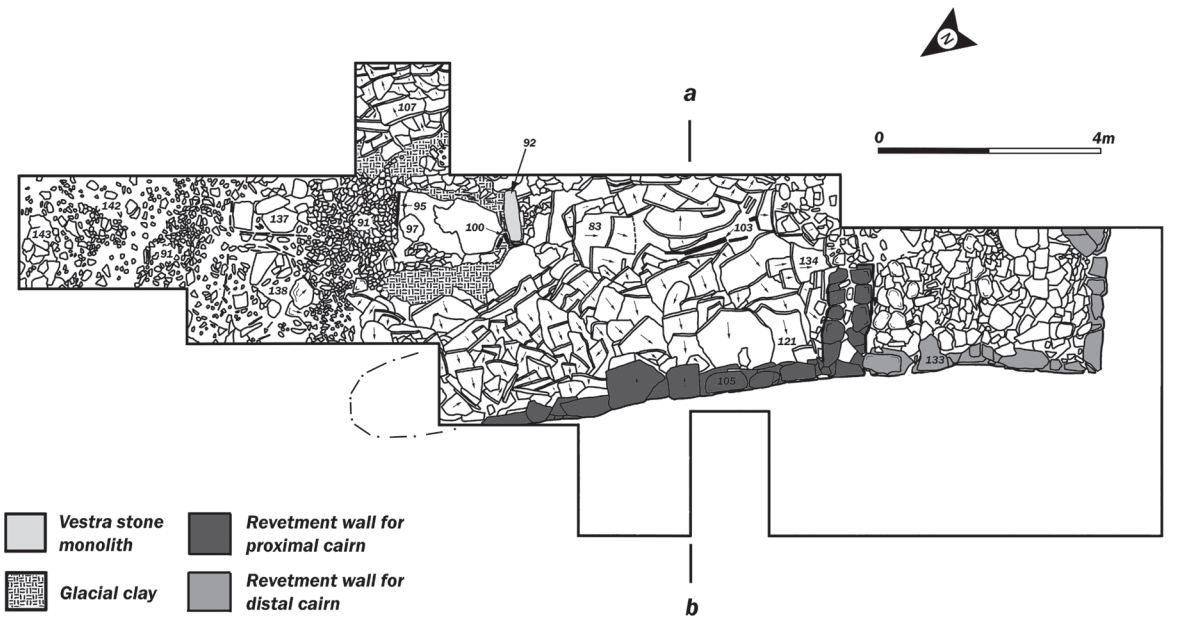


FIGURE 6.15. Plan of the complete horned cairn as excavated.

flagstones. Indeed, if these horizontal slabs were laid with care they would have generated an outward but illusory appearance of corbelling.

The faunal remains sealed in the primary cairn

Excavations of a long cairn at Vestra Fiold in 2003 yielded a small, hand-recovered assemblage of 423 fragments of animal and bird remains. Sieved samples produced additional fragmentary remains (*c.*350 fragments). Careful recording of locations of groups of faunal remains as small finds during excavation has enabled some investigation of the spatial distribution and composition of the faunal assemblage trapped in voids between the pitched flagstones. However, for the purpose of examining broad patterns of species and element representation and ageing information, the hand-recovered faunal assemblage from the Vestra Fiold horned cairn is best discussed as a single unit.

Overall the hand-recovered assemblage is only moderately well preserved. Over 68 % of identified large mammal and bird specimens showed signs of significant damage to the outer surface of the bone. Preservation of bone varied within the voids and shillet material in terms of degree of fragmentation and surface condition (Fig. 6.16). In several instances very different levels of preservation were apparent on different areas of the same bone. In the Vestra long cairn, bone erosion reflects a combination of several of these taphonomic factors, where surface damage from roots or exposure may have left bones more vulnerable to subsequent additional physical and chemical destruction. There is little evidence to suggest that bones were left exposed for any length of time prior to their incorporation within the mound. There is no evidence of canid

FIGURE 6.16. The faunal remains were sandwiched and sealed between the pitched slabs forming the body of the cairn.
COLIN RICHARDS

gnawing on any of the bones. One bone showed signs of having been gnawed by a rodent, which most likely occurred after its incorporation within the cairn.

Fragmentation of bones, some recent and some ancient, was evident throughout the assemblage. However, although most bones showed some degree of damage, at least half of the large mammal and bird specimens recorded were at least 50 % complete and many shards of bone could be refitted, suggesting breakage of the bones occurred *in situ* subsequent to their incorporation in the deposit. Several Associated Bone Groups (ABGs) of elements belonging to the same individuals were also identified among the remains. The presence of associated, largely intact or refitting bones is a good indication that the assemblage represents the primary deposition of unmodified bones. Had bones been damaged prior to deposition, or if the faunal remains had been subsequently re-deposited, skeletal elements would have become disassociated and damaged and the smaller refitting shards from ancient breaks would have been lost.

Of the 423 bone and teeth fragments recovered by hand, 200 (47 %) were identified to species or family. Mammal and bird species identified include sheep/goat, cattle, fox, red deer, pine marten, Orkney vole, duck, gull and fulmar (Table 6.2). Additional faunal material (*c.*350 fragments) was recovered from sieved samples, of which only 10% was identifiable to species or family (Table 6.3). Most of the identified remains from the sieved samples belonged to small mammals or were loose teeth or small bones of sheep and fox, many of which belonged to the same individuals represented in the hand recovered assemblage. One rabbit bone was also recovered. By far the majority of the hand-recovered assemblage (421 fragments) came from the cairn make-up (context 88) where bones were recovered from amongst the loose shillet material found within the voids between the pitched flagstones that formed the body of the cairn.

Species	No. Frags	%	MNI
sheep/goat	98	53.6	5
cattle	56	30.6	4
fox	20	10.9	2
red deer	6	3.3	2
cf. pine marten	2	1.1	1
deer (antler, species indeterminate)	1	0.5	
identified large mammal total	183		14
Microtus sp. cf. *Microtus arvalis orcadensi* (Orkney Vole)	10		4
identified small mammal total	10		4
duck cf. mallard	5		1
gull (*Larus* sp.)	1		1
cf. fulmar	1		1
identified bird total	7		3
unidentified mammal	174		
unidentified medium mammal (sheep/pig sized)	17		
unidentified large mammal (cattle sized)	16		
unidentified small mammal (rodent sized)	13		
unidentified bird	3		
unidentified total	223		

TABLE 6.2. Total fragments count (NISP) and minimum number of individuals (MNI) (hand recovered assemblage).

Species	No. Frags	%
sheep/goat	7	18.4
fox	12	31.6
rabbit	1	2.6
Microtus sp. cf. Orkney vole	18	47.4
total identified	38	
unidentified small mammal	39	
unidentified mammal	314	
total unidentified (approx.)	353	

TABLE 6.3. Total fragments count (NISP) (sieved sample).

Among the large mammals, the remains of domestic species predominate. Sheep/goat (54 %) are the most abundant species in terms of NISP, followed by cattle (31 %). Wild species, including fox (11 %), red deer (3 %) and pine marten (1 %), are also represented in small numbers. The relative abundance of fox may be somewhat over-stated in the NISP count, due to the presence of several bones from the same partial skeleton. Fox and red deer are more evenly represented in the MNI count (two individuals of each). Each of the main species is discussed below.

Domestic mammals

SHEEP

A minimum number of five sheep were represented by a total of 98 fragments of bone and teeth. Three specimens were positively identified as sheep, and not

goats (after Payne (1985) and Prummel and Frisch (1986)). It is difficult to draw reliable conclusions concerning the size and shape of the sheep from Vestra long cairn, due to a small sample of measurable bone, although the single available maximum astragalus length measurement (26 mm) does fall within the range 24–31 mm observed for Neolithic sheep at Knap of Howar and Skara Brae (Noddle 1983, and unpublished).

Four mandibles were sufficiently complete for estimation of age, indicating a minimum number of two 2–5 month old lambs and one four year old adult (Grant 1982; Payne 1973; Hambleton 1999; Greenfield and Arnold 2008). The post-cranial remains reflect a broadly similar age profile. Just over half of the sheep specimens (52 %) were classified as porous or very porous, i.e. reflecting very young perinatal/infant sheep. Of the remaining non-porous bones, a high proportion was unfused, indicating the presence of older juveniles and sub-adults. Only one ABG was positively identified: the left scapula and ulna and right radius and metacarpal (centrally unfused) belonging to a foetal sheep (SF 67 and SF 68).

From the combined element and ageing data it can be concluded that at least one foetal sheep, two young infants, one juvenile (<2.5 years old) and one young adult (*c*.4 years old) are represented within the long cairn assemblage. Fragments count by element indicates all the main areas of the body were represented within the sheep assemblage, which is consistent with the deposition of complete carcasses within or around the long cairn.

Cattle

A minimum number of four individuals were represented by 56 fragments of cattle bone and teeth. Only two complete or undamaged bones provided measurements, and no direct comparisons could be made with the limited metrical data available from other Neolithic Orkney sites. The general impression of the Vestra Fiold adult cattle bones is that they are too small to be wild aurochs and belong to large domestic specimens of a similar type to those previously described from Skara Brae, Knap of Howar and Quanterness (Noddle 1983; Clutton-Brock 1979).

Cattle ageing data are limited due to the small sample size. No mandibles or cheek teeth were recovered from which to estimate age at death. An incisor with enamel wear indicates a subadult or very young adult individual and very porous mandible fragments and an unworn maxillary third deciduous premolar attest to the presence of very young infants or perinates. Of the cattle specimens, 32 % are either unworn deciduous teeth or porous bones, many of which belong to very young calves probably peri/neonatal and almost certainly <6 months of age. Epiphyseal fusion data also indicate a high proportion of juvenile deaths. Element and ageing data indicate at least two very young calves, and the remains of at least one sub adult and one adult cattle in the assemblage.

The only cattle ABG recorded was a left hind foot (Centroquartal, calcaneus, metatarsal and 1st phalange). The metatarsal bone displays slight pathological abnormalities, probably age-related changes, such as extra bony growth at muscle

FIGURE 6.17. Lipping of proximal articulation of cattle 1st phalange.

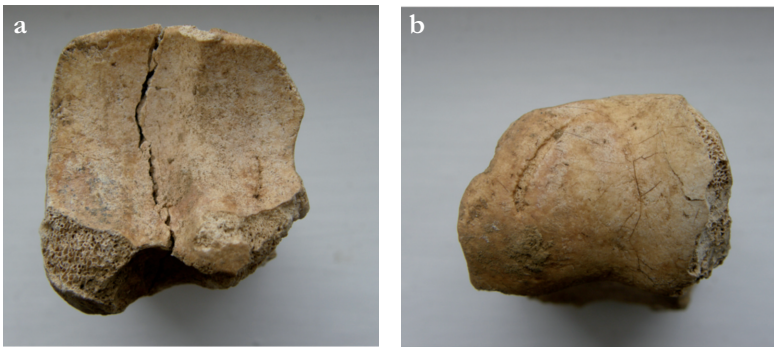


FIGURE 6.18. Cattle 1st phalange exhibiting lipping and 'Type 1' lesions (Baker and Brothwell 1980) of proximal (a) and distal (b) articular surfaces.

attachment sites. This group was spread throughout the structure in several different small find locations (SFs 54, 58 and 59). One adult 1st phalange displayed slight lipping of the proximal articular surface (stage 2, after Bartosiewicz *et al.* 1997, 47–48) (Fig. 6.17), and a second a similar degree of lipping of the proximal articular surface, as well as small 'Type 1' lesions (as described by Baker and Brothwell 1980, 109) on the proximal and distal articular surfaces (Fig. 6.18). Although associated with the weight-bearing stresses of draught animals, these are not exclusively draught pathologies and in such early stages are likely to have been asymptomatic and probably represent age-related changes (Telldahl 2005).

Bias towards the selection or survival of feet is evident from the high proportion of metapodials and phalanges in the cattle sample, but only among the sub-adult and adult remains. Among the porous elements most major body areas are represented, suggesting complete carcasses of calves were deposited, in or around the long cairn.

Wild animals

Fox

In total, 20 fragments of fox bone and teeth were present in the hand-recovered assemblage, representing the remains of a minimum number of two individuals. Two proximal tibiae (one fused and one unfused) indicate at least one adult and one sub-adult fox was present. Two ABGs were recorded. ABG 1 comprised at least six bones from the right hindlimb of a sub-adult fox recovered from two locations (SF 45 and SF 49) over a metre apart. Several of the bones clearly articulated with each other, and the presence of refitting fragments of the same fibula from each location further confirmed that the remains belonged to a single individual. The second fox bone group (ABG4), comprising the fragmented remains of an adult fox skull, right and left mandibles and right and left maxillae, was also spread over a wide area (SFs 61–67) and loose teeth from the same individual were also recovered from among the sieved samples.

Fox remains found within the chambered tomb at Quanterness have been interpreted as later intrusions (Clutton-Brock 1979). Unlike Quanterness, where

foxes were thought to have denned in the chamber, the fox remains at Vestra are incorporated within the physical structure of the cairn makeup itself, which is less suggestive of den activity. Most of the limb bones are fairly complete and the ABGs were probably deposited and incorporated into the long cairn structure as articulated and fleshed remains at the same time as the cattle and sheep remains, before subsequently becoming dispersed throughout the structure by natural taphonomic processes, such as settling of the stone slabs and bones slipping down through voids or being disturbed by the actions of small mammals.

Red deer

A total of six red deer bones were identified, representing a minimum number of two individuals. In addition, a fragmented and eroded piece of antler probably also belongs to red deer although it could not be firmly identified to species. The red deer bones are all those of very young individuals, including several very porous (neonatal) elements. Although no ABGs were confirmed, it is likely that at least three of the foot bones recovered belong to the same neonatal individual.

Pine martin

Two bones were identified as those of a sub-adult pine marten. This species is extremely rare on Orkney and a search of faunal reports from other comparable sites revealed that prior to identification of the remains from the Vestra Fiold horned cairn, the 'first and only instance of this species so far identified on Orkney' was from the Neolithic chambered tomb at Pierowall Quarry (MacCormick 1984, 110). Although more usually associated with arboreal habitat, MacCormick points out that pine marten are also suited to survival in treeless environments, and that the island habitat would have afforded a suitable diet (1984, 110). The pine marten remains may be later intrusions, but they were found in a void between flagstones (SF 59) along with the remains of several other species including neonatal cattle and red deer, young sheep, gull and small mammal, all of which exhibited a similar state of preservation and appear to have been deposited together at the same time.

Rabbit

A single tibia of a juvenile rabbit was recovered from the sieved samples, the presence of which indicates a degree of later intrusion and potential disturbance of the original deposits within the long cairn. Despite this, there were little signs of any substantial rabbit burrowing in the structure, nor anything to suggest the presence of recent intrusive or earlier residual material amongst the remains of the large mammals discussed above.

Small mammals

A total of 23 bones and teeth of small mammals were recorded from the hand-recovered assemblage and a further 57 noted from the sieved samples. Taxonomic

identification to species and/or family was attempted for mandibles, maxillae and loose molar teeth. Post cranial remains of small mammals were not further identified, but their size and general morphology were consistent with those of voles. All identifiable cranial fragments belonged to voles of genus *Microtus.* All observable intact upper M2 teeth exhibited the simplex form typical of the Orkney vole, *Microtus arvalis orcadensis.* This species probably hails originally from elsewhere in Europe and appears to have been well established on Orkney during the Neolithic, having been introduced by human agency, possibly by the earliest Neolithic farmers or by early seafarers, although the exact origins and date of introduction of the Orkney vole remain unclear (Corbet 1979; Berry 1996; Yalden 1999, 230). Previous studies have indicated a decrease in size in Orkney voles from the Neolithic to present (Corbet 1979), and further study of the small sample of voles from Vestra Fiold has the potential to add to the metrical dataset. No measurements were recorded for this report.

Some of the small mammal remains may have been introduced as pellets by birds of prey, but there are no conclusive signs of digestion on any of the vole teeth or bones which could help confirm their origin as predator deposits. Vole remains in the identified faunal assemblage are most likely to represent post-depositional (but not necessarily recent) intrusions of these creatures into the long cairn structure, where they may have been living. The presence of one rodent-gnawed bone suggests small mammals were active in the vicinity of the long cairn, although there is no evidence of any significant destruction or modification of the large mammal assemblage by rodents.

Birds

Ten fragments of bird were present in the hand recovered assemblage and none from the sieved samples. Identified bird remains include duck (five fragments of mallard size), a large gull (one fragment, not identifiable to species), and fulmar (one fragment). All species have been previously identified at other Neolithic Orkney sites, including the fulmar which according to Bramwell (1983) were previously not thought to have been breeding on Orkney until just over 100 years ago.

Discussion of faunal remains

The predominance of domestic species (sheep and cattle) over wild species, such as red deer, is a pattern observed in several other Neolithic assemblages from Orkney, including passage graves such as Quanterness (Clutton-Brock 1979) and Pierowall (MacCormick 1984), where sheep are by far the most abundant species, and settlements such as Skara Brae (Noddle unpublished, cited in MacCormick 1984) and Knap of Howar (Noddle 1983), where cattle remains are either more abundant than sheep or present in similar numbers. Pig, although present at these other sites, is seldom found in large numbers and its total absence from the very small assemblage recovered from Vestra Fiold therefore comes as no surprise. The greater abundance of sheep relative to cattle (and pig)

observed at Vestra Fiold is not apparent on all comparable sites from Orkney, but sheep do appear to have become increasingly important during the later Neolithic at the nearby settlement of Skara Brae, perhaps reflecting the greater suitability of sheep to the exposed Orkney landscape and partial woodland (MacCormick 1984, 108). There is, however, by no means a consistent pattern of species abundance from Neolithic Orcadian sites; the faunal assemblages from stalled cairns at the Knowe of Yarso (Platt 1935) and Knowe of Ramsay (Platt 1936) were both dominated by the remains of red deer, while famously within the chambered cairn at Isbister the bones of sea eagles predominate, although outside the Isbister cairn cattle were by far the most abundant species (Barker 1983).

The faunal assemblage from the Vestra long cairn is limited in the information it can provide concerning the day-to-day activities, economy and depositional practices of the people who constructed it. This is in part due to the small sample size, but also due to the nature of the monument itself. MacCormick (1984, D13) rightly highlights the problem that animal remains associated with funerary monuments or other similar commemorative structures cannot necessarily be assumed to derive from the normal domestic and dietary activities of the local community. The predominance of red deer at the Knowe of Yarso and sea eagles at Isbister, for example, is seen not as an indication of the economic and dietary exploitation of these species, but an expression of their symbolic importance to the community or locale (Jones 1998; Morris 2005). Nevertheless, the Vestra Fiold horned cairn assemblage does exhibit a range and relative abundance of species broadly in keeping with later Neolithic settlement sites, and the incorporation of domestic sheep and cattle within the structure supports the assumption that these species were of importance to the community and prevalent within the local landscape.

No butchery marks were evident on any of the bones, and while the widespread surface erosion and root damage may have obscured butchery marks, the absence of any marks, even on the better preserved bones, suggests there was little, if any, processing of the carcasses incorporated into the long cairn. Sheep remains of all age groups are represented by broad and relatively even coverage of the major body areas. The same is true for young cattle, although older cattle are mainly represented by foot bones. The apparent emphasis on the feet of adult cattle may be down to deliberate selection of these elements, or perhaps reflects the presence of primary carcass-processing waste in the area while the long cairn was under construction. At the Stones of Stenness henge monument (Clutton-Brock 1976) the pattern of cattle element representation among old and young individuals was similar to that observed from Vestra Fiold, although since both assemblages are very small any apparent patterns in element representation may be the result of small sample bias.

There is a clear emphasis on the remains of very young animals in the assemblage. All the large ungulate remains include a high proportion of juveniles, including at least two very young neonatal/infant red deer, two

neonatal/infant cattle, two neonatal/infant lambs and one foetal sheep. Older juveniles and adult cattle and sheep are represented in smaller numbers. A similar emphasis on very young individuals has been reported from Neolithic chambered cairns at Quanterness (Clutton-Brock 1979), Midhowe (Platt 1934) and Pierowall Quarry (MacCormick 1984). MacCormick suggests that the high proportion of neonatal sheep could be regarded as the product of a sheep-dairying economy, and a similar dairying model could also account for the cattle age profile. Alternatively, MacCormick points out that the rubble structure may have afforded some shelter to animals and thus accumulated the remains of young weak individuals who sheltered and died there. While either explanation could account for the age profile at Vestra Fiold, the apparent incorporation of animal remains throughout the rubble makeup of the cairn structure indicates deliberate inclusion of most of the large animal remains during construction rather than their subsequent incorporation into the chamber of a cairn by natural agencies. Clutton-Brock (1979, 113) interprets the perinatal remains of sheep, cattle and red deer found at Quanterness as 'offerings', and suggests a possible ritual association with foetal or newborn animals. Such ritual selection cannot be ruled out for the Vestra long cairn assemblage, although high percentages of neonatal and infant cattle and sheep individuals have been reported from settlement sites such as Knap of Howar and Skara Brae (Noddle 1983, 94), indicating that the emphasis on very young individuals was a feature of the preferred husbandry strategy and a possible emphasis on dairying. Ritual and functional explanations need not be mutually exclusive; as MacCormick (1984, D13) argues, the ritual selection of young animals may be influenced by economic pragmatism.

The available ageing data does provide some useful information concerning possible seasonal activity. In a study of modern Shetland sheep population living on Orkney, the herd had a restricted lambing season from late March to early May (Davis 1996, 596). A similar lambing season for the Vestra sheep would suggest death/killing of the young lambs occurred in early/mid summer although the birthing season may well have been more spread out during the Neolithic, which could account for the presence of foetal and older neonatal/infant individuals together in the same deposit. An equivalent birthing season for cattle would also suggest summer deaths for the young calves present. Assuming Neolithic red deer shared the May-June birthing season seen in modern Scottish populations, the neonatal individual from the Vestra long cairn also represents an early/mid summer death. Despite being a very small sample, the age information is compatible with the suggestion that the faunal remains were incorporated in the cairn structure in a single short-term event (*i.e.* the construction of the mound) that took place during the summer months. The faunal remains were deposited in the orthostatic box construction with pitched flagstones which comprised the main body of the cairn, but there are further elements to the Vestra Fiold horned cairn.

FIGURE 6.19. View of the arc of walling as first revealed directly beneath the turf.
COLIN RICHARDS

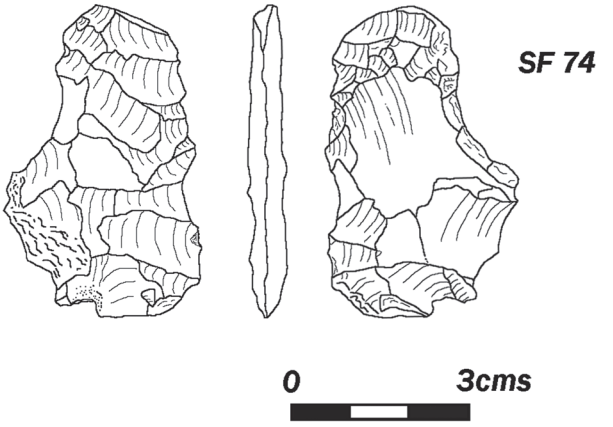
Building the long cairn: the circular proximal cairn and the tail extension

There are two other elements of the monument. First, a circular cairn was built over the proximal northern part of the long cairn, and second, the primary cairn has an extension of *c*.4 m to the south. The method of construction employed in the southern extension of the cairn is of a completely different character. A single-skin outer revetment wall with little concern for structural integration lay against the primary cairn, and ran 4 m in a southerly direction and then turned at right angles to form the rear of the cairn. The encased internal area was subsequently filled with a mass of laid slabs and stone rubble. However, in places fairly ephemeral lines of single-course walling were visible running laterally across the long cairn. Observations of the sloping rear of the long cairn indicate that it is a product of stepped 'bays', with rubble fill being contained by ephemeral transverse revetment walls composed of just a few courses (Figs 6.14 and 6.15). Each lateral revetment wall was simply built on the underlying rubble core, which introduced instability to the whole cairn structure. Indeed, the substantial amount of displaced and fallen stone present alongside the external wall face of the outer revetment effectively demonstrated this instability.

Because of the truncated and semi-ruinous condition of the Vestra Fiold long cairn, structural events were recognizable, but relative chronologies not. For example, although the tail section appeared to be added to the primary cairn, the jointing between the two was ambiguous. Certainly, towards the centre of the cairn a gap opened between the two sections (see Fig. 6.15), and given their differential built it is not beyond the realms of possibility that the front cairn section was actually added to the rear. Again this uncertainty mirrors the ambiguous relationship reported by John Barber (1997, 16–7) between two cairn sections observed at Point of Cott horned cairn (Fig. 6.23).

The circular structure built to enhance the proximal end of the cairn was represented by a ruinous arc of walling which was visible on removal of the turf (Figs 6.4 and 6.19). The wall was a revetment that clearly related to an elevated circular cairn. The remnant revetment wall comprised seven stones and a series of small uprights, which followed its circuit. Within the sub-circular revetment wall were several horizontal flagstones which acted to provide a degree of stability and support for the upper cairn material. The area of the circular cairn was visible due to colour differentiation caused by a spread of light-brown silty clay and small stone chips and fragments. There was no evidence to suggest a time lag between the basal cairn and the superimposed circular cairn over the proximal end of the Vestra horned cairn. On the contrary, the foundation or stabilizing slabs for the circular cairn superstructure lay directly above the pitched flagstones of the basal cairn (see Figs 6.4 and 6.9).

There is little evidence for further structural changes. The only evidence for ancillary activities is the deposition of fragmentary cremated remains in the forecourt area to the north of the rammed stone surface. Here, a series of small uprights were associated with several large horizontal flagstones, beneath which small fragments of cremated bone were deposited with a burnt, pinkish-grey, bifacially-worked knife (Fig. 6.20) and the remains of a pottery vessel (Fig. 6.21). The vessel is represented by 21 larger sherds and 17 fragments. The sherds were examined using basic macroscopic techniques with inclusions identified under low-powered (×30) binocular microscope following the procedures described in Orton *et al.* (1993, 231–42).



below: FIGURE 6.20. Flint knife (SF 74) associated with the Carinated bowl and calcined bone.
JOSHUA POLLARD

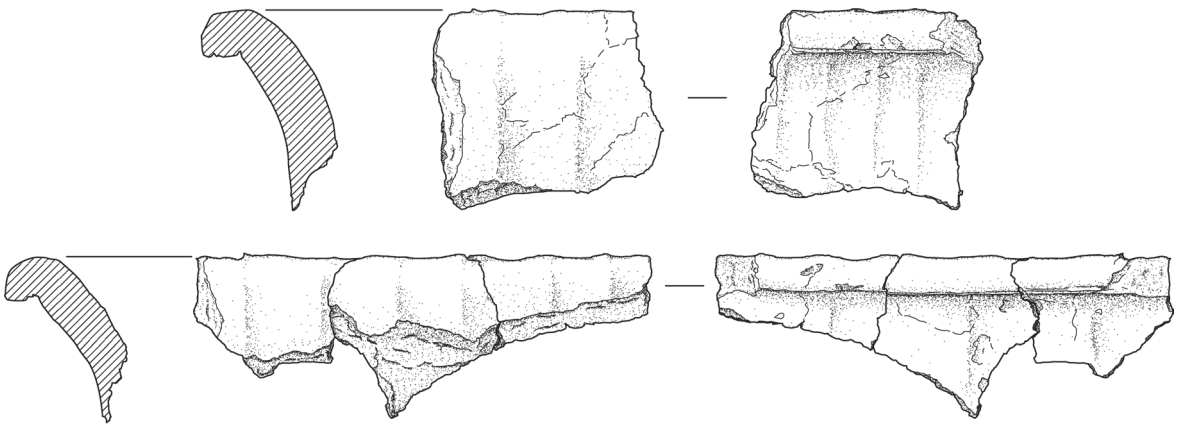


FIGURE 6.21. Reconstruction of vessel (SF 76) associated with the forecourt cremation deposit.
RICK PETERSON

Small Find	Context	Trench	Description
74	136	C/D	Burnt large bifacially-worked implement. On a pinkish-grey-brown flint, but the colour probably altered by heat. Due to its condition, it is not easy to reconstruct the form of the implement, but it is either a large knife or leaf-shaped point. On one side flat, thinning flaking, probably achieved with a soft hammer; on the other the entire surface worked with regular evasive pressure flaking. A fine and skilfully worked piece.
77	136	C/D	Heat removed spall, almost certainly from SF 74.

TABLE 6.4. Lithics associated with the Carinated bowl in the frontal area of the horned cairn

The sherds are from a single open round-based vessel with either an S-shaped or carinated profile (Fig. 6.21). There are traces of fluting on both the internal and external surfaces of the neck. The vessel was relatively fine, between 8 mm thick at the rim and up to 13 mm thick at the base. It is likely to have been around 400 mm in diameter, although there were not enough rim sherds surviving to reconstruct the diameter with any degree of confidence. Inclusions within the fabric are sparse and generally small. The inclusion identifications should be regarded as tentative as they are based only on low-power reflected light microscopy.

The vessel is likely to be an Early Neolithic bowl. It has the open flared form and fluting characteristic of North Eastern Scottish pottery of this date (Cowie 1993, 15). Parallels from mainland Scotland would include fluted bowls illustrated by Henshall (1983, figs 4 and 5) from Boghead and from the River Spey. The fluting on the Vestra Fiold example is slightly less pronounced and surface of most of the sherds is much rougher. More similar in terms of the ephemeral nature of the fluting are the vessels from Camster Long cairn in Caithness (Henshall in Masters 1997, 158), although the reconstructed profile of these vessels is less open.

The recovery of a well-fired, thin-walled Carinated bowl at Vestra Fiold is not without consequence. Accepting a date in the mid-fourth millennium cal BC (Whittle *et al.* 2011, 803–33), the presence of this unusual vessel testifies to early Neolithic activity at Vestra Fiold. Although too fragmentary to identify, the associated calcined bone may well be human. If so, the hill at Vestra Fiold provides an early funerary context for a ceramic style and mortuary practice previously unrecognized in fourth millennium cal BC Orkney. Apart from its rarity, this deposit reveals that Vestra Fiold was already effectively a 'sacred' place hundreds of years before the quarrying of monoliths or the erection of the proximal end of the horned cairn.

Building chambered cairns: surface over substance

Although heavily truncated at the proximal end, it is clear from the cairn structure that the fairly small Vestra Fiold horned cairn was a deceptive monument, in the sense that it maintained the appearance of a substantial monument, yet beneath the surface was a rickety structure. Indeed, given its location on the hillside, it was always surprising that the horned cairn was so

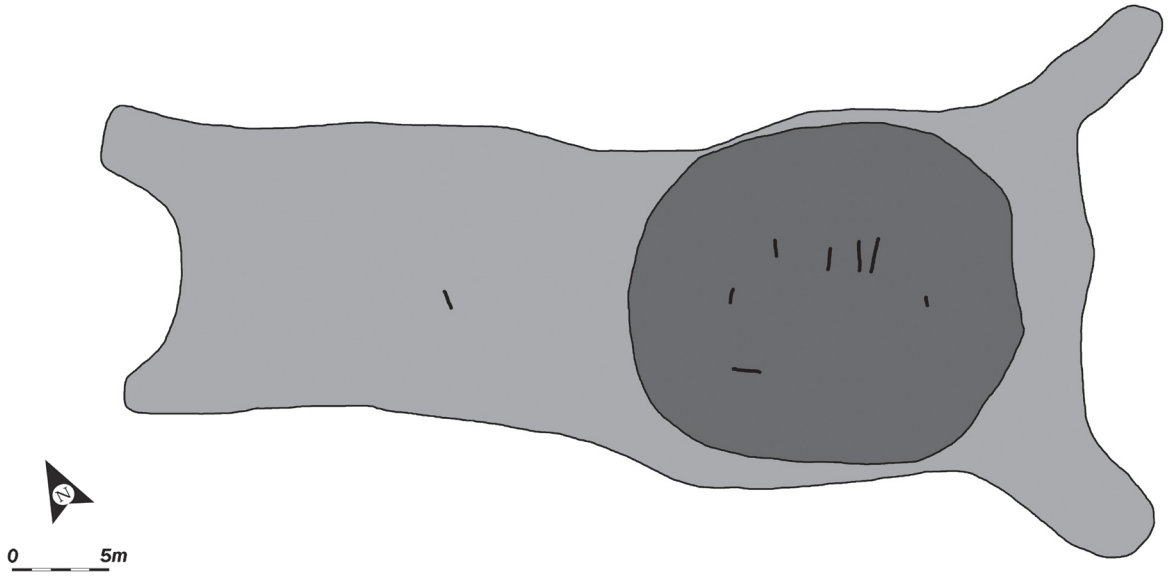


FIGURE 6.22. Plan of Head of Work, Mainland, Orkney (after Davidson and Henshall 1989).

FIGURE 6.23. The horned cairn at Head of Work, Mainland, Orkney. Note the high circular cairn at the proximal end.
COLIN RICHARDS

physically degraded (see section Fig. 6.9). Of course, a combination of structural instability and positioning on the edge of a steep scarp where any collapsing material would fall away ensured a savage degradation of the cairn. However, when first built, the Vestra Fiold horned cairn would have assumed a shape similar to that seen at the Head of Work, Mainland (Figs 6.22 and 6.23).

Despite the sequence identified at Tulach an t'Sionnaich by Corcoran (1967), where a long tail was clearly added to a modified small round cairn, Roger Mercer has argued strongly that in Caithness a process of *cumulicity* occurred where the 'round cairn additions set atop the earlier horned cairns produced a composite outline to a new kind of monument' (1992, 53). The new kind of monument referred to is the horned cairn of northern Scotland, with its pronounced hornworks and a bulbous mound forming the proximal end. For Mercer, the round cairn was

superimposed on the proximal end of an older low long mound, and these constructions contained a bi- or tri-partite chamber (1992, 53). It is clear that the circular cairn was superimposed on the basal long mound at Vestra Fiold, but there appears to be little time-lag between the two structural elements. Equally, there is no evidence for stone sockets to support orthostats of an upper bi- or tri-partite chamber. We will deliberate the implications of the third millennium cal BC dates obtained for the construction of frontal section of the Vestra Fiold, for the horned cairns of Orkney and Caithness below. But first we will assess the orthostatic box method of construction as a form of building other Orcadian chambered cairns.

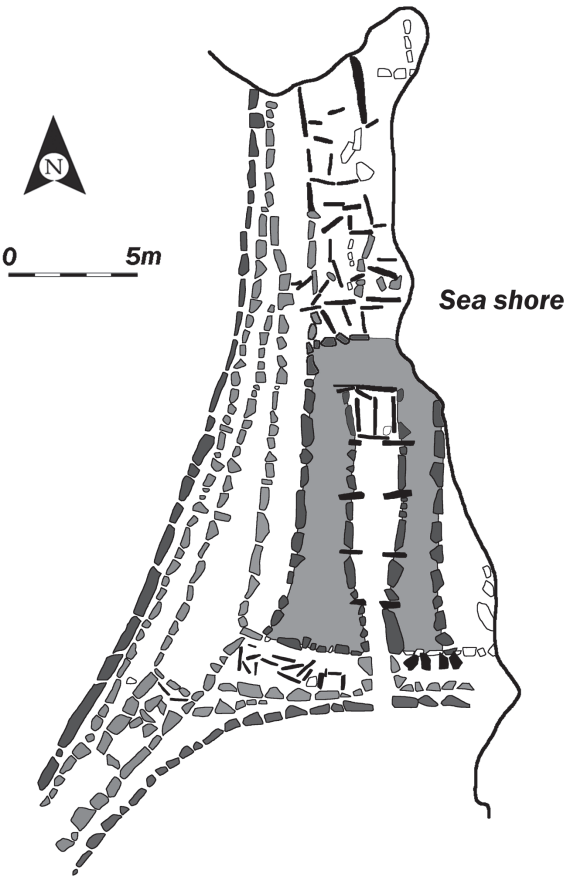


FIGURE 6.24. Plan of the Point of Cott horned cairn situated on the east coast of Westray, Orkney, Note the orthostatic construction of the rear cairn and hornworks (after Barber 1997).

Cairns at Setter, Eday, Orkney

The rectangular form of the burial chamber at Vestra Fiold is highly unusual in the context of chambered cairn architecture in Orkney. However, how rare is the box and pitched flagstone form of construction in the context of Orcadian chambered cairns? This method of construction was first recognized as forming the rear section of the horned cairn at Point of Cott, Westray, when it was excavated in 1984–5 (Fig. 6.24). Here, the use of orthostats to create stone boxes or cists was initially mistaken as chamber architecture, but eventually recognized 'to be a constructional device rather than a true structure' (Barber 1997, 14).

A similar constructional method, although on a much smaller scale, was present within a previously unknown chambered cairn at Setter, Eday (Downes 1999, 327–8), a mound investigated as part of the Orkney Barrows Project (Downes forthcoming). This site actually comprised two small cairns 75 m apart, situated *c.*200 m to the south of the Stone of Setter (see Fig. 6.25). The most northerly of the mounds, just over 5 m in diameter (Fig. 6.26), was a small chambered cairn, with an entrance facing north. What is interpreted as the main chamber was a comparatively small structure oriented *c.*1.8 m long N–S by 1.10m wide E–W, formed by well bedded orthostats which were a maximum of 0.75 m high. The rear, southern part of this chamber consisted of a slightly raised area, 1.10 m × 0.55 m in extent, formed of redeposited subsoil and sporadic paving which was separated from the rest of the chamber by stone slabs. The entrance to the main chamber was only 0.40 m wide; the entrance had been blocked by two very large stones rolled into the immediate opening, and the outer kerb was then continued across it, effectively sealing the monument.

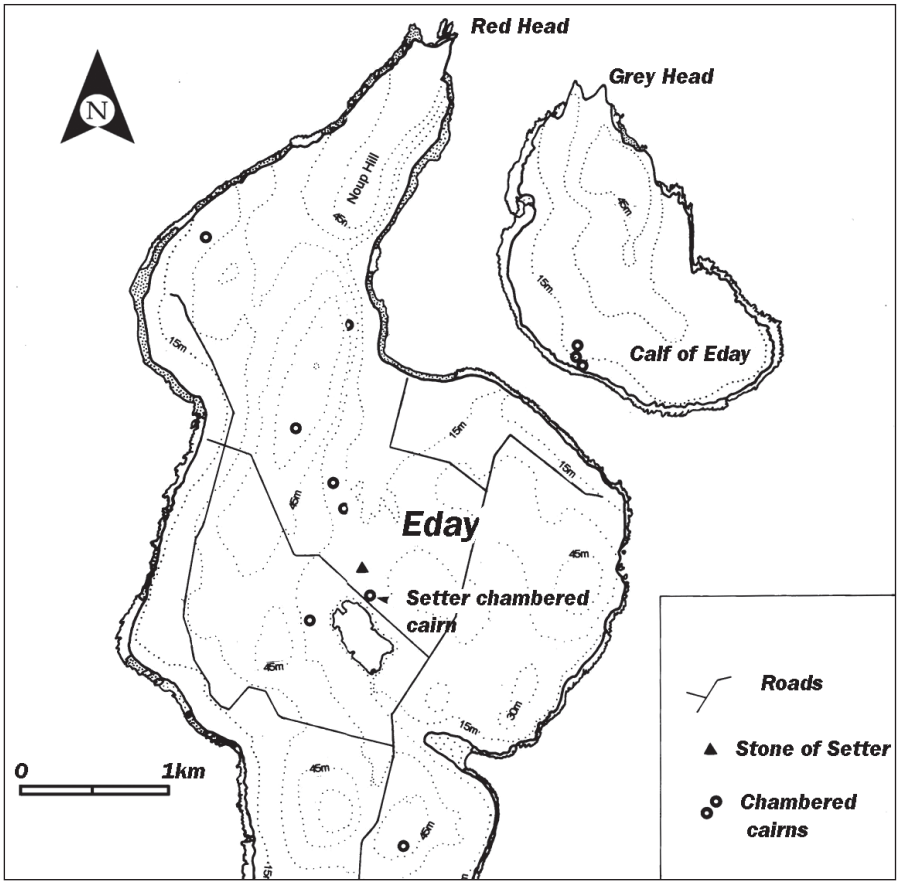


FIGURE 6.25. Location of the Setter chambered cairn.

FIGURE 6.26. Setter chambered cairn under excavation.
JANE DOWNES

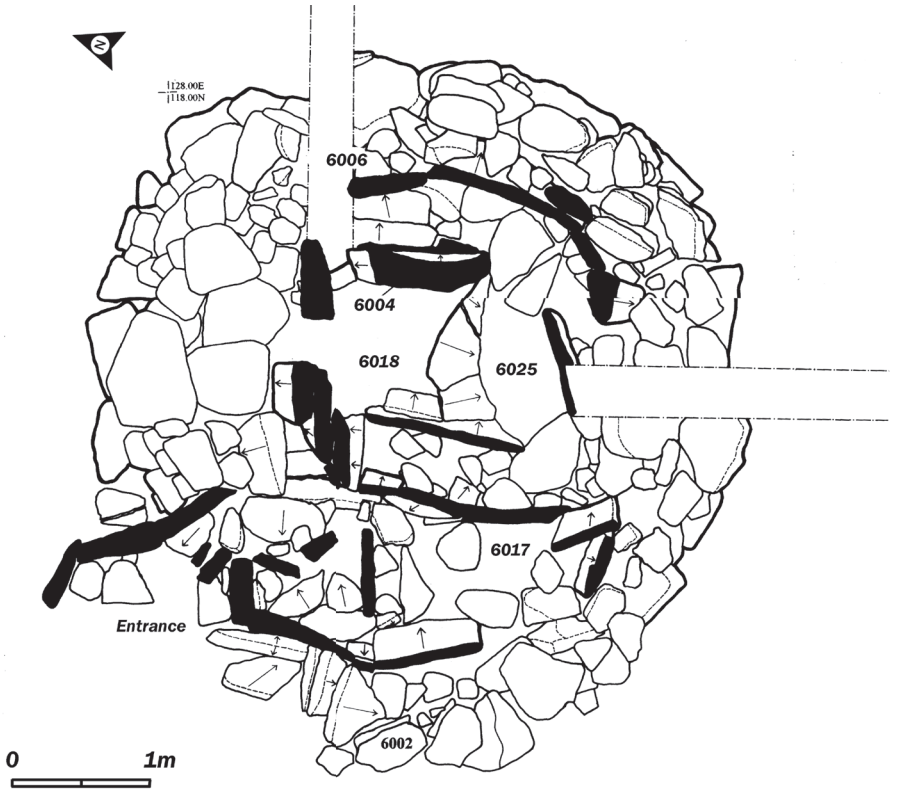


FIGURE 6.27. Plan of chambered cairn at Setter, Eday, Orkney (after Downes 1999).

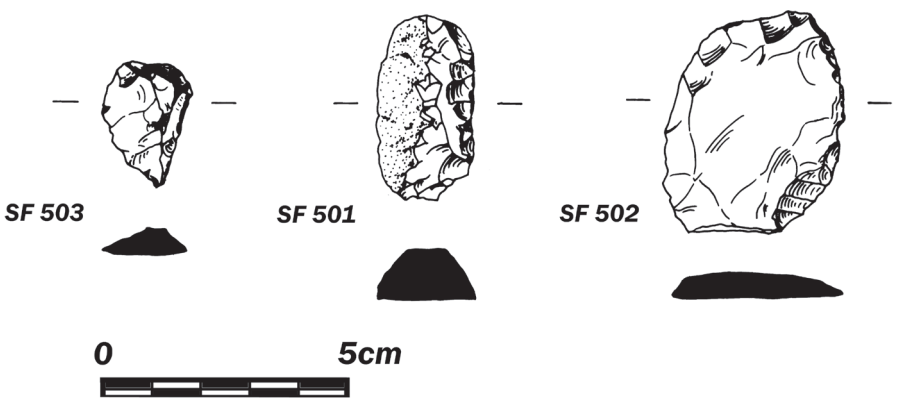


FIGURE 6.28. Flint artefacts from Setter chambered cairns.

The central chamber was surrounded by orthostatic constructed boxes. It was clear from this arrangement that the 'cairn' was created by these boxes with slabs being laid against and over them. Such a form of construction allows large monuments to be built relatively easily; conversely, the structure is intrinsically unstable and always prone to collapse. Another small chamber or large box measuring 2.10 m × 1.0 m had been built to the west of the main chamber and was subdivided into two small compartments by an orthostat. This

FIGURE 6.29. Mound 2 at Setter, Eday, Orkney.
JANE DOWNES

box or chamber appeared to be a slightly later addition to the monument. It too had a northern opening which was defined to the east by an arm-work of upright orthostats and had been blocked with three upright stones (Fig. 6.27). There were four flint flakes and a scraper (SF 503) recovered from the cairn (Fig. 6.28); conditions of high acidity in the peaty soil negated the possibility of bone surviving. Large stones interpreted as collapsed roof slabs were found within the chambers and boxes, although when the monument was roofed a very low small space would have been described.

The outer kerb of the chambered cairn was relatively substantial, formed of flat slabs and boulders. No entrance gap to the central chamber was identifiable in the kerb, suggesting that it was constructed at the same time as the later western chamber, and the original chamber was blocked at the same time. Whether there was any great time lag between the construction of the central chamber and the side chamber was not possible to discern; it is possible that the monument was constructed as a single event with a central chamber being added to by a side chamber, encased or enwrapped with the kerb in one continuous construction event.

Mound 2 was the southern cairn, *c*.5 m in diameter, and constructed of stone slabs and boulders surrounding a large cist *c*.1.5 m × 1.0 m in extent, with a large basal slab. The cist slabs were encased by a cairn of large stone slabs (Fig. 6.29). The likely contemporaneity of these monuments is indicated by the flaked stone finds. A small assemblage of totalling eight pieces included three fine retouched tools (Fig. 6.28): the afore-mentioned scraper (SF 503) from Mound 1, and two knives from Mound 2 (SFs 501 and 502). A likely Neolithic date for Mound 2 is indicated by the lithic assemblage; moreover the standing cist or chamber is similar to that encountered at Vestra Fiold.

Apart from the orthostatic box construction, these two small cairns raises a couple of interesting issues. The first is a classificatory issue concerning our assumption based on size and appearance that the Setter cairns would be Bronze Age, and the ramifications for the possibility of other earlier Neolithic monuments being mis-classified both in Orkney and elsewhere. More importantly is their physical juxtaposition in the landscape. Here, it is worth considering that such paired small cairns may form the primary elements of long cairns. A well-known example of such a pairing was incorporated into a long horned cairn is Camster Long, Caithness (Masters 1997), where two small circular chambered cairns are subsumed into a larger monument.

Constructing the chambered cairns of the north and architectures of appearance

Investigations at the supposed Orcadian chambered cairns at Vestra Fiold, Mainland and Setter, Eday, produced unexpected but extremely interesting results. Apart from posing typological problems, the significant aspect of both monuments was the box-like construction of the cairns. Although small, the employment of this distinctive method of construction at Setter demonstrates that it was a technique not restricted to the creation of massive monumentality. Similarly, from the detailed investigation of the Vestra Fiold horned cairn a number of issues arise concerning the categorization of monuments, and their methods of construction and material constitution during the Neolithic period of Orkney. After excavating the horned cairn at Point of Cott, John Barber (1997, 63) commented on the general 'shoddy' quality of the space-filling, orthostatic box construction of the northern cairn. The same could be said of the proximal end of the Vestra Fiold horned cairn and from field survey, Head of Work horned cairn in east Mainland, (Figs 6.22 and 6.23) appears to be built in a similar manner. These observations concerning cairn construction resonate with those discussed in Chapter 4, where it was noted with some surprise that the actual erection of the stone circle at the Ring of Brodgar appeared to be somewhat hasty. When considered together with the manipulation of the architecture and layout of the stone circle at Brodgar to enhance its visual effect, the orthostatic box construction of cairns, some on an enormous scale, reinforces the notion that this is an architecture of contingency and expedience. Barber is perfectly correct when he astutely stated that 'these Neolithic techniques militate strongly against the persisting perception that chambered cairns are large amorphous masses' (1997, 63).

Judging from the OSL dates indicating that the ditch around the Ring of Brodgar was dug between 2600–2400 BC, and the strong possibility that the ditch post-dates the erection of the stone circle (cf. Ritchie 1976; Gibson 2010b, 242–4), the dating of the construction of Vestra Fiold horned cairn to 2800–2600 cal BC (Fig. 6.11) is of great significance for two reasons. First, it reveals that the horned portion of the long cairn was actually constructed during

the period when the outcropping sandstone was being quarried for monoliths. This may provide a little illumination on the unusual occurrence of a standing monolith being present and directly associated with a burial cist at the proximal end of the cairn. Indeed, this clear relationship between a standing stone and human burial enforces the suspected commemorative role of standing stones.

Second comes the startling realization that against conventional typological monument sequencing, horned cairns are being constructed at the same time as the great stone circles, such as the Ring of Brodgar. Moreover, the monuments are being built by the same people. This observation returns us full circle to the very beginning of this chapter when the question was asked whether all monuments should be understood as being of the same order. Clearly, the answer is in the negative since there appear to be quantitative and qualitative differences between monuments being built at the local level, for instance, Vestra Fiold horned cairn and more public constructions such as the Ring of Brodgar.

This remarkable situation has wider implications for an understanding of horned cairn architecture. For example, the largest horned cairn in Orkney, which again displays evidence of orthostatic box-construction, was identified in the 1980s at Staneyhill, Harray, Mainland (Davidson and Henshall 1989, 182–3). Significantly, it will be recalled from Chapter 5 that Staneyhill is another quarry identified as providing at least one stone (Stone 16) for the Ring of Brodgar (Fig. 4.17). Thus, at one level we recognize a second coincidence of a horned cairn being constructed adjacent to a monolith quarry supplying stones for the Ring of Brodgar. At another, the question must be asked concerning the date of the Staneyhill horned cairn. Could this also be a third millennium cal BC construction? Although the Staneyhill horned cairn is a remarkable monument, measuring nearly 70 m in length, its topographic situation is curious. Rather than being built across the hillside, thereby exhibiting the greatest prominence when viewed from downslope, a defining feature noted generally for the landscape position of chambered cairns in Orkney (*e.g.* Phillips 2002; 2004; Cummings and Pannett 2005), the long axis of the Staneyhill horned cairn is upslope (Fig. 6.30). In assuming this unusual position it is not sky-lined from the low-lying ground to the north of the monument, but from the east – the direction of the Ring of Brodgar. Here then is good evidence to indicate that the Staneyhill horned cairn was positioned to be viewed to maximum effect from the Ring of Brodgar, and if this is the case, built at the same time, or later than, the great stone circle.

The question that arises from these observations is: do the orthostatic box and pitched stone constructed horned cairns represent a totally new monumental form or a modification and enlargement of earlier architecture? Certainly Point of Cott, Westray, can be subdivided into separate periods of construction. A cursory examination of the radiocarbon dates reveals two discrete 'phases', one centred between 3400–3300 cal BC, and a second between 2900–2800 cal BC (see Barber 1997, 58–9). Moreover, at Knowe of Lairo, Rousay, the chamber

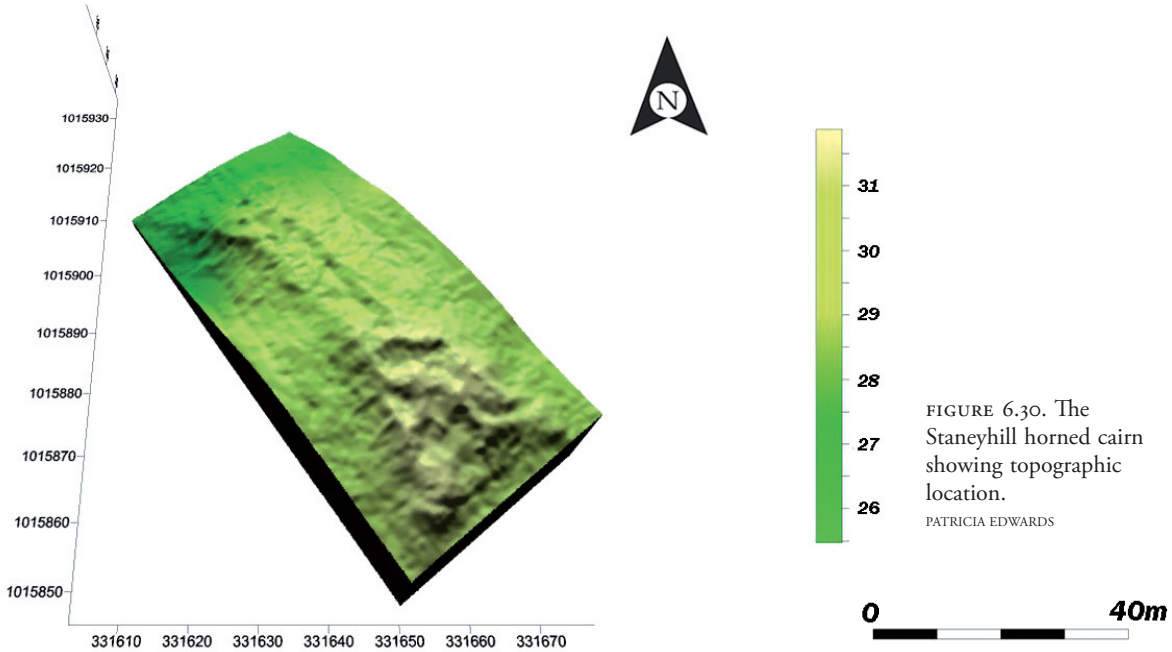


FIGURE 6.30. The Staneyhill horned cairn showing topographic location.
PATRICIA EDWARDS

FIGURE 6.31. The Staneyhill horned cairn is visible on the horizon to the east of the Ring of Brodgar.
COLIN RICHARDS

of a small tri-partite chambered cairn is remodelled into passage grave form (Grant and Wilson 1943; Davidson and Henshall 1989, 134). Almost certainly contemporary with this modification is the construction of a massive horned cairn. Although lacking any radiocarbon dates for the Knowe of Lairo, there are clearly at least two periods of construction and reconstruction which may well concur with the late fourth and early-mid third millennium cal BC phases recognized at Point of Cott, Westray. At this point we may introduce the

evidence of a dual period component to the activities occurring at Vestra Fiold horned cairn. These are represented by the Carinated bowl, and associated flint knife and calcined bone, from the frontal area (and possibly the rear section of the long cairn) and the mid-third millennium cal BC orthostatic box and pitched stone constructed frontal area of the horned cairn.

The employment of structural devices (Barber 1997, 63) as the orthostatic boxes and pitched flagstones were clearly a form of 'quick architecture' (Barber 1992, 29; McFadyen 2006, 353), which alternatively could be equally termed 'expedient architecture'. It is also, as suggested at the beginning of the chapter, deceptive in that through this form of construction monumental architecture looks substantial, yet in actuality represents a 'house of cards' effect (Barber 1997, 63). Rather than attributing the different forms of construction to different people, an interpretation firmly grounded within a culture-history tradition, or some loss of building skills, they may be instead ascribed to a strategic attitude towards monumental construction on the part of the builders during the first half of the third millennium cal BC. To be precise, different techniques of building offered optional construction methods to create specific architectural effects, whether it is the remodelling of the Knowe of Lairo, the front of the Vestra Fiold horned cairn or the rear of the Point of Cott horned cairn, or for that matter, the stone circle at the Ring of Brodgar. Such social strategies clearly undermine the normative assumptions implicit within a typological approach to the chambered cairns of Orkney and northern Scotland.

Tursachan Circle, Calanais

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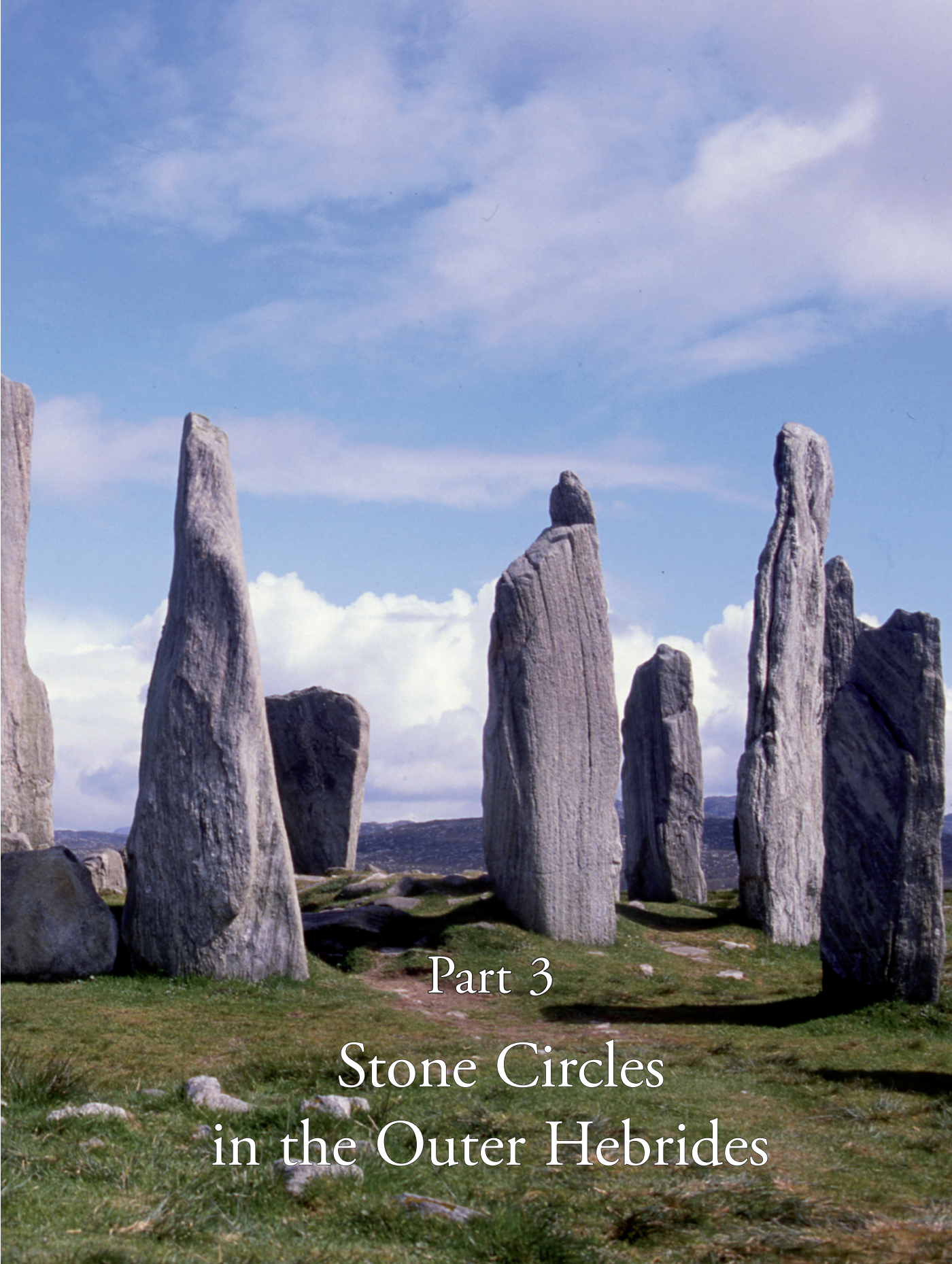

Part 3

Stone Circles in the Outer Hebrides

CHAPTER 7

The Peristalith and the Context of Calanais: transformational architecture in the Hebridean early Neolithic

Vicki Cummings and Colin Richards

Introduction

Several hundred years before the stone circles at Calanais were being built, people in the Outer Hebrides were erecting circles of stone as part of chambered cairns. The encircling ring of monoliths found at these passage graves is known as a peristalith. Whilst we are not particularly interested in searching for antecedents of stone circles (cf. Burl 1979b, 45), it is obviously of significance that a specific element of passage grave architecture is redeployed as a major monumental form in subsequent centuries. In order to investigate this occurrence it is important to examine the architecture of the passage grave and its spatial representation, and situate it in the broader context of early Neolithic life in the Outer Hebrides. This is necessary in order to pursue the idea that the later stone circles may well have been inspired by and, in some way, indexed the Hebridean chambered cairns.

In comparison to Orkney, our knowledge and understanding of the early Neolithic in the Outer Hebrides are severely limited. This is mainly due to a combination of a lack of archaeological research, specific social and economic conditions and extreme environmental factors which serve to both benefit preservation but inhibit the discovery of archaeological material. Today, the population of the islands is low, and historically practised a crofting economy. Much of the archipelago is mountainous and rock-strewn or covered in blanket peat, and consequently, there is only limited cultivation. This means that many of the upstanding archaeological remains are very well preserved and sometimes protected by a layer of peat. It also means that very few archaeological discoveries are made through arable agricultural practices or chance finds. Our knowledge of the early Neolithic comes from two main sources: the chambered cairns of the region, which, in many cases are extremely well-preserved, and from settlement evidence, which has primarily come to light over the last 100

years, usually through chance encounter or targeted excavation projects. Initially we will consider the evidence for occupation before moving on to examine monumental architecture.

A number of early Neolithic occupation sites have been identified in the Outer Hebrides. Many of these are typical of mid to late fourth millennium cal BC sites from across Britain and Ireland, consisting of the remains of small-scale, short-term occupations. For example, an area of habitation was found at Bharpa Carinish on North Uist which comprised isolated arcs of boulders, stakeholes and a series of hearths, although a significant quantity of bowl pottery was found here too (Armit 1992, 55; Crone 1993). Slightly more permanent structures were identified at Alt Chrysal on Barra, where a complex of hearths, stone settings and postholes were found along with occupational debris (Branigan and Foster 2000). This evidence indicates a process of impermanent settlement with the place being occupied and reoccupied over an extended period of time. There are other, similar, examples of periodic occupation from early Neolithic sites across the Outer Hebrides (see Armit 1996).

One of the best known Neolithic occupation site in the Outer Hebrides is Eilean Domhnuill, in Loch Olabhat on North Uist (Armit 1996, 44–50; 2003). This small islet settlement is joined to the shore by a thin causeway (Fig. 7.1). Multiple occupation layers dating to the Neolithic are present, and excavation has revealed the remains of structures along with a large pottery and stone assemblage. Waterlogged deposits also survive at the site but have not been examined in detail.

FIGURE 7.1. The islet settlement site of Eilean Domhnuill, North Uist. VICKI CUMMINGS

There are two features that highlight questions about the nature of settlement as represented by the evidence at Eilean Domhnuill. Firstly, this site was not unique in the Hebrides. Similar sites have been found both on North Uist and in the Hebrides more generally. For example, the islet site of Eilean an Tighe (Scott 1950), also on North Uist, shares many similarities with Eilean Domhnuill. Armit (1996, 52) also lists two other possible islet sites on Lewis (see also Armit 1992, 317–8). More recently, a similar site has been identified at Loch a'Choire in South Uist (Henley 2003; Parker Pearson *et al.* 2004, 38). Living on islets, then, seems to have been common practice across the Outer Hebrides in the early Neolithic, and beyond (cf. Armit 1992, 320; 1996, 52–4). Secondly, while it may have been common for people to inhabit the islets of the Outer Hebrides, we should think critically about the nature of that occupation, and especially, the observation that at Eilean Domhnuill there seems to be a process of impermanent occupation, as evidenced by a clear sequence of hearths and associated quantities of pottery and lithics (Armit 1996, 50).

Aside from known settlement sites such as Eilean Domhnuill, occupation sites are usually identified through the discovery of lithic scatters. In the Hebrides, however, the dense peat cover, formation of machair deposits and lack of cultivation mitigate against such discoveries, so we have little sense of the wider early Neolithic occupation of the landscape. There have, however, been a few discoveries of lithics during peat cutting, among which are a number of stone axes. The most famous example is the Shulishader axe from Lewis, which was found with a preserved wooden haft (Armit 1996, 61, fig. 4.9) dating to the beginning of the late Neolithic (3389–2914 cal BC).

At the settlement of Alt Chrysal on Barra, the lithics included flakes of Arran pitchstone, Rhum bloodstone and a porcellanite axe fragment from northeast Ireland (Sheridan and Addison 1995). Indeed, a substantial number of the axes found in the Outer Hebrides come from distant locations such as Tievebulliagh/Rathlin Island and Langdale, Cumbria. Furthermore, the presence of several flint axes is also reported (Armit 1996, 61). Taken together, these finds plainly illustrate that the Outer Hebrides were not isolated in the Neolithic. On the contrary, it is clear that they formed part of broader networks of maritime communities who were involved in the exchange of a range of material culture, including polished axes, along the western and northern coastline of Britain and across the Irish Sea (cf. Cummings 2009). The presence of Unstan Ware in the early Neolithic of the Outer Hebrides emphasizes these connections, this time to the northeast, towards Orkney and Caithness (Armit 1996, 57). Overall, the evidence suggests extensive and overlapping exchange networks, representing social relationships extending well beyond the Outer Hebrides. It also hints at a fairly mobile early Neolithic lifestyle resulting in frequent movement and transient occupation of a number of sites within fairly diverse island landscapes (cf. Whittle 1997c).

The Hebridean chambered cairns

There are 42 chambered cairns in the Outer Hebrides, with almost half of these sites on North Uist (Figs 7.2 and 7.3). Sea levels have risen since the chambered cairns were constructed, so that a number are now located on low-lying coastal promontories. In one case, that of Sig More on South Uist, the monument is now in the inter-tidal zone. Many sites are badly ruined, probably as they would have presented a convenient source of stone in the past. Others, however, are extremely well preserved, surviving virtually intact.

Unsurprisingly, previous considerations of the chambered cairns of the Outer Hebrides have focussed on the form of these sites, especially the architecture of the chamber. Consequently, they have fallen into two basic typological categories, Clyde and Hebridean cairns (Henshall 1972). As their name suggests, Clyde cairns are found predominantly in western Scotland and cluster around the Clyde and associated waterways. The few Clyde cairns present in the Outer Hebrides have been designated 'outliers' of this tradition (see Henley 2004). The dominant 'type' of chambered cairn in the Hebrides is the Hebridean passage

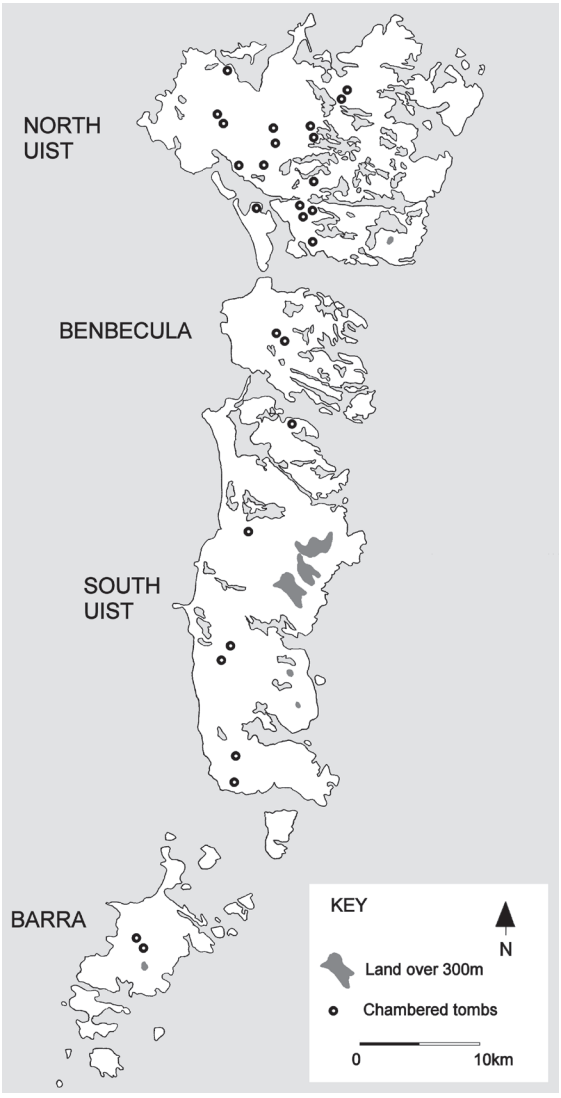

FIGURE 7.2. Distribution of chambered tombs on North Uist, Benbecula, South Uist and Barra.
VICKI CUMMINGS

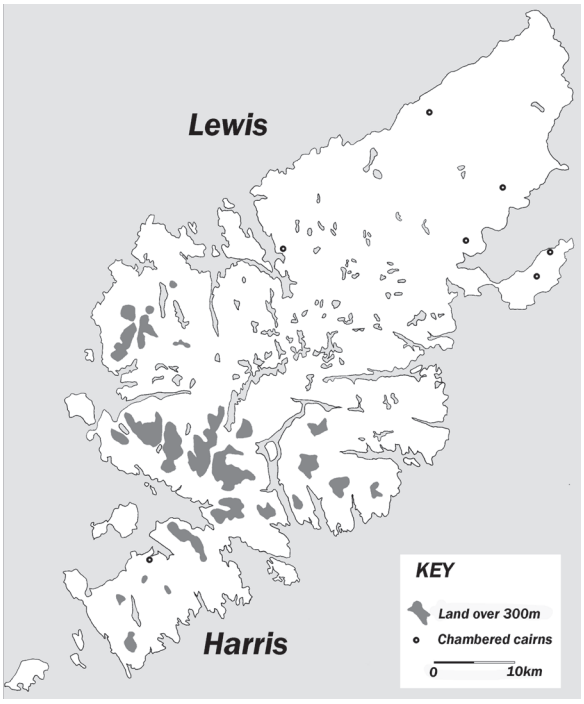

FIGURE 7.3. The distribution of chambered tombs on Lewis and Harris.
VICKI CUMMINGS

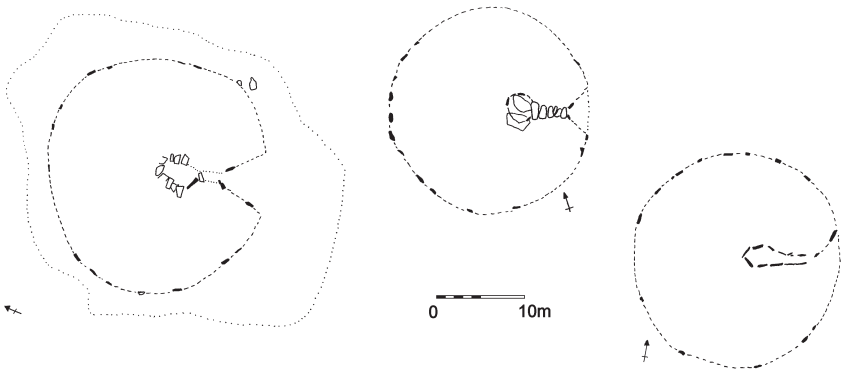

FIGURE 7.4. Three typical Hebridean chambered cairns.
left: Loch a'Bharp, South Uist; *centre*: Marrogh, North Uist; *right*: Barpa Langass, North Uist (after Henshall 1972).
VICKI CUMMINGS

grave, examples of which are found throughout the Outer Hebrides, Skye and the mainland beyond. Their chambers are typically circular with a passage leading to the outside of the cairn (Fig. 7.4). While the configuration of the chamber dictates the classification, the cairns which surround the chambers also vary. Three different shaped cairns are found in the Hebrides: long, round or square.

The variety of different chamber styles, the variety in cairn shape and size and in some cases, what seems to be the 'mixing' of traditions (cf. Henley 2004), have in the past caused some confusion to the typological mind. Inevitably, such architectural divergence has been interpreted as a consequence of different communities living in the area at the same time, or different traditions being constructed over time (*e.g.* Scott 1942; Armit 1996, 76). We should be wary of placing too much emphasis on the form of these sites, particularly when it seems likely that some sites underwent considerable alterations over time (*e.g.* Barpa nam Feannag, North Uist). Cairns in particular appear to have been altered in shape and size, with round cairns being converted into long cairns in a number of cases. Other cairns seem to have been transformed into square cairns, or had extra cairn material added beyond the original edge of the round cairn (Henshall 1972, 130–2 and see below). Furthermore, the chambers were potentially open and accessible in one form or another (see Bayliss and Whittle 2007), with deposits reflecting use from the early Neolithic into the Bronze Age (Armit 1996, 72).

Only a limited number of sites have been investigated and produced finds. Very little skeletal material has been preserved, possibly due to acidic soils (Henshall 1972, 143). Where material has been found, it comprises pottery and stone objects including flint, chert and quartz flakes. Overall, our understanding of the Hebridean passage graves remains limited. All major archaeological investigations of these sites occurred at least 60 years ago, and the most thorough excavations, those of Unival and Clettraval, were of 'atypical' monuments.

Let us now consider the form of the Hebridean passage graves in more detail, in particular the interplay of linear and circular architecture. A number of authors in recent years have thought about the construction processes involved in building monumental architecture, particularly chambered cairns

(*e.g.* Richards 2004b; McFadyen and Whittle, 2006). These discussions have encouraged us to think more carefully about the process of construction and the significance of different material constituents deployed as architecture. In the case of the Hebridean passage graves, the dominant spatial theme appears to be circularity as manifest in the form of the chamber and encasing cairn. However, as the name suggests, the linear passage is also a defining characteristic. In thinking about the sequence of construction we see a fusion of these spatial structuring principles. The first element of the site to be built would be the erection of a circle of orthostats to create a chamber which is then extended to form the passage. The orthostats would be set in sockets, and initially would assume the appearance of a small stone circle and avenue (cf. Henley 2005, 100). From this point on a process of encasement ensued with the gaps between the orthostats being filled with dry-stone walling. The chamber was roofed in stone by corbelling, which allowed a greater height to be achieved. This contrasted dramatically with the low lintled passageway. The presence of a circular or sub-circular chamber may not seem particularly remarkable, yet architecturally it contrasted quite markedly with other forms of monumentality in western Scotland. For instance, to the south, and indeed in the Hebrides themselves, it was linear spatial principles that underlay the architecture of the Clyde cairns.

There is greater ambiguity concerning the construction of the cairns encasing the Hebridean passage graves, especially the status of the peristalith. There are two lines of interpretation. Henshall seemed inclined to think that the peristalith was one of the later phases of construction (Henshall 1972, 141), effectively embedded within the cairn. Alternatively, there remains the possibility that the peristalith was constructed prior to the creation of the cairn. In the former scenario, large stones within the cairn would support the monoliths comprising the peristalith as it is built up. In the latter the monoliths were set in sockets forming a freestanding stone circle which was encased within the cairn as it grew. Although in terms of sequence and imagery there is a distinction between the two scenarios of construction, in both modes, a stone circle effectively surrounds the passage grave. This leads directly to a question of constructional uniformity: specifically the point that at different passage graves the peristalith may have been constructed in different ways. The pertinence of this challenge to the assumed unitary construction of sites of a specific 'type' will be explored further when the Calanais stone circles are examined in Chapter 9.

A peristalith is found at roughly half of the passage graves in the Outer Hebrides (Figs 7.5 and 7.6). More sites may have originally have had these circles of stone: the stones in the peristalith would have been the most accessible for taking as building material in later years, and they may also have been moved and redeployed in the Neolithic during the remodelling of specific cairns. Nonetheless, Henshall could only list four sites that she thought never had a peristalith (Henshall 1972, 128). Peristaliths are unusual features and

above: FIGURE 7.5. Peristalith at Reineval, South Uist.
VICKI CUMMINGS

below: FIGURE 7.6. Peristalith at Dun Bharpa, Barra.
VICKI CUMMINGS

are not found widely in early Neolithic chambered cairn architecture beyond the Hebridean group. Elsewhere kerbs are common, but these were usually constructed using much smaller stones, often dry-stone walling, and typically they were used to support the cairn. Dry-stone walling has been found between the peristalith stones at some sites (Henshall 1972, 127). Otherwise, the stones in the peristalith seem to stand proud from the round cairn which they encircle. Clearly, in the imagery of the Hebridean passage grave we see the provision of a stone circle as a method of externally wrapping and containing the interior spaces of transformation.

Here, then, we have circular monuments: circular chambers set within circular cairns wrapped by stone circles (peristaliths). None of the elements alone are completely unparalleled elsewhere in Britain and Ireland, but circularity does seem to have been reiterated over and over again at these sites. Although there has been substantial discussion about the apparent adoption of circular and concentric spatial principles in monumental architecture (*e.g.* Richards 1996a; Bradley 1998a, 104–9), this has tended to be recognized as occurring at the end of the fourth millennium cal BC. Accepting the deficiencies in dating the Hebridean passage graves, it does seem on the basis of ceramics, such as Hebridean ware and round-based bowls, recovered from the passage grave chambers (*e.g.* W. L. Scott 1932, 199–201) that in the Western Isles a circular spatial referent as manifest in monumental architecture occurred considerably earlier than, for instance, Orkney. Intriguingly, it is only in their later forms that a few chambered tombs were converted into square or long cairns, and as such there is a partial movement away from circular architecture.

Distribution and setting

It is now worth considering the landscape setting of the passage graves in order to add another dimension to our understanding of these monuments. The settings of the chambered tombs of North Uist (Henley 2003) and South Uist (Cummings, Henley and Sharples 2005) have already been considered elsewhere, but here we will wield a broader brush. A cursory examination of the distribution of the passage graves indicates that they are not found equally distributed throughout the Outer Hebridean islands but in specific clusters. There are only seven definite sites from the whole of Lewis and Harris, while 17 have been identified on North Uist alone. Unsurprisingly, the decision to situate passage graves was far more socially strategic than a basic territorial model suggests (*contra* Renfrew 1976, 200; Chapman 1981; see however, Chapman 1995). Henshall (1972, 116) posited that the monuments are positioned in relation to good upland pasture, while Armit (1996, 77) observed that cairns were sited to command extensive views, possibly over specific tracts of land relating to different communities: a situation in the landscape similar to that consistently noted for the chambered cairns of Neolithic Orkney (*e.g.* Childe 1942; Davidson 1979; Renfrew 1979; Fraser 1983; Woodman 2000; Cummings and Pannett 2005). However, the most recent and interesting suggestion is that indeed the Hebridean passage graves were built to overlook specific tracts of land, but those specifically related to access routes across and between different landscapes (Cummings *et al.* 2005; Henley 2003).

On the Isle of Lewis, four of the six definite passage graves are located around Broad Bay on the east side of the island. One site, that of Caisteal Mhic Creacail (Fig. 7.7) is located just a hundred metres from the shore and commands wide views out over Broad Bay. Carn a'Mharr, by contrast, is located 3 km from the sea, yet still had wide views out over Broad Bay to the south. It seems that these

FIGURE 7.7. Caisteal Mhic Creacail, Lewis, looking out west over Broad Bay.
VICKI CUMMINGS

four passage graves were built to overlook this bay area, and we suggest that the Neolithic people who were building and using these chambered tombs were maritime-based communities based in and around Broad Bay. Interestingly, the other two passage graves on Lewis also overlook navigable waterways. Breascleit commands views down onto Loch Ròg an Ear which links the Calanais area with the Atlantic Ocean. The other site, Steinacleit, is located on the western side of Lewis. Overall, the few identified Lewis passage graves all overlook stretches of water that were almost certainly well used for travel within and between islands.

The coastal setting of sites is also a feature of other areas in the Outer Hebrides, where a number of passage graves on Harris, North Uist and South Uist overlook the sea. In particular, they are found overlooking waterways that are sheltered and easily navigable. On North Uist, Benbecula, South Uist and Barra, however, the majority of passage graves are positioned not in relation to movements by sea, but movements *across* and *between* islands. Specifically, monuments are located to overlook access routes across the landscape. For example, a number of the passage graves on North Uist are found on the sides of hills overlooking key routeways across the island (Henley 2003, chapter 6). Barpa Langass, for instance, looks out to the north, over a route into the heart of North Uist, now marked by a major road (A867).

To the north of Barpa Langass right in the heart of the island are three passage graves which also overlook a natural routeway through the landscape (and see Henley 2003, chapter 6). The first of these, Guala na h'Imrich, sits on the southern side of a hill of the same name (Fig. 7.9). The cairn has wide

FIGURE 7.8. Barpa Langass, North Uist, looking out over the plains to the north.
VICKI CUMMINGS

views down over Bogach nan Sgadan, an open expanse of moorland which in the Neolithic would have been excellent pasture and/or woodland for domesticated and wild animals. This valley also provides access right into the heart of North Uist and beyond. At the eastern end of the valley are two more chambered cairns: Marrogh (Fig. 7.10) and Airidh nan Seilicheag. Both flank the valley on the hillside to the north and south respectively. Each passage grave is carefully placed to be skylined if one was passing along the bottom of the valley. Interestingly, another possible passage grave is present on the northern slopes of Beinn na h-Aire, again looking out over the valley. It seems that in this instance, passage graves were carefully placed to mark out and structure the navigable passage along this valley.

A similar landscape position appears to characterize the passage graves on Barra, the southernmost island of the Outer Hebrides. Yet again, these are carefully located so as to be visible on the skyline when one is passing along the main routeway through the heart of the island which runs up from the coast through to the gap in the ridge of Beul a' Bhealaich.

Overall, then, the setting of the passage graves of the Outer Hebrides strongly indicates that the communities building and using these sites were deliberately positioning sites so that they were visible as people moved around the landscape. These movements were twofold: firstly, along routeways *through* the islands, particularly following valleys which would have been ideal for keeping livestock or hunting, and secondly, along maritime routeways, connecting all the islands together as well as linking the Hebrides with the wider Neolithic world.

FIGURE 7.9. Guala na h'Imrich, North Uist, looking east (cairn indicated by arrow). VICKI CUMMINGS

Back to islets

Having considered the architecture and setting of the passage graves of the Outer Hebrides, let us re-visit the islet settlements. As discussed above, a number of Hebridean islets have been found with Neolithic occupation layers, and as such these sites have been interpreted as settlement sites. However, there are hints and clues which suggest that these sites may represent something rather different, a point noted, but not really developed, by the excavator (Armit 2003, 98). These small islet sites would only ever have been large enough for occupation by a limited number of people. The evidence from Eilean Domhnuill seems to suggest that only a single house actually stood at any one time (Armit 1996, 46). Eilean Domhnuill was also not permanently occupied, with the loch levels rising on a number of occasions and flooding the site (Armit 1996, 47). Non-permanent occupation here is further supported by the environmental evidence which suggests that between 4000–3300 cal BC woodland was reduced and regenerated a number of times (Mills *et al.* 2004). Small-scale, non-permanent occupation may be considered fairly typical for Neolithic settlements, but another interesting feature of Eilean Domhnuill was that it was surrounded by a sequence of timber screens or palisades, which essentially shielded the site from view (Mills *et al.* 2004, 889). Considering its location in a low-lying loch, this is not a site that was highly visible in the landscape anyway. Moreover, Armit (2003, 98) notes that there was a considerable amount of evidence for the preparation and serving of food, but very limited evidence for other day-to-day activities. Curiously, no material associated with everyday craft activities,

FIGURE 7.10. Marrogh, North Uist, looking east over lochs and plains.
VICKI CUMMINGS

such as pottery making, stone knapping or woodworking, was found on the site (Henley 2003, 47). Carved stone balls were also found (Armit 1996, 62–3), not a common find in any Neolithic context (Edmonds 1992). Indeed, it is now suggested that the islet held some 'special significance' (Armit 2003; Mills *et al.* 2004, 889). This suggestion can be taken further.

As discussed in Chapter 1, archaeological typologies of things and places tend to have a homogenising effect. Nowhere is this more pronounced than in the area of Neolithic habitation, or the identification of Neolithic 'houses', which tend to be conceived as totally residential. This remains problematic for the interpretation of difference and diversity of dwellings (see for example, Richards 2005c; Card 2010). Let us consider something a little different. There are numerous ethnographic examples where certain elements of the community are sent away at particular times in their lives; Lovers' camps, for example (Binford 1983), or male initiation ceremony camps involving circumcision (Whelehan 2001). It is therefore possible to suggest that although the islet sites, such as Eilean Domhnuill, were maintained over long periods of time their inhabitation took the form of frequent short-term episodes of occupation by small numbers of people. Moreover, secluded from the wider world by screens and surrounded by water, these islets may have been special places designed for the social transformation of particular people or groups.

Indeed, the Hebridean islets possess all the characteristics of liminality, places specifically constructed for *rites de passage*. Certainly, the architecture of Eilean Domhnuill shielded practices from the scrutiny of the wider population and the dominant activities occurring within the site involved eating and

drinking. The inhabitants were not, however, involved in day-to-day craft or subsistence activities. In these observations we witness a striking resonance with the character of the architecture of, and practices associated with, passage graves. These monuments also contained people undergoing a transformation of personhood from life to death. Interestingly, the large quantities of pottery found on the islets are also very similar to the types and quantities of vessels found in passage graves (see W. L. Scott 1932, 199–201; Armit 1996, 75–6). A large number of the relatively restricted range of forms were also heavily decorated, which again contrasts with other pottery assemblages from domestic sites in the area (Henley 2003, 115–6).

The fact that people went back to Eilean Domhnuill at regular intervals, and re-engaged with the construction of buildings is also of relevance. Armit (1996, 48–9) argues convincingly that people were repeatedly dismantling the previous structures and using the material to build new structures. This occurrence is recorded as happening at Eilean Domhnuill at least 11 times, and not all of the layers were excavated (Armit 1996, 47–8). If we compare this sequence with the construction and reconstruction that occurs at the passage graves, it can be suggested that the reworking of particular architectures formed a major component of transformational practices throughout the Neolithic. The similarities between islets and passage graves can be said to operate at the level of homology, not only in terms of spatial representation, but also that of recurrent practices involving construction and reconstruction.

There are also analogues between the passage graves and islet settlements; both created a series of enclosed or nested spaces. The central islet area, which at Eilean Domhnuill was surrounded by a palisade of some description, visually restricted people looking out and concealed them from people looking in. The palisade effectively contained and wrapped the living and it can be paralleled with the circular chamber area of a Hebridean cairn, which contained the dead. Connecting this hidden and restricted world to the outside at Eilean Domhnuill was a causeway, long and narrow and suitable for only one person at a time. Again, we can parallel this with the passage of the Hebridean passage grave (see Henley 2003). If we follow this analogy through it is apparent that water becomes inter-changeable with stone as a form of wrapping. It is possible, therefore, that in the Hebridean early Neolithic there was an underlying grammar involving wrapping places with distinctive materials and substances, for instance, water, wood and stone, which articulated between different sites for both the living and the dead (Table 7.1).

Conclusion

In this Chapter we have considered the evidence from the early Neolithic of the Outer Hebrides, focussing on the passage graves and the islet occupation sites. One of the key themes that has come from a study of these different types of site is the importance of circular worlds in the early Neolithic of the Outer

Islet settlement	Hebridean chambered cairn
Circular islet space	Circular chamber area
Limited visual access in or out	Limited visual access in or out
Repeated rebuilding of architecture	Repeated rebuilding of architecture
Islet defined by palisade (wood)	Chamber defined by orthostats (stone)
Peristalith (wood)	Peristalith (stone)
Connected by narrow causeway	Connected by narrow passageway
Islet surrounded by loch	Chamber surrounded by cairn
Place to contain or alter a certain kind of person (living)	Place to contain or alter a certain kind of person (dead)
Limited number of occupants (living)	Limited number of occupants (dead)
Connected with feasting and drinking	Connected with feasting and drinking

TABLE 7.1. Similarities between the islet settlements and passage graves of the Outer Hebrides.

Hebrides. Circularity was articulated not only in monumental architecture, but also in specific types of settlement architecture and there are clearly homologies and analogues between these different sites. Moreover, circularity seems to have been emphasized again and again, a dominant metaphor expressed and reworked time and time again throughout the early Neolithic and in particular linked with social transformation. These observations signal specific themes that are crucial in respect to understanding the Hebridean stone circles of the third millennium cal BC.

Out of this cosmological schema is drawn the peristalith. It is tempting to contrast the timber uprights surrounding the dwellings of islet habitation sites such as Eilean Domhnuill with the stone uprights surrounding the passage graves in terms of the living and the dead (cf. Parker Pearson and Ramilisonina 1998). Here, materiality is crucial because although it may be intrinsically unstable and shifting (*e.g.* Ingold 2007), that instability is manifest far more strongly in the physical decay of wood. The selection of this material to bound (and bind) islet settlements; a timber peristalith, would appear to be an appropriate material metaphor for such transient occupation. In contrast, the materiality of the bounding and binding of the passage graves; a stone peristalith, may be fluid but essentially maintains form and substance. By default, the stone peristalith of the passage grave survives generations whereas the wooden peristalith of the islet settlement perishes. In this deployment, material metaphors are not reflective nor elaboration but 'creative and infinitely generative in their allusions' (Tilley 2004, 23).

The dominant theme of transformation is manifest in the need to restrict and emphasize entry and exit, and materially wrap and segregate transitional places. While a representational and structural conjunction between passage graves and islet settlement have been argued, it is the social practices of transformation within these different contexts that appear to dominate fourth millennium cal BC life in the Outer Hebrides. Importantly, this architectural intervention appears to operate at different scales of practice ranging from that in the landscape and that in the site. For instance, passage graves overlook pathways and coastal stretches along and across which people were journeying, and in the process inevitably changing (Helms 1988). Equally, the narrow and lengthy stone causeway providing access to Eilean Domhnuill (Fig. 7.1) resonates strongly

with the passage within the Hebridean 'passage graves' (Fig. 7.4). Here, to move through and along such pathways provides a necessary dislocation and removal from an exterior world.

It is against this backdrop that people started building stone circles in the Outer Hebrides. In some cases, passage graves would already have been standing for many hundreds of years when people started to think about constructing stone circles. It is possible to argue that the peristaliths themselves inspired the construction of the stone circles (see Chapter 8). Indeed, such was the resonance between earlier passage grave architecture and stone circles that a small cairn was constructed right at the very heart of the Calanais complex, within the Tursachen stone circle (Circle 1). Here the central stone circle could be thought of as an exaggerated peristalith, although the stones of the circle are much taller and closer together than those found around the passage graves. Yet, the stone circles of the Outer Hebrides were not direct replicas of the peristaliths at these earlier sites, they were one architectural element or wrapping extracted and redefined. It seems that the notion of wrapping played out in different contexts in the early Neolithic was reinterpreted again later in the sequence with the construction of stone circles.

Throughout this chapter we have also emphasized the importance of understanding the communities of the Outer Hebrides not as living in isolation, but as part of a broader Neolithic world. There is good evidence for connections to both the Irish Sea zone, west Ireland and Orkney, not just in terms of architecture, but also in terms of traditions of practice. The early Neolithic provides us with a context against which to understand later developments, but those later developments, the construction of stone circles, were not created in isolation either, but part of broader practices found in the circular worlds of the Hebrides and beyond.

CHAPTER 8

Erecting Stone Circles in a Hebridean Landscape

Colin Richards, Adrian Challands and Kate Welham

An unusual monument on Great Bernera, Lewis

Occupying a very dramatic position on the very edge of the island of Great Bernera, Lewis, is the very unusual monument of Cleitir. The name Cleitir actually translates as 'cliffs' (Curtis and Curtis 2000, 27) and unsurprisingly, the site lies in a beautiful location directly above a cliff that drops sharply into a narrow and deep watercourse separating the small island of Great Bernera from Lewis (Fig. 8.1). Architecturally, the site is composed of three standing monoliths and a stump set in a semi-circular arrangement on a level platform (Fig. 8.2). The platform was found to have been partially paved with stones when a fallen monolith was re-erected in 1985 (Ponting and Curtis 1985, 64). The presence of a semicircular arrangement of monoliths in an area of stone circles has long been recognized as unusual (RCAMS 1928, 24), and unparalleled (Curtis and Curtis 2000, 27). Indeed, Cleitir is so close to the main group of Calanais circles (see Fig. 9.1) that it was included as Callanish circle VIII by Tait (1978).

It has been suggested that the semicircle of monoliths was originally a stone circle that has been eroded and reduced by the ravages of the sea (*e.g.* Renell 2003, 37). The edge of the rock shelf on which Cleitir sits displays a rounded countenance of glacial abrasion, consequently there has been no erosion of the monument itself. Cleitir remains as it was when originally built. Rather than dismissing Renell's idea of the site being half of a stone circle, it is suggested that it could be reintroduced in a slightly different way. Although having been moved from its original location within a hundred metres of the shore (Ponting *et al.* 1976, 57), a single monolith remains standing on the opposite side of the narrow watercourse. This land has seen significant disturbance by post-medieval agricultural activity, and it is quite possible that other monoliths have been removed.

If the remaining monolith is recognized as an additional component of Cleitir as a semi-stone circle then the monument effectively straddled the narrow Great Bernera channel, and can be re-interpreted as a split stone circle.

left: FIGURE 8.1. Semi-circular arrangement of monoliths at Cleitir from the Great Bernera sound.
COLIN RICHARDS

below: FIGURE 8.2. View of Cleitir semi-stone circle overlooking Great Bernera sound.
COLIN RICHARDS

Significantly, the channel between the two islands is one of only two sea routes into the Calanais stone circle complex. Consequently, any route through the Great Bernera narrows involves the act of physically passing through a stone circle. If the Cleitir semi-stone circle was constructed to be traversed, then this may indicate that the Hebridean stone circles somehow participated in, or rather punctuated, journeys and consequently acted as junctures of transformation. To explore this further it is necessary to briefly continue a discussion begun in the last chapter concerning Hebridean passage graves and especially the role of the peristalith.

Transforming people and monuments

In Chapter 7, the incorporation of a peristalith as an architectural feature of Hebridean passage graves was discussed in relation to a general overview of the Outer Hebrides during the fourth millennium cal BC. As an encircling ring of standing stones, the imagery of the peristalith is striking, especially when the monoliths reach heights of up to three metres, as seen for example at Sig More, South Uist, and Dun Bharpa, Barra (Fig. 7.6). The construction of the Hebridean passage graves incorporated two different forms of practice. The peristalith component required the identification and selection of particular outcrops with appropriate fissuring to enable the extraction of pillar-like monoliths. The quarry was frequently in close proximity to the passage grave and this single source provided the stones for the entire peristalith. As discussed in Chapter 5, the quarrying of stones has a built-in temporality and a degree of forward planning is necessary to secure appropriate monoliths. This work may be contrasted with building the bodies of the cairns where people searched the immediate environs, including the shore-line (Henshall 1972, 126), and collected large numbers of stones and small boulders. In construction, the peristalith is effectively supported by the cairn material.

Given that the peristalith stood proud, appearing almost as an enclosing circle of stones, in full visual prominence, it is seductive to interpret the free-standing stone circles that are erected in parts of the Outer Hebrides as maintaining some form of referential relationship to the passage grave. Consequently, any interpretation of Hebridean stone circles is to a large degree contingent on understandings of the architectural representation of the Hebridean passage graves. Judging from the human bones found within Rudh' an Dunain, Skye (Scott 1932, 22), the Hebridean passage graves, like those elsewhere, were buildings apparently erected to accommodate the deceased, specifically their skeletal remains (cf. Henshall 1972, 143). These remains are invariably disarticulated and re-arranged. Hence, the accommodation of skeletal material clearly does not represent permanent burial. Instead, these skeletal remains appear to be a result of a combination of mortuary practices, involving the deliberate deposition of human bone as part of the removal ceremonies of defleshed skeletons. Consequently, the consistently encountered

human remains within the chambers are deposits of the dead, not the dead themselves (see also Barrett 1988). In acting as a container for a transformatory process, the architecture of the passage grave was emblematic of the transition of fleshed persons to de-fleshed skeletal remains. In this way, passage graves acquired biographies, both in relation to their role as places of transformation and in respect to the people who metamorphosed into a different state of being within their confines.

This argument can be taken further. In extracting and reproducing one aspect of the passage grave, the stone circles clearly expressed a metonymical relationship to the former. If the passage grave is considered to be the inspiration or 'prototype', in the vocabulary of Gell (1998, 25–6), then the question arises of what were the particular qualities of the passage grave referenced and magnified in the architecture of the stone circle. At one level, the relationship could be described as indexical (Gell 1998, 13–4), in the sense of the creation of something different, the stone circle, by virtue of a recognizable visual resemblance to something else – the peristalith. The importance of the index is that through what Gell refers to as an 'abduction of agency' (1998, 14–6) it invokes, in this case, an understanding of the stone circle not only as a representation of particular qualities of the passage grave, but also as a consequence of particular set of social relationships and practices. Linkage between the stone circle and the passage grave is further achieved through a metonymic process (Tilley 1999, 5–6).

The decay of the fleshed body is a physical process of transformation. Indeed, the partial skeletal remains derived from this process litter the floors of many passage graves. It is this material evidence that fixates our understanding of the nature of chambered tombs more generally. What receives less attention is the effect of such a transformation to the status of the 'person' (see however, Thomas 2000; Fowler 2004). If the process of de-fleshing precipitates the changing state of a person (Thomas 2000, 658), then the passage grave is an architecture, which the person *passes through* in a changing state of being. A concurrent, but alternative sequential process is also apparent in the treatment of the physical remains (cf. Thomas 2000, 660). Here, the passage grave as a *conduit* or *doorway* to another world (Richards 1992; Robin 2008) may be contrasted to the idea of it merely constituting a 'house of the dead'. Entry into the passage grave initiates a process of transformation of the person, one which is represented by a changing physicality through the decomposition of the body. From this understanding the internal chamber is necessarily encased by the peristalith and cairn to wrap and bind the ritually dangerous and potentially polluting decay of the fleshed body. Hence, the external architecture of the passage grave becomes an index of the transitional nature of the practices occurring within its confines. Under such circumstances we can begin to understand why particular elements of that architecture such as the peristalith may be appropriated as both a form of wrapping and a material metaphor of transformation.

A late Neolithic Hebridean landscape

The Outer Hebrides possess some of the most dramatic and beautiful landforms in Scotland, ranging from the high peaks and boulder-strewn hills and mountains of Harris to the vast and expansive peat covered lowlands and numerous lochs of central Lewis. Along the Atlantic coastline, from the island of Barra northwards, the sculpted glacial topography of rocky bays, hills, mountains and morrains, is punctuated by vast stretches of rolling machair with endless beaches of white sand. Of course, this was a very different world back in the late fourth and third millennium cal BC. The sea level was up to 5 metres lower (Lambreck 1995, 85). Peat had begun to form around damp loch-side environs, but had not yet covered large tracts of the Lewis lowlands (*e.g.* Bennet *et al.* 1990) and much of the higher ground was bare rock; rugged and jagged, as opposed to the smoother, blanket peat-covered, rounded profiles which we see today. Many areas of Britain have been described as representing 'worlds of stone', from Orkney (A. Jones 2005, 237) to Bodmin Moor (Bender *et al.* 2007), but few places could have presented a more scoured, rock-strewn glacial landscape than parts of the Outer Hebrides. Within this late Neolithic world, small clumps of woodland persisted in the lower valleys (*e.g.* Fossit 1996, 190). Apart from such sparse tree cover, the remaining lower land tended to be open with grass and scrubland. However, besides rock, a dominant feature of the Outer Hebrides in the fourth and third millennium cal. BC was water (Henley 2003, 282–7). Taking the form of vast expanses of freshwater loch-lands, river systems, penetrating sea-water lochs or the surrounding ocean, water would have been a dominant, ever-present element (Fig. 8.3).

In so many ways it is difficult for us to engage with this alien Neolithic world, although through an appreciation of the concept of landscape (*e.g.* Bender 1993; Tilley 1994; Ingold 2000) it is possible to understand the nature of such an engagement (see Cummings and Whittle 2004, 8–15). The Outer Hebrides were island worlds where myth and social tradition fused with physical features and substances. That Neolithic people engaged in a participatory relationship with the physical world is a very attractive proposition (cf. Tilley 2004, 19–22). Inhabitation in such a vibrant living material world, where people not only encountered things and substance perceived to be animate, but could also be in some way genealogically related, allows the possibility of agency to extend beyond humans to the wider material world. Under such circumstances, people were not merely part of landscapes; they were participants in an intimate and reciprocal relationship. In order to inhabit such a world it is necessary to form an understanding of it, hence the acquirement of knowledge through discourse is a crucial part of sociality (Barrett 1997). In the idea of *habitus*, Bourdieu (1977) privileges practice as the locus of such discourse, emphasizing learning through doing. This extends through to understandings of landscape as an outcome of embodied engagement, of bodily hexis which 'is political mythology realized, *em-bodied*, turned into a permanent disposition, a durable way of

FIGURE 8.3. The passage grave of Marrogh overlooking a waterscape in North Uist.
COLIN RICHARDS

standing, speaking, walking, and thereby of feeling and thinking' (Bourdieu 1990, 69–70). The embedded temporality of social practices sequentially orders such experiences of the world within the routines and tasks of daily life (cf. Ingold 2000, 194–200). Since the nature of such engagements will vary, as will the physical qualities of different places, so landscape may be appreciated as a sequence of heterogeneous encounters with places and people. Under such circumstances, places could be described as punctuating journeys, providing a structure or framework to the changing conditions of life. Accepting that places come into existence through various forms of practice (Rodman 1992, 642–3), the production of knowledge of the wider world, and the differential character of such places, will be manifest in language through the process of naming.

Although such knowledge is today culturally endangered, up until relatively recently, the varied landscape of the Outer Hebrides, the hills, valleys, streams, rock outcrops, paths, and so on, were intimately known and named places. The naming process mixed topography with human agency in a complex and particular manner. For instance, *Cnoc Farasail*, near Barvis, on the west coast of north Lewis, is translated in the following way; *Cnoc* is hillock (repeated in '*ail*'), and on a journey from home to the 'faire' this hillock is the last place with a view of home; 'that is the farewell place' (Maciver 1934, 22). In this example the name not only relates to the hillock, but also references a particular social group and qualities of attachment. In the Calanais area of western Lewis, a number of

further examples provide linkage between a description of topography, animals and associated activities. *Creag an taghain* translates simply as 'the wild cat's cairn', while *Cnoc a ruagain* is 'the hill from which sheep are driven far and wide in summer' (Maciver 1934, 10). Pathways and human experiences of places fuse, for instance, in *vilifir* which is a path difficult to travel by, while *Griomasta* is 'a low dark place with hills between it and the evening sun'. Colour and materiality come together in *Guiliman* – a high sharp rock at Dibadal shore. It is a nickname for 'yellow one', also *Geodha Bladha* – 'there are red stones in this rift' (Maciver 1934, 18–19). In a landscape of stone it is no surprise that virtually every rock or outcrop of any size was named, for example, *Sgaravat* means 'beside the loch is a rock with a skardh, breach in its middle' (Maciver 1934, 29).

These brief examples serve to illustrate how Hebridean landscapes were understood and described in a way that, apart from the profusion of names, consistently mixed descriptions of 'natural' features with human experiences and practices associated with those features. Thereby, in the naming process memories constantly became attached to particular places. Such discourse secures familiarity and local knowledge with a strong sense of belonging. Of pertinence here is the constant and ongoing naming of specific and noticeable landmarks, by reference to their *physical characteristics*, *material properties* and associated *social practices*. In this process 'place names schematically image a peoples intentional transformation of their habitat from a sheer physical terrain into a pattern of historically experienced and constituted space and time' (Weiner 1991, 32).

Within this naming regime are hints of the fluidity of landscape as it is constantly traversed and effectively reworked according to changing practices. If landscapes are composed of known and named places effectively punctuating journeys through life, changes in social practices will result in different journeys and different experiences. Hence, places may be altered, abandoned or new places created. Accordingly, places may be entered, viewed or simply passed by. In doing so perspective changes and the world is ordered and re-ordered (Tilley 2008, 272). Such order is not arbitrarily attained but pertains to social strategies of choreography that have at their heart a cosmological rendering of landscape (*e.g.* Richards 1996b). One way in which such choreographies are constituted is through architecture and monumentality. The question here is how stone circles as an apparently different architectural construct to passage graves participated in this ordering process.

Putting Hebridean stone circles in their place

About five miles west of Stornoway, the main A859 road rises gently uphill. As the summit is reached the road levels off as it continues across higher moorland. Next to the road, opposite the abandoned Halfway Garage, is a small peat-covered knoll. On the knoll, seven stones are currently visible lying on the

FIGURE 8.4. Plan of Druim Dubh (after Ponting and Ponting 1993).

ground. These slabs are the collapsed remains of a small stone circle, known as Druim Dubh or Halfway Garage, which through a probing survey is estimated to have been originally composed of *c*.16 monoliths (Curtis and Curtis 1993, 98–9). Originally the monoliths were supported in a vertical position by packing stones and boulders around their bases. Unsurprisingly, due to an absence of dug sockets, through time the monoliths became destabilized and collapsed. The shape of the stone circle is actually an 'oval' with a flattened side, measuring *c*.28 m (east–west) × 22 m (north–south). But when walking across the knoll, such geometric subtlety is not apparent (Fig. 8.4). The route of the modern road governs the entire experience of visiting Druim Dubh. From the road, the raised knoll upon which the stone circle was erected is hardly impressive; indeed, this description sums up the general countenance of the stone circle.

However, Druim Dubh stone circle is anything other than unimpressive when approached and viewed from a different direction and perspective. Directly north of the circle, on the opposite side to the modern road, the ground drops sharply into a narrow, steep-sided valley running east–west. When entering the valley from either direction, the rocky knoll upon which Druim Dubh sits is transformed from a nondescript mound to a dominating elevated platform (Fig. 8.5). In assuming this commanding position, the stone circle would have been skylined making the relatively small monoliths appear exaggerated in size. Once it is realized that the stone circle is strategically placed in an ascendant position overlooking a very narrow section of a main thoroughfare running across the island, its architecture assumes far greater significance. In plan the stone circle is stretched along its east–west axis, precisely echoing the orientation of the valley. Megalithic geometry aside, the elongated shape enhances the size of the stone circle when looking up from the valley. Accepting slight displacement through collapse, in composition the spacing of stones forming the circle also appears irregular. However, a trend is discernible towards the stones being more closely

set in the northern area of the monument. Again, this militates towards the architecture of the stone circle being influenced by appearance and imagery. Here, the more closely set stones are situated in relation to passage along the valley floor, as opposed to an exercise in geometric principles.

A careful examination of the Druim Dubh stone circle seems to reveal interesting subtleties in architecture and topographic position. In this instance, the architecture of the monument, whilst maintaining the form and imagery of a stone circle, is cleverly altered in relation to the requirements of encounter. Not only is the imagery of the stone circle enhanced by its location, both the shape of the circle and monolith frequency are manipulated to enhance its appearance. Equally, the position of the stone circle overlooking and dominating a narrow valley was clearly selected to exaggerate the overall impression of the monument to those passing below.

As the main road continues westwards across the island, towards the complex of stone circles at Calanais, a second stone circle is encountered at Achmore (Ponting and Ponting 1981). Again this circle is situated in an elevated position adjacent to the modern road, emphasizing the continued significance of the main east–west route across the island. This substantial stone circle had a diameter of *c*.41 m (Fig. 8.6). Given its ruinous condition it is difficult to provide a secure estimate of the original number of monoliths, although 22 have been suggested (Ponting and Ponting 1981, 53). Being positioned on rising ground to the north of the road, Achmore commands extensive views across ground falling away to the southwest (Fig. 8.7). In reverse perspective, when viewed from the lower ground, the stone circle is skylined on a false crest. Again, this position tends to exaggerate the scale of the monoliths, which once more are relatively small ranging from *c*.1 m–2.4 m in height. Today, only two monoliths are semi-erect and 14 stones lie prone in various states of survival. Packing stones have been located for another four (Fig. 8.8). In light of the earlier observation that the stone spacing at Druim Dubh is manipulated to enhance the visual effect from a preferred downslope viewpoint, it is interesting that at Achmore the closest spacing between monoliths occurs in the southwest circuit of the circle where they are *c.* three metres apart (Fig. 8.6).

Both Achmore and Druim Dubh stone circles, overlook the principal east – west routeway across the island. Consequently, they were built in the knowledge that they would be viewed from particular directions. Their elevated, skylined, positions have the effect of magnifying the relatively small monoliths due to the oblique viewing angle. Besides strategic topographic positioning, both circles employed a series of architectural devices, including flattening of the circular form and adjusting spacing between monoliths, to enhance their appearance.

Interestingly, all these attributes are consistently shared by many of the other known Hebridean stone circles. These are situated in elevated positions overlooking valleys and open ground that would in all likelihood have been routes traversed during the Neolithic. The stone circles appear false-crested when viewed from below. Whether they all employ architectural variability, such as shape and stone spacing, to affect and enhance appearance is difficult to determine given

above: FIGURE 8.5. View of Druim Dubh from the southern approach to the valley, the stone circle lies on the elevated knoll to the right of the road.
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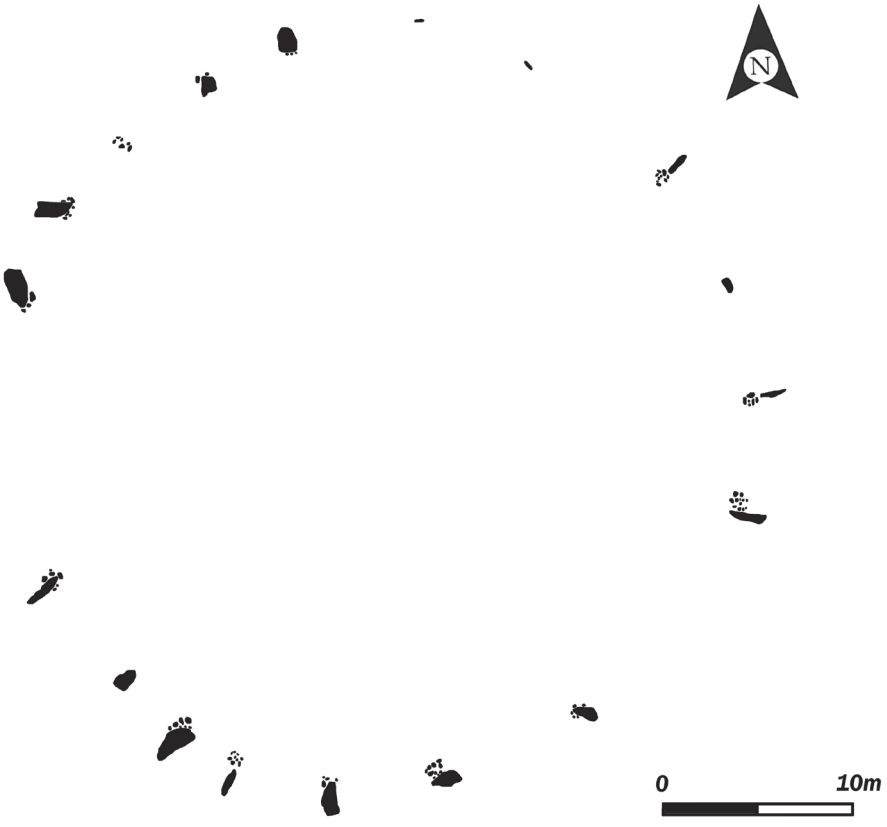

left: FIGURE 8.6. Plan of the stone circle at Achmore, showing visible packing stones at the base of the fallen monoliths (after Ponting and Ponting 1981).

above: FIGURE 8.7. Views to the south from the Achmore stone circle.
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right: FIGURE 8.8. Fallen monolith at Achmore stone circle. Note the packing stones at the base of the stone.
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their ruinous condition, but from the available evidence this is strongly suspected. Overall, a clear pattern emerges of stone circle architecture being strategically manipulated for visual effect and enhancement to suit landscape location and presentation.

What is so intriguing, given the earlier discussion of the relationship between passage grave and stone circle architecture, is the consistency in shared topographic position overlooking east–west valleys, an occurrence noticed by Henley (2003) for North Uist. In being situated overlooking such pathways, the stone circles like the peristalith passage graves effectively punctuated and structured journeying across the islands. This intervention seems to be stronger and more immediate in the case of the stone circles; for instance, Druim Dubh (Halfway Garage) stone circle is only a short distance upslope from the main valley thoroughfare and visually dominates passage (see Fig. 8.5). Thus, the landscape situation of the various stone circles overlooking particular routes creates a sequential ordering through the centre of the Lewis.

Significantly, if this were an east–west movement, the journey would culminate within the Calanais stone circle complex, which will be explored in the following chapter. The stone circles encountered along this route may punctuate and grade space, but they should also be understood as spatial metaphors which fuse the narrative quality of the journey with alternative states of being. This is one parameter that facilitates human ability to approach a categorically different realm. Passing through a graded landscape, as represented by a sequential ordering of stone circles, is best thought of as a process of unwrapping the sacred (cf. Bradley 1997, 114–5).

Distance, imagery, passage and 'the gaze' characterize the suggested relationship between stone circles and route ways. Specifically, as people pass through the valleys and across the lowlands they see the stone circles skylined and are aware that they are entering another phase of the journey. In being alongside or adjacent to the path or routeway, the area of the stone circles can be conceived as a liminal space that is necessarily experienced in an ordered manner as the route is traversed. As Raitz (1999, 364) notes, the architecture of this zone of experience captures and mediates social and political relationships of the human world, and provides a potent architectural reservoir for grading space.

The three stone circles of North Uist have been described as 'long forgotten' by Henley (2003, 240). Of the forgotten, Pobull Fhinn is the best preserved, being a substantial stone circle, 'strangely beautiful on its hillside of bracken and heather overlooking Langass Loch and distances of tiny lochs…' (Burl 1995, 152). The circle sits on a levelled platform apparently cut into the hillside and its east –west axis is elongated to form a flattened plan. Once again this configuration serves to visually enhance the circle when viewed from below. There is, however, an additional element to the architecture of this circle in that there is a portal arrangement of stones at each end of its elongated axis (Fig. 8.9). Together these arrangements of stones form 'entranceways' enabling clear points of entry and exit through the circle. This provision strongly indicates that the circle was intended to be physically passed through, as opposed to either being viewed from afar or representing an end point or destination in itself.

In some ways, the architecture of Pobull Fhinn recalls that of Cleitir in providing additional evidence that these are monuments of transition, and

FIGURE 8.9. The portalled entrance stones of Pobull Fhinn on its western side.
COLIN RICHARDS

components of more extensive journeys to *somewhere else*. To explore the complex role of the architecture of the stone circle as a medium and mechanism of transformation further, the final section of this chapter is devoted to the recently recognized stone circle at Clach an Trushal, northwest Lewis.

Clach an Trushal stone circle

The largest standing stone in Scotland was erected at Clach an Trushal on the northwest coast of Lewis:

> On the gentle slope of a hillside, falling towards the north about 1 mile north-west of the fifteenth milestone on the Stornoway and Ness road, in the township of Ballantrushal, at an elevation of about 100 feet above sea level, is the magnificent monolith, Clach an Trushal, standing 18 feet 10 inches above ground, and measuring about 6 feet in width, 3 feet 9 inches at its greatest thickness, and 15 feet 7 inches in girth at the base
>
> (RCHAMS 1928, 7).

The giant Clach an Trushal monolith is deceptive in that its immense size is not really visible when viewed from the middle distance (Fig. 8.10). Only over longer distances or in close proximity is the huge scale of the stone discernable. The size of the monolith was commented on by Maciver who made an interesting observation: 'Clach an truissail: the stone of the mare-hill. This stone resembles the Druidical stones at Callanish [Calanais], only it is of such immense size that one wonders if it was possible by human energy and skill to erect it in such a

FIGURE 8.10. The Clach an Trushal standing stone.
COLIN RICHARDS

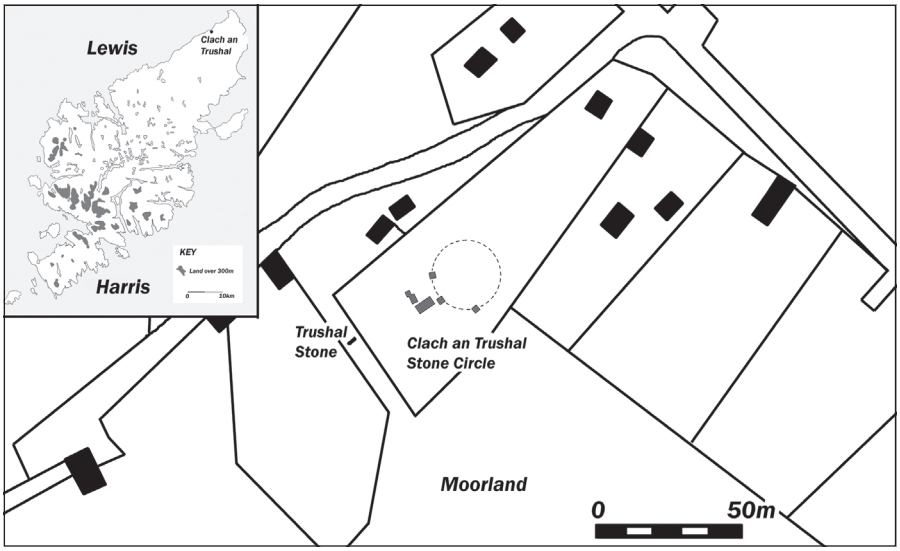
place...' (1934, 22). There are two points of relevance in Maciver's words. First, the sheer scale of the standing stone raises the question of it being attributable to human agency. Second, the presence of the tall stone invokes a comparison with Tursachan (Circle I) at Calanais, which, as will be seen, appears to be a particularly valid observation.

Whilst undertaking survey at Clach an Trushal in 2004, a monolith was seen laying in the shallow ditch adjacent to the standing stone. Other large fragments of a further monolith were incorporated in the adjacent croft walling. These had previously been identified as the remnants of a possible stone circle that had once stood in the immediate vicinity, perhaps encompassing the Trushal Stone (Curtis and Curtis 2002, 119). Mr Mackay, whose family had farmed the land adjacent to the standing stone for many years, relayed the view that a stone circle had once stood in a field adjacent to the Clach an Trushal monolith but was destroyed at some time in the 19th century. The account of the circle, which had been passed on by his father, actually included a vivid description of its destruction by fire and water. The only questions which remained to be answered, apart from whether this was a rural myth, concerned the exact location and architecture of the circle, because as noted above, it was generally assumed that it might have actually surrounded the Clach an Trushal standing stone. However, Mr Mackay was adamant that it had been positioned on a flat, platform-like, area of ground in the adjacent meadow to the north (Figs 8.11 and 8.12).

In an attempt to resolve the question of location, resistivity survey of the area surrounding the Clach an Trushal stone was undertaken by Adrian Challands in 2004. The results of the survey showed a series of discrete anomalies, indicating the presence of possible stone sockets. More importantly, during the survey a series of small depressions, *c*.1.5 m in diameter, were noticed within the field. Within one depression the remains of a stone actually projected through the turf. In order to establish the exact topographic position of the stone circle, it was decided to investigate further through excavation.

Re-discovering the Clach an Trushal Stone Circle

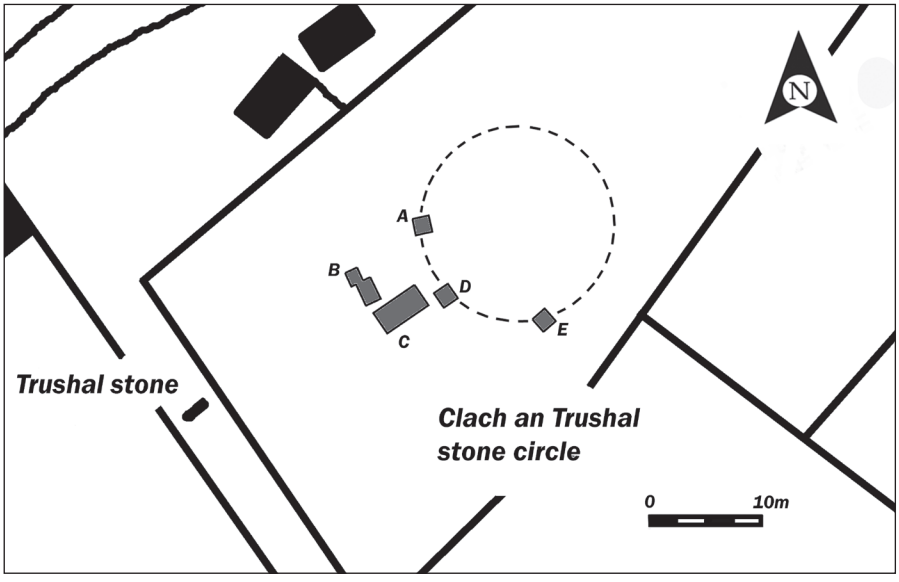
On the basis of the surface surveys, six trenches were laid out across the level 'platform' to the north of the Clach an Trushal standing stone (Figs 8.13 and 8.14). Their position accorded with a combination of geophysical anomalies



right: FIGURE 8.11. Location map for Clach an Trushal stone circle.

below: FIGURE 8.12. Level ground to the east of the Clach an Trushal stone. COLIN RICHARDS

above: FIGURE 8.13. View of the stone circle excavation from the east showing the Clach an Trushal standing stone in the background.
COLIN RICHARDS



left: FIGURE 8.14. Spatial layout of trenches at Clach an Trushal.

(A, B, C and D), physical depressions (D and F) and visible stones projecting through the ground surface (A, B and E).

Trench A measured 2m × 2m, and was positioned around a buried stone projecting through the turf in an oval depression. On excavation the stone was found to be the broken base of what would have been a substantial monolith lying in an oval pit or socket measuring 1.73 m × 1.37 (Fig. 8.15). On removal of the turf, the topsoil continued down into the oval pit. Near the base it gave

FIGURE 8.15. Trench A: broken monolith in its socket.
COLIN RICHARDS

way to a red-brown burnt ashy loam mixed with remnant packing stones. The oval pit was clearly a stone socket cut into the glacial till for a monolith, the remains of which were represented by the broken stone. The destruction of the monoliths by fire and water during the nineteenth century, described by the landowner, was confirmed by the presence of the red ashy layer at the base of the stone socket.

The larger Trench B was positioned to include another visible but partially buried stone and a localised geophysical anomaly interpreted as a stone socket (Fig. 8.17). The removal of the turf revealed the recumbent stone to be a displaced monolith measuring 1.58 m in length (Fig. 8.18). However, there was no obvious socket within close proximity, although a natural, shallow peat-filled hollow in the glacial till was present to the west of the monolith. Below the turf, a thin deposit of peat filled undulations in the underlying glacial till. The glacial till was very coarse, being composed of degraded stone and clay which provided a matrix for a variety of sizes of stones and boulders.

Another stone socket was discovered in the western area of the trench. Being oval in shape, it measured *c.*1.2 m × 0.92 m and was filled with a dark-brown loam. Several large stones, representing packing stones and possibly part of a broken monolith, filled the centre of the cavity (Fig. 8.19). A second sharp-sided pit, measuring 0.68 m × 0.59 m, *c.*0.30 m deep and partially covered by a large stone, was present in the northeast corner of the trench. The pit was also filled with a peaty soil and contained at its base four large packing-like stones. Although smaller in size to the western stone socket, this pit with associated packing stones is a likely candidate for a second stone socket in Trench B.

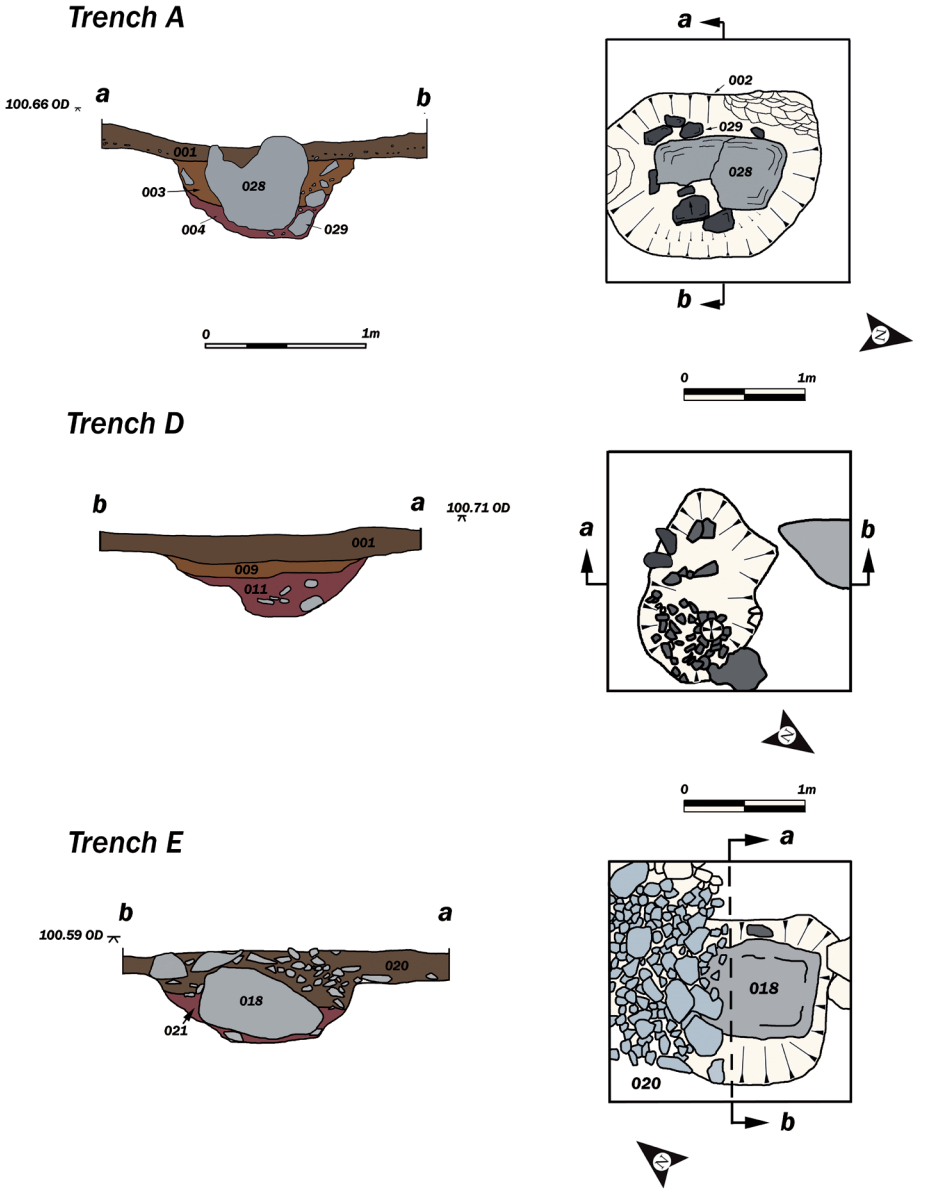


FIGURE 8.16. Plans and sections of stone sockets in trenches A, D and E.

The largest excavated area, Trench C, measuring 6 m × 3 m, was positioned to encompass several geophysical anomalies. All anomalies were found to be a product of the undulating glacial geology and no archaeological features were encountered. A small flint flake (SF. 1) was uncovered on the surface of the till at the base of the peaty topsoil (Table 8.1).

A 2 m × 2 m trench (D) was dug in order to investigate an oval depression in the ground surface. Directly below the topsoil an irregular oval pit, measuring 1.4 m × 0.97 m, concurred with the depression (Fig. 8.16). The cut was filled with an upper layer of red-brown peat. A secondary fill of red-brown soil formed

FIGURE 8.17. View of Trench B from the west showing displaced monolith. Note the stone socket in foreground.

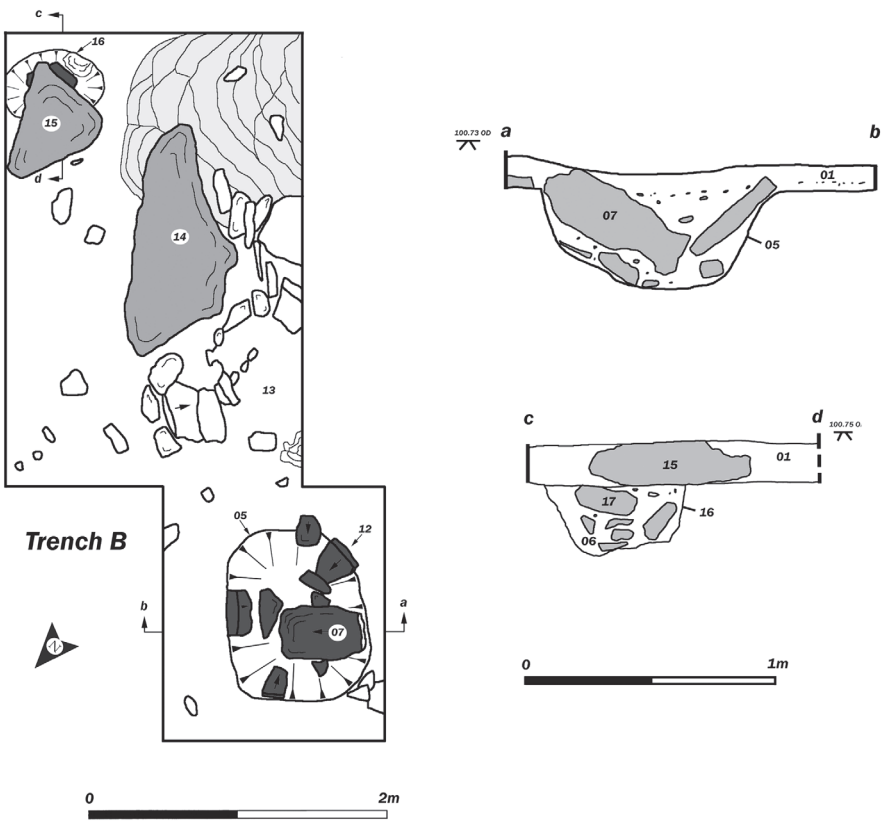


FIGURE 8.18. Plan and sections of features in Trench B.

FIGURE 8.19. Excavating the stone socket in the western area of Trench B. COLIN RICHARDS

Small Find	Context	Trench	Description
1	008	1	Knife fragment on the distal end of a broken flake, in a greyish-brown flint. Regular moderate retouch forms a triangular point. Traces of use related micro-flaking and wear exist along both edges.

TABLE 8.1. Lithic (SF 1) from Clach an Trushal stone circle.

a matrix for disturbed stone slabs with burnt material at its base. As with the similar material encountered in the stone socket in Trench A, this layer appears to relate to the destruction of a monolith over a hundred years ago. Beneath the burnt layer, a series of tightly packed small stones appeared relatively undisturbed. At the base of the socket a small circular cut, with a diameter of 0.15 m and depth of 0.14 m, was visible and remnants of stone packing appeared rammed around its edge. This appears to be the basal section of a post-hole (Fig. 8.20). The post-hole was filled with a distinctive brown loam which contrasted with the lower fill of the stone socket.

The discovery of the remains of a post-hole at the base of a stone socket was quite unexpected. Possible post-holes were present within Cnoc Ceann à Gharraidh (Circle II) at Calanais (Burl 1995, 151). Thus, it seems quite possible that timber uprights may have initially marked the position of monoliths within certain stone circles.

Noticed as a small circular raised area with stones projecting through the grass, Trench E, measuring 2m × 2m, was positioned to examine what was originally thought to be a possible burial cairn within the stone circle. On removal of the turf, a heap of pebbles and more angular stones was piled over a more substantial partially buried stone. During the cleaning of the stone mound small pieces of modern glass were present beneath some of the stones. Disappointingly, the pebble 'cairn' was clearly recent. Only the eastern half

above: FIGURE 8.20. The post-hole (inset) at the base of the stone socket in Trench D.
COLIN RICHARDS

right: FIGURE 8.21. Trench E: excavated broken monolith in socket.
COLIN RICHARDS

of the trench was fully excavated, but this revealed a large, broken stone set in a substantial socket 1.32 m wide (Figs 8.16 and 8.21). The upper fill of the stone socket was composed of the ubiquitous peaty loam which was clearly a continuation of the topsoil into the declivity. Beneath this was a firmer layer of soil containing the characteristic burnt material encountered in the other stone sockets.

Trench F, measuring 2 m × 2 m, was opened to examine a discrete depression in the ground surface. On removing the turf it seemed likely that the irregular depression was of natural origin and small glacial boulders spread promiscuously across the small trench. No further excavation was carried out.

Clach an Trushal and the Hebridean Stone Circles

While the excavations at Clach an Trushal confirmed the research of Ron Curtis and the family history of Mr Mackay, they also located the position of stone sockets and broken stones in Trenches A, D and E. Together these form an arc which is almost certainly part of a stone circle, centrally positioned on the level platform. It is difficult to estimate the size of the circle with any accuracy, but it would have been in the region of 20m in diameter (Fig. 8.14). The sizes of the monoliths comprising the circle are difficult to estimate given that the majority remain in the form of broken stumps. The prone monolith within Trench B measured 1.58 m in length, while the monolith in the ditch, adjacent to the Clach an Trushal monolith, measured 1.3 m in length. Extrapolating from these two examples, the Clach an Trushal circle would have been composed of stones of similar size to those present at Calanais within Cnoc Fillibhir Bheag (Circle III).

The topographic position assumed by Clach an Trushal stone circle conforms to the pattern previously described. The circle was built on a flat piece of ground overlooking the Creagan Carrach valley, which runs east – west, dropping down from the island interior to the Atlantic coast. In assuming this elevated position, the stone circle would have appeared prominently on the skyline, the stones appearing disproportionately high to people following the Shader River through this broad valley. For impression and grandeur, the circle could not have been better placed.

Yet the circle is clearly adjacent to the enormous Clach an Trushal stone which may have been erected for totally different reasons, possibly to be seen from the ocean. The pair of stone sockets revealed in Trench B combine to form part of a possible avenue, *c*.3.5 m–4 m wide, running from the circle towards the Clach an Trushal monolith. One observation, which may be pertinent in understanding this inter-relationship, comes from Tursachan (Circle I) at Calanais. Here, at an earlier time in the monuments history, a stone avenue or row ran south from the main circle to a massive monolith, situated 'behind' the circle, adjacent to Cnoc an Tursa (see Chapter 9). This monolith was subsequently removed but for an indeterminate time Tursachan (Circle I) may have possessed a similar spatial structure to that at Clach an Trushal.

Overall, the position of the Clach an Trushal stone circle overlooking the Creagan Carrach valley and thoroughfare recalls the topographic situation of other Hebridean stone circles. Whether directly encountered or simply viewed from below, these monuments appear to have assumed a transitory role in more extensive journeys or passages. This observation can be contrasted with the view that a stone circle represented the goal or end point of such a journey. If the Hebridean stone circles are recognized as comprising structural elements in a broader spatial ordering of the landscape, then their indexical architectural relationship with Hebridean passage graves is clear.

Through the relationship between the stone circle and the passage grave, as represented by the reproduction of the peristalith, a transference and appropriation of these transformatory qualities were effected. Accordingly, this afforded the internal, wrapped space of the stone circle a transitional quality. Throughout this chapter the investigation of stone circles has shown their architecture to be heavily influenced not by 'geometric sophistication or precision', but by constructional strategies to enhance external imagery and effect. This is the dominant factor lying behind the presence of the so-called Hebridean 'flattened circles' (*e.g.* Ponting and Ponting 1984, 11). Equally, topographic position serves to enhance and exaggerate the scale of the relatively small stones used to build the circle. It should also be recalled that the reason many of the circles are difficult to locate is that all the stones have fallen. This is a consequence of the monoliths being erected without sockets, being propped in position by small cairns of stones packed around the base of the stone. Taken together these traits do appear to betray an expedient form of architecture where the presentation and outward appearance of the stone circle was the determining factor influencing construction.

Earlier in the chapter it was noted that both Druim Dubh (Halfway Garage) and Achmore stone circles occupied situations relating to the main thoroughfare running east-west across the island of Lewis. At the western extent of this thoroughfare lies a group of at least eight stone circles, numerous standing stones, and stone rows comprising the Calanais monumental complex (Fig. 9.1). If both Druim Dubh (Halfway Garage) and Achmore stone circles constitute 'quick' architecture built to create a spatial ordering to journeys across the island to and from Calanais, then the focus of attention inevitably shifts to the group of stone circles, whose principal component enjoys the status of the 'Stonehenge of the north' and it to this extraordinary complex we will now turn.

CHAPTER 9

Expedient Monumentality: Na Dromannan and the high stone circles of Calanais, Lewis

Colin Richards, George Demetri, Charles French, Robert Nunn, Rebecca Rennell, Mairi Robertson, Lee Wellerman and Joanna Wright

Calanais: stone circles in a glacial landscape

Of all the stone circles in Scotland, the most spectacular and well known example is Tursachan (Circle I) at Calanais on the Isle of Lewis. Here, 49 white sparkling Lewisian gneiss monoliths combine to form a unique cruciform arrangement of avenues, rows and a central circle. Originally thought to comprise *c*.80 stones, it is easy to understand the description of Tursachan as one of the finest stone circles in Britain (Burl 1976, 148), second only to Stonehenge (RCAHMS 1928, xxxii). Yet Tursachan is not alone. At least eight other stone circles, and probably more, are present within the immediate environs (Fig. 9.1).

Currently, a rather confusing system of numbering exists for the Calanais stone circles. This was initially introduced by Thom (1967) and extended in 1974 after further survey and mapping by geographers from the University of Glasgow (Tait 1978). Ashmore (1995, 13) critically reviewed the evidence for these identifications and reduced the number of stone circles to six definite examples. The system of numbering has been partially retained (*e.g.* Ponting and Ponting 1993) to cover standing stones, groups of standing stones and miscellaneous sites. Just to confuse the issue further, another stone circle at Cnoc Gearraidh Nighean Choinnich was recently discovered by Curtis and Curtis (2003) but has not been attributed a number.

Providing a narrative that accommodates the nine Calanais stone circles requires the introduction of themes that recur throughout this volume. The principal question concerns the relative status of typologically similar but architecturally different monuments. As will be seen there are also substantial differences in construction, scale and topographic position between the Calanais circles, but the crucial point is how this variability should be assessed and interpreted. From the outset it is necessary to appreciate that the overall picture is far from clear or complete. The identification of stone circles in this part of Lewis has always been extremely problematic. In the recent context of a diminishing importance of peat

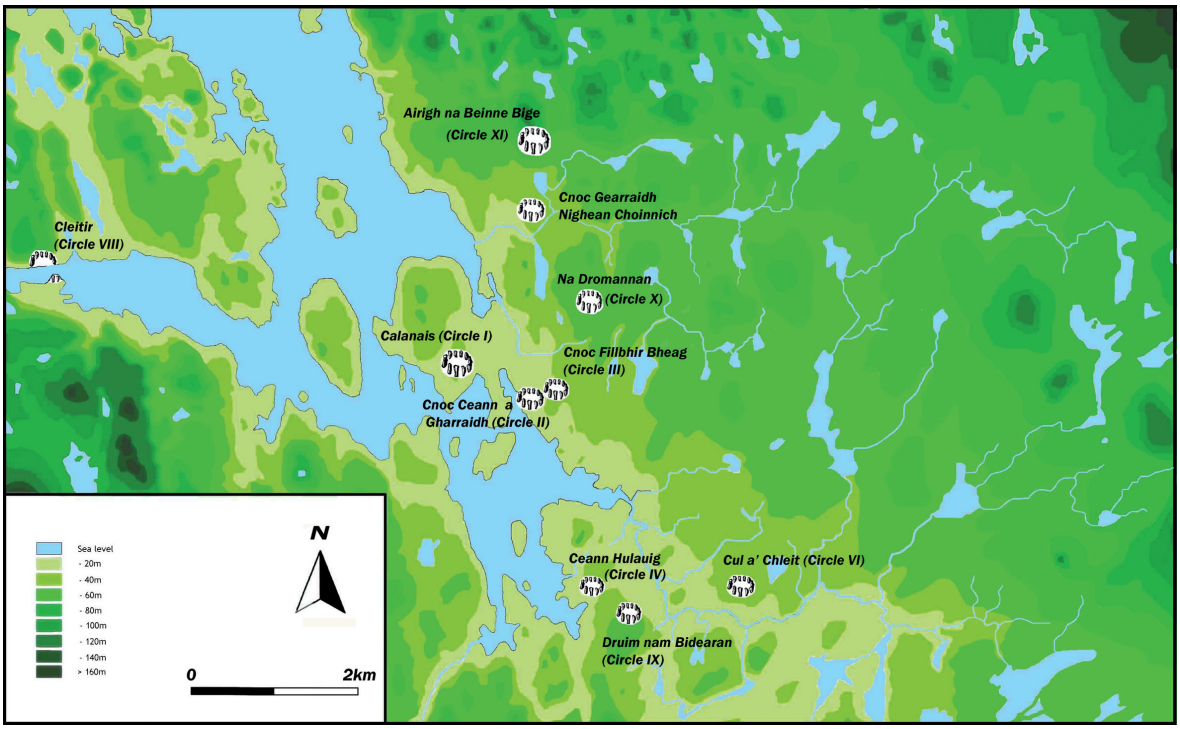


FIGURE 9.1. Distribution of stone circles at Calanais.

cutting, the presence of deep blanket peat covering huge tracts of land makes the detection of collapsed stone circles extremely difficult (see, however, Ponting and Ponting 1981a). A further problem of circle identification is the traditional practice of removing monoliths for building material. For instance, the large circle of Airigh na Beinne Bige (Circle XI) was robbed of stones that were subsequently employed as door lintels for black houses (Curtis and Curtis 2000, 34). Equally, the construction of irregular Bronze Age field boundaries using large orthostatic construction adds further difficulties of accurate identification. The Calanais landscape is very much divided between the lower domesticated land and the wild peat-covered higher ground, each of which provides variable conditions of archaeological survival. Accepting such conditions, it is the striking landforms and extraordinary materiality of this area that seem, almost on an instinctive level, to exert the strongest influences over the location and composition of the Calanais stone circles.

The material constitution of Lewis and Harris began over 1,500 million years ago through the transmutation of igneous rocks into a range of gneisses through a process of metamorphism. Indeed, such ancient gneisses form the backbone of the Hebridean landscape. Nonetheless, many parts of this ancient landform have been altered by the results of more recent glacial processes. The Calanais area on the west coast of Lewis is one such area being shaped and moulded by 'the ceaseless pounding of the Atlantic waves, and by the action of ice, wind and rainwater to form the remote and beautiful landscapes we see today' (Goodenough and Merritt 2011, 1). It was the late Devensian ice sheets that mainly sculpted the

Calanais landscapes, approximately 18,000 years ago. Effectively, the passage of heavy, thick ice-sheets sliding across outcrops of ancient gneiss, followed by fast-flowing meltwater laying down deposits of rock and till, created saddle-shaped *roches moutonnées*, crag and tail formations, and a range of glacial deposits. These features have created a micro-topography of narrow parallel valleys and linear ridges among broader hill and valley landforms. This is a world of rock outcrops and glacial erratics, of secret enclosed spaces opening into vast open tracts of peat moorland and lochs which formed on top of impermeable glacial till.

So how did the construction of the stone circles converge with this extraordinary landscape? Accepting problems of archaeological visibility, at first glance there appears to be little consistency in the topographic position or spatial relationships of the stone circles. For instance, several of the circles, including Tursachan (Circle I), Cnoc Ceann a Gharraidh (Circle II), and Cnoc Fillibhir Bheag (Circle III), lie on lower ground within a few hundred metres of one another to the east of Loch Roag. Three more, Na Dromannan (Circle X), Cnoc Gearraidh Nighean Choinnich, and Airigh na Beinne Bige (Circle XI), are positioned on rising ground to the north, while a single example, Ceann Hulavig (Circle IV), lies on a gently rising hill-slope to the south. Finally, Cu'l a' Chleit (Circle VI) is the most south-easterly circle and occupies the summit of a high hill (Figs 9.1 and 9.3).

Out of this variation, there seem to be several principles of 'place' operating at different spatial scales to influence the situation of the monuments. Rennell (2003, 68–74) identified two broad topographic preferences for the position of the circles: a lower group comprising Tursachan (Circle I), Cnoc Ceann a' Gharraidh (Circle II), Cnoc Fillibhir Bheag (Circle III) and Ceann Hulavig (Circle IV), and a higher group comprising, Cu'l a' Chleit (Circle VI), Druim nam Bidearan (Circle IX), Na Dromannan (Circle X), Airigh na Beinne Bige (Circle XI) and Cnoc Gearraidh Nighean Choinnich. Given the discussion of the location of Hebridean stone circles in the previous chapter; this seems an interesting distinction to explore further. Particularly, whether any differences in the methods of construction and material composition of the circles correlates with their landscape position.

The high stone circles of Calanais

As part of the Sermon on the Mount as reported by Luke (6: 46–7) and Matthew (7: 24–7), there is a well known parable concerning the 'house on the rock'. It notes the consequences of building a house on sand by a foolish person as opposed to the wise person who builds theirs upon a rock. Of course, eventually a storm comes and the house on the rock survives whilst the foolish builder's house collapses. Ignoring the ethical dimension of the story, in the case of the stone circles at Calanais the opposite is true: virtually all the monoliths erected to form the high stone circles have collapsed. Clearly, it is important to examine the high circles in more detail.

Interestingly, each of the Calanais stone circles appears architecturally very

different, although there seems to have been an assumption that they served a similar purpose (Ashmore 2004, 68). In order to draw out their differing characters, a brief description of the high circles is necessary (see also Ponting and Ponting 1984). Na Dromannan (Circle X), which was excavated as part of the Great Stone Circle Project between 2003–6, will then form the main focus for investigating the specific characteristics of a high circle. There are five definite high stone circles, situated on hilltop or hillside locations.

Cu'l a' Chleit (Circle VI)

Two standing and three prone monoliths are all that remain of what was, in all probability, a large circle. It is difficult to envisage the details of its original form, but the remaining standing stones appear to assume opposed positions within the circle, the diameter of which can be estimated to *c.*17 m. The overall number of stones is equally difficult to estimate because, as will be seen at Na Dromannan, stone spacing varies considerably within the high circles. Both of the remaining standing stones are of substantial size, although of limited height being *c.*1 m and 1.7 m above ground respectively (Fig. 9.3).

Post-medieval settlement and shielings are present in close proximity, and stone robbing is almost certainly responsible for the missing monoliths at Cu'l a' Chleit (Circle VI). Unusually, when standing the circle would have enclosed the summit of the hill, thereby commanding a high level of visibility across the peat moorland. Significantly, Cu'l a' Chleit (Circle VI) is particularly visible over long distances to the south and southeast, and particularly along the course of the Black River.

Druim nam Bidearan (Circle IX)

This stone circle was discovered during a survey in 1974 by geographers from the University of Glasgow (Tait 1978), and briefly mentioned by Curtis and Curtis (2000, 29). Situated at 67 m OD, two fallen stones, measuring 1.6 m and 1.4 m respectively, lie on the north side of the summit of Druim nam Bidearan, on a flat area of *c.*24 m diameter (Fig. 9.4). It is likely that this represents a levelled platform for the stone circle. There is little doubt that these stones are the remnants of a substantial stone circle. Both monoliths are propped up in a similar manner to that seen at Na Dromannan (Circle X), with several packing stones being visible beneath the northernmost stone. A number of other partly buried stones are also present on the platform and a large boulder is situated to the southeast. Southwest of the summit yet another monolith is represented by a broken stump. A low mound is visible in a central position on the 'platform' which may be a burial cairn similarly positioned to those recorded inside Cnoc Ceann a' Gharraidh (Circle II) and Ceann Hulavig (Circle IV). The stone circles Tursachan (Circle I), Cnoc Ceann a' Gharraidh (Circle II), Cnoc Fillibhir Bheag (Circle III), Ceann Hulavig (Circle IV), Cu'l a' Chleit (Circle VI), Na Dromannan (Circle X) and Airigh na Beinne Bige (Circle XI) are all visible

above: FIGURE 9.2. The glacial landscape at Calanais.
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left: FIGURE 9.3. The northeast monolith at Cu'l a' Chleit (Circle VI), and the extensive views to the south and southeast over the Black River.
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right: FIGURE 9.4. Two monoliths of Druim nam Bidearan (Circle IX) in the foreground, project supervisor Robert Nunn is standing on the central mound.
COLIN RICHARDS

below: FIGURE 9.5. Airigh na Beinne Bige (Circle XI).
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from this circle. The site is also extremely prominent when viewed from along the meandering course of the Black River.

Airigh na Beinne Bige (Circle XI)

Despite claims to the contrary (*e.g.* Curtis and Curtis 2000, 32–4), a single monolith, standing to a height of *c.*1.5 m, is all that remains of what would have been a very impressive stone circle (cf. Ashmore 2004, 67). Airigh na Beinne Bige (Circle XI) was first recorded by the Glasgow University geographers (Tait 1978), and subsequently published by Ponting and Ponting (1981). Further fieldwork by Margaret and Gerald Ponting, and Ron Curtis, revealed a collapsed monolith and suspected packing stones for additional stones to the south of the standing monolith. Along the southern perimeter of the circle a collapsed monolith is still clearly visible running beneath the peat and the fragmentary remains of other uprights and packing stones are also partially visible on the surface.

This stone circle not only assumes a dominating aspect, being situated on a south facing terrace or possibly levelled platform, on the middle slopes of Airigh na Beinne Bige, but would also have been the largest of the Calanais circles in having a diameter in the region of 45 metres. If evenly spaced, the circle would originally have consisted of *c.*17–20 monoliths (Fig. 9.5). The single erect monolith stands 1.5 metres above the peat, and since its packing stones are clearly visible it would never have exceeded 2 metres above the original ground surface. Remarkably, even though represented by a single standing monolith, Airigh na Beinne Bige (Circle XI) is highly visible throughout the Calanais area. Indeed, Airigh na Beinne Bige (Circle XI) is the only stone circle from which all the other circles can be seen. This serves to demonstrate that when all the monoliths were standing this would have been beyond doubt one of the most spectacular monuments of the Calanais group. This is ironic as today the site appears unassuming and is rarely visited.

Cnoc Gearraidh Nighean Choinnich

This large circle was discovered relatively recently (Curtis and Curtis 2003, 138) and is situated on a long ridge of high ground, running north–south, behind the village of Brèascleit (Fig. 9.1). No monoliths remain standing of the elongated circle, which measures *c.*40 m × 48 m. If evenly spaced, the circle originally comprised *c.*15 monoliths, five of which are visible and lie prone around the circuit; the largest of the prone monoliths measures *c.*1.9 m in length. Packing stones, other broken slabs and disturbed areas of ground represent the position of further monoliths. Given the close proximity of the circle to the village it seems likely that as with Airigh na Beinne Bige (Circle XI), many stones were removed for blackhouse construction. Equally, a drystone wall bisects the circle in which large slabs of stone and rounded packing-like stones are visible.

Although Cnoc Gearraidh Nighean Choinnich is positioned on a ridge, it does maintain an easterly aspect in occupying slightly sloping ground. Consequently, when standing, this substantial circle would have been very

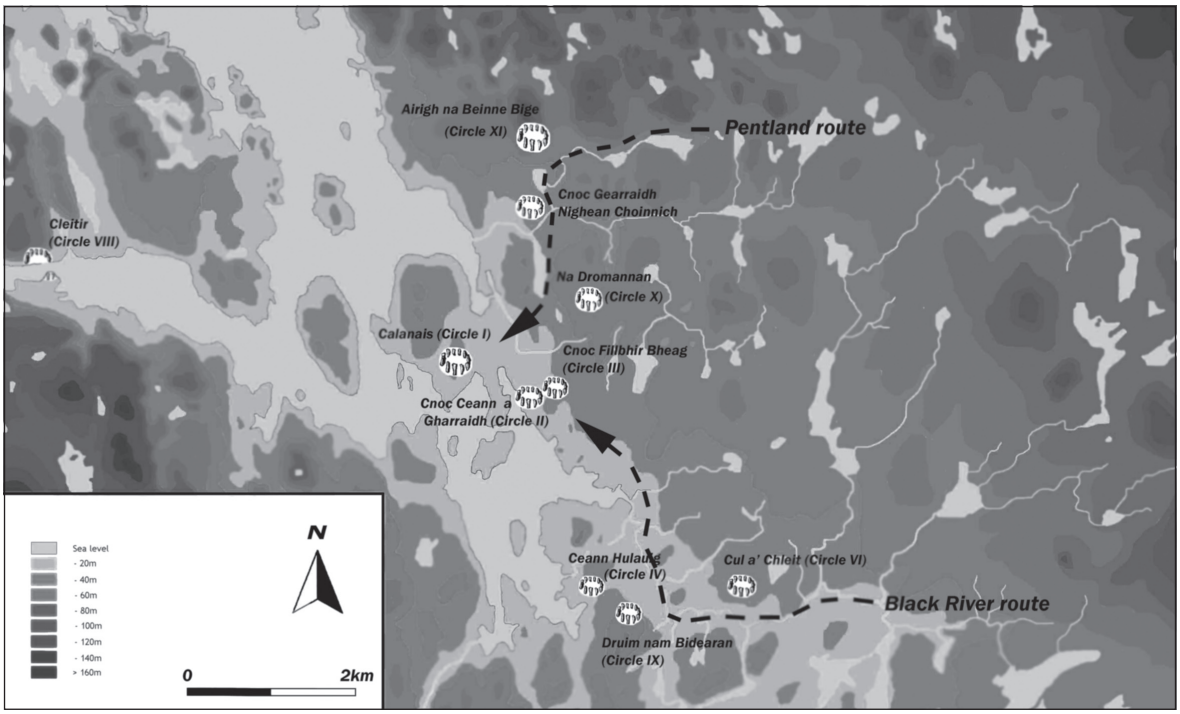

FIGURE 9.6. Map showing principal routes to the 'low' circles, particularly Tursachan (Circle I).

impressive and highly visible especially when viewed from the floor of the adjacent valley. As will be discussed below, this direction pertains to a main point of entry into the Calanais complex.

Passage to Calanais: the high stone circles

As part of fieldwork undertaken between 2003–6, an extensive survey was undertaken mapping the views from and to the different stone circles. Unsurprisingly, those sites assuming a more elevated position possessed the most extensive views and could be seen from numerous locations. The survey involved walking across large tracts of land and marking the visibility of circles on an OS map. Of course, a similar exercise could easily have been achieved by employing GIS (see Rennell 2003, 48–66), but we were interested in the 'influence' exerted by the circles as much as their visibility. For instance, visibility does not directly translate into presence and the force or impact of that presence. In walking across the land two things began to become apparent. First, while being placed in prominent positions, the 'high' stone circles were not consistently situated in places that might be selected as the most visible. Second, as noted in the previous chapter, it was soon realized that they tended to be situated so their impact and presence were strongest when viewed from particular adjacent valley floors.

There are four main routes into the low-lying area where Tursachan (Circle I), Cnoc Ceann a' Gharraidh (Circle II) and Cnoc Fillibhir Bheag (Circle III) stone circles are set in close proximity (Fig. 9.6). Two of these are different

approaches from the Atlantic Ocean into Loch Roag. In the Neolithic period, the sea level is considered to have been substantially lower (Armit 1996, 27–8) and consequently Loch Roag further seaward. It is possible that a smaller and lower freshwater loch may have formed at the confluence of one major and three minor rivers: Allt a' Ghiuair, Allt à Loch na Gainmhich, Allt na Muilne and the larger Abhainn Dubh (Black River). Either way, the Calanais complex was built at the confluence of a series of rivers and Loch Roag.

Of the two approaches from the Atlantic, one passage is through the Great Bernera sound and the 'semi-stone circle' Cleitir (Circle VIII) discussed in the last chapter. Hence, one route into the Calanais complex from the Atlantic involved physically *passing through* a stone circle. Of the two inland routes, the path along the Abhainn Dubh (Black River) running in from the southeast is the most prominent. It also continues the long series of east–west valley systems that dissect the centre of Lewis. This is a route that the modern road follows today, and is also the major route way overlooked by Achmore stone circle (see Chapter 8).

The Abhainn Dubh (Black River) route

The Black River rises near Achmore stone circle and continues westwards towards the Atlantic Ocean. As the Calanais area is approached, Cu'l a' Chleit (Circle VI) appears sky-lined on the hilltop to the northwest. The visual impact of the stone circle is enhanced through a dipping down of the distant mountains. Cu'l a' Chleit (Circle VI) remains consistently visible as the river meanders and enters a narrow valley (one of the few enclosed spaces along the route) where a substantial mound is encountered on the northern bank. The mound (at NB 25453 30012) is *c.*22 m in diameter and partially built on outcropping rock rising from the riverside. A series of uprights slabs are visible around the perimeter of the mound, which is consistent with this site being an unrecognised burial cairn (Fig. 9.7).

FIGURE 9.7. Looking south at the possible burial mound adjacent to the Black River.
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On leaving 'cairn' valley, as the moorland opens out to the south and west, and Druim nam Bidearan (Circle IX) comes into view directly ahead, Cu'l a' Chleit (Circle VI) reappears on the western skyline. A secondary stream, Allt loch na Cleitch, runs north into the Black River and at the confluence, Ceann Hulavig (Circle IV), framed by the various crag and tails, suddenly appears surprisingly sharply on the western skyline. The stones seem out of proportion to their size and distance, a feature which was consistently commented on whilst the survey was undertaken. Continuing downstream, Ceann Hulavig (Circle IV) remains ahead and as Cu'l a' Chleit (Circle VI) is passed, Druim nam Bidearan (Circle IX) is sky-lined to the southwest. At this point Cu'l a' Chleit (Circle VI) and Druim nam Bidearan (Circle IX) flank the river and Ceann Hulavig (Circle IV) is sky-lined directly ahead. Following the river, Cu'l a' Chleit (Circle VI) falls behind while Druim nam Bidearan (Circle IX) and Ceann Hulavig (Circle IV) continue to dominate views to the left and straight-ahead. Passing the crag and tail Cnoc nan Searrach, Ceann Hulavig (Circle IV) becomes obscured but Druim nam Bidearan (Circle IX) continues to dominate from the west. Below this circle on the lower hill-slope, Airigh nam Bidearan stone row runs parallel to the river. Passing beneath the crag, Ceann Hulavig (Circle IV) suddenly reappears silhouetted on the near horizon.

Up until now, the heart of the Calanais complex has been obscured by the micro-topography. Then the Black River enters a narrow valley and Ceann Hulavig (Circle IV) disappears from view as it falls behind another prominent crag and tail. As the narrow valley opens out, Cnoc Fillibhir Bheag (Circle III) unexpectedly appears silhouetted on the distant horizon, framed by two distant crags. Also at this moment Na Dromannan (Circle X) becomes just visible on the distant northwest horizon. Continuing along the river, Tursachan (Circle I) briefly appears for the first time. From this point on, as Calanais is approached the other 'low' circles of Tursachan (Circle I), Cnoc Ceann a' Gharraidh (Circle II) and Cnoc Fillibhir Bheag (Circle III), become sequentially visible and hidden behind a series of crag and tails.

The Pentland route

The second overland route into the Calanais complex is also from the east. This follows a higher, shallow valley containing Lochs Amhaster and na Gainmhich, which today is also the route followed by a small road running into the village of Brèascleit. Passage into the complex from this direction involves following a stream linking the two lochs. Passing Loch Amhaster, forward views are blocked by a high ridge projecting into the valley from the northern uplands. As the ridge is passed, Airigh na Beinne Bige (Circle IX) dramatically appears sky-lined on a level terrace to the northwest. Continuing onwards, the ground begins to gradually drop to the southwest and Airigh na Beinne Bige (Circle IX) remains ever-present and elevated to the right. At this point, the stone circle Cnoc Gearraidh Nighean Choinnich becomes apparent on the ridge

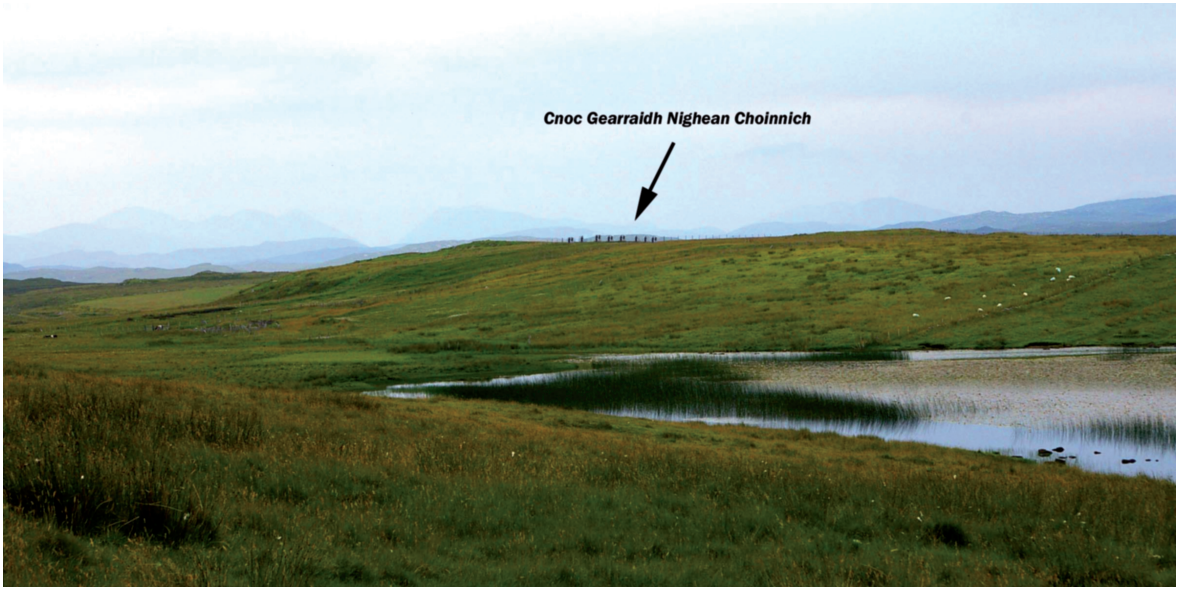

FIGURE 9.8. Dropping downslope into the na Beinne Bige and Bharavat valley, the stone circle Cnoc Gearraidh Nighean Choinnich (graphically reconstructed) becomes visible on the ridge directly ahead.
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directly ahead (Fig. 9.8). As the ground drops further into a narrow valley orientated north–south the Lochs of na Beinne Bige and Bharavat lie directly ahead. Proceeding along the valley floor, Cnoc Gearraidh Nighean Choinnich remains prominent and the significance of the stone circle being positioned on a slight east-facing slope becomes obvious as it becomes sky-lined from the valley floor. As the stone circle is passed, the valley system continues south past Loch Bharavat. Finally, the high ground forming the west side of the valley falls away suddenly revealing an uninhibited and spectacular view of Tursachan (Circle I). Turning downslope to the west, and coming out of the valley system, all the low stone circles become sequentially revealed (Fig 9.9).

From these detailed descriptions, it is quite clear that the Calanais 'high' circles act in a similar manner to other stone circles in the Outer Hebrides. They overlook valley systems and potential pathways. But in this case a number of circles act in conjunction to create a sequential order to movement along the main routes into the heart of the Calanais complex. Here a fascinating experience of moving through a landscape as a process of unwrapping, that is concealment giving way to revelation, is created through the strategic visual interplay of hills, valleys and stone circles. The unwrapping of the landscape in an ordered manner is only fully appreciated by people entering the Calanais area, along particular pathways, *en route* to the low circles and ultimately Tursachan (Circle I). At this point we are forced to ask the question of what status we should ascribe the 'high stone circles', particularly if together they simply act as a monumental form of wrapping, operating to punctuate and structure a journey. In order to advance this line of enquiry it is necessary to examine a high circle in detail.

FIGURE 9.9. Coming out of the Pentland route valley system, Tursachan (Circle I) is visible on crag and tail to the left.
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Investigating Na Dromannan stone circle (Circle X)

One of the main aims of the Great Stone Circles Project was to locate and investigate the quarry sites providing monoliths for stone circles in the north of Scotland. When, in 2003, attention turned to the Calanais group, the site that instantly caught our attention was Na Dromannan (Fig. 9.1). Na Dromannan is actually the name of a rocky ridge on the upper hill slopes overlooking the low circles to the west. Due to its elevated position, the ridge is false-crested on the horizon above the lower stone circles Tursachan (Circle I) and Cnoc Ceann a' Gharraidh (Circle II). The Na Dromannan ridge attracted our attention because it has been consistently identified as the quarry supplying the monoliths for the Calanais stone circles (*e.g.* Ponting and Ponting 1984, 30; Ashmore 1995, 18). For example, in discussing Tursachan (Circle I), Burl states 'its stones of Lewissean (sic) gneiss may have come from a cliff at Na Dromannan a mile away' (1995, 150). The Na Dromannan ridge assumes the appearance of a crag and tail and its elongated west side is a steep rocky cliff (Fig. 9.10). The identification of the cliff being a stone source is understandable as large monolith-shaped blocks of stone have eroded and fallen from its face.

Besides the supposed quarry, a possible collapsed stone circle had also been recorded higher on the ridge (*e.g.* RCAMS 1928, 28; Ashmore 1995, 18). Other researchers were less cautious and Na Dromannan was identified as a definite circle of 'flattened circle type A' (Curtis 1979, 36–7). Today, Na Dromannan seems quite remote: access is difficult and requires having to traverse deep peat cuttings and negotiate bogs. When first visited in 2002, at least 16 slabs were visible projecting through the peat and seeming to rest in a recumbent or slightly angled position (Fig. 9.11). As no monoliths remained standing, it was easy to see why there has always been a degree of ambiguity concerning the

FIGURE 9.10. View of Na Dromannan from the west, note the cliff of outcropping stone previously identified as the megalithic quarry.
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FIGURE 9.11. View of Na Dromannan before excavation in 2002.
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status of the site as a stone circle (*e.g.* Ashmore 1995, 18). The unusual angled position of the rest of the monoliths was a result of what appeared to be stone blocks wedged beneath one end, and although the stones formed a rough circle it was far from clear whether this arrangement actually represented a fallen stone circle. Indeed, it seemed entirely feasible that the monoliths had been quarried and the reason they were propped up was similar to that seen at Vestra Fiold, Orkney (Chapter 5).

Apart from the monoliths poking through the peat, a broader survey of the Na Dromannan area revealed two further points of interest. First, macroscopic examination of the gneiss across the Na Dromannan ridge suggested that the cliff reputed to be the source of the Calanais stones was of fairly consistent lithology. Significantly, this lithology displayed very different banding and mineral composition to the monoliths constituting the low stone circles,

above: FIGURE 9.12. In transit monolith propped on its side east of Na Dromannan.
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right: FIGURE 9.13. Panoramic view of Na Dromannan stone circle from the east. Note the glacial debris within the area of the circle.
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particularly the stones at Tursachan (Circle I). Second, several other places along the Na Dromannan ridge also displayed evidence of stone having been quarried, including an area within the putative stone circle. A hundred metres beyond the Na Dromannan ridge, a single monolith is propped up on its side on the eastern slope of a parallel ridge. This stone has been identified as an outlying standing stone by Ponting and Ponting (1984, 31), but it is clearly 'in-transit' in being propped on its side by a number of small wedge stones (Fig. 9.12).

Given the ambiguity of the angled stones semi-submerged below the peat, together with clear evidence for quarrying monoliths it was decided to examine Na Dromannan in its entirety. This was also undertaken on the basis that across the site the peat was badly eroding and in places the underlying rock surface was exposed. Work began in 2003 when two trenches were opened. These were expanded between 2004–6 to form a single large open excavation (Fig. 9.13).

FIGURE 9.14. Excavating Stone 20, note the broken tip and angle of rest due to the collapse of the monolith and its impact against the bedrock.
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Investigating Na Dromannan was a relatively straightforward process, being essentially restricted to peat removal. There was variable peat cover across the site. In some places the peat deposits had been virtually eroded by water courses, in others the peat reached depths of up to 1.20 m. Where present, up to four layers of peat were discernible. An upper dark-brown peat [001] consistently overlay a mid-brown peat [002], while in some areas this in turn covered a black-brown peat [003]. Finally, a thin layer of mid-brown peat [004], almost 'skin-like', formed the basal peat overlying some areas of the natural bedrock.

During the first season, as the peat was slowly removed, the situation of the monoliths became clearer. The angled elevation of some of the stones was clearly a result of one end being propped up on discrete piles of rounded stones (Fig. 9.14). At this time no stone-sockets had been encountered, as would be expected if the monoliths had originally stood erect. Moreover, spatially, the monoliths appeared to lie fairly haphazardly across the uneven folds of outcropping gneiss.

This caused considerable interpretative problems. For example, it was difficult to understand the reason for the stones to be propped up on what appeared to be small cairns of rounded stones (see Figs 9.14, 9.18 and 9.19). Two possibilities presented themselves. First, the situation of the monoliths could be due to their having been raised up in readiness for removal, as seen in the quarry at Vestra Fiold, Orkney. Alternatively, Na Dromannan was indeed a stone circle, albeit of irregular design, and stones had toppled on their own packing stones. In the absence of stone sockets, the former was considered the most likely interpretation until the peat was removed from around Stone 20 (Fig. 9.14).

FIGURE 9.15. Vertical view of broken Stone 22, again the breakage was caused by an impact with the bedrock.
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As this monolith was slowly uncovered it was found to have a broken tip. It was clear that this slender monolith had once stood in an upright position, supported by a group of packing stones jammed against its base. Before the peat had begun to form, the monolith had toppled directly on to the rock outcrop with the impact fracturing it into two pieces. A similar occurrence was noted for Stone 22 (Fig. 9.15), but the reason this stone fell may be attributed to the toppling of adjacent Stone 7, which collapsed against its base creating almost a 'domino effect'. As the circle was cleared of peat over the next three years, this pattern of breakage was repeated in several monoliths, for example Stones 8, 15, 16 and 19 (Fig. 9.16).

Once the peat had been entirely removed, a number of interesting features of the Na Dromannan stone circle became clear. For instance, it was not actually built centrally on the spine of the ridge but more towards its western side on a gentle slope, which fell away sharply beyond the western circuit of stones. The stone circle had a rough diameter of 20 m and the outer circuit comprised 17 stones. A further five stones originally stood within the interior of the circle (Table 9.1). From the south, a short 'avenue' of four stones marked an ascending route into the circle. A single outlying stone was positioned just beyond the circle to the north (Fig. 9.16), and despite a thorough search for further stones in this area none were found.

Given the numerous claims of geometric precision and regularity of design for the Calanais stone circles, the most noticeable and surprising aspect of Na Dromannan was the irregularity of the overall layout and shape of the circle. Admittedly, the stones had all fallen giving a jumbled and chaotic impression

Stone	Circle position	Stone Context numbers	Length (metres)	Width (metres)	Thickness (metres)	Direction of collapse	Packing stone context numbers	Number of packing stones
1	outer	038	N/A	N/A	N/A	N/A	037	19
2	outer	018	2.61	0.87	0.40	WSW	019	35
3	outer	049	1.70	1.62	0.58	W	050	18
4	outer	033	2.08	0.59	0.35	SW	034	35
5	outer	031	2.38	0.90	0.39	SE	032	29
6	outer	069	2.26	1.28	0.38	SW	070	N/A
7	outer	005	3.28	1.19	0.55	ENE	006, 058–9	47
8	outer	048	1.91	0.76	0.23	SSE	055	12
9	outer	044	1.40	0.90	0.20	NW	045	11
10	outer	046	2.20	0.88	0.33	SW	047	17
11	outer	N/A	N/A	N/A	N/A	N/A	043	36
12	outer	023	2.09	0.93	0.08	WSW	024	18
13	outer	020	2.39	0.93	0.46	SE	022	20
14	outer	039	2.01	0.58	0.49	SSE	040	13
15	outer	060	2.42	0.67	0.52	SE	061	29
16	outer	035	2.00	0.66	0.20	NW	036	13
17	outer	014	3.10	1.45	0.33	N	015, 056–7	75
18	inner	010	2.50	1.15	0.28	NNE	011	35
19	inner	016	3.30	0.73	0.33	NW	017	34
20	inner	012	2.87	0.76	0.33	NNE	013	35
21	inner	N/A	N/A	N/A	N/A	N/A	042	9
22	inner	007–8	3.82	1.29	0.22	NE	009	54

TABLE 9.1. Details of monoliths and packing stones comprising Na Dromannan stone circle.

which made it difficult to envisage the actual spatial organization of the original 'standing' monument. Eventually it was clear that the circle was flattened along its western circuit as had originally been suggested by Ron Curtis (1979, 36–7). Architecturally, the western circuit of the circle resembled a façade-like arrangement (Fig. 9.17). Interestingly, this flattening also corresponded with a closer spacing of the monoliths along the western circuit; indeed, in places the stones were positioned no more than a metre apart. In complete contrast, the eastern circuit displayed very irregular spacing with large gaps of up to *c*.7 m, between monoliths. The circle originally had five standing stones within the interior. Four monoliths had been arranged roughly around the centre, and of these Stones 18, 19 and 20 remained. The position of the missing Stone 21 was represented only by a scattered spread of packing stones (see Fig. 9.16). A further internal monolith, Stone 22, positioned in the southern area of the circle, is of particular interest (Fig. 9.15). The stone had fallen to the east and fractured on hitting the bedrock. In shape, it had a 'classic' angled top and measured 3.82 m in height, making it the largest and one of the most striking monoliths comprising the circle. Although not centrally placed, the presence of an internal large angle-top monolith is reminiscent of the similarly placed monolith in Tursachan (Circle I). When standing, Stone 22 at Na Dromannan would have towered above the adjacent monoliths in a similar manner to that seen at Tursachan (Circle I). The possibility must remain that Stone 22 originally stood as a single standing stone before the stone circle was built around it.

The surface upon which the circle had been erected is formed of extremely

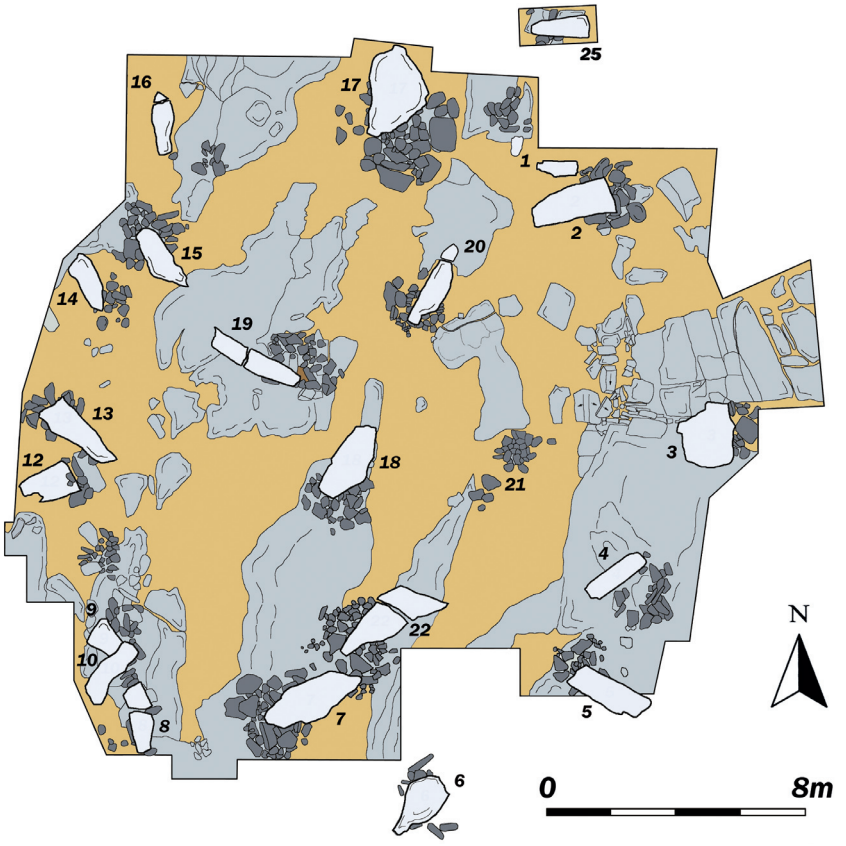

FIGURE 9.16. Excavated plan of the Na Dromannan stone circle.

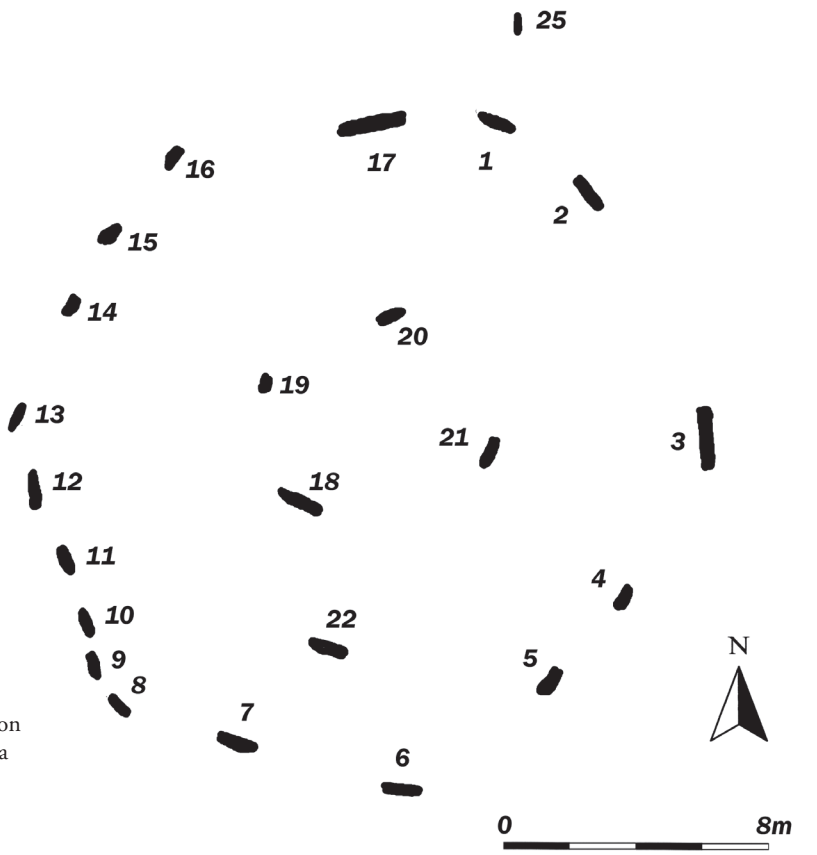

FIGURE 9.17. Original position of erect monoliths within Na Dromannan stone circle.

Soil layer	Thickness	Description
Basal	6.5 cm	a horizon of porous, aggregated, poorly sorted sandy clay loam with abundant lenticular, medium sand sized clay fragments and abundant amorphous iron-replaced plant tissue fragments, mainly in the void space.
Intermediate	1.5 cm	a horizon of fine sand with frequent amorphous iron-replaced plant tissue, mainly in the void space
Upper	1 cm	a horizon of clay and/or amorphous iron replaced plant tissue fragments with an horizontal orientation aspect

TABLE 9.2. Soil profile at Na Dromannan.

undulating *roches moutonnées* with rounded folds of Lewisian gneiss, rising and dipping across the ridge. Glacial till and stone deposits also covered large areas of the ridge, including the interior of the stone circle. In some of the folds in the rock, a soil had formed with some organic accumulation and subsequent peat development above; this was followed by more recent oxidation and exposure (Table 9.2). In detail a very thin soil sequence comprising a weathered, rather poorly developed, lower A/C horizon formed on a clay-rich parent rock material with an oxidised, once organic-rich, A horizon above. The organic component of the A horizon accumulated under partially waterlogged conditions. It was then subject to saturation, probably as a result of a once high groundwater table, which led to thin peat formation. The whole soil profile has subsequently become dried out and oxidised leading to the replacement of organic matter by amorphous iron.

The nature of monolith erection and collapse at Na Dromannan was always a topic of conversation during the excavation. The hardness of the gneiss appeared to have inhibited the digging of deep stone sockets and consequently the bases of the majority of the monoliths rested directly upon the bedrock. Generally, once a monolith was positioned at an appropriate point within the circle, a number of rounded stones were heaped around its base. Further stones were then added for additional stability. Taking Stone 17 as an example, the first stage of monolith erection involved placing a series of large rounded boulders *c*.1 m in diameter in a semi-circular arrangement. Once the boulders were positioned correctly, the monolith was manoeuvred into position and additionally supported by several substantial uprights, measuring up to 0.97 m in height, jammed between the boulders and monolith. The circuit of larger boulders was then completed to encase the monolith, and a number of smaller slabs were used as wedges and chocking stones to provide additional support and stability (Fig. 9.18).

One of the tallest of the internal monoliths, Stone 19 did employ elements of construction that were generally alien to Na Dromannan, being more reminiscent of those used to support monoliths within the low circles (see Chapter 10). Although Stone 19 was erected on the rock outcrop, a shallow socket was created by prizing out a small section of bedrock along the fault lines (Fig. 9.19). The tall monolith, measuring 3.3 m in height, was then erected and packed within the shallow socket by small stones. Further larger stones were then stacked around its base at ground level and bonded together by green-yellow clay.

Even with such a careful sequence of erection, without sockets the stability of each monolith was compromised. Although perfectly adequate to provide initial support, the packing arrangement was inherently unstable given the size and weight of each monolith. Because of this instability all the monoliths comprising the circle had fallen, in some cases taking a second stone with them. As each stone fell, its larger packing stones were thrust outwards and the smaller wedge stones tumbled into the cavity formally occupied by its base. At this point the question arises of whether the monoliths fell due to natural phenomena or human agency: did they fall or were they pushed? Although differential depths of peat were observed sealed beneath the displaced packing stones, this does not constitute evidence for the monoliths falling at different times because, on excavation, the depth of the peat was found to vary considerably across the site.

FIGURE 9.18. Packing stones around the base of Stone 17.
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FIGURE 9.19. Packing stones and socket at the base of Stone 19.
COLIN RICHARDS

FIGURE 9.20. View of Stones 26 and 27 looking upslope from the south. COLIN RICHARDS

As described above, in some cases it seemed that the collapse of one stone caused another to fall, for example Stone 9 falling against Stone 10 and Stone 7 falling against Stone 22. Although there is no direct evidence to support either a human or naturally induced collapse of the stone circle, it seems likely that Stone 1 fell at a much later date as its broken parts were found stratified at a higher level in the covering peat [002]. Therefore this monolith remained standing for a longer period, providing evidence that militates against the total destruction of the site by human agency, and most certainly not as a single event.

Although classified as a hilltop circle by Rennell (2003, 48), Na Dromannan stone circle is actually situated on a ridge that resembles a crag and tail. It is aligned north-south with a higher rock outcrop situated at the northern end. Access to the circle was gained by passing along a short avenue, climbing up a slope of outcropping rock and passing between two large glacial boulders (Stones 26 and 27), both of which are of 'pointed' shape and appear to have toppled (Fig. 9.20). Today, both boulders simply rest at the base of the sloping outcrop. However, the presence of several displaced packing stones on the ground beneath Stone 27 indicates that it had once stood in a vertical position. Two further monoliths, Stones 23 and 24, continued the line of the avenue towards the circle (Fig 9.21). To the north of the circle, an outlying fallen monolith, Stone 25, may indicate the presence of a row of monoliths running towards the elevated outcropping to the north. However, no further stones were identified in this area.

As we will see in the following chapter, there are numerous contrasting features between the high and low circles. One particular difference is the lack of deposits and material culture at the former. Although a damaged polished stone

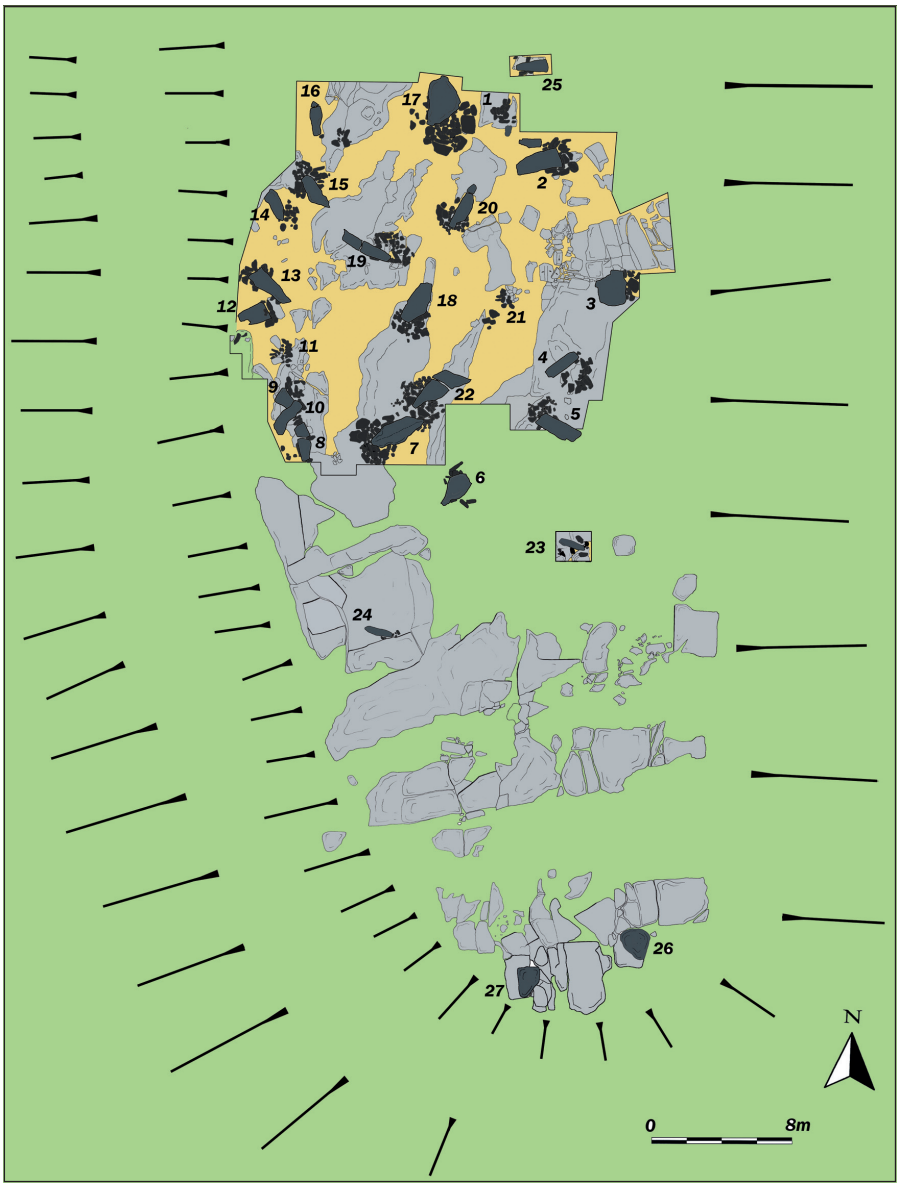

FIGURE 9.21. Plan of Na Dromannan showing the stone circle and avenue, and outcropping gneiss utilized as a quarry for the monoliths.

axe was found at Airigh na Beinne Bige (Circle XI) (Curtis and Curtis 2000, 33), only a single hammer-stone (SF. 3) of gneiss, weighing 0.920 kg was recovered from Na Dromannan (Fig. 9.22). Small fragments of quartz were spread across the site, but this was a result of larger pieces shattering under natural processes; no worked pieces or tools were identified. Not only was there an absence of portable material culture, no trace of any stratigraphy or any preceding activity at the stone circle was detected. Unfortunately, attempts to locate traces of *in situ* burning through magnetic susceptibility survey proved fruitless, and no trace of burnt stones, charcoal or any form of burnt material was encountered.

Consequently, to all intent and purposes Na Dromannan stone circle was built on a barren ridge with no history of occupation. The only possibility is that Stone 22 may have been present as an isolated standing stone.

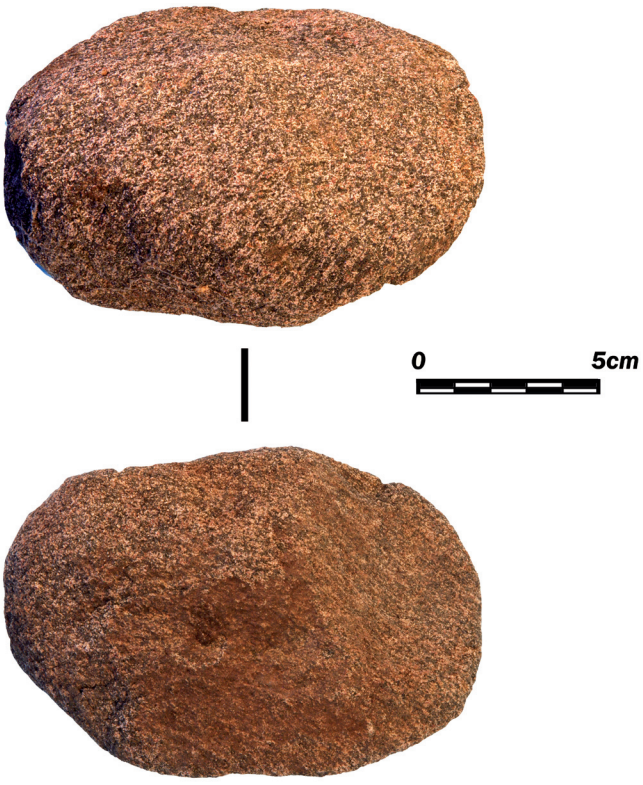

FIGURE 9.22. Single hammer-stone (SF. 3) of gneiss from Na Dromannan.

Na Dromannan and the material composition of the high circles

Earlier (see Chapters 3 and 4), much significance was placed on the geological variability of monoliths comprising the Orcadian stone circles and how that heterogeneity belied a process of construction that extended well beyond the circles themselves. When the initial survey of the Calanais stone circles began in 2003, three major questions structured the research. First, were the stones comprising the circles actually quarried? This was of obvious importance because the crag and tail rock outcrops, and many glacial erratics of varying size and mineralogy, both provide equally viable alternative sources for procuring monoliths. The second question concerned the lithologies of the monoliths within each circle, particularly, whether a similar pattern to that seen within the Orcadian stone circles, of differential lithologies being drawn together to form each individual circle, would be present at Calanais. The characterization of the Lewisian gneiss, in terms of mineralogical banding and distortion profiles was no easy task because of substantial variability present within individual outcrops. Ultimately, a characterization process, combining a profile of mineralogical banding, distortion and more importantly, the presence or absence of particular mineral inclusions such as the hornblende 'eyes' of Tursachan (Circle I), was implemented. The final question depended on the results of the former two; were the stones comprising each circle quarried and could they be securely characterized? If the answer was in the affirmative, then where were the sources of the stones located?

A complete examination of each of the high circles was impossible due to missing monoliths. However, of the surviving stones examined, all appeared to have been quarried as opposed to being glacial erratics. Quarrying was relatively easy to establish through the morphological characteristics of sharp edges, with many displaying one surface rounded through glacial abrasion (upper surface) and the other flattened and sharp-edged through extraction from bedrock (lower

surface). This provided further information about the nature of quarrying, which appeared to involve the removal of stone sections from the upper surfaces of gneiss outcrops (see schema in Mens and Large 2009, 44–6). Once conclusive evidence for quarrying was gained, the next step was to establish any evidence of geological difference within or between circles.

Beginning with Cu'l a' Chleit (Circle VI), both the fallen stones visible today are of Lewisian gneiss (Fig. 9.3), and display similar fabric and mineral banding. These characteristics are identical to those of the gneiss outcropping adjacent to the stone circle. Although it is obviously dangerous to extrapolate from the two remaining monoliths, it is clear that they were both locally derived from the adjacent outcrop.

A similar situation exists for the ruined stone circle Druim nam Bidearan (Circle IX). Situated in an elevated position overlooking the Black River, this stone circle is similar to Na Dromannan in having a number of angled recumbent monoliths and snapped uprights projecting through the ground surface (Fig. 9.4). A likely candidate for the quarry supplying the monoliths is a substantial adjacent outcrop, situated to the southwest. Constituted of similar fabric and quartzite banding to that exhibited by the fallen monoliths, this outcrop has a low cliff-face that exhibits naturally fissured rock capable of producing monoliths c. 1.4m – 1.8m high. Moreover, the cliff-face has clearly been the context of extensive quarrying activities, not necessarily exclusively of Neolithic date. Overall, the evidence strongly indicates that the monoliths constituting the Druim nam Bidearan circle were obtained by quarrying adjacent rock outcrops.

Two monoliths, one standing and the other fallen, are all that remain of the large circle at Airigh na Beinne Bige (Circle XI). Unfortunately, the single standing stone has extensive lichen growth, making it difficult to characterize. The depleted circle stands on a south-facing level terrace in the mid reaches of Beinn Bheag. Consequently, the circle has a definite 'front and back' spatial configuration. The 'back' takes the form of steeply rising ground from which gneiss outcrops project, and this outcropping has clearly been quarried (Fig. 9.23). Fissures cutting through the rock are of appropriate spacing to provide ideal monolith-sized slabs. Indeed, a number of 'scars' are visible where slabs have been prised off the glacially rounded rock surface. In one instance, immediately behind the stone circle, a slab has been split away from the parent rock and wedged up by small stone inserts. Designating these quarrying activities exclusively to the Neolithic period is more difficult, as the circle was plundered for building materials in historic times. Nonetheless, the presence of extensive outcrops producing naturally fissured rock of suitable 'pillar-shaped monoliths', which has certainly been extensively quarried in the past, is highly suggestive.

Only five fallen monoliths remain of the estimated 15 at Cnoc Gearraidh Nighean Choinnich stone circle (Fig. 9.8). All the stones are of gneiss and tend to be similar in mineral banding, but a degree of variation is present in overall

FIGURE 9.23. Outcropping gneiss, displaying evidence for quarrying, directly behind Airigh na Beinne Bige (Circle XI). COLIN RICHARDS

fabric. Unfortunately, the slight hillslope on which the circle lies is completely covered by grass and peat, which would obscure any nearby outcropping. Certainly, no gneiss outcropping is visible in the immediate environs of the circle. Consequently, little can be said regarding the source of the monoliths and its proximity to the circle. Suffice is to note the little variation in monolith lithology.

Sourcing the Na Dromannan monoliths

A number of the monoliths forming the Na Dromannan stone circle display similarity in parallel mineral banding, especially the inclusion of thick quartz veins. Indeed, the outer face of Stone 17, the largest of the Na Dromannan monoliths, was a solid quartz layer before it fractured on collapse. There can be little doubt this particular stone was chosen for the thick quartz band, which was positioned facing outwards in the northern area of the circle (Figs 9.16 and 9.17). At Na Dromannan all the noted lithological variation in the circle is present within the immediate stone outcropping. As mentioned earlier, this ridge had been previously identified as the source of monoliths for Tursachan (Circle I) because 'the west side of the ridge shows a roughly vertical face, so weathered that fine slabs of large size could easily be split off by wedges. This is considered by the local people to be the quarry which provided the stones for the Calanais and adjoining circles' (RCAMS 1928, 29). Unfortunately, the cliff displays a completely different lithology from the stones within Tursachan (Circle I), but there is similarity in the pattern of mineral banding and overall fabric to that seen in the Na Dromannan stones.

The southern slope of Na Dromannan ridge also revealed clear evidence for

FIGURE 9.24. Recording areas of quarrying of *roches moutonnées* on the southern slope of Na Dromannan ridge.
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FIGURE 9.25. Cleaning around a dislodged monolith-shaped stone on the southern slope of Na Dromannan ridge.
COLIN RICHARDS

quarrying. A form of 'stepping' was present in the upper surface of the glacially rounded rock outcrops that are exposed laterally across the down-slope (Fig. 9.24). These steps were a result of the upper slabs having been prised out along fissures in the rock surface. In other places, gaps were present in the outcropping rock where fault lines were utilized to prise out individual 'pillar-shaped' stones. Occasionally, stones were found to be partially separated from the parent rock as a result of glacial action, resulting in 'naturally' quarried monoliths (Fig. 9.25).

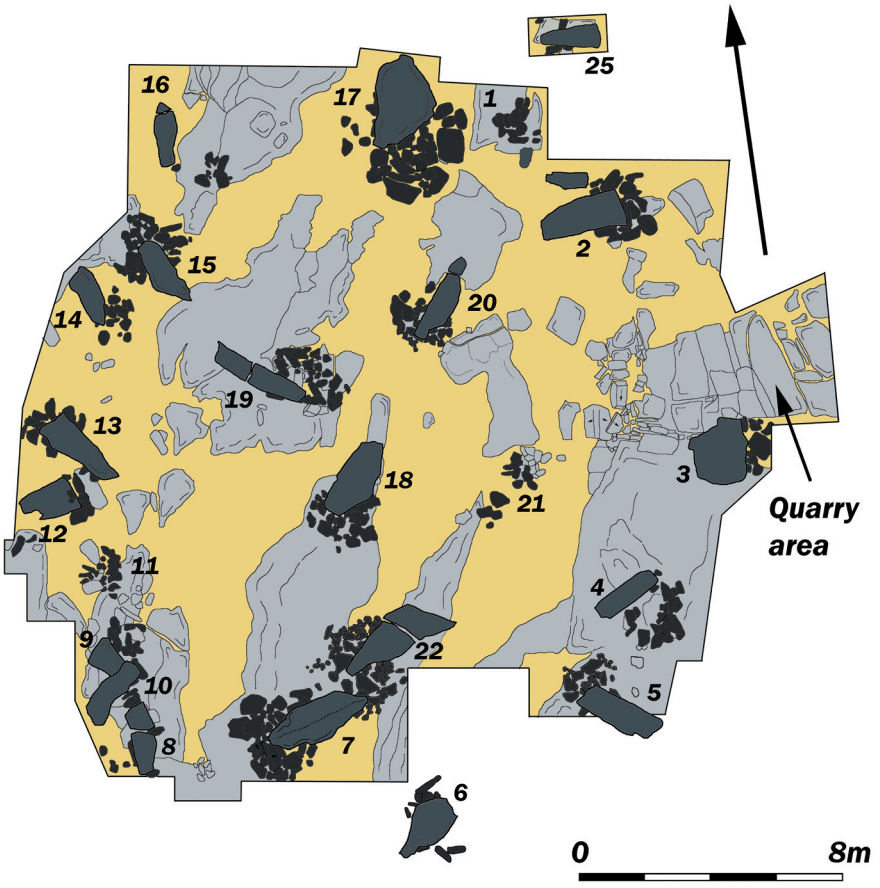

FIGURE 9.26. Plan showing area of quarrying in the Na Dromannan stone circle.

Further north, along the ridge, and running laterally into the eastern area of the Na Dromannan stone circle, is a rock outcrop with fissures dividing the rock into ideal monolith-shaped slabs. This outcrop clearly showed evidence for extensive quarrying and the extraction of several monoliths. These acts of quarrying actually resulted in debris spilling into the interior of the stone circle (Figs 9.26 and 9.27). Overall, there is little doubt that all the stones forming the Na Dromannan circle were derived from its immediate environs. Indeed, it

FIGURE 9.27. View of quarried outcrop and quarrying debris in the eastern area of Na Dromannan stone circle.
COLIN RICHARDS

is not an exaggeration to say that the stone circle actually stood on its quarry. Given that the debris from quarrying littered the eastern side of the circle, there was an overall impression of a lack of concern regarding the internal state of the circle.

An overall assessment of the lithologies of stones within the different high circles of Calanais reveals an interesting pattern. Accepting missing monoliths at many sites, from the available evidence all the high circles display an intra-site similarity in lithology. Each stone circle, with the exception of Cnoc Gearraidh Nighean Choinnich which is heavily grassed and peat covered, has outcropping gneiss in close proximity. Moreover, in each case, the adjacent outcrops of gneiss reveal similar macroscopic characteristics to the monoliths present within the circles. In short, as is unequivocally demonstrated at Na Dromannan, each of the high stone circles appears to be constituted of the stone upon which it once stood.

Rethinking the high stone circles of Calanais

The 'high' circles, such as Na Dromannan (Circle X), were clearly erected to be visually prominent, and many assume a skyline position. In the context of enhanced visibility over long distance, the architecture of the 'high' circles was strategically manipulated to orientate and present a particular image of the circle towards certain places in the landscape. Scale, in the form of large monoliths, may be expected to have been of greater concern than, for instance, particular surface qualities of the individual stones. Certain qualities of the stone, nevertheless, do appear to be of importance. For example, Stone 17 at Na

Dromannan (Fig. 9.18) is one of the largest stones in the outer circle in having a height of over three metres. Its most remarkable characteristic, however, is not merely its size but the thick layer of quartz that once formed its outer surface. Indeed, large veins of coarse quartz are a feature of many of the Na Dromannan stones. There can be little doubt about the amazing effect of the sun striking the quartz in these stones and at certain times light would have sprung from Na Dromannan, making the circle strikingly visible over extensive distances. Another strategy employed to enhance the visual countenance of the circle was to position the monoliths forming the outer ring with their freshly quarried surfaces facing outwards.

While there remains a tension between the qualities of local stone and architectural ideals, the desire to exploit local rock sources to constitute the high stone circles seems to have been of paramount importance. Now, this could be understood as an illustration of the playing out of a principle of least effort. This is precisely the way in which stone circle construction has been previously portrayed; 'a second requirement, and an essential one in deciding where a circle was to be erected was the easy availability of stone … free-lying stones had to be found within three or four miles with no steep slopes, marshes or rivers between' (Burl 2000, 44). Clearly, the general requirement of labour involved in high stone circle construction at Calanais was considerably less demanding than, for instance, the stone circles in Orkney (see Chapters 4 and 5). That is why the physical attributes of constructing the Calanais high stone circles appear to conform to Burl's (2000, 44) expectations.

In conclusion, we are left with a group of stone circles, built out of locally available gneiss in locations that were deemed appropriate for reasons other than a tradition of place. Not only do the high stone circles give the appearance of being strategically placed and planned (see Whittle 2006, 21–2), but also seem to have been built rapidly, being in every sense a form of 'quick architecture' (McFadyen 2006a). However, to recognize that they were erected quickly is to miss the logic of their presence in the landscape; rather they were monuments that were expedient in nature and substance.

Given the state of the interior and absence of material culture from Na Dromannan, it seems as if the high circles were simply built with no intention of further use. There is no long-term, open-ended, project of constructional practice embodied within the architecture of the high stone circles of Calanais; on the contrary, once built they were left to decay and collapse. Even their architecture is about deception and illusion, as is so evident in the close spacing of monoliths along the façade-like western circuit of the circle at Na Dromannan. Here, the spatial representation of a stone circle is subverted in a similar manner to that seen at the Ring of Brodgar. Na Dromannan was made to be seen from afar, as part of a journey to the great stone circle of Tursachan (Circle I), which lies in full view to the west.

The high stone circles were erected in locations that appear to have possessed no history as 'places'. Instead, they seem to have been strategically

positioned in accordance with requirements relating to the accessibility of the low stone circles, particularly Tursachan (Circle I). However, the provision of a short avenue at Na Dromannan appears to complicate this picture of dissociation somewhat. However, it is important to recall that the architectural representation of the stone circle maintained an indexical relationship with the peristalith and passage grave. As argued in the previous chapter, transformation and a change in state were integral to this architecture, as was reference to an ancestral past. In short, the avenue at Na Dromannan may not have been a passage for living members of society at all. In embodying such a relationship, the high stone circles affected a particular ordering and grading of landscape, which could be described as an ancestral wrapping of the low circles. If this is indeed their *raison d'etre* then it is necessary to move beyond, or rather below, the high circles and examine the low circles in order to resolve what seems an illusion of typological homogeneity.

CHAPTER 10

The Sanctity of Crags: mythopraxis, transformation and the Calanais low circles

Colin Richards

Perstaliths, stone circles and mythopraxis

When Marshall Sahlins (1981) introduced the term mythopraxis, he was describing a process whereby particular social practices were understood in terms of a re-enactment of myth. In this way not only do mythical events assume concrete 'historical' expression and current reality, but more importantly can also be manipulated to serve specific ends (Sahlins 1983, 526; 1995, 250). Thus, historical metaphors are created from 'mythical realities' (Sahlins 1981). Of course, the notion of repetition, and understanding actions, particularly ritual actions, in the present as referencing a mythical past is nothing new (*e.g.* Eliade 1965). However, Sahlins was influenced heavily by Johansen's (1954) account of Maori religion and his argument concerning the vital importance of history as a principle of constituting identity and moral authority for the person and kin group. In this way, declares Johansen, the Maori 'thinks history because he [*sic*] lives history' (1954, 172).

To some degree, Friedman (1992) subverted the idea of mythopraxis, from events conceived as a re-enactment of a mythical past, to one in which history is constructed according to specific social discourses, based in a particular *habitus* (Bourdieu 1977). By using, as illustration, the construction of Greek identity, Friedman argues that the emergence of Greek national identity was predicated on an externalized view of Greece as the hub of European culture and learning. There are two points of relevance here. The first is an argument that history is 'a mythical construction, in the sense that it is a representation of the past linked to the establishment of an identity in the present' (1992, 195). Second is the interesting assertion that 'history or rather stories of the past are constructed according to categorical schemes that are imported from other domains', a practice identified by Friedman as mythologization (1992, 196).

In some ways this is similar to the strategic use of myth to provide some form of legitimate 'charter' to everyday social discourse, described as a process

of mythopoiesis (bringing into being through myth) by Weiner (2001, 116–18). These ideas concerning myth and history offer a line of enquiry which is suggested to be very pertinent and particularly useful in thinking about the stone circles and their situation at Calanais. If, as was argued in Chapters 7 and 8, the Hebridean stone circle maintains an indexical link with the peristalith and passage grave, particularly in referencing transformation and wrapping an ancestral domain, then what is the meaning and strategy behind this burst of monumentality at Calanais? Questions concerning the redeployment of the peristalith, in the guise of a stone circle and a displaced manner, are partially answered by an understanding of *habitus* as constituted by very specific political and historical circumstances. Consequently, the erection of stone circles represented a form of 'mythopraxis' or as will be argued later, mythologization, articulated through strategic practices, and grounded in a historical reality of the early third millennium cal BC to affect social transformation and the construction of particular Neolithic Hebridean identities.

In order to outline and justify this interpretation it is necessary to demonstrate exactly how such a social strategy was realized in the construction and architecture of the Calanais stone circles. My argument here is that the key to understanding the Calanais complex lies in the setting and architecture of the low stone circles. Acting as material and historical metaphors they provide a (mythical) narrative about current reality, through the medium of action and movement, and that this process involved an example of 'the definition of the self by means of the other' (Friedman 1992, 195). To pursue this proposal further, initially we need to examine and understand the setting of the low circles.

Stone circles in a crag and tail landscape

As described in the previous chapter, the scouring process of glacial erosion has sculpted the Calanais landscape in a remarkable manner. However, it is the lower-lying areas that seem to have been more affected by the ice flow, creating in Goodenough and Merritt's words 'much of its rugged and desolate beauty' (2011, 28). It is at the bases of smoothed, scoured slopes on broad valley floors that a series of linear, elongated tapering ridges, known as crag and tails, and moraine ridges were produced by glacial action. In appearance the crag and tails are highly distinctive in having a steep-sided, bulbous mound heading one end of a sloping ridge. These formations were created by glacial sediments, produced from the erosion of softer geology, sliding over hard rock outcrops (Fig. 10.1). Behind the hard rock outcrop, glacial debris in the form of fragmented rock and till created elongated tapering ridges or 'tails' (Glasser *et al.* 2004).

Because of the north-south direction of the final glacial action across the west of Lewis (Peacock 1984, fig. 1), the crag and tails in the Calanais area take the form of parallel formations. As the magnitude of the crag and tail is determined by the size of the hard rock outcrop and the amount of debris deposited, the topography is shaped by crag and tails of all sizes ranging from 150–400 metres

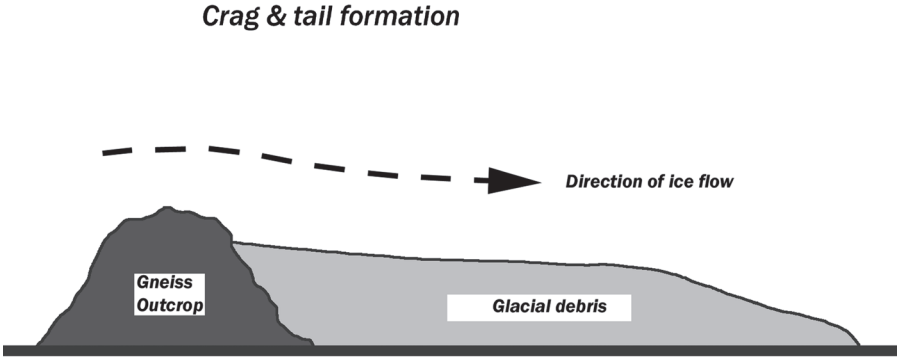

FIGURE 10.1. Diagram showing the composition of a crag and tail glacial formation.

in length. The effect of this process is to create a landform of parallel ridges separated by secluded valleys that can be less than 50 metres wide (*e.g.* Fig. 8.5). Therefore, visually the Calanais landform is distinctive in being composed of highly visible ridges and hidden lower and intermediate areas, especially when viewed from the valley floors, which may well have been the main thoroughfares during the Neolithic period (see Chapter 9). Because of these visual restrictions, this is a difficult and confusing area to traverse, where particular high crag and tails can conceal large tracts of intervening land. Indeed, circuitous routes and valley pathways characterize the landscapes of western Lewis, where particular places slip in and out of view as the crag and tails are negotiated. It is this highly sculpted landform that provides the context of the low stone circles at Calanais.

As introduced in the previous chapter, Rebecca Rennell (2003, 36–9) subdivided the Calanais stone circles into categories of high and low. The low circles include Tursachan (Circle I), Cnoc Ceann a Gharraidh (Circle II), Cnoc Fillibhir Bheag (Circle III) and Ceann Hulavig (Circle IV). The latter is admittedly in a more ambiguous position in being located at 46 m OD and over 3 km away from the closely associated Tursachan (Circle I), Cnoc Ceann a Gharraidh (Circle II) and Cnoc Fillibhir Bheag (Circle III). Accepting this difference I will concur with Rennell (2003, 39) and include it with the lower circles. The most striking aspect of the low circles is their identical relationship to crag and tail formations. Each stone circle was erected in an intermediate position on the tail sections of a crag and tail. At one level, because the tail rises slightly towards the crag, this geological formation provides an ideal place for the circle in an elevated position, which additionally provides a high degree of prominence and visibility to each circle. More importantly, the linearity of the spine of the crag and tail, affords a 'naturally' formalized linear approach to the circle. To draw out the individual qualities of the low circles, a brief description of each site is necessary. This will be followed by a more detailed examination of what is argued to be the most important stone circle arrangement of the entire Calanais complex, Tursachan (Circle I).

FIGURE 10.2. View of Tursachan (Circle I) from the quarry area to the west. Note the profile of the crag and tail formation.
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Cnoc Ceann a' Gharraidh (Circle II)

Viewed from Tursachan (Circle I) and Cnoc Fillibhir Bheag (Circle III), Cnoc Ceann a' Gharraidh appears to be almost insignificantly positioned on low-lying ground (Fig. 10.3). This perspective is, however, deceptive. Cnoc Ceann a' Gharraidh is actually situated on the spine of a less pronounced crag and tail formation. In plan, it is an ellipse rather than a circle, measuring *c*.21.5 m × 19 m, and today, five monoliths, set in sockets, remain of the circle which originally consisted of approximately 18 stones in its outer circuit (Fig. 10.4). The remaining stones are of variable shape, some being pointed and others more squared at the top. The tallest standing monolith, Stone 3, with a height of 3.3 m, also appears to have been dressed, almost knapped, along its southern edge to create a distinctive pointed shape (Fig. 10.3). The five stones are all gneiss but do display a variety in lithology.

When cleared of peat in the mid-nineteenth century the interior of the circle was considered to have a paved or cobbled surface (Ponting and Ponting 1984, 13), although this may simply have been collapse from a centrally situated cairn (Fig. 10.5). Also, four or five 'holes', one measuring 0.51 m × 0.31 m (Burl 1995, 151; Ponting and Ponting 1984, 13), were observed in the interior, three or four forming an arc in northwest and one in the southwest. Fragments of charcoal were located within the holes leading to the assumption that a timber circle may have been present at Cnoc Ceann a' Gharraidh (Burl 1995, 151; Gibson 1998, 41–3). Originally, four fallen stones were also present in the circle together with an outlier to the east (Ponting and Ponting 1984, 13–4).

Although no human bones were reported, a probable burial cist was constructed directly in front of Stone 1. A low internal upright stone (Stone 9)

formed its southern end and two smaller, irregular slabs comprised the sides; it was floored by a central oval slab surrounded by smaller stones. From the illustration redrawn by Ponting and Ponting (1984, 14), from an original in the National Monuments Record, Edinburgh, it is difficult to assess whether this was a primary element of the circle. Nonetheless, significantly it does provide a relationship between a particular stone and a burial.

Cnoc Fillibhir Bheag (Circle III)

Again, Cnoc Fillibhir Bheag is typically situated on the spine of a crag and tail, with a large crag forming the focal point to the south (Figs 10.6 and 10.9). The stone circle is positioned near the northern end of the tail with a substantial gap of *c*.80 m of slightly rising ground between the stone circle and pronounced crag. In terms of the situation of all the low stone circles, this is the most well defined crag and tail with a clear linear, steep-sided demarcation. Perhaps this is the reason a particular illusion concerning the size of the monoliths is a characteristic of this stone circle. Overall, the stones of Cnoc Fillibhir Bheag are actually quite low, yet the stature of the circle appears more substantial than the actual height of the monoliths would suggest; the tallest monolith stands just over 2 metres.

Today, 12 attractive monoliths (Fig. 10.8) remain standing, 'slim pillars of gneiss that now lean outwards, their coarse surfaces whitened by countless storms and blizzards' (Burl 1979b, 108). Cnoc Fillibhir Bheag is variously described as

FIGURE 10.3. Stone 3 at Cnoc Ceann a' Gharraidh (Circle II), showing the elevated Tursachan (Circle I) in the background. COLIN RICHARDS

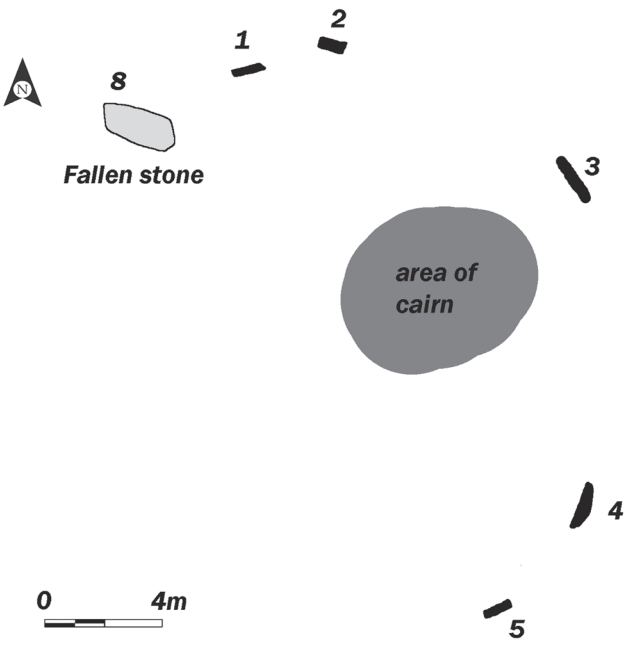

FIGURE 10.4. Plan of Cnoc Ceann a' Gharraidh (Circle II), (after Tait 1978 and Ponting and Ponting 1984).

FIGURE 10.5. Cnoc Ceann a' Gharraidh (Circle II), showing the central mound.

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FIGURE 10.6. The situation of Cnoc Fillibhir Bheag (Circle III) on a crag and tail.

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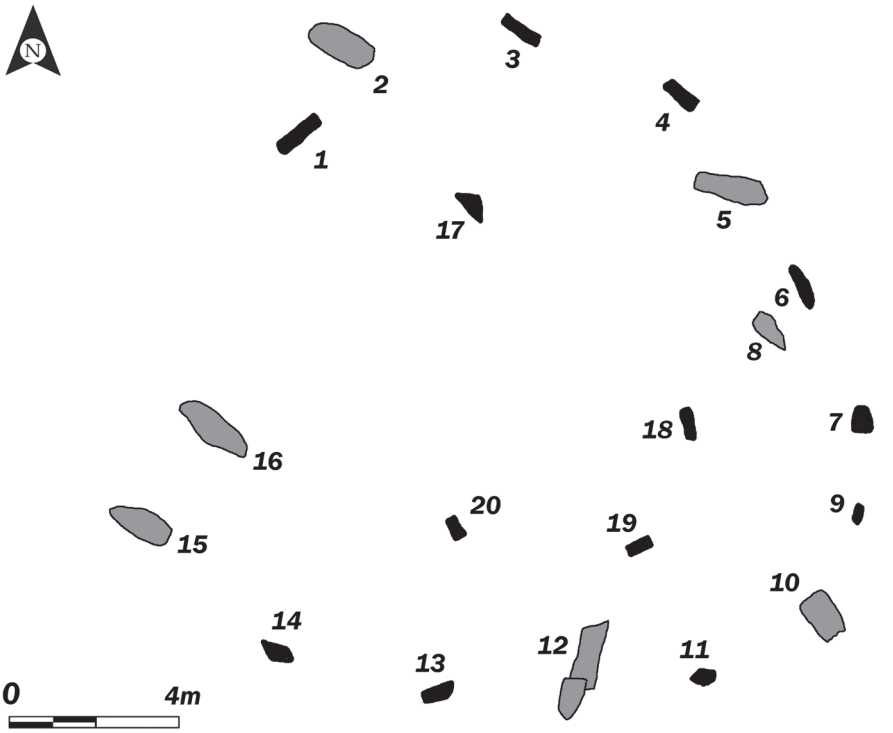

left: FIGURE 10.7. Plan of Cnoc Fillibhir Bheag – Circle III.

below: FIGURE 10.8. View of Cnoc Fillibhir Bheag (Circle III) from the southwest.
COLIN RICHARDS

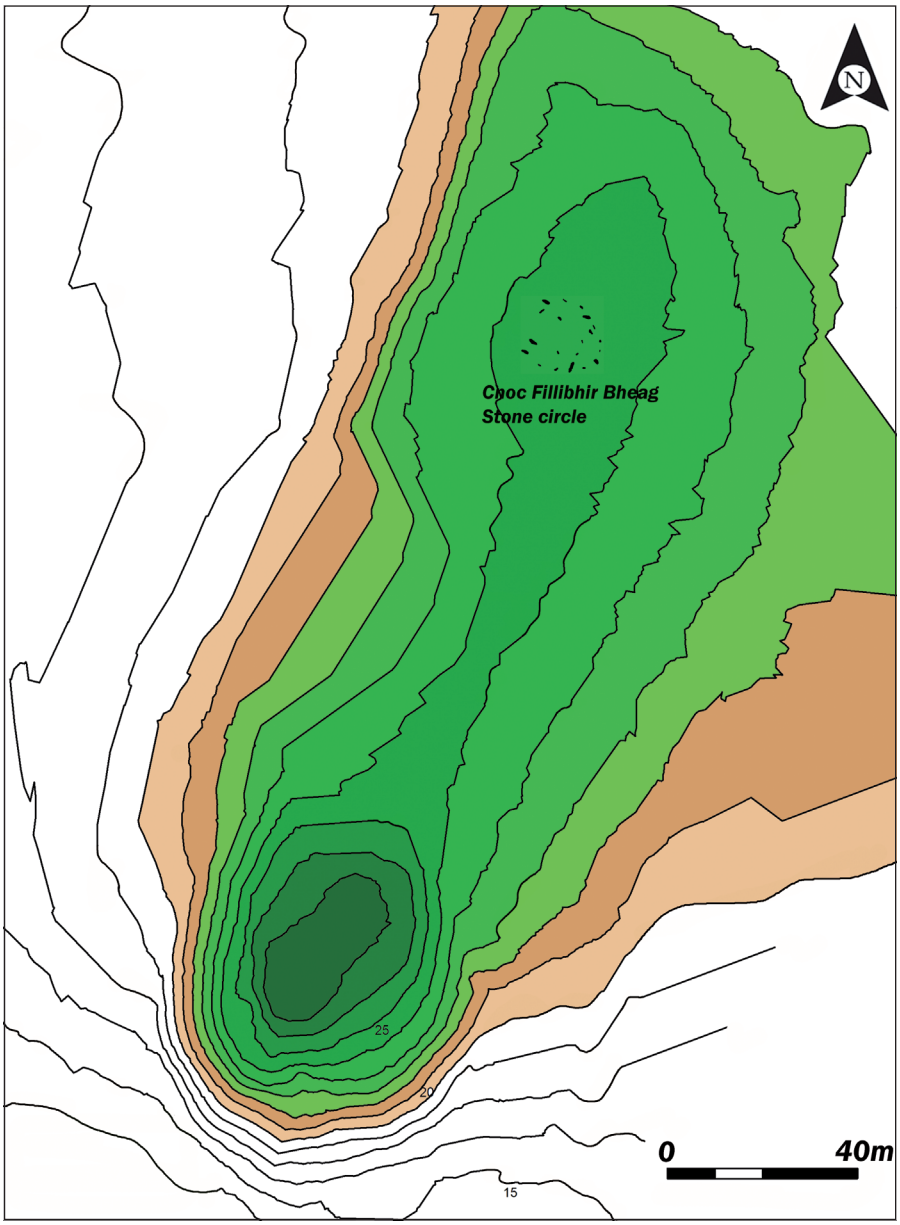

FIGURE 10.9. Contour survey of Cnoc Fillibhir Bheag – Circle III.
KATE WELHAM

composed of irregular (Burl 1995, 152) or rough concentric ellipses (Ashmore 1995, 17). In layout the site is formed of an outer circuit, measuring 13.7 m × 13 m, where eight stones remain standing of a possible 13. A supposed inner concentric ring measuring *c*.10.5 m × 6.5 m, is represented by four monoliths out of a supposed eight (Burl 1979b, 108). Burl (1979b, 109) interprets the absent stones as a project which was never finished. However, this arrangement of stones could easily be an irregular internal group as seen within Na Dromannan (Circle X), as discussed in the last chapter.

The monoliths comprising the circle are of pointed and rectangular shape, and despite some having toppled, all were almost certainly set in sockets. Their description by Burl (1995, 152) as 'jagged and rough as though broken from the living rock' serves to illustrate the point that of the 12 stones standing, at least eight show signs of being quarried, but not all. Interestingly, they do display a noticeable heterogeneity in their lithology. For example, Stone 17, standing within the inner group, is unlike any other stone within the entire Calanais complex, being a heavily metamorphosized, feldspar-rich dense, dark-green gneiss with quartz veins.

Unlike the other low circles, Cnoc Fillibhir Bheag appears not to have had an internal stone cairn, as no stone structures came to light when the site was cleared of peat in 1858 (Ponting and Ponting 1981, 17). Equally, without excavation it is impossible to determine the presence of earlier activity at the site.

Ceann Hulavig (Circle IV)

Ceann Hulavig is the smallest of the low circles, and is also positioned in a typical location on the spine of a long crag and tail, orientated north – south. The ridge rises behind the circle and culminates in a low amorphous crag. As with the other low stone circles, the approach to Ceann Hulavig almost certainly would have followed the spine of the ridge forming the northern tail.

J. J. A. Worsaae first recorded Ceann Hulavig in 1846, and also undertook limited 'excavation' (Ponting and Ponting 1981, 20). Five lichen-covered monoliths, set in sockets, are all that remain of the stone circle. Ceann Hulavig (Circle IV) is a comparatively small stone circle or 'oval' measuring *c*.13 m × 9.5 m (Fig. 10.10). For Burl (1995, 151), the circle originally comprised *c*.13 stones, but a number in the order *c*.10–12 seems more likely. Today, the highest monolith stands *c*.2.7m tall. Two different types of gneiss are discernible, one of finely banded, rippled fabric with feldspar inclusions (Stones 2, 3 and 4), the other a coarser fabric with planes of pink feldspar (Stones 1 and 5).

At least one additional monolith stood within the centre of the circle, the stump of which is visible within a disturbed central cairn. This cairn, in extremely ruinous condition, was revealed in 1858 when approximately two feet of peat was removed from the site (Ponting and Ponting 1981, 20).

Tursachan (Circle I) and Cnoc an Tursa

Tursachan (Circle I) is the most widely known and best-preserved stone circle in Scotland. Architecturally, it is by far the most sophisticated monument of the complex in possessing avenues and lateral rows of standing stones, features that have led to it being called 'the Stonehenge of the North' (Burl 1979b, 98). This arrangement of monoliths is completely fused with the topography, being centrally positioned on a long sloping ridge forming the tail of a substantial crag

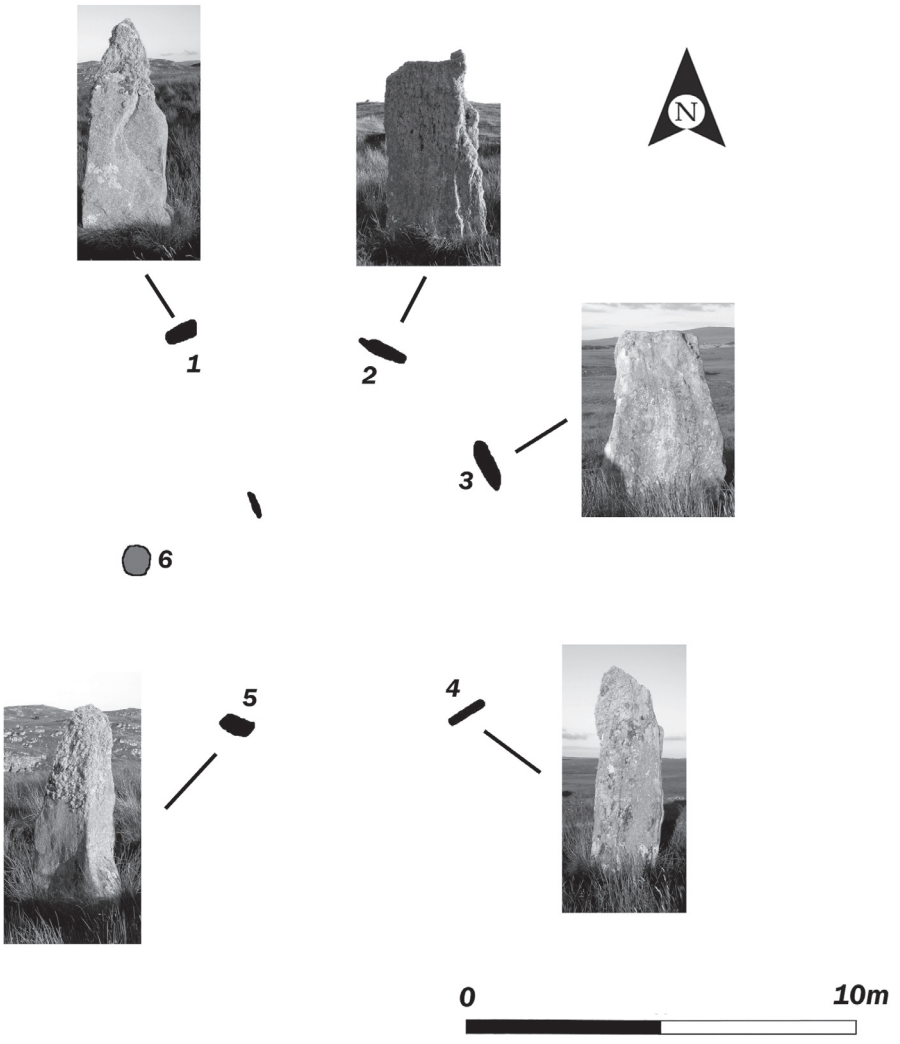

FIGURE 10.10. Plan of Ceann Hulavig – Circle IV (after Burl 1979b).

and tail. The crag, known as Cnoc an Tursa, is large, rocky and bulbous. The tail is fairly broad, and defined by increasingly steep rocky sides as it runs up towards the crag (*e.g.* Fig. 10.1). In discussing the relationship between the low stone circles and crag and tails, Rennell suggests that 'the stone circles would have gained meaning through association with these places, rather than vice versa' (2003, 41). Undoubtedly, Tursachan is built on one of the most spectacular crag and tails in the Calanais area.

On the basis of typological reasoning, the architecture of Tursachan has been sub-divided into a number of recognized architectural components: stone circle, avenue, stone rows, chambered cairn and standing monolith. Once such disassociation occurs, particular components tend to be examined as discrete types; for example, the chambered cairn (Henshall 1972, 462–3), and avenue (Burl 1993) are treated as separate entities. Inevitably, this leads to chronological

ordering; hence for no convincing reason the avenue is consistently considered to be a later addition, as are the lateral stone rows (*e.g.* Burl 1993, 61; Ashmore 2004, 67).

In piecing together the structural history of Tursachan from the 1980–1 excavations (Fig. 10.11), intriguingly, there seems to be a degree of similarity to that postulated in Chapter 3 for the Stones of Stenness, Orkney. During the fourth millennium cal BC a small, roughly circular shallow-ditched enclosure with an entrance to the northwest occupied the ridge (Ashmore 1995, 30). This was succeeded by cereal cultivation in prepared ridges and Carinated bowls and Hebridean styles of pottery were associated with this early activity. It is difficult to know exactly the role of the small enclosure, but given the amount of pottery recovered (Ashmore 2004, 70–1), sporadic activities, perhaps involving brief periods of habitation are likely. Initially, a 'light structure', dated to around 3000 cal BC, was built on the eastern side of the area subsequently enclosed by the stone circle (Ashmore 1995, 31). Around the site of the initial timber structure, a massive central monolith and stone circle, or rather an ellipse, measuring 13.4 m × 11.8 m, were constructed (Fig. 10.12). At least 13 monoliths, averaging 3 m in height, were set in sockets dug through earlier deposits into the glacial till and packed and wedged in place by lumps of gneiss. To ensure greater stability, this packing was supplemented by further clay and stones rammed around the monoliths at ground level (Ashmore 1995, 31). From this form of construction there can be little doubt about an intention towards permanence. This contrasts strongly with the method of erection employed at Na Dromannan (Circle X) specifically, and the high circles as a whole.

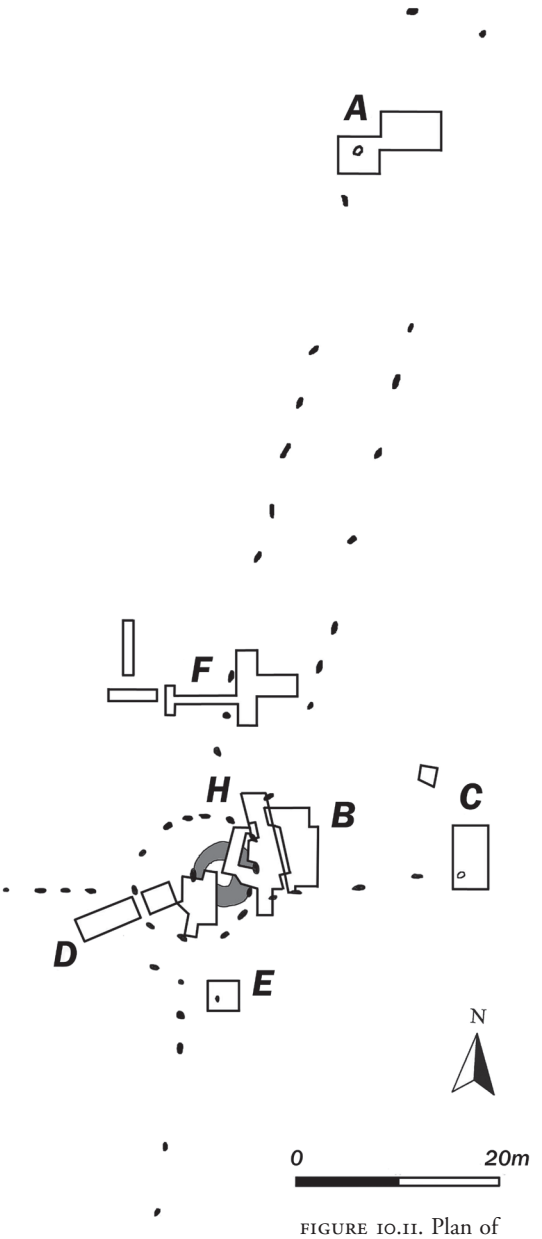

FIGURE 10.11. Plan of Tursachan showing position of 1980–1 trenches (after Ashmore 1995).

At some time after the monoliths were erected a second wooden building was built (Ashmore 2004, 71), in this case associated with the use of Grooved ware pottery (Ashmore 1996, 73). Given the ephemeral, mainly timber-constructed nature of settlement in the Hebrides during the entirety of the Neolithic period (see Chapter 7), there seems a strong possibility that a sequence of 'house' structures were present before and after the erection of stones at Tursachan. Whatever the status of the timber structures they do appear to have had the efficacy to determine subsequent architecture.

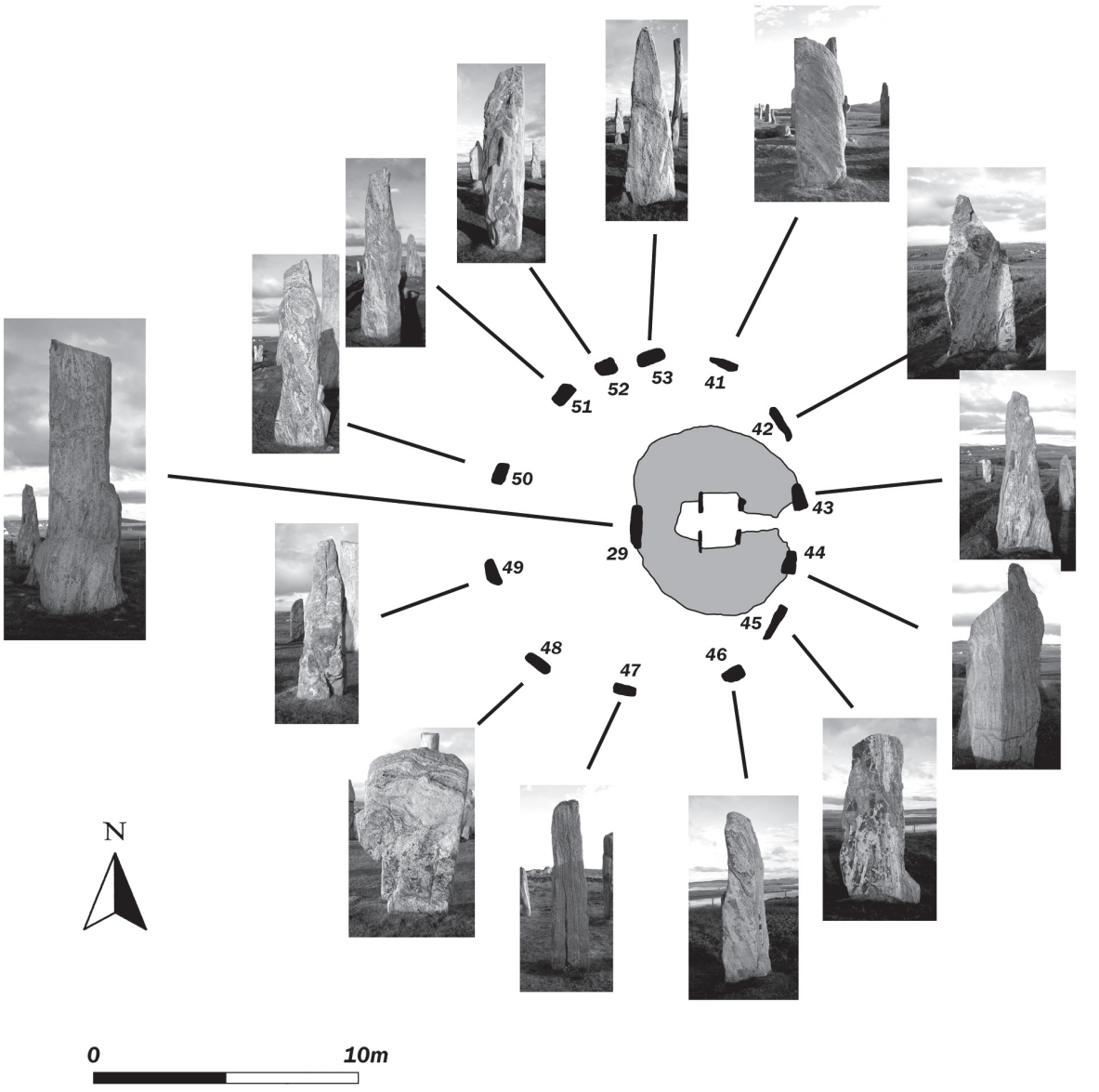

FIGURE 10.12. Plan of stone circle and chambered cairn at Tursachan.

The erection of over 60 monoliths is a considerable feat of construction. Admittedly, some of the monoliths comprising the avenue are relatively small but overall this still represents a substantial undertaking of a magnitude overshadowing the construction of all the other stone circles forming the Calanais group. In terms of architectural representation nothing could be clearer. An avenue of monoliths, beginning with a tall pairing runs along the spine of the crag and tail to the stone circle composed of 13 monoliths averaging 3 m in height. Because of an apparent dip in the height of stones, the avenue is assumed to be of two phases of construction (Burl 1993, 61). However, the

FIGURE 10.13. View looking up the avenue towards the stone circle, note Cnoc an Tursa clearly visible in the background.
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organization of monoliths tends to enhance the experience of entry into the avenue and the subsequent approach to the stone circle. Equally, a hardly noticed tapering or restriction in the width of the avenue further enhances the experience of this final approach (Fig. 10.13). Interestingly, the encounter with the elevated stone circle, structured by the avenue, is not so dissimilar to that experienced when moving into a large passage grave (cf. Richards 1992; 1993). This similarity was also recognized by Henley (2005, 99), who directly compared the architecture of Tursachan with that of a developed passage grave such as Maeshowe, Orkney.

Two rows of five substantial monoliths traverse the ridge, emanating from either side of the stone circle. This is what gives Tursachan its noted cruciform plan. Considered to be unfinished avenues (Burl 1979b, 100), what appears as an irregular spatial organization in plan (Figs 10.11 and 10.16), is actually a well-orchestrated architecture that fuses perfectly with the crag and tail topography. In conjunction, the stone rows create a lateral barrier or screen, which serves to divide the crag and tail into a front and back area. When Chris Tilley writes that meanings were constituted through the experiences generated by different 'modes of encounter and engagement' (2004, 35), he could easily be referring to the complicated architecture of Tursachan.

In an offset position, wrapped within the stone ellipse is a massive monolith of gneiss (Stone 29) rising to a towering height of 4.8 m above ground (*c.*6

FIGURE 10.14. The central Stone 29, showing the angled top reminiscent of the Stones of Stenness, Orkney.
COLIN RICHARDS

m in quarried length). Interestingly, it assumes similar proportions and shape to those present within the Stones of Stenness, Orkney (Fig. 10.14). The position of the monolith is curious. This is not only due to its off-centred situation, but also because it is in the appropriate position to act as the rear slab of the chambered cairn (Figs 10.12 and 10.15). In occupying this unusual position, the monolith appears to anticipate the construction of the chambered cairn. As discussed above, the chambered cairn is placed on the site of a series of timber structures and is considered a late addition. Indeed, the excavator makes a point of describing the construction sequence: 'first they dug up fresh clay and spread it between the eastern face of the ring and the central monolith. Our excavation showed that the thin soil immediately under this clay overlay the mound at the base of one of the circle stones, proving the cairn was later than the circle' (Ashmore 1995, 32). It is hard to contemplate the manoeuvre and erection of a six metre-long monolith within the confines of the completed stone circle. Of course, the whole construction period could have run over an extended period of time, possibly many years, however, the one thing that can be stated with confidence is that the erection of the central monolith constituted a primary element of the building process.

The chambered cairn is undoubtedly of unusual architecture, certainly within a Hebridean context (Henley 2005, 100). In possessing a chamber divided by two opposed pairs of small orthostats it seems to conform to the stalled arrangement of chambered cairns distributed across northern Scotland and Orkney (Henshall 1972, 139). The diameter of the chambered cairn is small in measuring only *c*.6.5 m, and this is reflected an equally small chamber. As Henshall comments, 'the effect of the small tomb cramped into this space and over-towered by the very tall and closely set monoliths is very strange. It seems odd that the whole space within the circle was not used' (1972, 138). It is clear, however, that the chambered cairn contained cremated human remains (Henshall 1972, 462; Ashmore 1995, 33).

The Tursachan avenue fuses the linearity of the crag and tail with megalithic architecture in creating a formalized pathway to the stone circle. The lateral stone rows effectively sub-divide the ridge, forming a screen or façade. The break within this screen of monoliths is actually the stone circle itself; however, at first

FIGURE 10.15. View of the chambered cairn from the east.
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glance there seems to be no architectural acknowledgement of a route through the circle. Here the 'oddness' of the off-centred position of 'central' monolith and chambered cairn, noted by Henshall (1972, 462), may betray a passage of movement through the centre of the stone circle.

Although today represented by only a handful of monoliths, there can be little doubting that an avenue or single row originally continued south beyond the stone circle. A slight shift in direction orientates these monoliths directly towards the crag, Cnoc an Tursa (Fig. 10.16). But why should such extensive activity culminating in the massive labour involved in the erection of over 60 monoliths be focussed on this particular crag and tail? Even before the erection of the standing stones, Tursachan would have presented the image of an extremely impressive elevated crag and tail. In particular, Cnoc an Tursa is an imposing natural outcrop resembling a large mound (Fig. 10.2). Perhaps of greater import is a unique feature of the crag, a fissure that resembles an entrance or passage into the rock itself (Fig. 10.17).

right: FIGURE 10.16.
Aerial view of Tursachan.
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below: FIGURE 10.17.
The passage-like fissure leading into Cnoc an Tursa.
COLIN RICHARDS

Cnoc an Tursa

Three seasons of excavations, between 1993–5 were undertaken by the University of Edinburgh, centred on the investigation of Cnoc an Tursa. In the absence of a full account of the excavations, certain important features and deposits can be reconstructed from the interim reports (Coles 1993; Coles and Rees 1994; Coles 1995). The investigation involved opening of area measuring 10 m × 20 m running north from Cnoc an Tursa. A substantial pit, measuring 1.75 m in diameter with a depth of 1.25 m, was discovered directly in front of the fissure. On excavation the pit was found to be back-filled with rubble and earth and given its size is almost certainly best interpreted as an empty stone socket. In taking this position, a large monolith would obscure direct visual access into the crevice, which would be effectively concealed behind the stone.

At a later date the monolith was felled and removed. The temptation here is to suggest that it was re-erected as the centrepiece of the stone circle. After the empty socket was backfilled with rumble and earth, a long sequence of practices focussed on the crag ensued. These involved the digging of small shallow pits and scoops and depositing fragments of pottery and flints, directly in front of the opening. Several of these small features cut into the top of the in-filled stone socket. The actual opening into the rock outcrop provided the context for a series of fires, as a series of stone-defined hearths were stratified above one another (Coles and Rees 1994, 96). The ash from these episodes of burning spilled out of the crevice to partially cover the back-filled stone socket.

What was initially considered to be a three-metre stretch of ditch, running north from the eastern side of the outcrop, was later found to be a result of a sequence of inter-cutting stone sockets, post-holes, and shallow scoops representing a continued process of replacement (Coles 1993, 111). Some of the post-holes still contained *in situ* stone packing (Coles and Rees 1994, 96). The *in situ* decay of posts, together with a long history of stone and timber replacement, seems to indicate substantial time depth to this enclosing architecture. It seems as if a similar series of features were present on the west side of the outcrop (Noble 2006, 172). If so, the crevice and monolith were contained within a defined forecourt area.

During the 1994 season a series of post-holes and stone holes were uncovered between Cnoc an Tursa and the remaining stones of the southern avenue. One large pit in particular had a flat bottom and packing stones within the fill and was clearly recognized as a stone socket (Coles and Rees 1994, 96). Taken together, the results of these excavations clearly show that originally the southern alignment or avenue extended along the spine of the ridge to Cnoc an Tursa. Also, a series of practices involving fires and the deposition of material culture centred on the fissure or 'entrance' into Cnoc an Tursa. Here it is worth considering what significance Cnoc an Tursa held for the Neolithic inhabitants of Lewis. One clue comes from the results of excavations undertaken during 1995 on the summit of the crag. Two additional trenches were opened and

revealed the presence of two cairns. One was quite small in having a diameter of 2 m. The second was more substantial in having a diameter of 3.5 m, and was surrounded by well-built stone kerb. While no human remains were actually encountered during these excavations there can be little doubt that the cairns were constructed for human burial. That Cnoc an Tursa was deemed an appropriate context for burial of the dead may provide further insight into the manner in which the crag and tail geological formations, particularly the bulbous, mound-like crags, were understood during the Neolithic period. Indeed, were these the burial cairns of an ancestral and mythical past?

When discussing the 'presence' of the Calanais stone circles, Henley makes an interesting and accurate observation; 'even from those sites [the low circles] the feeling is still that it is the central monument which is central to perceptions of the landscape, centre to human engagement of the world' (2003, 259). When attempting to assign importance or order to the Calanais stone circles, it is difficult to ignore the scale and monumentality of Tursachan. From the discussion in the last chapter of the relationship between the high stone circles and the Calanais landscape, it is clear that a major aspect of their situation is an extension of Achmore stone circle (Chapter 8) in providing an order to the approach to Tursachan. Nonetheless, the deployment of monumental architecture to create both spatial order and a mechanism of transition is not restricted to the high circles. The 80 monoliths originally composing Tursachan appear not only to constitute a place in themselves, but are arranged as an elaborate prelude to yet another place: Cnoc an Tursa. At Cnoc an Tursa, it is the fissure or 'entrance' which is the *axis mundi*; a place where two worlds meet, a point of entry to another world that once was obscured and guarded by a massive monolith. Could it be that the entire array of monuments at Calanais, and their architecture, are merely organized to structure a journey from the outside world to Cnoc an Tursa? If so this must have represented the most important and sacred place on the island, and to approach such a place was truly an act of great consequence and danger. Accepting the significance of this place, a further narrative is required to account for the unique deployment of megalithic architecture at Tursachan.

A beautiful rock born out of fire and pressure: sourcing the monoliths of Tursachan and the low circles

It is hard to challenge the view that 'some of the most beautiful examples of the gneisses can be seen in the standing stones' (Goodenough and Merritt, 2011, 10). The metamorphic Lewisian gneiss is the oldest rock in the British Isles. As if in agony, its twisted banded structure was formed over three billion years ago when the substance of the earth's core broke through to the land surface, and was subsequently placed under huge pressure and heat. The drama of its creation is reflected in the colour and texture of the gneiss, which must be one of the most visually striking lithologies encountered throughout the British Isles. It is

a very beautiful rock. For instance, within the Calanais area it is characterized by thin veins of black, red, pink, grey and cream minerals within a grey-white quartz and feldspar matrix (Phemister 1960, 8–16). When caught by the sun, the major quartz and feldspar components sparkle bright and its appearance is even more fabulous when wet (Fig. 10.18). This quality was clearly appreciated during the late Neolithic period, making gneiss a favoured rock for the production of polished mace-heads, as the broken example recovered next to the Stones of Stenness, at Barnhouse Odin in Orkney, aptly shows (Challands *et al.* 2005, 224–6). This is a rock that once seen and handled is never forgotten and the suggestion that distinctive substances were associated with their places of origin (*e.g.* Edmonds 1995, 104; Thomas 1996, Chapter 6), or acted as a form of index of place, must surely apply to the metamorphic rocks of the Outer Hebrides.

In assessing the geological composition of stones within the different Calanais circles an interesting distinction is apparent. As was seen in the previous chapter, accepting the absence of monoliths at particular sites, all the 'high' circles display an intra-site similarity in lithology, whereas the 'low' circles of Cnoc Ceann a' Gharraidh (Circle II), Cnoc Fillibhir Bheag (Circle III), and Ceann Thulabhaig (Circle IV) maintain a degree of internal variability. Of course, in assessing this discrepancy it is important to establish the degree of variation that is present in outcrops within a small area. For instance, all the different lithologies within the stones comprising Cnoc Fillibhir Bheag (Circle III) may simply reflect the variation present within a discrete geographic area. Alternatively, such variation could be a consequence of a variety of sources being exploited in different parts of the Outer Hebrides, thereby mirroring the Orcadian situation. On the other hand, Tursachan displays a remarkable

FIGURE 10.18. The gneiss monoliths at Calanais sparkle in the sunshine.
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above left: FIGURE 10.19. Stone 3 at Tursachan (Circle I) showing characteristic mineral banding and hornblende inclusions.
COLIN RICHARDS

above right: FIGURE 10.20. Hornblende inclusion showing in the rock surface of Cnoc an Tursa.
COLIN RICHARDS

similarity in lithology, with the monoliths displaying similar mineral banding and hornblende inclusions (Fig. 10.19).

In order to investigate these observations further, the discovery and location of potential stone sources for individual circles became a prime goal of the Hebridean fieldwork. Given the uncertainties discussed above, it was decided that identifying quarries for stone circles betraying more distinctive mineralogical attributes, such as the characteristic hornblende inclusions in the monoliths of Tursachan, presented a more viable and productive line of enquiry. After extensive survey in very variable weather, across large tracts of land in the environs of Calanais and Brèascleit, by sheer chance during one of many visits to Tursachan stone circle, a hornblende 'eye' was noticed on the rock surface of Cnoc an Tursa (Fig. 10.20). In 2005, a careful examination of this outcrop revealed the presence of further hornblende inclusions together with veins of coarse pink quartz: another characteristic of the Tursachan monoliths (Fig. 10.21). Although partially obscured by peat, there was evidence for stone extraction at Cnoc an Tursa on the south-western side of the crag.

After extensive survey in the close environs of Tursachan, a second location of outcropping gneiss displaying these distinctive characteristics was discovered. The outcrops ranged over a wide area on the eastern slopes of a lower ridge approximately 300–350 metres west of Cnoc an Tursa (Fig. 10.22). Here, larger slabs than those available at Cnoc an Tursa, with numerous hornblende inclusions, are visible as surface outcrops. Fieldwork in this area, including small-scale excavation, uncovered rock outcrops with identical hornblende inclusions to those present of the Calanais monoliths (Fig. 10.23). At other locations across

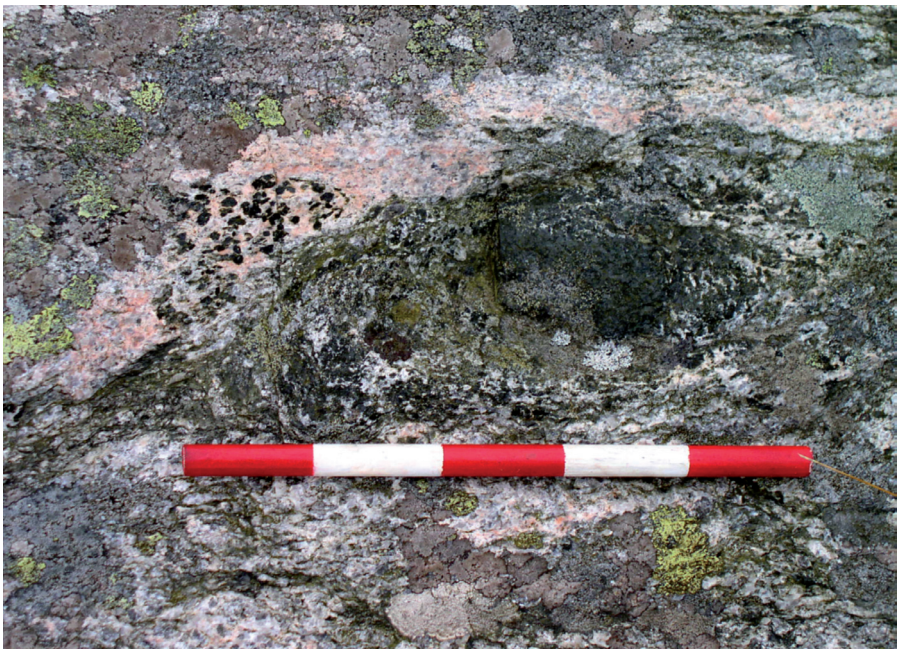

FIGURE 10.21. Detail of hornblende inclusion in Cnoc an Tursa, note the presence of bands of pink quartzite.
COLIN RICHARDS

FIGURE 10.22. View of the outcropping gneiss to the west of Tursachan.
COLIN RICHARDS

the sloping side of the ridge clear evidence for quarrying activities was visible. Excavation revealed areas where stone blocks of monolith size had clearly been removed, while elsewhere quarrying was evident from the fracture lines of surface outcrops (Fig. 10.24). Exploration of the surrounding moors and outcrops to the east of Calanais and Brèascleit proved unrewarding.

FIGURE 10.23. Uncovering outcrops to the west of Tursachan displaying the characteristic 'eye' inclusions.
COLIN RICHARDS

FIGURE 10.24. Fieldwork at the Tursachan quarry located several places where monoliths had been removed, here supervisors Lee Wellerman and Joanna Wright examine an area of quarrying.
COLIN RICHARDS

In terms of the description of the constructional sequence at Tursachan (and potentially other low circles), because of the close proximity of the quarry, once detached a monolith could simply be manhandled into place through the labour of a relatively small number of people. The creation of pathways to drag the monolith through the landscape, the gathering of large numbers of people and

their provision were not necessarily major issues in this level of construction. Equally, small stones and boulders were readily available in a landscape littered with glacial debris, and their collection for packing stones would be relatively easy work. For the low circles, sockets would require excavation, but these would be cut into glacial till.

Calanais stone circles and mythopraxis: transforming places and identity in the third millennium BC

It would seem that in the construction of the stone circles at Calanais particular Neolithic identities are not being forged in reference to dispersed homelands through the labour or practice of stone dragging. Indeed, there appears to be virtually no material linkage between people's place of dwelling, or the materiality of that place, and the constituents of the stone circles, a feature that was suggested to be so prominent in the construction of the Orcadian stone circles (Chapters 4 and 5). In this context, social risk also appears negligible in comparison. In attempting to provide a narrative of the social significance of the Calanais stone circles it is necessary to draw together some of the strands of evidence discussed in the last three chapters.

Unlike the Orcadian stone circles, materially and metaphorically, the Calanais stone circles are not constituted out of the stuff of different landscapes. To that extent they are not emblems of a *bricolage* of island materiality, nor a manifestation of collective identities mediated through that materiality. Instead, they are discrete entities formed of the substance upon which they either stand or lie in close association. Although in the current and the previous chapter, a distinction between 'high' and 'low' circles is outlined in terms of history, traditions of place, and pathways through the landscape, it appears that in terms of material constituents there is little divergence between the stone circles or their labour requirements. Nonetheless, particularly with regard to the circles, it was earlier intimated that the crag and tails upon which they lie were steeped in tradition and cosmogonic significance. An extension of that argument embraces the materiality of place. This effects a fusion of monument and landform to create an indistinguishable amalgam centred on one particular place. In short, the only thing that comes to the stone circles at Calanais are people, and the focus of attention is on the place of a circle, and the social practices occurring there, as opposed to other places distributed across the physical and social landscape.

On close scrutiny, it is difficult not to attribute the description of expedient architecture to the high stone circles. They maintain a character of being built quickly from the material upon which they stood. Once the monoliths were extracted from the rock outcrops they were set up in visible positions and propped up by packing glacial stones and boulders around their bases. When we were excavating Na Dromannan (Circle X), the nature of construction as representing a lack of concern regarding longevity was continually commented upon. To

FIGURE 10.25. *top:* Cnoc an Tursa, *bottom:* Bharpa Langass.

describe Na Dromannan as being 'thrown up' is perhaps too derogatory a portrayal of the construction process, but overall the stone circle just seemed to lack the qualities of permanence. As part of a monumental punctuation of landscape progression into the heart of the Calanais complex, the high circles combine. They remain, nonetheless, distinct monuments, and as far as can be recognized display divergent architecture.

The low circles stand in a certain contrast. Here, the operative word is 'stand', because despite having a higher level of peat support until the 1850s (Ponting and Ponting 1984), many of the monoliths comprising the low circles remain standing today. This is due to their being set in stone sockets and such support ensured the permanence of the monuments. The low circles are also distinctive in being consistently built on the spines of crag and tail glacial formations. When viewing the low circles from either near or afar it is difficult not to recognize and appreciate the interplay between circle and crag, structured by the physical constraints of the linear and narrow tail (*e.g.* Fig. 10.9). Nowhere is this better demonstrated than in the architecture of Tursachan (Circle I).

It has already been argued that the fissure in the large crag Cnoc an Tursa represented the focal point of Tursachan stone circle and avenue (Fig. 10.18). I will now go further and propose that this fissure or entrance into the stone had cosmological import in acting as a conduit between two worlds or domains (see Bradley 2000, 29–30). These domains could be portrayed as the everyday world of the living and a sacred realm of darkness and the dead. Such duality may seem familiar as it has already been encountered in Chapters 7 and 8 as manifest in the transformatory qualities of the architecture of the Hebridean passage grave. Indeed, the physical resemblance between the entrance into Cnoc an Tursa and a passage grave is unmistakable (Fig. 10.25).

A complex spatial arrangement of monoliths forms an elaborate architecture of approach to Cnoc an Tursa; a tapering avenue leads to a fairly small but relatively 'high' and transcendent stone circle. Projecting from either side of the circle are two stone alignments which effectively subdivide the spine of the crag and tail. Beyond the circle a further avenue once led directly to the crag Cnoc an Tursa. This is a unique form of megalithic architecture, and the question must be raised as to why the stone circle at Tursachan is displaced, especially

if the Hebridean stone circles were indexically linked to the peristalith, as was argued in Chapters 7 and 8. Why does the stone circle not encircle the crag and directly imitate the Hebridean passage grave architecture?

At the beginning of the chapter, the dual concepts of mythopraxis and mythologization were briefly discussed and now is the time for their reintroduction. But first I want to merge two completely different arguments. In a recent reanalysis of the representational qualities of Irish passage graves, Guillaume Robin recognizes that despite the famous cruciform layout 'the linear nature of the megalithic architecture is one of the most important characteristics of passage graves' (2010, 397). He goes on to note that in the terminal chamber 'the same structures and the same signs are displayed so as to signal entrances and thresholds that cannot, however, be physically crossed' (2010, 394). Thus, the logic of the Irish passage grave is to structure a journey through the monument towards a rear chamber, which possesses the characteristics of a threshold or symbolic doorway, 'an impassable gateway to another world' (Richards 1992, 72). This a little disconcerting, because surely the description of the representational qualities of a passage grave could easily be applied to the megalithic architecture of Tursachan.

The connection between passage grave architecture and the spatial organization of monoliths at Tursachan appears so great to Cole Henley that he argues that the latter:

> is not a stone circle. It has a stone circle as a constituent part of its overall construction, but this is just one of several integral parts to this site. I would like to argue that rather than struggle to interpret Callanish [Tursachan] as a stone circle we must instead consider it as the embodiment – in form – of a developed, Late Neolithic passage grave… We may, with this perspective, interpret the ring of Callanish [Tursachan] as representing the chamber of such monuments, with the avenue signifying the passage and the three alignments the cruciform sub-chambers
>
> (2005, 99).

The passage grave exerting the greatest effect on the spatial organization of Tursachan is intimated to be Maeshowe in Orkney (Henley 2003, 254). Indeed, an early third millennium cal BC Orcadian connection is further suggested through the construction of the small chambered cairn of tripartite stalled architecture positioned within the circle at Tursachan (Muller 1988, 34; Henley 2005, 100).

Clearly, the stone circle at Tursachan is not a passage grave, but from the above accounts it seems clear that the same structuring principles that influence passage grave architecture appear to be redeployed at the site. Moreover, the elaborate arrangement of standing stones undoubtedly structures the encounter with Cnoc an Tursa, just as Robin (2010, 394–5) describes for the encounter with the end chamber in the Irish passage graves. If we ascribe mythical and sacred status to Cnoc an Tursa, and further acknowledge a relationship to the Hebridean passage graves, then the standing stones of Tursachan necessarily

wrap and bind the fissure or entrance into the very stone itself. Yet, curiously, the manner in which this is achieved is allied more to cruciform passage graves from further afield.

Rather than seeing mythopraxis (Sahlins 1981) merely as the establishment of historical metaphors through events being conceived as a re-enactment of myth, Friedman re-orientated the discussion by contending that history itself 'is very much a mythical construction' (1992, 195). Moreover, in a rather convoluted manner, he argues that 'culture is the organization of the present in terms of a past that is already organized by the present' (1992, 196). This effectively means that a re-constructed past influences social strategies in the present, particularly in reference to identity. By introducing the practice of mythologization, as a portrayal of the past 'according to categorical schemes that are *transferred from other domains*' [my italics], Friedman (1992, 196) provides an interesting framework which can be employed to consider the construction of social identity in the third millennium cal BC.

If we think about the megalithic architecture of Tursachan as constituted by a series of practices (cf. McFadyen 2006c), bringing cosmological themes into being (Richards 1993; 1996b), then the contention that a process of mythologization 'may occur in specific circumstances where an emergent social identity manifests itself via the display of mythic models' (Friedman 1992, 196), appears highly relevant (cf. Bradley 2002, 17–19). The question is whose mythical models are actually being materially deployed?

There is clearly a strong element of irony here. At this juncture in time emergent Hebridean social identities, manifest in the building of Tursachan, are clearly drawing on imagery derived from a local Hebridean past in the form of the peristalith. Yet, the potency of such strategies appears to lie in the deployment of megalithic architecture in accordance with external cosmological principles. Such a process is consistent with Friedman's identification of history being a mythical construct 'in the sense that it is a representation of the past linked to the establishment of an identity in the present' (1992, 195). Taking this line of reasoning further, and acknowledging the relative rarity of Grooved ware in the Outer Hebrides (Armit 1992, 320), together with the early third millennium cal BC dates for Grooved ware at Orcadian settlements such as Barnhouse (Ashmore 2005; Schulting *et al.* 2010), we can begin to appreciate the significance of its later appearance inside the stone circle at Tursachan (see also Sheridan 2004).

Here we see further evidence for the building of Tursachan and the other stone circles of Calanais as a strategy of social transformation whereby people were constructing identities in terms of the 'other'. As Helms recognises, mere contact with other places is transformational and specifically those who 'venture to these power-filled lands are, accordingly, no longer ordinary people' (1988, 49). In short, not only were people building stone circles in the late Neolithic of the Outer Hebrides, but in doing so they were building and transforming themselves in relation to the 'other', within discourses of cosmological acquisition (Helms 1993). To modify Friedman (1992, 195), Neolithic Hebridean

identity consisted in the importation and establishment of a Neolithic Orcadian identification of the Hebrides, just as the Hebridean past became the Orcadian objectification of its ancestral past.

In the events taking place at Calanais in the early third millennium cal BC, we also begin to glimpse the complex social and material strategies, articulated through mythopraxis and mythologization. We can also appreciate the potency of the exotic material and symbolic resources becoming available to localized social groups that arose out of the expansion of contacts and social relations along the Irish seaboard (cf. Sheridan 2004; Henley 2005, 103–4; Cummings 2009, 192–7) and northwards to Orkney. In this respect the great stone circle complex at Calanais, being positioned adjacent to the Atlantic Ocean, owed as much to traditions emanating from the Orcadian and Irish Neolithic as to the locally established peristalith of the Hebridean passage graves.

CHAPTER 11

A Time for Stone Circles, a Time for New People

Seren Griffiths and Colin Richards

Introduction

When the Great Stone Circle Project began the intention was to examine a number of 'great stone circles' as described by Burl (1999), as additions to the Stones of Stenness and the Ring of Brodgar in Orkney and the Calanais complex in the Isle of Lewis, Outer Hebrides (Richards 2005d). In retrospect, this objective seems rather ambitious. Nonetheless, investigations began in Orkney in 2002 with the survey and excavation of the megalithic quarry of Vestra Fiold, and initial survey at Calanais, Isle of Lewis. It soon became clear that the stone circles in these two areas were remarkably different in composition and architecture. This in itself should have been of little surprise despite assumed typological conformity. Yet strangely, after discovering and recording the variation in the lithology of monoliths at the Ring of Brodgar, this particular characteristic was expected to also be present within the Outer Hebridean stone circles. Interestingly, it took some time before the uniformity in composition of the Calanais stone circles and the strong contrast in constructional practice between the Northern and Western Isles was fully appreciated. At this point it also became clear that to fully investigate and record this variability required considerable fieldwork and excavation. Moreover, any interpretation of the stone circles in either area needed a detailed understanding of the social conditions under which such monumental architecture was created, including temporal relationships between the different stone circles.

In determining the social conditions that led to the building of stone circles in the north it is crucial to appreciate the degree and nature of interaction that existed between Orkney and Lewis, and beyond. Indeed, in Chapter 10 it was argued that the building of the Calanais stone circle complex formed part of a sophisticated process, on the part of Neolithic Hebridean social groups, of forging identities in terms of constructing historical metaphors through monumental construction. These historical metaphors drew on images of a mythical past, partly reconstituted in terms of the 'other' (Freidman 1992). Here, the 'other' is a spectrum of dispersed communities lying beyond the Outer

Hebrides along the Atlantic façade (*e.g.* Sheridan 2004). Aubrey Burl (*e.g.* 2000, 194) took a keen interest in possible external influences affecting stone circle architecture, but this was mainly to provide a framework in which to justify typological identification. Indeed, the variability of stone circle architecture recognized in Orkney and the Western Isles was for Burl a symptom of broader cultural contact; 'just as the forests and swamps of the countryside hindered journeys, so the seaways of Britain and Ireland encouraged the careful traveller' (2000, 199).

Significantly, during the early third millennium cal BC such external contact appears to directly affect local identities and a broad range of material culture, including monumental architecture, throughout the Irish Sea – North Atlantic area. It is suggested that changing practices would have been couched in local tradition and legitimated through historical metaphors, but following Friedman, articulated through categorical schemes, which are 'transferred from other domains' (1992, 196). If, from Orkney to the Hebrides to the Boyne Valley, Ireland, people were engaged in a range of practices which reconstituted identities in relation to the 'other', within discourses of cosmological acquisition (Helms 1993), including monumental construction, the timing and tempo of interaction are clearly of fundamental importance.

So far absolute chronology has taken a back seat in this study of stone circle construction. Instead we have been more concerned with the practices employed to construct monumental architecture. However, if an understanding of different architectural forms and consequently the nature and variety of constructional practice are dependent on an appreciation of the 'other', establishing a more detailed understanding of the chronology of monument building along the Atlantic façade is also essential.

A time of stone circles

There was a time when all stone circles were thought to be of Bronze Age date (*e.g.* Hawkes and Hawkes 1943, 75–83). This chronological position was based upon the frequent occurrence of Early Bronze Age burials within the circles; 'in the absence of stratigraphy or any method of absolute dating, it was reasonable enough to infer that these were primary deposits and reflected the original purpose of these sites' (Bradley 1998, 138). In all fairness, providing a chronology for the construction of stone circles is an extraordinarily difficult task. As Waterhouse laments, 'dating is a problem that is common to all the stone circles of the British Isles' (1985, 26). More than anyone else, over the years Aubrey Burl has attempted to provide some form of chronological order to stone circles (*e.g.* 1976, 45–9; 1979b, 39; 2000, 77–86, 2012 [1983], 36–45). For Burl, the question of chronology was directly linked to origins and typology, and therefore dating stone circles depended on three areas of evidence: architecture, radiocarbon dating and associated material culture (1976, 45). An original chronological scheme that has endured in Burl's thinking is the typological

sub-division of stone circle architecture into circle, flattened circle and oval. The true 'circles' of stones were also considered to be the larger monuments and Burl explains why:

> Southern stone circles may have derived from henges which have average diameters well in excess of 31.0 m. Such an origin makes it likely that many of the primary circles would be of comparable size and it is not entirely fanciful to consider that the larger stone rings, 31.0 m or more across, are amongst the earliest in the series (1976, 45).

Evidence appeared to support this assumption, especially recognition that the substantial Newgrange stone circle was contemporary with the passage grave, which was dated to the late fourth millennium cal BC (Burl 1976, 46). Given the scale of the Newgrange circle, which is in excess of 100 metres diameter, Burl felt reasonably confident in suggesting that a date of '2508 bc may be extrapolated for the circle' (1976, 46). Because the Newgrange stone circle formed part of the large stone circle complex, which was assumed to be the earliest, then this date both provided a guide and supported the chronological scheme. However, the apparent ambiguity now seen to exist in the relationship between the timber circle, the stone circle and passage grave at Newgrange (Bradley 1998a, 102–3; 1998b, 3–6) clearly problematizes this example.

Central to culture historical analysis is the idea of diffusion from an origin or homeland, hence the priority given to the quest for origins in particular modes of typological thinking (see S. Jones 1997). Unfortunately, 'where or why the first stone circle was built is unknown' (2005 [1979], 10), muses Burl, but that does not appear to inhibit the search. For example, it was recognized that another antecedent might exist for stone circles; 'near Sligo in the north-western corner of Ireland circles developed from heavy banks of stones surrounding tombs' (Burl, 2005 [1979], 11). More recently, these banks have been recognized as stone circles:

> The earliest of all stone circles may be in the north-west of Ireland. Somewhat misleadingly termed 'boulder circles' the open air rings at Carrowmore in Co Sligo are transitional forms of unroofed enclosures between Neolithic passage-tombs and the true stone circle (Burl 2000, 77).

In Chapters 7 and 8, a discussion of Hebridean stone circles focused on the role of the peristalith in stone circle architecture. This discussion was not couched in terms of origins or antecedents but rather the transformational character of an architectural entity, which led to the establishment of specific historical material metaphors. Hence the development of peristalith architecture, for instance, as manifest in the stone circles at Calanais, was suggested in Chapter 10 to be part of a discourse of transformation and shifting social identities. Moreover, monument construction also formed part of a discourse in which such historical metaphors were constituted through the 'other'. In this way the social order became embedded in broader social relations beyond the Outer

FIGURE 11.1. Map showing stone circles and other Neolithic sites discussed in this chapter.

Hebrides. Therefore the timing of stone circles in different areas now assumes greater significance, not in the search for stone circle origins, but in unravelling the sophisticated social strategies that lay behind their construction (Fig. 11.1).

Turning initially to Orkney, the Stones of Stenness has always been assumed to be one of the earliest stone circles in Britain. However, the radiocarbon determinations were deemed problematic due to large error range (Ashmore 2005, 388). A re-dating programme subsequently provided a new set of dates for the Stones of Stenness (Sheridan and Higham 2006, 202–3; 2007, 225), which has been recently remodelled (Schulting *et al.* 2010, 35–6). This resulted in a time range between *3020–2890 cal BC* (*95.4 % probable*) or *2940–2900 cal BC* (*68.2 %*

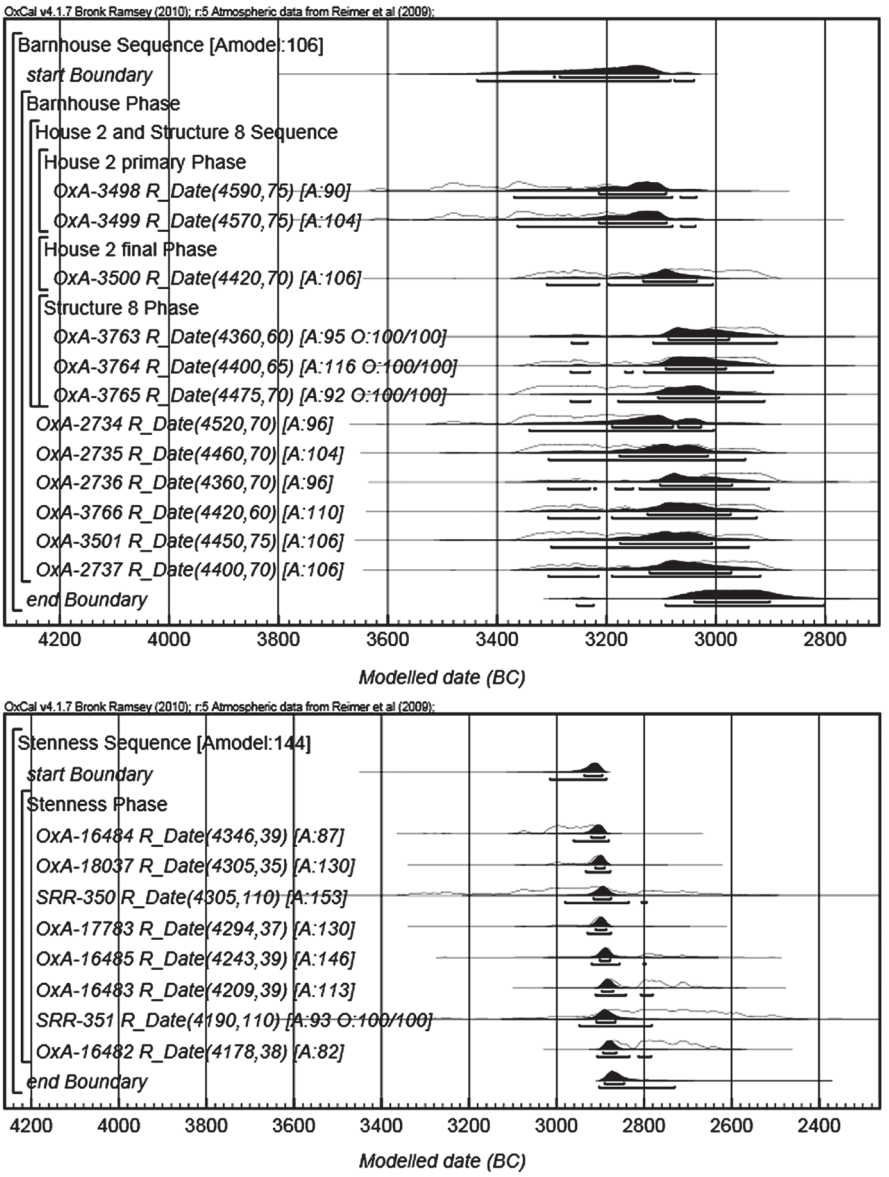

FIGURE 11.2. Comparison of Bayesian models for the Stones of Stenness and Barnhouse village.
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probable) for activities within the monument (Schulting *et al.* 2010, 35). Apart from demonstrating an overlap with the nearby village of Barnhouse (Fig. 11. 2), these dates provide a good indication of the stone circle having been erected by the 30th century cal BC. Interestingly, the monumental architecture of wrapping occurring at the Stones of Stenness seems to concur in tandem with the digging of the ditch at Maeshowe (Fig. 11.3), and in all probability the construction of the passage grave (Challands *et al.* 2005). Significantly, the stone used to build Maeshowe was derived from the same source as that supplying monoliths for the stone circle at the Ring of Brodgar (Chapters 4 and 5). Of interest here is that, although far less fine grained, the OSL determinations for the digging of the

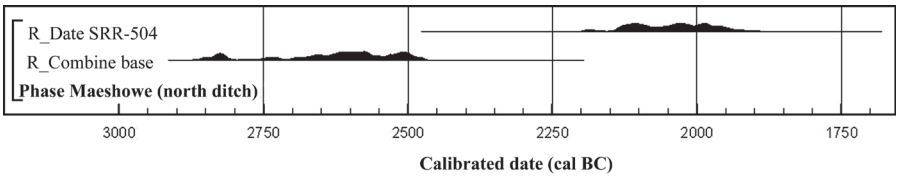

FIGURE 11.3. Calibrated radiocarbon dates from the north ditch at Maes Howe, Orkney (Reimer *et al.* 2009; Stuiver and Reimer 1993). A weighted mean has been taken of the two, statistically consistent, measurements on peat from the base of the ditch before calibration (4060 ±48BP; T'=3.0; T'(5%)=3.8; df=1; Ward and Wilson 1978; Q-1482, 3970 ±70BP and SRR-505, 4135 ±65BP). ALEX BAYLISS

Ring of Brodgar ditch suggest it was constructed in the mid third millennium cal BC, some 300–400 years later than the Stones of Stenness.

The assumption that the beginnings of stone circle architecture occurred in the north of Scotland, specifically Orkney (*e.g.* Sheridan 2012, 173), has more recently been deflected by the results of a dating programme of the much smaller stone circle at Balbirnie, Fife, by Alex Gibson (Fig. 11.4). Here the stone circle is estimated to have been erected 'probably in the 31st to 29th centuries cal BC' (Gibson 2010, 63). Equally, the recognized presence of a bluestone originally standing in Aubrey Hole 7 at Stonehenge represents a large stone circle being erected in Wessex between 3000–2920 cal BC (Parker Pearson 2012, 309; Darvill *et al.* 2012). Overall, stone circles of various sizes appear to be constructed across the British Isles within a short time span at the very beginning of the third millennium cal BC, so it is dangerous at this stage to give a primacy to the far north of Scotland.

The Stones of Stenness, Orkney and Tursachan, Calanais, Isles of Lewis: a comparison

We will now return to the relative chronology of stone circle construction in Orkney and the Isle of Lewis. Analysis of radiocarbon dates associated with the stone circles at the Stones of Stenness, Orkney and Tursachan, Calanais, Isle of Lewis, and the horned cairn at Vestra Fiold is important here. The model presented below from the Stones of Stenness is adapted from that produced by Schulting *et al.* (2010, 35; fig. 23; including SRR-351 as a *terminus post quem* rather than using the outlier model). The model for Calanais uses information from Ashmore (1999, 128–30). These models were produced using the Reimer *et al.* (2009) calibration curve, and the computer program OxCal v4.1 (Bronk Ramsey 1995; 1998; 2001; 2009).

Bayesian modelling (see Buck *et al.* 1996 for an introduction to archaeological applications) imposes a statistical distribution on an assemblage of data (see Buck *et al.* 1991; 1992; 1996; Bronk Ramsey 1995; 1998, 2001; 2009 and references therein). This modelling process accounts for scatter, and can produce more precise posterior density estimates from extant radiocarbon data. In addition, estimates can be produced about the timing of other events of interest that are not directly dated. Output from the models – posterior density estimates – are by convention quoted in italics.

The model for Tursachan stone circle (Circle I), Calanais, makes use of the stratigraphic information detailed in Ashmore (1999) which provides some of

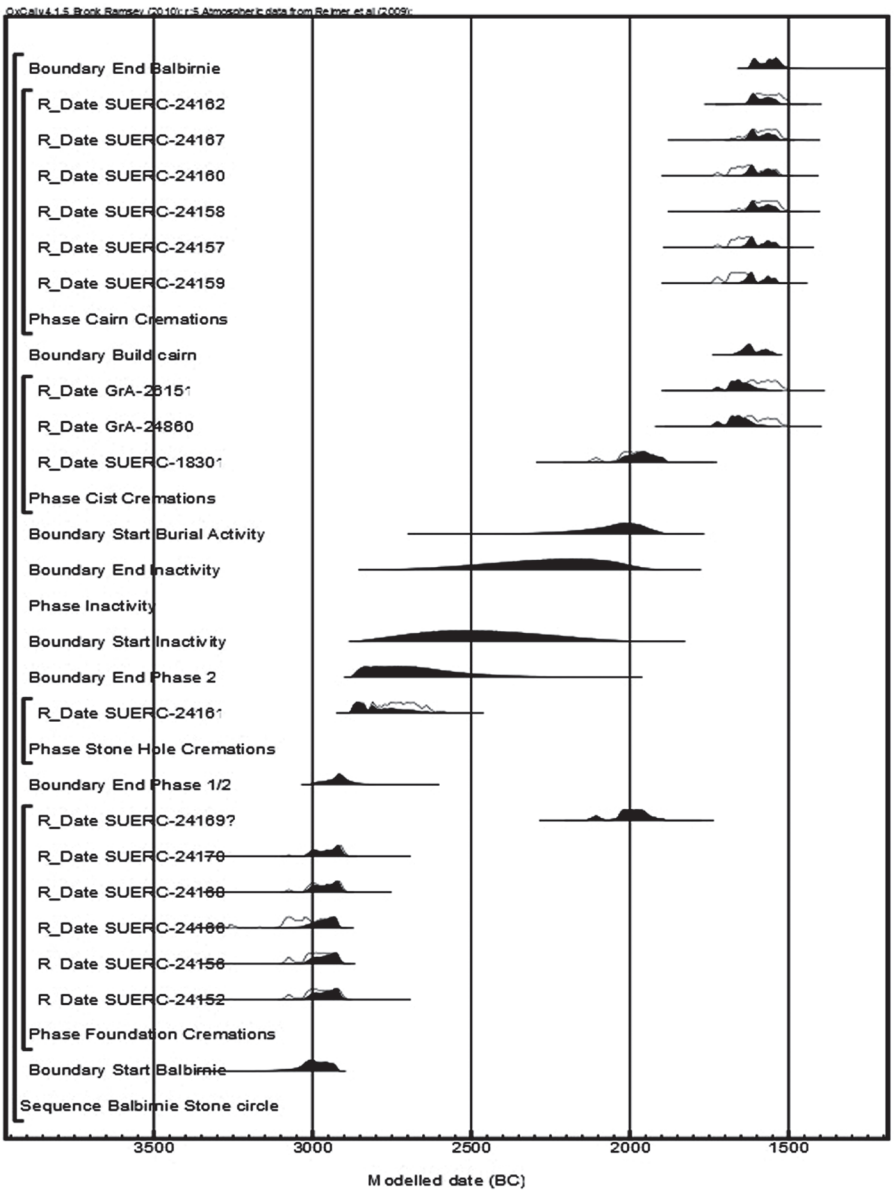

FIGURE 11.4. Radiocarbon dates from Balbirnie calibrated using OxCal v4.1.

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the relationships between the parent contexts of dated samples. The model derived from Schulting *et al.* (2010) presents the radiocarbon dates in a single phase of activity. The analysis presented here has not attempted a detailed review of the site stratigraphies, nor has it been possible to commission new radiocarbon results. Three results (AA-24960; AA-24961 and AA-24963) from ard-marks from Tursachan which were suggested by Ashmore (1999, 130) to have been produced on samples redeposited from earlier activity, and therefore too old for their parent features, are presented as *termini post quos*.

A result on unidentified charcoal from the Stones of Stenness which may have

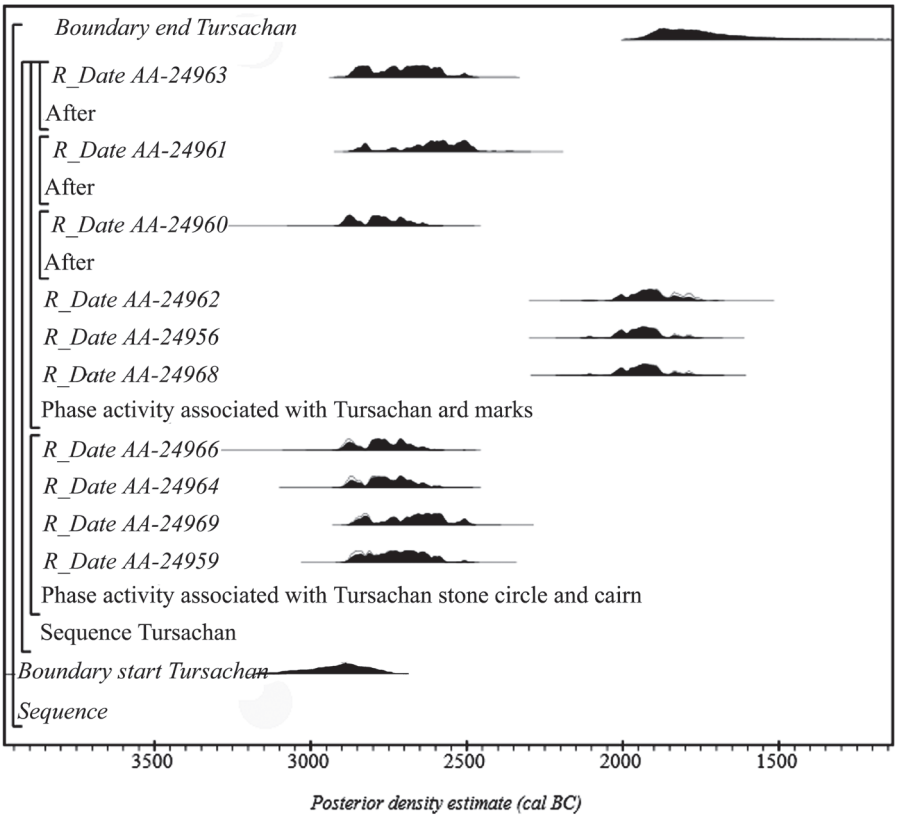

FIGURE 11.5. Probability distributions of dates from Calanais. Each distribution represents the relative probability that an event occurred at a particular time. For each of the radiocarbon measurements two distributions have been plotted, one in outline, which is the result of simple radiocarbon calibration, and a solid one, which is the output from on the chronological model used (derived from information from Ashmore 1999). The other distributions are estimated from the model. The large square brackets and OxCal v4.1 CQL2 keywords define the overall model exactly.

been produced on material with an inbuilt 'old wood' offset (Bowman 1990) is also presented as a *terminus post quem.* Readers are directed to Ashmore (1999) and Schulting *et al.* (2010, 33–6) for details for the original data, measurement techniques and sample association. Other measurements are presented as if they represent activity associated with their parent features; a number of concerns mean that this interpretation may be superficial (Waterbolk 1971; Dean 1978). It should be stressed that the limited chronometric data, together with the difficulties in demonstrating a robust association between the dated samples and the parent features, mean that additional short-lived, single-entity well-associated measurements – and a robust exploration of the sample association of extant measurements – would benefit the chronological analysis of these sites. Because the archaeological interpretations used to construct the models presented here are not fixed, the resultant posterior density estimates are not 'absolute' but estimates that will change using different approaches to the most appropriate prior information (Steier and Rom 2000); it is anticipated that further work at these sites will revise these estimates.

Beginning in the Isle of Lewis, if the currently available data from the stone circle setting and the cairn at Tursachan stone circle are representative of these phases of activity, it is most probable that the phase began in *3380–2690 (95 % probable),* most probably in *3030–2770 cal BC* (*68 % probable;* start Tursachan

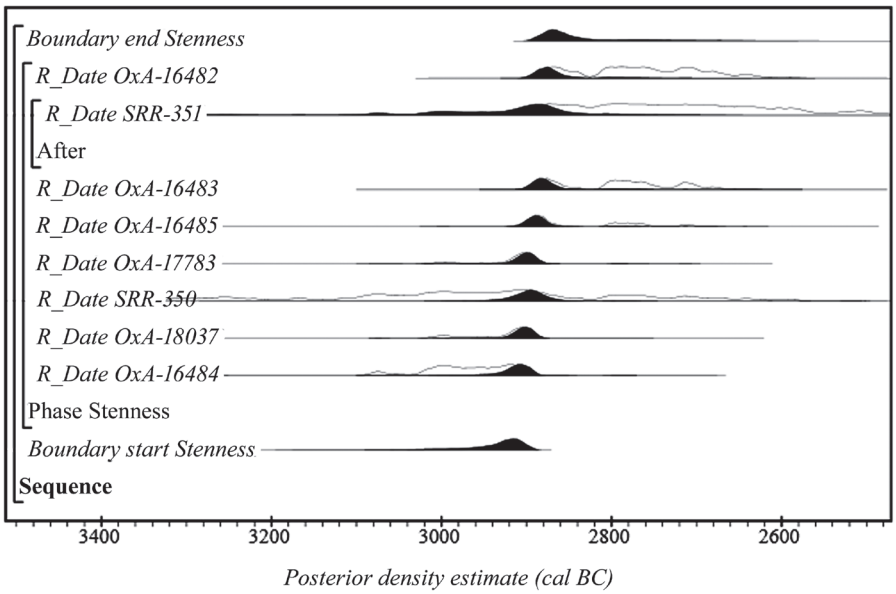

FIGURE 11.6. Probability distributions of dates from Stenness. Each distribution represents the relative probability that an event occurred at a particular time. For each of the radiocarbon measurements two distributions have been plotted, one in outline, which is the result of simple radiocarbon calibration, and a solid one, which is the output from on the chronological model used (adapted from Schulting *et al.* 2010). The other distributions are estimated from the model. The large square brackets and OxCal v4.1 CQL2 keywords define the overall model exactly.

– see Fig. 11.5). The end of activity sampled by the available data occurred in *1970–1290 cal BC* (*95 % probable*), or *1920–1670 cal BC* (*68 % probable;* end Tursachan – see Fig 11.5). The data associated with the ring of stones and the cairn are statistically consistent (T'=3.5; T'5%=7.8; v=3; Ward and Wilson 1978), and could be of the same actual age, though given our understanding of the sample taphonomy and representativeness of the associated activity this dataset is insufficient for more complex modelling. Given the multiphase activity at the site and the issues outlined here, further radiocarbon dates on appropriate samples with robust taphonomies would be of benefit.

Returning to Orkney, from the slightly amended model from Schulting *et al.* (2010), activity sampled from the Stones of Stenness began in *3060–2880 cal BC* (*95 % probable*) or *2960–2890 cal BC* (*68 % probable;* start Stenness; see Fig. 11.6). In the model, activity at the Stones of Stenness ended in *2900–2660 cal BC (95% probable)* or *2900–2830 cal BC (68 % probable;* end Stenness; see Fig. 11.6). Key posterior date ranges are shown in Table 11.1, and the date distributions are shown in Figure 11.7. Given the limitations expressed above concerning how representative the data sample is, and the association of the dated samples, it would perhaps be unwise to place any great emphasis on the posteriors presented here.

From the precision achieved from the above modelling it is not currently possible to make a clear distinction between the building of the Stones of Stenness in Orkney, and Tursachan, Calanais in the Isle of Lewis. Accepting that the OSL dating of the ditch deposits at the Ring of Brodgar does not provide a clear chronology for the stone circle, we can assume a slightly later date then Stenness for its overall construction. The complex interplay suggested to occur between the Northern and Western Isles during the beginning

Parameter name	Parameter interpretation	Figure showing model	Date range (upper row 95% unless otherwise stated; lower row 68%)
Start Calanais	Posterior density estimate for the start of activity from the available radiocarbon results from Tursachan, Calanais, derived from the Ashmore (1999) interpretation of the sample association and phasing.	Fig. 11.5	*Posterior density estimate* *3380–2690* *3030–2770*
End Calanais	Posterior density estimate for the end of activity from the available radiocarbon results from Tursachan, Calanais, derived from the Ashmore (1999) interpretation of the sample association and phasing.	Fig. 11.5	*Posterior density estimate* *1980–1290* *1920–1670*
Start Stenness	Posterior density estimate for the start of activity from the available radiocarbon results from Stenness, derived from the Schulting *et al.* (2010) interpretation of the sample association and phasing.	Fig. 11.6	*Posterior density estimate* *3060–2880* *2950–2890*
End Stenness	Posterior density estimate for the end of activity from the available radiocarbon results from Stenness, derived from the Schulting *et al.* (2010) interpretation of the sample association and phasing.	Fig. 11.6	*Posterior density estimate* *2900–2660* *2900–2820*
GU-22224	Calibrated radiocarbon measurement of the age of a red deer metatarsal from Vestra Fiold.	Fig. 11.7	Maximum intercept calibrate radiocarbon date method (Stuiver and Reimer 1986) 2840–2490 2830–2500
GU-22225	Calibrated radiocarbon measurement of the age of a cow metatarsal from Vestra Fiold.	Fig. 11.7	Maximum intercept calibrate radiocarbon date method (Stuiver and Reimer 1986) 2870–2490 2840–2570

TABLE 11.1. Key posterior density estimates from Figures 11.5, 11.6 and 11.7.

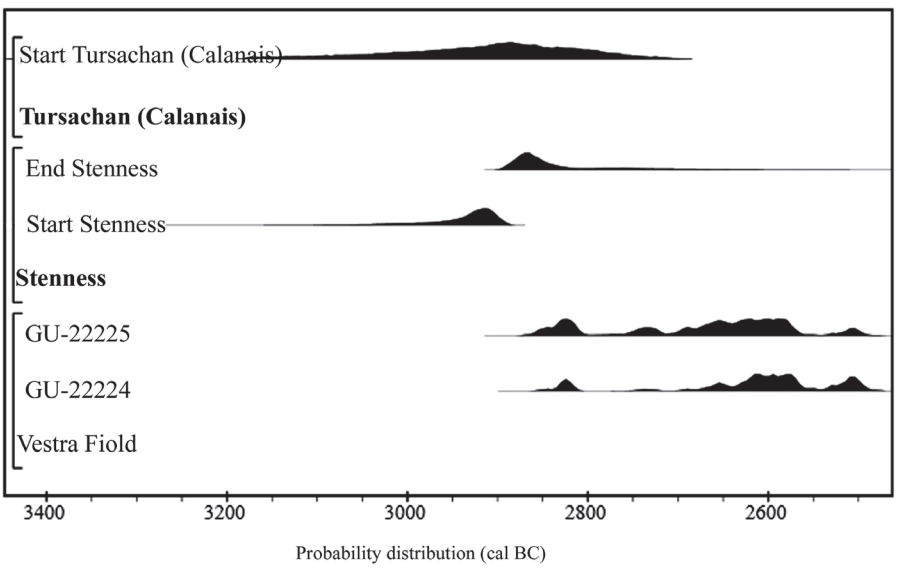

FIGURE 11.7. Key posterior density estimates from Calanais and Stenness generated from models shown in Figs 11.5 and 11.6, and calibrated radiocarbon dates from Vestra Fiold.

of the third millennium cal BC cannot currently be disentangled from the currently available radiocarbon dates. If it is accepted that the building of the horned section of the Vestra Fiold long cairn concurred with the quarrying of monoliths for the Ring of Brodgar, then the later OSL date of the latter is partly confirmed. Interestingly, it is at this time that animal remains are being placed in chambered cairns across Orkney (Sheridan and Higham 2006; 2007). There is clearly a need for a more sophisticated radiocarbon dating programme in order to examine the relative chronology of stone circles and the complex inter-regional contact occurring at the very beginning of the third millennium cal BC. In looking further south to the west coast of Scotland, particularly, the Inner Hebrides, Arran and the Kilmartin Glen we see that stone circle construction is underway early in the third millennium cal BC. It is however worth emphasizing that further temporal structure may exist within the timing of the appearance and use of the sites presented here, and further dating exercises may help refine our understanding of these sites. Alison Sheridan, in reassessing Temple Wood stone circle, suggests that:

> a date in the first two centuries of the 3rd millennium can be proposed. This is because the circles can be understood as part of the southward spread of a practice that may well have originated in Orkney with the erection of the Stones of Stenness around the 30th century BC, with the Templewood circles forming part of an Atlantic façade arc with Callanish on Lewis and Machrie Moor on Arran
>
> (2012, 173).

This view of an interconnection, or rather interrelationship, between social groups along the 'Atlantic façade', is certainly manifest in monumental construction at the time Sheridan (2004; 2012, 172–3) envisages. However, this is not simply a spread of ideas or materials. Instead, the construction of the great stone circles is a manifestation of the material strategies employed by local social groups as they negotiated their social position and identity through discourses of the 'other'. The material or architectural metaphors are actually present in all these areas in one form or another, and their re-deployment in terms of monumental building projects is an obvious strategy to enhance social position. The time of the great stone circles of the north is clearly at the turn of the third millennium BC, but these great monuments are also inextricably linked to a broader array of material culture, including complex passage graves, which also occurred from Orkney to the Boyne Valley, Ireland, but this is another story.

CHAPTER 12

Constructing through Discourse: the folklore of stone circles and standing stones in the Northern and Western Isles

Tom Muir and Colin Richards

Introduction

One of the most pleasant things about reading Aubrey Burl's numerous books on stone circles is the way in which he carefully interweaves folklore with field observations (*e.g.* 1976, 152–3; 1999, 56–8). Burl's employment of folk stories is partly to enrich his accounts, but also to expose the changing meanings and significance of stone circles through time. In this respect, stone circles clearly possess a biography; indeed, as we will see the belief that standing stones are transformed 'living things' is a consistent feature of folklore. The idea of taking a biographical approach to objects or monuments is well trodden ground in the archaeological literature (*e.g.* Appadurai 1986; Gosden and Marshall, 1999; Bradley 2002). Indeed, Gosden and Marshall provide a good description when they say that such an approach 'seeks to understand the way objects become invested with meaning through the social interactions they are caught up in. These meanings change and are renegotiated through the life of an object' (1999, 170). We wish to ally this perspective with the idea that things are always in the process of becoming; in this sense we can say monuments are always in the making through discourse. One potent area of discourse is folklore (*e.g.* Grinsell 1976a), which has an ambiguous relationship with archaeological enquiry.

For example, Tim Darvill and Geoffrey Wainwright (Darvill 2009; Darvill and Wainwright 2009, 16–7) have recently employed folklore to interpret the bluestones at Stonehenge as possessing healing qualities. Undoubtedly, an appreciation of this quality is important to understand both the shifting historical meanings attached to Stonehenge (see Chippendale 2012), and the consequent treatment of bluestones within the monument. As Richard Bradley notes folklore does 'suggest *which kinds of interpretation were considered to be plausible in the past*' (Bradley 2012, 97). However, in being tempted to deploy ideas directly derived from folklore sources, such as the healing properties of the Stonehenge bluestones as representing authentic meanings (*e.g.* Darvill

2009; Darvill and Wainwright 2009, 16–7), it is prudent to heed Bradley's warning that such sources 'cannot shed light on the original significance of these structures' (2012, 97).

Just as stone circles, particularly Stonehenge, attract substantial attention today, so in the past these monuments captured the public imagination, however, such imagination is both fluid and contingent. Folklore still abounds in the British Isles for anyone who is interested enough to seek it. Standing stones and stone circles are places rich in folktales as people have attempted to interpret the origin and social role (or purpose) of these enigmatic monuments through stories. These tales may go back a very long time, while others may be of more recent date. This short chapter will mostly focus on the stone circles of Calanais and the standing stones and stone circles of Orkney. Apart from anything, we hope that more researchers will take an interest in these customs, beliefs and tales, not because they provide information regarding authentic interpretations, but rather because they add to the richness of meanings accrued by these monuments over substantial periods of time. Such narratives also give us a greater understanding of the shifting interaction between communities and the ancient remains that surrounded them and dominated the landscapes in which they lived, and to some extent participated in the constitution of their material *habitus*.

Calanais

The origin of the stone circles at Calanais is a consistent theme in Hebridean folk stories (Fig. 12.1). An early record of the oral history attached to the beautiful and atmospheric stone circle, avenues and rows of Tursachan (Circle I) was given in an account of a voyage around the Western Isles by Martin Martin around 1695.

FIGURE 12.1. The variety of shaped stones in Cnoc Ceann a' Gharraidh (Circle II) at Calanais.
CROWN COPYRIGHT: HISTORIC SCOTLAND

> I inquired of the inhabitants what tradition they had from their ancestors concerning these stones, and they told me it was a place appointed for worship in the time of heathenism, and that the chief Druid or priest stood near the big stone in the centre, from which he addressed himself to the people who surrounded him
>
> (cited in McNeill 1957, 85–6).

Here we find the stones attributed to the work of the Druids, whose existence people still seemed to be aware of. This druidic designation is a common one found across the British Isles that still continues to this day. A similar situation surrounds the folklore attached to the megalithic monuments in Brittany which are similarly attributed to the Veneti (Bradley 2002, 2–3). Coincidentally, the stone circles of the north did command special significance during the Iron Age (Hingley 1996). Indeed, this interest was not restricted to stone circles but encompassed a range of Neolithic sites, particularly chambered cairns such as Quanterness and Howe of Howe, Mainland, Orkney. Although a large Iron Age broch, known as Big Howe, was built adjacent to the Stones of Stenness, Orkney, no monolith appears to have been removed from the circle nor was the site destroyed. On the contrary, the location of this broch almost certainly represented a strategic decision on the part of the builders to be directly associated with an ancient and sacred site. Activities certainly occurred within the stone circle during the later Iron Age, taking the form of digging pits and the deposition of pottery (J. N. G. Ritchie 1976, 15; MacKie 1976b, 25–7). From this interest in the stone circle, occurring over two thousand years after its erection, we can begin to appreciate the potency of appropriating large monuments and weaving them into stories and myths of an ancient and reconstructed past. Through this process it is clear that the monument maintained just as much significance during the Iron Age as it had during the late Neolithic period.

Returning to Calanais, another tale records the story of their creation. It says that a great priest-king, dressed in fine robes of mallard feathers, arrived at the island with a huge fleet of ships. He had the stone circle, avenues and rows built using black slaves as labourers, many of whom died during the work (Swire 1966, 20). In this story we see another common folklore theme, that of the need to account for the origin of the circle and the vast expenditure of labour necessary for its construction.

It seems, in one way or another, that the stones have continued to be regarded as supernatural by people throughout the ages, as we recognize from the story of a nineteenth century antiquarian. When he was a boy he visited Lewis and went to see the stones at Calanais. While there he met an old man who told him that when he had been a boy people used to go to the stones in secret, so as not to get into trouble with the minister. These visits were done especially on May Day and at Midsummer.

> His parents had said that when they were children people went openly to the circle but the Ministers had forbidden all that so now they went in secret for it would not do to neglect the stones… And when the sun rose on Midsummer morning

> 'Something' came to the stones walking down the great avenue heralded by the cuckoo's call
>
> (Burl 2000, 206).

Other versions of this tale call the 'Something' that came to the stones 'the Shining One' and make the link between the cuckoo and Tir-nan-Og, the Celtic Land of the Blessed, a magical island that lay to the west and where the souls of the righteous dead washed ashore on the waves (Cope 1998, 397). Interestingly, the cuckoo is also the harbinger of the spring and whose call has a special connection with Beltane, the Celtic May Day festival when bonfires were traditionally lit. (Burl 2000, 207).

Another tale with a supposedly Celtic mythological connection relates to a time of famine in the Isle of Lewis. This famine was not a natural disaster, but caused by the constant raiding by war-bands who carried away almost everything edible and destroyed much else as well. Hunger gripped the people as the food ran out and death stalked their houses. One poor woman was driven nearly mad by the sight of her children and husband starving, so she decided to take her own life in order for them to stand a better chance of survival with one less mouth to feed. She walked down to the seashore and started to wade out into the sea, intent on drowning herself. Suddenly, a beautiful white cow rose from out of the waves and started to slowly walk ashore towards the woman. It was a very beautiful animal, but obviously an Otherworld beast and not of the mortal realm.

As the sun set behind the cow its rays made the animal's ears appear to be red, which is the usual colour of Otherworld animals; white with red ears. When it walked up to where the woman stood, transfixed with amazement, it looked at her with sad brown eyes and spoke to her in Gaelic, telling her to go home and fetch a milking pail and to get her neighbours to bring their pails to the stones at Calanais as well. The woman rushed home and told everyone of her incredible meeting with the cow. Her neighbours didn't believe her, and asked her how just one cow could give enough milk for everyone in the township. She insisted that the cow would be there and to come along. Sure enough, the cow was standing at the stones when they arrived. Each woman filled her pail with rich, creamy milk, the like of which they had never seen before. Then the cow spoke again, in its soft, lyrical voice, telling the women to return there every evening with one pail and she would fill it. This magical gift saved the lives of the children and the poor folk of the township. Soon word spread to other areas and the people flocked from miles around to milk the cow, which always had plenty of milk to give them. One evening a woman arrived carrying two pails, which greatly angered the local women, but the cow said softly that the second bucket was for the woman's neighbour, who was pregnant, and so the agreement had not been broken. This went well until an evil woman, some said that she was a witch, decided to break the spell and cast the good people back into poverty through her malice. She took two buckets to the cow, both for herself, but the cow refused to give her as much as one drop of milk. She returned the next evening with just one pail, but she had knocked the bottom

FIGURE 12.2. Stones within the Ring of Brodgar, Orkney.
COLIN RICHARDS

out of it and replaced it with a sieve. She milked the cow relentlessly until it was dry and then left the stones happy with her bad deed. The next evening, when the women gathered at the stones to milk the cow, it was not there, and it never returned (Ross 2000, 69–70).

There is yet another story of the creation of Calanais. This says that the stones were actually a group of giants who resisted the introduction of Christianity into Lewis and were turned to stone by Saint Kieran. Here we encounter perhaps the most common theme in standing stone lore, that the stones were originally giants (*e.g.* Grinsell 1976b, 15), or people turned to stone, often as a punishment, but we shall return to that later (see also Bradley 2012, 97–8).

The standing stones and stone circles of Orkney: the Ring of Brodgar

Giants also feature in the story of the creation of the Ring of Brodgar (Fig. 12.2). For example, a group of Orkney giants used to love to meet together and dance the night away, but they had to be home and hidden before the sun rose or they would be turned to stone. One night the fiddler struck up a lusty tune and the giants gathered together in a great circle to dance. Around and around they went, their huge feet thundering over the land between the lochs, faster and faster they flew. The fiddler played fast and furious and the giants' feet took up the tune as they danced. But in all their excitement they had forgotten to keep a watch on the time and the sun rose above the horizon. The music stopped dead and silence reigned over the land. There they remain, turned to stone by the sun. The Ring of Brodgar is the dancing giants, still in a great circle, while the nearby Comet Stone is the fiddler (Muir 1998, 27).

George Marwick of Yesnaby recalled the Comet Stone being called the 'ulie stane':

> Now this 'ulie stane'… stands about three chains to the east of the circle opposite 'Farrar's knowe.' I remember old men of the last generation whenever going past this stone took off their caps, hats or 'binnets,' giving as the reason that this was done 'afore this times'
>
> (Marwick n.d.).

The circle opposite 'Farrar's knowe' has to be the Ring of Brodgar. A chain is 66 feet, or 20.116 metres, this that would be 198 feet (60.350 m) east of the Ring of Brodgar. 'Farrar's knowe', from the description here and later on in the paper, must be Fresh Knowe, which was excavated by James Farrar in July 1853. Farrar was the Conservative MP for South Durham and good friends with Thomas Dundas, 2nd Earl of Zetland, the largest landowner at that time in Orkney, which led to the excavation of Maeshowe in 1861.

The walking stones

The Watch Stone today stands in splendid isolation next to the bridge of Brodgar that spans the confluence of the Stenness and Harray lochs (Fig. 3.6). Actually, it is one of a pair, the stump of the second stone was discovered in road widening operations in the early twentieth century (Challands *et al.* 2005, 216). It is said that the giant Watch Stone has the power to leave the place where it stands at midnight on New Year's Eve and dip its head into the Stenness Loch for a drink (Muir 1998, 26). The Yetnasteen on the island of Rousay is another Orcadian example of a walking stone. Its name, in Old Norse, translates as the Giant's Stone, and at midnight on New Year's Eve it walks down to the nearby Loch of Scockness for a drink (Muir 1998, 25).

A more dangerous walking stone is the Stone of Quoybune in Birsay, Mainland, Orkney. It walks down to the nearby Boardhouse Loch for its midnight drink on New Year's Eve, but it is considered to be fatal to try to watch it doing so. One story tells of a young man who was rescued from a shipwreck and stayed with an elderly couple who lived near to this stone. He was warned of its nocturnal ramblings and told that he would meet his doom if he ever tried to watch it. Fired up by this thought he declared that he would indeed sit out on New Year's Eve and observe its movements. To make sure of a ringside seat he climbed up the stone and sat on top of it. His crushed and lifeless body was found there the following day (Muir 1998, 26).

The Stone of Setter in the island of Eday has already featured in this volume as the Setter chambered cairn is situated nearby (Chapter 6). Interestingly, the stone has a strange and macabre tale associated with it which has echoes of ritual deposits. The story says that a 'laird' (landowner) who owned Eday had the stone erected. Unfortunately, he and his wife did not get along, so when she came to see how the work was progressing and found the stone balanced on an earth ramp next to the hole he persuaded her to stand on the end in order to tip it into the pit. Following his instructions she dutifully stood on the end and as the stone slipped into the hole she fell beneath it and was crushed to death.

The callous laird ordered his men to haul the stone upright and fill in the hole without making any attempt to retrieve her body (Hebden 2008, 47).

The standing stone at Holland in the island of North Ronaldsay, Orkney, has a small hole through it, positioned quite high up. The origin of the stone is recounted in a story that when an old giant woman was down on the shore gathering bait she saw a large, flat stone slab. She stuck one of her fingers through it and carried it up onto the land and thrust it down into the ground (Muir 1998, 27). Indeed, it was a tradition for a long time for young people to meet at this standing stone on New Year's Day and to dance around it to the tune of the fiddle (Tulloch 1974, 144). When the new lighthouse was lit in 1854 they abandoned the standing stone and danced around lighthouse instead, but this too ceased after a few years.

The most curious tradition relating to standing stones in Orkney is that of the now destroyed Odin Stone that once stood near to the Stones of Stenness (see Marwick 1976; Challands *et al.* 2005, 212–5). The Odin Stone also had a hole through it, but in this case was used for plighting your troth in marriage agreements and as a curative for certain diseases. For instance, if a young child put their head through the hole they would not 'shake with palsy in their old age', presumably referring to a cure for Parkinson's disease (Marwick 1991, 315). But it is for hand-fast marriages that the Odin Stone is best remembered. A contemporary account says that on New Year's Day young people would gather at the old 12th century church in Stenness (which was sadly demolished to make way for the present parish church) to play fiddles and dance. If a love affair blossomed then the young couple would walk to the Stones of Stenness, referred to as the 'Temple of the Moon' where the girl would get down on her knees and pray to Odin. Subsequently, the couple would walk to the Ring of Brodgar, referred to as the 'Temple of the Sun', where the young man would pray to Odin. After that they both went to the Odin Stone, where they stood on either side of it and held hands through the hole and made the 'Odin oath', which was considered binding (Marwick 1991, 314–5). The names 'Temple of the Moon' and 'Temple of the Sun' have no folkloric significance being merely predicated on observations made by early antiquarians who assumed that the surviving semi-circle of stones at the Stones of Stenness resembled a crescent moon and the more complete circle at the Ring of Brodgar represented the sun.

The two people that made the Odin Oath could be married to each other in church afterwards, but they could not marry another. If they had second thoughts they could stand back to back in front of the pulpit in the old Stenness church and walk away from each other, exiting by the doors at either end of the church, without looking back. If one died then the other would have to hold the dead hand that they held in life and renounce the oath, otherwise they could not re-marry. Rather unfairly, if the young man was lost at sea and his body never recovered then his partner was prohibited from further marriage. When John Gow the Orkney Pirate was hanged in London in 1725, his body was tarred and hung in chains as a warning to other would-be pirates. His

secret lover, Helen Gordon, to whom he had plighted his troth on the Odin Stone, had to make the perilous journey by ship to London in order to hold his lifeless hand and renounce the oath. A Caithness version of this story says that she paid someone in London to cut his hand off and send it to her by post in order to renounce the oath. Sir Walter Scott was told this story by Bessie Millie (the Stromness witch who sold fair winds to sailors) and it formed the basis of his novel *The Pirate*.

In an old folktale recorded by the Sanday folklorist Walter Traill Dennison the Odin Stone features as a way of accessing magical powers. The hero of the tale, whose wife had been abducted by the sea-dwelling 'Fin folk', is told to approach the Odin Stone on nine nights of the full moon. He then has to crawl nine times around the stone on his bare knees and then look through the hole. On the ninth night he was given the power to see their magic island of *Hilda-land*, which is usually invisible to the mortal eye (Dennison 1995, 74). This story effectively demonstrates how potent the Odin Stone was seen historically, mainly due to its unusual perforation. Because of this anomaly it maintained an Orkney-wide reputation of being a place of magical powers.

Unfortunately, the Odin Stone was destroyed in December 1814 by the tenant farmer; a Caithness man called Capt. John MacKay, who was also responsible for toppling some of the monoliths within the Stones of Stenness. The demolition brought the wrath of the local population down on MacKay as they were outraged by the senseless destruction of much venerated monuments. It is a real tragedy that such an important piece of archaeology and folklore was broken up in an attempt to annoy a local antiquarian who was in a feud with the factor of the estate (Marwick 1976; 1991, 312). On a more positive note, the location of the Odin Stone was re-established after the stone socket was uncovered in 1993 as part of the investigation of the late Neolithic Barnhouse village and its environs (Challands *et al.* 2005, 212–4).

Living things transformed

It is beyond the remit of this chapter to look at the plentiful traditions surrounding the other stone circles and standing stones in the British Isles, but there is an interesting point to be made. While the stones within the circles at Calanais and Brodgar were said to be giants turned to stone, thus representing transformed human forms, there are many other stones that have similar associated traditions. At some point in time it seems that the church adopted these stories to show the punishment that awaited those people who broke the sanctity of the Sabbath by dancing on that day. The stone circle complex at Stanton Drew in Somerset is a classic example of this. The story goes that a wedding feast was being held there one Saturday. As the evening wore on the fiddler stopped playing, much to the annoyance of the bride who ordered him to continue. He refused, saying that he did not want to accidentally play over into the Sabbath. The bride, who had readily indulged in the strong drink

that flowed at the wedding, declared that she had not danced enough yet and that she would get another fiddle player even if she to go to hell to find one. Suddenly a tall, dark stranger appeared and offered to play for her. No sooner had he struck up a tune than the wedding party flew into a wild frenzy of dancing. The next day there was no sign of the wedding party, only the standing stones. It seems that they were all turned to stone for breaking the Sabbath. It is also said that they are waiting the return of the Devil to carry on the dance. This story is echoed throughout the country, as are associations with standing stones and the Devil (Burl 1999, 56).

The consistent anthropomorphism and themes of transformation attached to standing stones and stone circles within folklore throughout Britain and Ireland is of particular interest. The erection of monoliths in a vertical position provides an imagery that readily translates into an equation with the human body as a living entity. Many ethnographic accounts record the commemorative role of the erection of standing stones (*e.g.* Layard 1942; Parker Pearson *et al.* 1999, 399). In these examples, the standing monolith acts at one level as a mnemonic for the deceased person. In particular instances the stone may become periodically possessed by the spirit or essence of the dead person. The main point we wish to draw out of this discussion is that the verticality of the stone, in referencing the living body, portrays the notion of the maintenance of a *living* being. It can be suggested that this quality will inevitably feature strongly in the biography of a standing stone. A good illustration of this effect is found in Sián Jones' (2006; 2012) interesting accounts of the turbulent biography of the Hilton of Cadbol Pictish symbol stone. In conducting an ethnographic study within the local community, she frequently encountered the stone being referred to as a 'living thing', one member of the community remarking that it 'was like something that was born there' and another that, if the upper section were returned, 'it would be like an ancient member of the village coming back' (Foster and Jones 2008; 262; see also S. Jones 2006). The anthropomorphic quality of standing stones is not in doubt, nor is the equation of a 'living' entity with the vertical axis. However, folklore emphasizes the transformation and the transformed and it is the nature and subtleties of these dual processes that appear to be more varied and complex in the shifting and fluid biographies of these monuments.

From giants to Sabbath breakers, the stone circles of the Northern and Western Isles and beyond have fascinated people throughout the ages, inspiring stories, customs and focussing a fear of the unknown. This is a subject that deserves to be taken far more seriously by archaeologists. Clearly, more detailed research is necessary in order to fully understand the changing role that these monuments played in past societies as their biographies shifted according to the contingencies of social life.

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