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**Building in Fragments:
A Non-Representational Approach to
the Neolithic Architecture of Orkney**

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requirements for a PhD in archaeology

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Abstract

This thesis comprises an analysis of the architecture of Neolithic Orkney via the implementation of a non-representational methodology. This methodology was devised in order to combat the epistemological problems that have affected our view of this architecture from at least the early twentieth century. Principally, although not exclusively, these problems relate to an epistemological position that has been defined in this thesis as 'representationalism', where the architecture in question is assumed to be, at its most fundamental level, an abstract representation as opposed to comprising physical archaeological entities. In countering this notion, the methodology underpinning this thesis attempts to consider the material constitution of this architecture first, before building up to an abstract representation or hypothesis. In this way, a heavily contextualised description of Neolithic architecture emerges from the ground up. In order to achieve this, the architecture of Neolithic Orkney is fragmented into its constituent parts, and each part is analysed in its own right, without assuming that it formed part of a representational whole from the very beginning. These constituent parts include: hearths, entrances, dressers and recesses. Moreover, a prime degree of focus is placed on how these constituent parts evolved over time. Overall, it is argued that the coming together of domestic and mortuary traditions propelled the development of architecture throughout Neolithic Orkney. In particular, the role of the mid-fourth Millennium BC stalled tomb is emphasised, as the architectural repertoire of these tombs provided a template for future architectural construction. Ultimately, these findings are only made possible through the implementation of non-representationalism and fragmentation.

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Declaration of Authorship

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Title of thesis: BUILDING IN FRAGMENTS: A NON-
REPRESENTATIONAL APPROACH TO THE NEOLITHIC
ARCHITECTURE OF ORKNEY

I declare that this thesis and the work presented in it is my own and has been generated by me as the result of my own original research.

I confirm that:

This work was done wholly or mainly while in candidature for a research degree at this University;

Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;

Where I have consulted the published work of others, this is always clearly attributed;

Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;

I have acknowledged all main sources of help;

Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;

None of this work has been published before submission;

Signature:

Date:

Acknowledgements

This thesis was completed during a very strange time – the COVID-19 pandemic. I have mixed feelings about this period because, on the one hand, COVID-19 has caused a lot of uncertainty and suffering, yet on the other, it allowed me to be furloughed, which meant that I could stay at home for months on end and concentrate on writing this thesis. Being furloughed also meant that I could spend more time with my family than I normally would have, particularly my wife, Radium, and my son, Oscar, who at the time of writing is just over 20 months old. Indeed, it is Radium and Oscar that I would like to thank more than anyone else for making this thesis possible, as they both provided me with huge amounts of energy and inspiration. Just being close to them during this time has meant the world to me. A special thanks also goes to my parents, Nick and Heather Morgan, who have been amazingly supportive, not only throughout this PhD but my life in general.

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Although the library collections and reading rooms were flooded at the time, they still allowed me to study alongside them in their upstairs offices.

1 Introduction

1.1 Opening Statement

On the face of it, this thesis is all about the Neolithic architecture of Orkney. Yet it is also about far more than that. In addition to my involvement in academic research I work as a field archaeologist within the commercial sector of Britain, and through experiencing both the academic and practical sides of archaeology I have noticed a key discordance between the two. This discordance is entirely methodological in nature, and it is one that is, in my opinion, very easy to rectify. Put simply, academic archaeology revolves around the grand hypothesis – it attempts to fix in place abstract frameworks with which vast amounts of archaeological evidence can be explained in a single expansive narrative. Of course, in and of itself this is not a negative aspect of academia, as it is in such narratives that we are able to observe how long-term and large-scale processes unfolded within the archaeological past, such as the mass migrations of people or the diffusion of certain ideas. Yet academic studies very often begin with a hypothesis, or an abstract representation, and this has the potential to undermine the physical constitution of the archaeological evidence. Field archaeology, on the other hand, is a lot more fine-tuned. The success of an archaeological excavation hinges on the amount of data collected from the site under investigation. This data covers many scales of analysis and can range from descriptions of large structural features to those of minute soil particles. Yet throughout the entire process the simple act of description remains of key importance.

Over the past several years I have thought a lot about these different approaches and how it might be possible to draw them together, with the aim of bringing academic and field archaeology into closer alignment. This reconciliation is quite simple. What if academic research into the archaeological past foregrounded the importance of fine-grained descriptions? And rather than setting up the grand hypothesis from the very start, what if this hypothesis was *built up to* through bringing all of this descriptive information together? In this way, we could retain the grand narratives of academia while simultaneously treating the small-scale archaeological evidence with the care and attention it needs. Through studying the Neolithic architecture of Orkney, this is what this thesis attempts to do. My reasons for choosing Orkney as my case study were quite simple: owing to the large number of archaeological investigations

that have been conducted here over the past couple of centuries, a significant amount of descriptive information has already been collected from this area. This is particularly true with regards to its architecture. Although on a more personal note, I believe that the Neolithic period of Orkney embodies a very special aspect of our archaeological heritage, and it is an area that I am truly fascinated by.

1.2 Outlining the Thesis

In order to tackle the problems outlined above, I will analyse the architecture of Neolithic Orkney from a *non-representational* perspective. To put this more plainly, I will allow the archaeological evidence to tell its own story by describing its constitution without assuming from the start that it represents anything at all. In order to accomplish this, I will refrain from beginning my analysis with a hypothesis in mind. Rather, my hypothesis will emerge as a result of my analysis. My main research question therefore asks: to what extent are we able to come to a fuller understanding of the Neolithic architecture of Orkney by discarding traditional representational thought, and allowing the archaeological evidence to take centre stage? Resultantly, my methodology involves describing the archaeological evidence in meticulous detail, while also describing the ways this same archaeology came together to form a coherent whole.

1.3 Representationalism vs. Non-Representationalism

Before beginning this thesis proper, it will be helpful for purposes of theoretical clarity to define exactly what I mean by *representational* and *non-representational* theory. With this in mind let us consider the following:

“To know is to represent accurately what is outside the mind; so to understand the possibility and nature of knowledge is to understand the way in which the mind is able to construct such representations.”

(Rorty 1979, 3)

“...the asymmetrical faith that we place in our access to representations over things is a historically and culturally contingent belief that is part of Western philosophy’s legacy and not a logical necessity; that is, it is simply a Cartesian habit of mind.”

(Barad 2007, 49)

The above statements by Rorty and Barad nicely illustrate what I take to mean by the term *representationalism*. While many would consider this term with reference to human experience and to be linked with Descartes’ and Aristotle’s studies of sensory perception, for the purposes of this thesis I am considering it wholly in epistemological terms. However, there are still significant crossovers between these two forms of representationalism.

To phrase this in the simplest terms possible, representationalism involves the assumption that a physical entity *represents* something other than itself. Within the context of epistemology, this ‘something else’ is often an abstract theory or hypothesis. Rorty argues that our entire system of knowledge production is based on representational thought, which is undoubtedly true. The fields of, for example, biology, chemistry and physics are conditioned by abstract categories with which all forms of life and matter conform to or represent. Nowhere is this better emphasised than within the periodic table, which acts as a blueprint for all configurations of all chemical elements. Barad goes further than this by arguing that such representationalism is only a product of the Enlightenment and is based upon the old Cartesian idea that mind and matter are fundamentally separable. The assumption of such a separation has of course driven archaeological methodologies from the very beginning, with Thomas even arguing that it has been a tyranny within the field as a whole (2004, 55–77).

This can be contrasted with *non-representational* theory. Non-representational theory was initially developed within the field of geography, particularly by Thrift (2008) who aimed at rallying against geography’s compulsion to analyse the world in a representational way. As a response to this worldview, Thrift argued that more emphasis should be placed on the performative aspects of human existence, or the ways in which people present themselves, as opposed to foregrounding its capacity to represent abstract categories. More recently through the work of Dewsbury (2011), non-representational geography has moved on from being concerned with performance and has taken assemblage theory into its methodological repertoire. Yet in considering the way that I am implementing it within this thesis, it may be

argued that ‘non-representational theory’ is somewhat of a misnomer, as I am not overly concerned with discarding representational thought altogether. The success or failure of this thesis still hinges on a representation, but as has already been stated, this representation (or hypothesis) will develop as the thesis progresses.

While I have taken inspiration from non-representational theory in geography in formulating the methodology for this thesis, in many ways I have been more influenced by the way the term ‘non-representational’ has been used in visual art. A non-representational painting can be said to represent nothing at all, and instead it presents a series of sensorial stimuli that are *felt* rather than intellectually deciphered (Bailey 2005, 94), and whose meaning is intrinsic rather than extrinsic (Ross 1997, 350; *cf.* Jones and Cochrane 2018, 115–36). I would argue that this also applies to archaeological evidence, which is first and foremost constituted by physical properties and characteristics, and it is the measuring and describing of these properties and characteristics that forms the basis of all archaeological investigation in the field. Therefore, when I refer to the *non-representational*, I am not speaking in a way that adheres strictly to the theory developed by Thrift. I am instead referring to a methodology that prioritises physical evidence and which de-privileges representational thought.

It would of course be impossible to implement a methodology that is entirely non-representational when writing a text-based thesis like this, as language is by definition representational. I am therefore not claiming to have overcome representational thought within this thesis, far from it. The purpose of this thesis, rather, is to mitigate those aspects of representational thought that are of most detriment to thorough archaeological investigation. The term ‘non-representational’ is therefore implemented rather loosely throughout this thesis and is used in favour of any other related term for purposes of convenience.

2 Neolithic Orkney: An Overview

2.1 Introduction

In my view, the Neolithic period of Britain and Ireland serves as one of the most enigmatic chapters in humanity's archaeological heritage and is certainly one that has cultivated a deeply engrained fascination within me. Upon visiting a Neolithic site, one is immediately struck by the juxtaposition of the familiar and unfamiliar, or by practices that are at once personally relatable and totally alien. Nowhere is this situation more clearly articulated than in Neolithic Orkney, where high levels of preservation, owing primarily to the use of robust sandstone as building material, have encapsulated a remarkably intact prehistoric world. When viewed through a macroscopic lens, much of Neolithic Orkney appears decidedly commonplace to us today: domestic buildings clustered into small communities, tombs venerating the ancestral dead. More fine-grained considerations likewise offer accounts of people cooking and eating together and going about their daily lives in a fashion much similar to our own. However, in amongst such commonality lies evidence of practices that challenge wholeheartedly our modern-day conceptions of rationality and common sense.

The myriad of recent discoveries from the ongoing excavation at the Ness of Brodgar undoubtedly offers the most transparent glimpse of such practices. By way of example, a hearth was incorporated into the centre of the eastern entrance of Structure 1. Due to this structural combination both hearth and entrance, as perceived traditionally as functional architectural features, were rendered useless. In addition, much of the masonry incorporated into Structure 10 was decorated artistically with cup-mark incisions. However, the placement of several of these stones within obscure and often low-lying positions within the structure effectively hid their artistic designs from view (Card and Thomas 2012, 122), which appears to violate our own ideals of artistic appreciation. Elsewhere in Orkney, the exceedingly large Structure 8 at Barnhouse seemingly blurs the line between the quotidian and the monumental, while the encasing and even countersinking of buildings within midden material at sites such as Skara Brae (e.g. Clarke 1976a; 1976b; Shepherd 2000, 140; 2016; Simpson *et al.* 2006) and Tofts Ness (e.g. Dockrill *et al.* 2007; Simpson *et al.* 1998; Bull *et al.* 1999) contradicts our ritual separation of the clean and contaminated. It is therefore clear that the Neolithic period of

Orkney offers a simply astounding picture of the prehistoric past, and it is one that must be further comprehended if we are to properly understand the deep historical roots of our own society.

2.2 Orkney

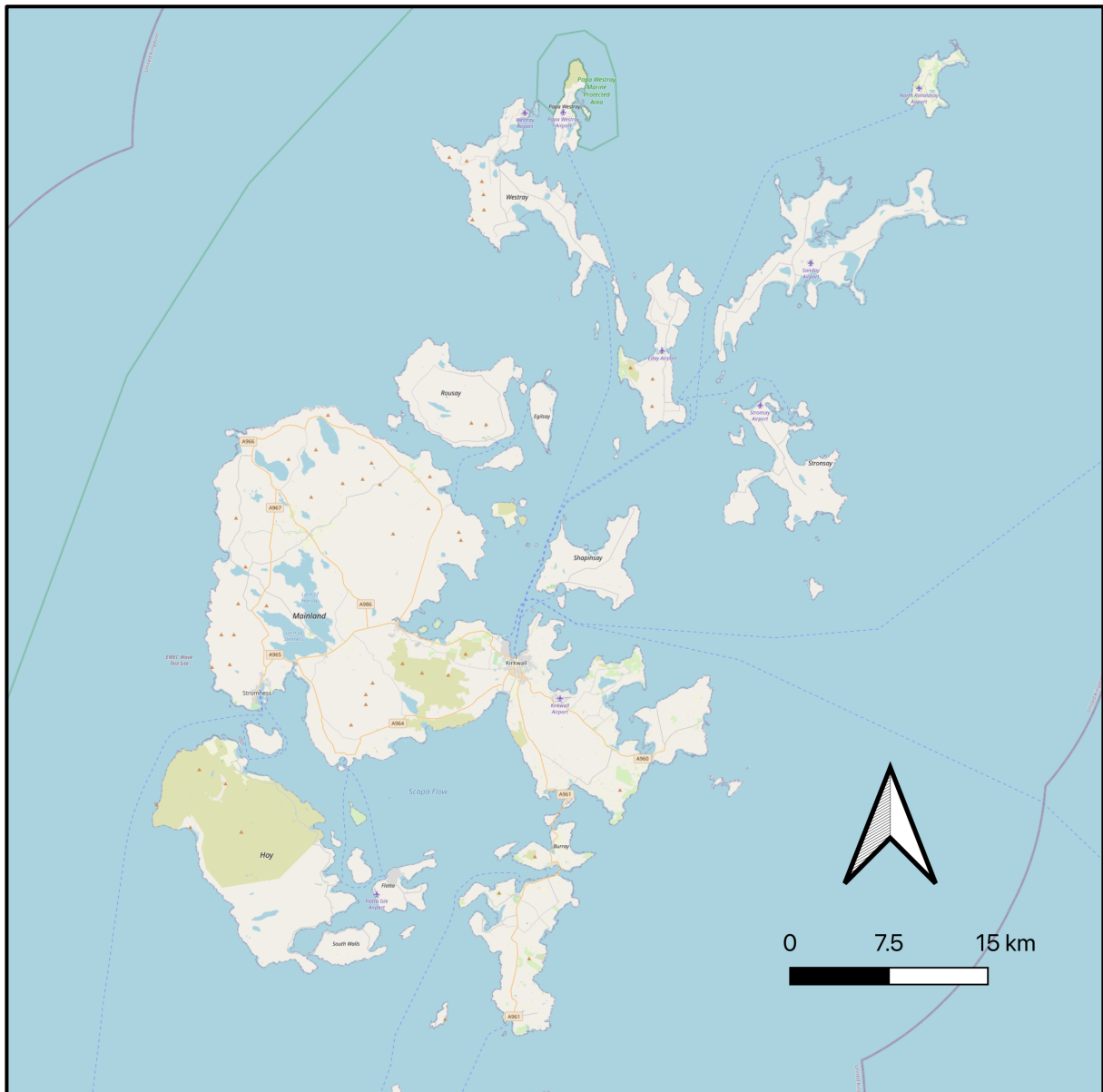


Figure 2.1. Map of Orkney

Orkney is an archipelago consisting of 70 or so islands and small uninhabitable islets (or skerries) (fig. 2.1). It is located 16km north of the northeastern tip of Scotland (in Caithness), and just under 200km south of Shetland. The archipelago in its entirety measures 80km NE–

SW, 47km E–W, and covers a total area of 975km². Topographically the islands are noticeably flat and low-lying; Ward Hill on the island of Hoy is its highest topographical feature, measuring a mere 481m in elevation. A distinct lack of trees is also noticeable, which may be explained by a combination of mass deforestation sometime after the mid-fourth millennium BC (Farrell *et al.* 2014) and the presence of strong destructive winds (Davidson and Jones 1985, 17). Daylight hours vary drastically between the summer and winter months, with the longest day being over 12 hours longer than the shortest. Midsummer witnesses on average a total of 20 hours daylight, while midwinter sees no more than four, which at this time of year can be extremely faint. However, in considering their northerly location the islands are distinctly temperate, remaining relatively cool throughout the year. Annual precipitation is also surprisingly low in comparison with other coastal locations across the rest of Britain and Ireland, with rainfall generally being less than that seen along, for instance, the south of England.

Superficial deposits of glacial till and diamicton define much of the geology of Orkney. Yet it is the underlying bedrock that is of most significance to the prehistoric architecture of these islands, which is composed primarily of Middle Old Red sandstone along with more minor deposits of siltstone and mudstone. Due to the easily laminable nature of Old Red sandstone, it can be readily extracted in the form of flat and thin slabs when quarried. It was therefore the perfect building material for the Neolithic inhabitants of Orkney, who relied mainly on drystone walling and slab partitioning when constructed their buildings. The readiness with which these stone slabs could be extracted was demonstrated during an archaeological experiment at Pierowall Quarry, where slabs measuring over a metre in length were prized away using wooden wedges and stone pounders alone (Fraser 1983, 225). It must be noted that Old Red sandstone distinguishes much of the geology of Scotland, as this region of Britain, along with the rest of northern Europe, formed part of Euroamerica (commonly known as the ‘Old Red Sandstone Continent’) during the Devonian period (Trewin and Thirlwall 2002, 213). The Caithness flagstone series, which belongs to the Old Red sandstone supergroup, constitutes the most widely distributed rock-type in Orkney (Mykura 1976). Outcrops of these flagstones punctuate the Orcadian landscape, most noticeably along coastal edges, where their appearance is often striking (Jones 2005a).

Sheer cliff faces also domineer Orkney's coasts, with roughly one-fifth of the shoreline being overshadowed by cliffs towering in excess of 15m in height. A wide variety of different bird species find home upon these clifftops, including puffins, gannets, guillemots, hen harriers and sea eagles. The sighting of marine mammals, predominantly whales, dolphins and porpoises is also a regular occurrence along the seashore. Writing in the early nineteenth century, the Scottish minister George Barry captured these coastal landscapes very well when he described them as having "yielded to the force of the billows and the ravages of time and are consequently shattered into a thousand different shapes" (1805, 6) (fig. 2.2).



Figure 2.2. The spectacular Orcadian coast, Yesnaby, Sandwick (www1)

As was intimated by Barry, Orkney's coasts have undergone some significant changes during the past several thousand years. Near the beginning of the Holocene sea levels were relatively low, yet throughout the Mesolithic and Neolithic periods they rose fairly dramatically. On the other hand, sea levels have probably remained fairly stable over the past four thousand years or so (Dawson and Wickham-Jones 2007; Wickham-Jones *et al.* 2009), and those levels

witnessed today were probably reached by around 2000 BC (Wickham-Jones *et al.* 2016; 2017). If there does exist a discrepancy in sea level then it would be in the range of only a few metres (Bunting 1994, 772). In terms of travel, the ubiquitous presence of water has always necessitated the use of boats in the transportation between islands of people, animals and goods. Prior to the introduction of extensive metalled roadways, seafaring and coastal navigation would have offered the most convenient means of traversing the archipelago (Phillips 2003; *cf.* Noble 2006). The sea would have also offered abundant resources of marine foods, and it is easy to imagine the prehistoric peoples of Orkney exploiting these resources with the aid of boats, nets and fishing lines (Sturt 2005).

Further inland a selection of wild fauna dwell upon the grassy terrain, the most conspicuous of which being deer, which were probably introduced to the archipelago sometime during the Neolithic period by boat, along with domesticated animals such as cows, pigs, sheep and goats. Alongside these larger animals, smaller commensal rodent species such as the Orkney vole and the wood mouse were most likely brought to the archipelago on boats as well (Romaniuk *et al.* 2016), with the former possibly deriving from as far as modern-day France or Spain (Haynes *et al.* 2003).

2.3 The Neolithic

It appears that the first traces of human activity in Orkney, along with the rest of Scotland, occurred sometime after the most recent glaciation, most likely no earlier than 8000 BC (Saville 2000, 91). Yet it must be stated that a firm Mesolithic presence had been established shortly thereafter during the eighth millennium BC (Saville 1998). Overall, very little Mesolithic archaeology has been recovered in Orkney (Wickham-Jones and Firth 2000), and as a result our knowledge of the Mesolithic peoples who inhabited these islands remains scant. It has been argued, however, that much of Orkney's Mesolithic archaeology lies in coastal areas that have now been completely submerged (Bates *et al.* 2013; *cf.* Ritchie 1985, 36). This situation contrasts considerably with the Neolithic, and it was during this period that drastic social and technological transformations occurred, with local populations transitioning from being relatively mobile packs of hunter-gathers to fully-fledged farmers. In concurrence with these transformations, we begin to see the use in Orkney of several domesticated flora and fauna. Cereal cultivation began to be practiced throughout the Neolithic on a relatively modest scale,

however it is in the use of animals that we begin to see major ecological changes. Domesticated animals, most notably cattle and sheep, dominate animal assemblages across Neolithic Orkney, which include breeds that are quite unique to these islands (Noddle 1978). Pigs were also being reared, albeit to a lesser extent (McCormick and Buckland 1997). On an artefactual level we also see the introduction of pottery, which was an entirely new resource and another defining element of the Neolithic. The pottery that dominates the earlier Neolithic phases comes in a form known as Unstan ware, which comprises shallow bowls with rounded bases, often with decoration below the rim. These can be separated based on function, with ‘plain bowls’ having been used for cooking, and ‘Unstan bowls’ being reserved for mortuary contexts (Jones 1999, 61; 2000, 128).

The most conspicuous of all the changes that the Neolithic brought about were to do with architecture. As will be seen throughout the following chapters, this architecture was often stone-built and exceedingly large. The most complex sites belonging to the previous Mesolithic period were somewhat simple campsites such as those discovered at Links House (Lee and Woodward, in prep.) and Long Howe (Robertson and Woodward 2007; Wickham-Jones and Downes 2008). These consisted of large scatters of flint tools and debitage and were sometimes accompanied by postholes and pits. The introduction of large-scale stone-built architecture to Orkney, therefore, ushered in a seismic change to the ways in which people engaged with the process of building.

According to recent Bayesian chronological modeling, the emergence of the Neolithic within northeastern Scotland can be dated to 3950–3765 cal BC (95% probability), or 3865–3780 cal BC (68% probability) (Whittle *et al.* 2011, 823–4). The same series of developments are mirrored throughout the rest of Britain and Ireland on a more or less synchronous basis. Regional variations do however develop throughout the mid-fourth millennium BC, and Orkney can be considered one of these regions within which a distinctive range of archaeological features and artefacts may be distinguished. These include, for example, Unstan ware; stalled tombs defined crudely as the Orkney-Cromarty-type; and the rectangular and circular timber-built houses as seen at locations such as Wideford Hill (Richards and A.M. Jones 2016), the Braes of Smerquoy (Gee *et al.* 2016), Green (Miles 2010) and Ha’Breck (Farrell *et al.* 2014; Thomas and Lee 2012).

Again, recent Bayesian chronological modeling has indicated that the first mortuary structures were built around 3640–3440 cal BC (95% probability), or 3570–3470 cal BC (68% probability) (Griffiths 2016, 292), while the corresponding dates for the first timber-built domestic structures range between 3520–3310 cal BC (95% probability), or 3500–3360 cal BC (68% probability) (Griffiths 2016, 287). It has often been assumed that stone-built domestic structures did not appear in Orkney until the later phases of the Neolithic period, however it has recently been established that their initial construction can be pushed back far earlier. For example, multi-bayed structures characterised by ‘pinched’ walling have been discovered at sites such as Knap of Howar (Ritchie 1983; Traill and Kirkness 1937) and Stonehall Knoll (Richards *et al.* 2016b), which were constructed significantly before the third millennium BC.



Figure 2.3. The Stones of Stenness (left) and the Ring of Brodgar (right) (www2 and www3)

Between the end of the fourth millennium BC and the middle of the third, further transformational changes occurred within Neolithic Orkney. By these later phases, Orkney had become one of the most significant locations in prehistoric Europe, and the sheer range of technological and architectural innovations present during this period is quite astonishing. The collection of sites most commonly known as the ‘Heart of Neolithic Orkney’, now a UNESCO World Heritage Site (Card *et al.* 2007; Downes *et al.* 2005), exemplifies this situation perfectly, which comprises the sites of Maeshowe, the Ring of Brodgar, the Stones of Stenness and Skara Brae. Maeshowe is one of the most finely constructed pieces of prehistoric architecture known in Europe, particularly when its highly sophisticated masonry is considered. Its central chamber also defines the tallest enclosed space ever constructed in Neolithic Europe. The current roof

of Maeshowe's central chamber is a modern reconstruction, yet it has been suggested that the original may have stood as tall as 4.6m (Ritchie 1995, 59).

The henge monuments and stone circles of the Stones of Stenness and Ring of Brodgar epitomise the same degrees of splendor (fig. 2.3). The former incorporates some of the tallest monoliths found in Britain and Ireland, and the latter one of the largest stone circles. While assigning a clear chronology to the Ring of Brodgar is at present extremely difficult, radiocarbon determinations for the Stones of Stenness are able to date its construction to 3060–2880 cal BC (95% probability) or 2960–2890 cal BC (68% probability), and its final phases of activity to 2900–2660 cal BC (95% probability) or 2900–2830 cal BC (68% probability) (Griffiths and Richards 2013, 289). Finally, the site of Skara Brae constitutes one of the first substantial settlements to have been established in the British Isles, which comprises a highly sophisticated and complex tangle of buildings, passages and corridors. Overall, it appears that this collection of sites saw a burst of activity between *c.* 3125–2850 cal BC, which slowly declined from around 2800 cal BC onwards (Bayliss *et al.* 2017; *cf.* Ashmore 2000).

We can also observe during this period evidence for the creation and use of a style of pottery known as Grooved ware, which comes in the form of flat-based vessels with sloping sides, often with elaborate decoration on its outer surface. Serving as one of the telltale characteristics of the Late Neolithic, Grooved ware can be found across the entirety of the country, yet the archaeological evidence betrays Orkney as its place of origin (Bradley 2007, 134; Brindley 1999; Cowie and MacSween 1999; MacSween 1992; Parker Pearson 2005, 63; Sheridan 2004). More than anything else, it is the emergence of Grooved ware, twinned with the decline in use of Unstan ware, that is often regarded as signaling the transition from the earlier phases of the Neolithic to the later ones. The site of Pool is key in determining the chronology of this transition, as here a direct stratigraphic relationship was established between Unstan ware and Grooved ware, where the former directly preceded the latter (Hunter 2000, 120; Hunter and MacSween 1991; MacSween 1992; MacSween *et al.* 2015).

3 Representations of Neolithic Orkney

3.1 Introduction

The ways in which the archaeology of Neolithic Orkney has been both analysed and interpreted throughout the twentieth and twenty-first centuries have been manifold, yet each method can be broadly situated within the prevailing analytic paradigm of its time (see Kuhn 1962). The ways in which the archaeology of Neolithic Orkney has been both analysed and interpreted throughout the twentieth and twenty-first centuries have been manifold, yet each method can be broadly situated within the prevailing analytic paradigm of its time (see Kuhn 1962). This is certainly not the place to hold any lengthy discussion on the history of archaeological theory. Nevertheless, it will suffice to say that while each paradigm differed in terms of its overall theory, it is clear that each theory remained largely incomplete in its goal of explaining the archaeology of Neolithic Orkney. Within this chapter I will conduct a review of those theories that have shaped our current understanding of Neolithic Orkney the most. Above all, I will explain where each theory fell short while simultaneously teasing out those elements of each theory that I would like to retain.

This review will accomplish two things. Firstly, it will situate this thesis within the wider literature of Neolithic Orkney and will demonstrate how and why I intend to move beyond previous traditions of archaeological thought, with the aim of creating a more rounded interpretation of the archaeological evidence. Secondly, it will set the foundation for the non-representational methodology that will be outlined in Chapter 4. I have split this review into three parts, covering the three main theoretical movements that have affected our understanding of Neolithic Orkney most dramatically: culture-history, processualism, and post-processualism. For purposes of concision, I have chosen to discuss the works of only three authors, each of which epitomising these theoretical movements *seriatim*. These authors include V. Gordon Childe, Colin Renfrew and Colin Richards. It should also be mentioned here that Appendix A is designed to supplement the discussion conducted in Section 3.2 on the work of Childe. This particular appendix aims at explaining the architectural terminology used by Childe and also the ethnographic parallels he drew on in defining this terminology.

3.2 V. Gordon Childe

3.2.1 A Tale of Two Cultures

“An Australian, a Marxist and a theoretician, this outsider embodied the establishment of Scottish archaeology...”

(Barkan 1992, 53)

The debt that archaeology owes to V. Gordon Childe is an enormous one. This is especially true when it comes to the field’s understanding of world prehistory, as Childe paved the way to a model in which prehistoric peoples were interconnected and whose technological creativity stemmed from cultural hybridisation. As Barkan rightly points out above, Childe completely transformed common understandings of Scottish archaeology through the use of this model. In many ways, Orkney sat at the heart of Childe’s work in Scotland, as it was here that some of his most ambitious and in-depth investigations were conducted. In fact, what we recognise today as the systematic investigation of Orkney’s prehistory effectively began with the arrival of Childe to these islands, as the kinds of investigations conducted before him were rather unrefined by comparison to his own. This was all despite the fact that Childe was a foreigner, possessed what were deemed at the time to be rather radical left-wing ideas and, to begin with at least, had very little knowledge of Scottish or Orcadian archaeology (Downes and Richards 2000, 160).

In being a committed patron of culture-history, Childe possessed a set of preconceived ideas of what prehistory should look like prior to archaeological investigation. According to his views, the entirety of human history could be seen as being composed of discrete cultural entities, each possessing its own ways of doing things, represented archaeologically by its artefacts. In the words of Childe himself:

“We find certain types of remains – pots, implements, ornaments, burial rites, house forms – constantly recurring together. Such a complex of regularly associated traits we shall term a ‘cultural grouping’ or just a ‘culture’”.

(1929, v–vi)

The unfolding of human history, however, could be seen as a continual dynamic struggle, where changes in the archaeological record were synonymous with one culture replacing another. Despite being heavily influenced by the work of Hegel and Marx, such a process went beyond simple dialectics, as Childe recognised that while change could occur through external transposition it could also happen as different culture groups merge slowly together. On this matter, Childe wrote:

“...archaeology’s revelations...disclose not abstract evolution but the interaction of multiple concrete groups and the blending of contributions from far-sundered regions.”
(1928, 11)

In this way, certain types of archaeological features or artefacts could be seen as representative of the cultural values of the people who used and created them (i.e. ‘pots equals people’). These physical remains were, in Childe’s view, fundamental in bridging the divide between people and their wider cultural constraints and were therefore vital in maintaining “the spiritual unity of each group” (Childe 1946, 2). In other words, it was material culture that determined spiritual culture (Childe 1956b, 53). The central role accorded to artefacts in interpreting past cultures was borne out of Childe’s belief that physical evidence would always trump abstract schemata, as contradictions could be teased out between artefacts and their means of production over time (Childe 1944a, 23). This was a rather salient view, as it enabled a dynamic relationship to evolve between past peoples and the material conditions within which they operated. This allowed Childe (almost paradoxically) to grant centre stage to the role of technology without being a technological determinist himself (Trigger 1980).

Notwithstanding the invigorating degrees of rigour and systematisation that such a methodology brought to the field of archaeology, it is worth remembering that its main theoretical tenets can be traced back to the late nineteenth century, an era when archaeology was beginning to establish itself as a serious discipline. For instance, the relative dating method of seriation, first implemented by Flinders Petrie (1899), worked on the basis of situating archaeological finds within discrete chronological phases, with each phase being made up of artefacts deemed to share the same diagnostic characteristics.

We can also see above that Childe viewed changes within the archaeological record as stemming from either cultural conflict or cultural assimilation. This view revolved around the process of *diffusion*, or the movement of peoples and ideas from one area to another. In either case, change could only happen at the point when two or more cultural groupings came into contact. However, in highlighting the capacity for past cultures to intermix, Childe's ideas flew in the face of more traditional conceptions of diffusion, which saw changes in material culture as resulting solely from the suppression of a passive culture by a more technologically (or even racially) superior one. This particular vision of cultural diffusion is best encapsulated within Kossinna's study of German-Aryan origins (1911), in which an attempt was made to link European prehistory to right-wing nationalist sentiments. It was precisely this kind of right-wing ideology that Childe was rallying against in his model of diffusion as he, through his own political sentiments, aimed at elucidated prehistory as a vast multi-cultural mixing pot. In the words of Trigger, "[Childe] ascribed positive moral and political value to diffusionism because it revealed the errors of Nazi racism" (1994, 12).

I would argue that it was Childe's vision of diffusionism, twinned with his disdain of Eurocentric nationalism, which shaped his model of Neolithic Orkney the most. According to his view of cultural history there existed two kinds of cultures in the archaeological past. Firstly, there were those cultures whose willingness to intermix with other cultures propelled them to a high state of technological and social advancement. These cultures accorded perfectly with Childe's own ideological ideals. Secondly, there were those cultures that were insular and as a result of such insularity they remained both primitive and backward, and it was these cultures that Childe associated with the Nazi ideal of racial purity. It was precisely through this lens that Childe viewed the Orcadian Neolithic and it resulted in him dividing the entire period into two phases, with each phase being occupied by a specific culture.

Childe saw the first phase as having been occupied by what he termed the *Megalithic culture*. According to Childe, the Megalithic culture spread across much of western Europe during the Neolithic period by what he denoted 'megalithic missionaries' (Childe 1957) – groups of maritime travelers who brought with them new belief systems centring on megalithic construction. The construction of tombs in particular was viewed as being the cornerstone of these peoples' belief system, leading Childe to describe them as a 'cult of the dead' (1926, 210). It was argued by Childe that the establishment of tomb building in Britain occurred when

these megalithic missionaries made contact with the Windmill Hill culture in the southwest of England (1931a, 41). Through the continual process of cultural assimilation, the Megalithic culture then began to spread northward, eroding those long-established Neolithic cultures with which it came into contact. These other cultures, according to Childe, represented the first agriculturalists to arrive in the British Isles. Culturally, he viewed them as being fundamentally the same, and he even argued that the northern cultures of Scotland were in effect identical to the Windmill Hill peoples further south (Childe 1935, 74). Childe therefore saw their replacement as a major turning point in the history of Neolithic Britain as for him it marked the transition from cultural homogeneity to cultural heterogeneity. More specifically, he asserted that higher degrees of regional variation began to develop in tomb morphology as the Neolithic progressed, where newer tombs would deviate the most from the architectural standards established by those initial megalithic colonisers (Childe 1933).

In being situated on the northern fringes of western Europe, Orkney could be seen as representing the final region to be converted to this megalithic way of life. Superficially, it seems as if Childe's hypothesis was a correct one, as the Orcadian landscape is indeed peppered with Neolithic tombs, suggesting that some form of megalithic culture did occupy this area at this time. It is likewise apparent that a wide variety of megalithic tombs exist in Orkney, ranging from long stalled tombs to large multi-chambered ones to those with protruding hornworks, many of which appear rather unique to the archipelago. This pattern would again attest to Childe's suggestion that a distinct regional character would be observed as the Megalithic culture progressed. Determining the meaning behind their distribution, however, proved problematic for Childe. In attempting to solve this puzzle, he focused his attention on the island of Rousay and eventually proposed that the tombs there could be seen as territorial markers for individual farmsteads (Childe 1942) (although see Section 3.3.1).

With the end of the Megalithic culture came what Childe termed the *Skara Brae culture*, whose society and technology were based almost wholly on his findings from the settlement site after which it was named. In fact, Childe's first major piece of archaeological research into Neolithic Orkney began with his investigations of Skara Brae between 1928 and 1931 (fig. 3.1 and 3.2). Antiquarians had crudely excavated Skara Brae during the previous century, with only a single extant account testifying to this process (i.e. Petrie 1867).



Figure 3.1. Childe with his team of diggers at Skara Brae, 1930 (© RCAHMS)



Figure 3.2. Excavation of Skara Brae, c. 1930 (© RCAHMS)

Strictly speaking, Childe's role at Skara Brae did not revolve around excavation *per se*. Rather, his job was to clear out the structures and to record them *in situ* (Richards 1991, 24–5). What Childe discovered at Skara Brae was a Neolithic settlement originally occupied by a community of people who used Grooved ware vessels. This was a situation that could be contrasted with the Megalithic culture, which was exclusively associated with Unstan ware bowls (Childe 1946). Therefore, Childe rightly recognised that Skara Brae belonged to a later date than the earlier tombs of Orkney. However, the process of dating Skara Brae was, to begin with, fraught with difficulty. Due to the presence of a type of carved stone ball found elsewhere across Scotland, Childe initially deduced that Skara Brae must have belonged to a period that post-dated the Bronze Age (Childe 1931c, 104). This hypothesis was based on the close spatial association between the distributions of these stone balls and the Pictish symbol stones (often densely embellished with Christian symbols), both of which cluster within the northern and eastern regions of Scotland. In consequence, Childe saw both the carved stone balls and Skara Brae, by proxy, as being representative of a Pictish culture. It was only until 1936, with the discovery of Grooved ware in southeastern England similar to that found at Skara Brae, within what was deemed to be a Bronze Age context (Warren *et al.* 1936), that an earlier date for Skara Brae was recognised by Childe.



Figure 3.3. Aerial shot of Skara Brae (photograph by Kieran Baxter)

In comparison with the earlier tombs of Neolithic Orkney, which were viewed as being architecturally varied, the so-called 'huts' of Skara Brae were seen by Childe to be structurally

homogenous. Moreover, he perceived the conditions that the inhabitants lived in to be notably primitive, with the remnants of litter strewn across the buildings' floors recreating for him an "atmosphere of stench and squalor" (Childe 1944b, 46). Simply put, the earlier Megalithic culture reaped all the rewards of cultural diffusion, while the Skara Brae culture suffered from a distinct lack of it. The discovery of Rinyo thereafter – which consisted of a collection of buildings similar in form to those of Skara Brae in conjunction with Grooved ware pottery (Childe 1938b; Childe and Grant 1938; 1947) – proved for Childe that the Skara Brae culture extended across the entirety of Orkney.

From the above summation we can see that Childe, in his overall model of Neolithic Orkney, created a bipartite chronology where mortuary architecture dominated the first half of the Neolithic and domestic architecture prevailed in the second. This effectively created a separation between houses and tombs, and it is this separation that has steered research into the Neolithic architecture of Orkney ever since. In accordance with Childe's model, it has also become customary to regard the tombs of Neolithic Orkney as typologically variable while the houses are considered collectively homogenous. Within the context of tomb typology, the work of Piggott (1954) can be seen as having picked up Childe's mantle. Upon assessing the Neolithic tombs of northern Scotland, Piggott defined the Orkney-Cromarty-type, which was characterised by the inclusion of a single rectangular chamber that was compartmentalised via pairs of stone uprights protruding from its sidewalls. Within Piggott's original assessment the Maeshowe-type tomb featured as a subgroup of the Orkney-Cromarty-type, which was specific to the Orcadian archipelago. It was only until Henshall's reassessment of these tombs (1963) that it became widely accepted that the Orkney-Cromarty- and Maeshowe-types in fact belonged to separate architectural traditions. According to Henshall, both traditions featured contemporaneously in Orkney, yet the Orkney-Cromarty tradition was seen as having been well established prior to the rise in influence of the Maeshowe culture (1963, 131; *cf.* Henshall 1985, 111–12). By today, the bifurcation of mortuary architecture into these two typological categories is normative practice within studies of Neolithic Orkney.

By comparison, the typological trajectory that Neolithic houses have taken since the work of Childe has been very different. Whereas tomb typologies are predicated on a number of different categories and sub-categories, reflecting the clear architectural variety that tombs display as a whole, no such categorisation exists within the context of house typology. Childe

himself was also guilty of neglecting the complexity of domestic architecture – a neglect that was in keeping with his view of the Skara Brae culture as being technologically stagnant. Within his summary of Skara Brae, for example, Childe described the settlement as consisting of a series of similarly constructed huts, each being rectangular in plan with rounded corners and each incorporating an outer casing wall (1931c, 48). Yet such description masked the true complexity of the settlement, a complexity that Childe did in fact recognise, particularly with reference to what he termed ‘Hut 8’. This building differed considerably from the others in terms of its structure and larger size. Its interior was also dominated by spreads of flint and chert implements, leading Childe to interpret it as a workshop (Childe 1931c, 49).

3.2.2 Conclusion

Within this section I have outlined how the work of Childe has shaped our current understanding of Neolithic Orkney, particularly its architecture. It remains beyond question that Childe’s research into this area is invaluable to us today, and he rightly stands as a true pioneer within the literature of Neolithic Orkney. However, we need to move beyond certain assumptions made by Childe that have become implicitly accepted today. These include:

- i) the assumption that domestic and mortuary architecture (or houses and tombs) are strictly separable;
- ii) that tombs are architecturally varied while houses are collectively homogenous.

3.3 Colin Renfrew

3.3.1 From Tribes to Chiefdoms

Much like that of Childe before him, the work of Colin Renfrew was fundamental in shaping our understanding of the Orcadian Neolithic today. Above all, he demonstrated that tombs and monuments were not just static features within the landscape but were *processes* that required hard physical labour and rigorous organisation to construct. It was this focus on process that stood the test of time within the literature of Neolithic Orkney, more so in my opinion than the generalised theory that he began his research with. Yet in order to comprehend Renfrew’s

legacy in Orkney, it is important to first understand the theoretical paradigm from which his research emerged, and that paradigm was *processual archaeology*.

Processual archaeology rose to prominence during the 1960s and it defined itself as a new theory of analysing the archaeological past. It also presented itself as a radical break from culture-history, and an attempt to shed the epistemological ‘innocence’ that archaeology had inherited from it (Clarke 1973). Rather than analysing archaeology with the intention of creating pure historical narratives, the practitioners of processual archaeology promoted a rigorous scientific methodology predicated upon the use of universal generalisation. Moreover, the tradition of regarding material culture as representing the sum total of a societal system was deemed inadequate. Alternatively, the processual archaeologist viewed material culture as an alienable commodity, being constrained by the parameters of the cultural system within which it was placed. While it was recognised that these systems occupied their own areas of time and space, the ways in which they operated were seen as being determined by forces both extrasomatic and universal, such as those economic, environmental or ideological (Binford 1962). In this way, the processual archaeologist saw no real difference between cultures of the archaeological past and the anthropological present: each was determined by known scientific laws, and thus entirely predictable. Consequently, while the archaeological record could be regarded as the outcome of a range of cultural practices that have long since disappeared, these practices could nonetheless be studied within present day ethnography (see Binford 1983). It was this idea that led to archaeology’s fascination with ethnography and anthropological literature more generally.

Within a British context, Renfrew is perhaps the most famous practitioner of processual archaeology. Unlike Childe before him, who saw technological and societal change as resulting from diffusion, Renfrew stressed the opposite: that change occurred primarily through the evolution of a single culture. According to Renfrew, therefore, cultural change did not require external influence to propel it forward. Such a view is best exemplified within Renfrew’s analysis of the megaliths of Wessex (1968). Here, he proved that monuments such as Stonehenge were mostly local innovations and were not in fact designed by Mycenaean travelers – a notion commonly accepted at the time of Renfrew’s writing (see Atkinson 1956). Exactly the same model of societal evolution steered Renfrew’s research into the Neolithic period of Orkney (Renfrew 1979), in which he tried to draw out a societal division between the Unstan

ware using peoples of the Early Neolithic and the Grooved ware using peoples of the Late Neolithic. In this respect, Renfrew was interested in the emergence of large-scale monumentality during the Late Neolithic, with particular reference to its labour requirements. According to his hypothesis, the enormous degrees of physical labour required to construct the kinds of monuments evidenced during this period could only be equated with the emergence of an elite hierarchical society. A direct correlation could therefore be proposed between the size of a monument and the amount of power possessed by the elites who commissioned its construction. In accordance with this scheme each monument was seen as a symbol of the power relations and social inequalities of the wider societal system within which it was constructed.

In addition, Renfrew envisioned Late Neolithic society as the culmination of an evolutionary trajectory beginning with relatively egalitarian societies in the Early Neolithic. In other words, he hypothesised that as the Neolithic period progressed, the more unequal society became. Renfrew therefore expected to find smaller, less centralised tombs containing collective burials in the earlier phases, and larger, more centralised ones containing a decreased number of deceased individuals in the later phases. By the Early Bronze Age, it was argued that this course of societal evolution had led to a cultural formation that expressed very rigid hierarchical lineages and personal individuation. Renfrew previously applied this model to other areas of the Neolithic and Bronze Age, including Wessex (1973b), Arran (1973a, 132–42), and Atlantic Europe more broadly (1976). Within the context of Wessex, for instance, Renfrew observed that the Neolithic period began with the prolific construction of communal monuments such as causewayed enclosures and long barrows. These had completely gone out of fashion by the Bronze Age and were replaced by monuments that represented individual power, such as round barrows containing singular crouched burials.

In order to substantiate this hypothesis within an Orcadian context, Renfrew's analysis included an attempt to translate monumental labour investments into units of man-hours. For example, a calculation of approximately 75,000 man-hours was assigned to the construction of the Ring of Brodgar during the Late Neolithic (Renfrew 1979, 213–14) – a figure that was established by considering each stage of its actualisation. These stages ranged from the digging of its ditch into solid sandstone bedrock, to the procurement of stone monoliths via quarrying, to the shifting of these monoliths, and so on. Yet this figure paled in comparison to that assigned to

the tomb of Maeshowe, which, with special consideration being given to the enormous effort in transporting stone, was calculated at 100,000 man-hours (Renfrew 1979, 214). For Renfrew, the large amounts of time, labour and organisation required to construct these Late Neolithic monuments could mean only one thing: that they were commissioned by powerful ruling elites. In the words of Renfrew himself:

“...it was at this time...that we see the emergence of a larger social formation, to which the population of the whole mainland may have owed allegiance...Late neolithic Orkney thus may have seen, around 2700 B.C., the development of a more centralized society, analogous in many ways to the developments taking place in south Britain at about the same time.”
(1979, 218)



Figure 3.4. Renfrew's excavation of the outer ditch of the Ring of Brodgar, 1973 (www4)

By contrast, Renfrew saw that Early Neolithic monumentality came predominantly in the form of Orkney-Cromarty tombs. These tombs were smaller in scale and far more numerous, and the burial practices associated with them also appeared incongruent with those expected from strict hierarchical societies. Within the tomb of Midhowe the bones of 25 individuals were identified, all dispersed in and around the various stalls and benches of the tomb's interior (Callander and Grant 1934, 330), and at Isbister it has been suggested as many as 342 were

interred (Ritchie 1959; Hedges 1984, 175). While the latter cannot in the strictest sense be considered an Orkney-Cromarty tomb (mainly due to its lateral entrance passage and incorporation of several recessed cells) it nonetheless belongs to a fairly early phase of the Orcadian Neolithic. In addition, the labour requirements necessary to construct these tombs would have been significantly lower than the larger tombs of the Late Neolithic, such as Maeshowe and Quanterness. For Renfrew, therefore, the Early Neolithic tombs seemed to be suggestive of social organisations based largely upon communality rather than stringent autocracy.

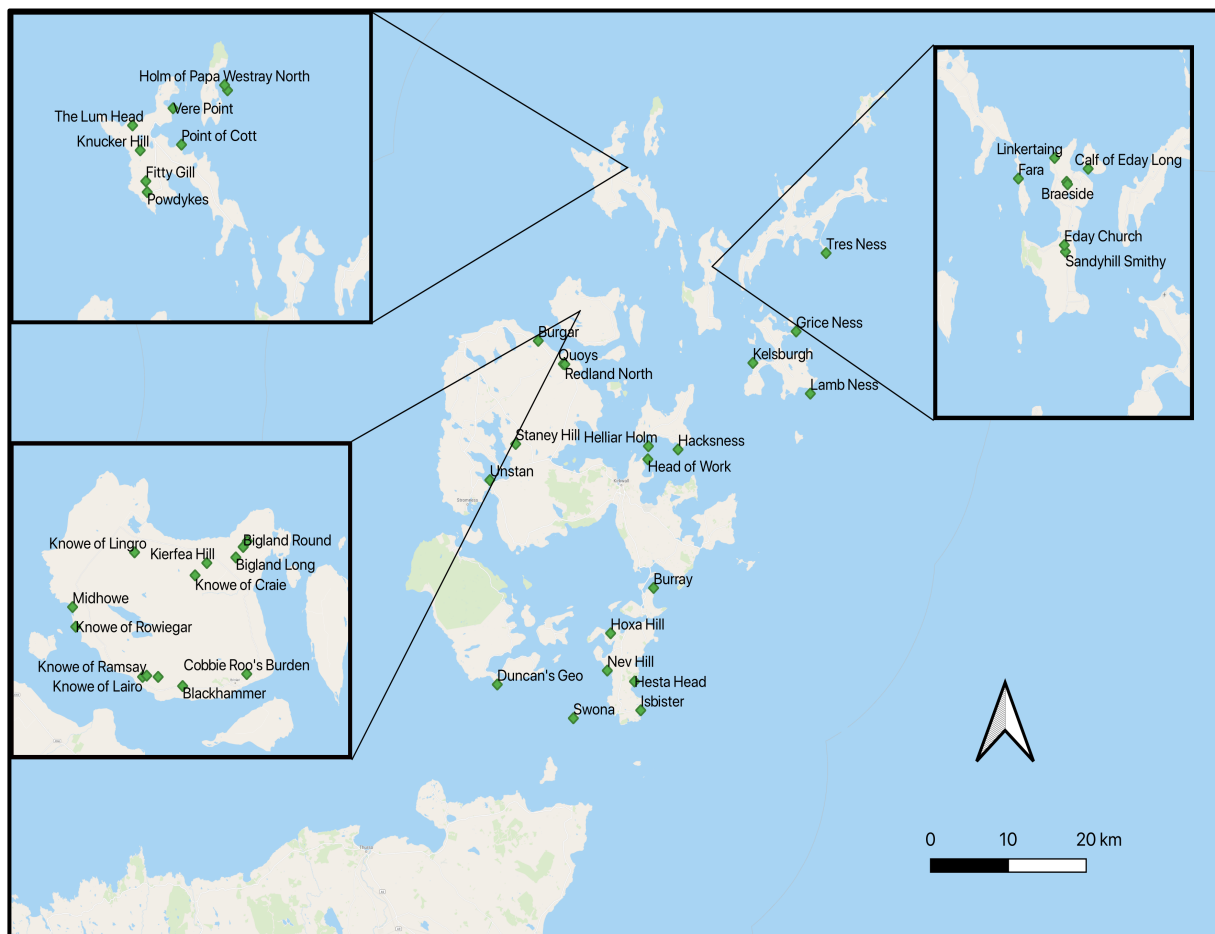


Figure 3.5. Map showing the distribution of the earliest tombs in Orkney

Yet Renfrew's analysis went deeper than this, as he was also interested in the distribution patterns of Neolithic tombs. If his hypothesis were a correct one, then the tombs of Neolithic Orkney would cluster together less and less as the Neolithic period progressed. Again, it was this heightening of territorialisation that Renfrew interpreted as betraying the emergence of chiefdom societies. To this end, Renfrew famously analysed the tombs of Rousay (1973a, 132–

42) (fig. 3.5). In this analysis, he was effectively replicating and improving on Childe's work on this island in 1942 (see Section 3.2.1). Using the distribution of nineteenth century crofts as a direct analogue, Renfrew posited that the population of Rousay during the Neolithic fell roughly between 350 and 650 individuals. Based on the assumption that each of the 13 tombs of Rousay represented a distinct territorial marker, Renfrew also hypothesised that a corresponding number of territories existed here during this period. Therefore, by dividing the total estimated population by the number of tombs, Renfrew established that a population size of between 25 and 50 people would have occupied each Neolithic territory. The high numbers of territories along with the relatively small and balanced numbers of peoples inhabiting them suggested two things to Renfrew. The first was that these Neolithic territories were relatively egalitarian – they simply did not yield the kinds of population densities that one would expect of chiefdoms. The second was that this pattern represented a relatively early phase in the Neolithic period and that these distribution patterns betrayed a prehistoric society that had not yet reached a stage of centralised power. According to Renfrew, they could be defined as *segmentary* societies as they constituted tribes whose power relations were shared amongst segments of the society, rather than being purely centralised. In response, Renfrew split the chronology of Neolithic Orkney into two parts, as outlined in Table 3.1 below.

Period	Type of society	Material culture	Burial practice	Population distribution
Early Neolithic	Segmentary	Unstan ware	Collective	Dispersed
Late Neolithic	Chiefdom	Grooved ware	Singular	Centralised

Table 3.1. Renfrew's chronological model of Neolithic Orkney

Another site that was important in Renfrew's definition of segmentary societies was the tomb of Quanterness, situated on the island of Mainland alongside the larger monuments of the Late Neolithic such as Maeshowe, the Stones of Stenness, the Ring of Brodgar and the Ring of Bookan. Upon excavating Quanterness in the 1970s, Renfrew immediately recognised that the tomb was both significant in scale and intricacy and was constructed from large pieces of masonry quarried from a sandstone escarpment nearby (1979, 44–69). The entrance was defined by a pair of massive jambs, which led into a sizeable chamber with branching cells, all enveloped within an inner and outer cairn built to around 1m in height. However, as Daykin pointed out (in Renfrew 1979, 67), the largest lintel stones were situated between 0.80–1.15m

from the chambers' floors. These massive blocks of masonry were likely manoeuvred into place with the aid of the tomb's sophisticated design, which made use of corbelled masonry in order to build up successive layers of cantilevered stone to form a pyramid-like structure (see also Barber 1992, 16). Based on radiocarbon samples taken from stratified human skeletal remains, Renfrew calculated that the tomb was still being used for human interment by *c.* 2300 BC. He also suggested that the tomb was itself built several hundred years prior, at around 2600 BC (Renfrew *et al.* 1976, 197). Later determinations obtained by Schulting *et al.* (2010) have indicated that the tomb is significantly older than this as the earliest human remains found within the interior yielded a date range of between 3501–3211 cal BC. Although as Sheridan has saliently pointed out, such early date ranges must be looked at with some suspicion as there is a chance that the human remains from which they derived were transported to Quanterness from an earlier tomb (2017, 309). Overall, the construction of Quanterness demanded a significant amount of skill and labour, with Renfrew estimating that the process would have necessitated at least 10,000 man-hours (1979, 214). While such a figure was relatively small compared to the one assigned to Maeshowe, the construction of Quanterness nonetheless entailed far more time and labour than the earlier Orkney-Cromarty tombs such as the ones found across Rousay.

Chesterman's account of the human bone assemblage of Quanterness (in Renfrew 1979, 66–8) suggested that a remarkably high number of 157 individuals were interred within the tomb throughout its history of use. More recent accounts (*i.e.* Crozier 2012; 2014; Crozier *et al.* 2016), however, have indicated that such a figure is dubious and have suggested instead that Quanterness housed a far lower number of 59 individuals. Yet even in the acceptance of Crozier's more refined estimates it is still clear that the Quanterness bone assemblage is one of the largest found in any mortuary context in Orkney. In addition, the pottery assemblage discovered at Quanterness comprised sherds derived from Grooved ware vessels – a type of pottery which, according to Renfrew's scheme, should have been manufactured within the chiefdom societies of the Late Neolithic. This meant that Quanterness fit rather uneasily into Renfrew's evolutionary scheme, as it was a Late Neolithic monument containing a human bone assemblage more indicative of burial practices associated with segmentary societies. Furthermore, it must be mentioned that thin-section analysis of the Quanterness Grooved ware assemblage showed that, petrologically speaking, it was rather varied and as a result it clearly derived from a dispersed network of inter-island trade (Williams in Renfrew 1979, 90–6).

Again, this assemblage was at odds with Renfrew's model, as it comprised what appeared to be regionally rather than centrally sourced pottery. At this point in his analysis, Renfrew conceded that the evidence from Quanterness (along with other later tombs) negated the presence of high-status individuals at the beginning of the third millennium BC (Renfrew 1979, 212). This effectively meant that if Renfrew's model were a correct one, then the emergence of chiefdom societies within Orkney must have occurred towards the beginning of the Bronze Age.

In evaluating the work of Renfrew in Orkney, it seems clear that his overall processualist approach failed to stand up to archaeological scrutiny. While it is true that Late Neolithic monumentality was constructed on a grander scale than those relatively small-scale tombs of the Early Neolithic, there was clearly far more to Neolithic society than monuments alone. That is to say, when attempting to analyse the formation of past societies it is vital that the occupation record is studied as well. This is something that is almost wholly neglected by Renfrew. As Pollard accurately surmises with reference to Renfrew's work, "claims for the existence of Neolithic élites, sometimes seen as a prerequisite for the construction of large monuments...find little or no expression in the occupation record" (2000, 362). Indeed, significant sites of occupation that were known of at the time of Renfrew's writing such as Skara Brae, Rinyo and Links of Noltland (to name only a few) are barely mentioned by him. In considering the meticulous nature of Renfrew's work, it may at first seem odd that he would leave such a large portion of the archaeological record untouched in this way. Yet if we consider the fact that Renfrew treated monuments as embodying almost the entirety of the societal structures within which they were built, then perhaps it makes sense that the settlement record would take a backseat within his analysis.

It is also clear that Renfrew viewed Neolithic Orkney almost as a battleground of competing tribal authorities, with each tribe inhabiting its own discrete area of the Orcadian landscape. However, if such a view were valid then widespread violence or even warfare would have dominated large pockets of the archaeological record here. This would be particularly true when it came to the earlier phases of the Neolithic, as according to Renfrew larger numbers of tribes should have existed during this period. Nevertheless, there exists very little evidence to suggest that such tensions prevailed during the Early Neolithic (Clarke and Sharples 1985, 69). On this specific issue Sharples justly remarked that "the tendency to view communities as

culturally independent has arisen by placing too much emphasis on the tomb as an embodiment of the social structure” (1985, 70).

Yet it is important to remember that Renfrew’s model belonged to a far wider tradition of evolutionary approaches, particularly within the realm of anthropology. The works of Sahlins (1958), Service (1962) and Fried (1967) can be seen as clear precursors to the kinds of processualist thinking employed by Renfrew (but see also Sahlins and Service 1960). These authors analysed non-western societies by considering the evolutionary stages within which they sat, and these stages ranged from simple bands of foragers on one end of the scale to fully-fledged chiefdoms on the other. Likewise, the notion of a *segmentary* society can be traced back to the work of Southall, in which he defined the ‘segmentary state’ (1956, 248–9). Such a state was characterised by Southall as having a relatively weak centralised sovereignty with limited control over peripheral territories, or in Renfrew’s terms it was on the path to becoming a chiefdomship, but without quite being there yet. Although in fairness to Renfrew it would be crude to suggest that his theoretical tenets were simply borrowed wholesale from post-war anthropological theory. This was something that Renfrew himself was at pains to demonstrate. While Renfrew acknowledged the clear overlaps between anthropology and archaeology, unlike other prominent processual archaeologists (namely Binford) he nonetheless saw them as fundamentally separate disciplines. In particular, he stressed that a prime focus on material culture, its spatial organisation and the units of power which defined this organisation were what separated archaeology from anthropology (Renfrew 1984).

3.3.2 Conclusions

I have argued within this section that Renfrew’s vision of Neolithic Orkney is predicated upon a problematic theoretical basis, which is made up of two primary assumptions. These are as follows:

- i) the assumption that the Neolithic period of Orkney can be wholly understood through the lens of social evolutionary theory;
- ii) that the significance of monumental architecture surpasses that of domestic architecture.

Despite these problematic assumptions I would nonetheless like to highlight the validity of Renfrew's focus on construction and process. Indeed, it is this kind of focus that will aid me in cutting through the kinds of representational thought that this thesis attempts to rebut. Within the literature of prehistoric Britain and Ireland it has often been assumed either implicitly or explicitly that monuments represent pre-packaged structures that went up almost overnight. As a result, the process of construction integral to their actualisation is almost wholly ignored. Within analyses of architecture the process of construction should receive its fair share of the limelight. The reason for this is rather simple – it is in the process of construction that the lives of Neolithic builders and the structure of their wider society reveal themselves. Renfrew of course recognised this very well, although rather than translating construction processes into units of time and labour, I propose instead that the intricacies of building should be foregrounded. These details may range from the seemingly prosaic to the sublime – from the manner in which a single stone slab was laid to the extreme height at which a corbelled roof was suspended. It is when all of these details are brought together that we will be able to achieve a more rounded view of the archaeological evidence and the past peoples that it pertains to.

3.4 Colin Richards

3.4.1 The House at the Centre of the Cosmos

It will be argued within this section that the work of Colin Richards has led us to view the Orcadian Neolithic as being dominated by cosmological representations. From the non-representational perspective that this thesis employs, such a view is of course highly problematic. However, while this section focuses on how Richards' theoretical work has hampered our understanding of Neolithic Orkney, it is worth remembering that in the round his contribution to the archaeological literature has been an overwhelmingly positive one. More specifically, it was his discovery of the settlement site of Barnhouse in 1984 during a session of fieldwalking (Richards 2005b), along with its subsequent excavation by him (Richards 2005a), which provided a fresh outlook on the Neolithic of Orkney. Moreover, Richards can claim to have accomplished something that Childe and Renfrew before him failed to do: to have created a theoretical model in which the domestic, mortuary and monumental evidence are drawn together in a cohesive way.

The work of Richards emerged from the post-processualist school of thought, and Richards can be considered one of its pioneering figures, particularly within the 1990s. The beginnings of post-processualism can be traced back to the wave of objection during the 1980s and 1990s to the stringent objectivity of processual archaeology (see Robb 2014, 22–3), particularly in relation to the ways in which it treated human behavior as being predetermined by extrasomatic conditions. Yet unlike processualism before it, the post-processual approach did not centre on one single type of analysis and can instead be seen as the convergence of several different schools of thought, or ‘mini-paradigms’ (Bintliff 2011, 7), including neo-Marxism, structuralism, post-structuralism and phenomenology (Trigger 2006, 444–78). In hindsight, however, it can be argued that each approach adhered fervently to a social constructivist philosophy. Consequently, the subjective basis of human existence took centre stage. It was humans, rather than the wider material conditions within which they operated, that formed the archaeological record, and not the inverse. Even within studies of specific forms of artefacts, post-processual approaches still treated the material constitution of things as being wholly subordinate to the social structures under which they were used and manufactured (e.g. Holtorf 2002).

Nevertheless, while human agency was seen to operate on a creative basis, that was only half the story, as such creativity was tightly bound by the structuring principles of language. Attempts at bridging the divide between human agency and social structure characterised much of post-processual theory, and it was to other fields within the humanities that archaeology looked to for inspiration, most notably those of anthropology and sociology. Bourdieu’s *habitus* (1977) and Giddens’ *structuration* (1984) became most influential in this regard. Bourdieu saw human agency as an embodied performance through which people went about their daily lives in a culturally prescribed manner. He viewed the human body as a link between agency and structure. Giddens, in much the same fashion, regarded agency and structure as ontologically bound together within what he termed a ‘duality of structure’, where “social systems are both the medium and outcome of the practices that constitute those systems” (1979, 69). While the concepts of *habitus* and *structuration* essentially operate on differing ontological scales, they both nonetheless envisage a reflexive relationship between human performance and the structuring principles that guide them.

Referring back to the field of archaeology, the practice of regarding human agency as somehow reflexively entangled with social structure became near commonplace. This was particularly true within the context of prehistoric research. While the bifurcation of the abstract and the physical can be seen as a conceptual foundation of both culture-historical and processual archaeology, post-processualism went beyond regarding the former as being simply superimposed onto the latter. With reflexivity came an additional element of humanism, yet with this liberal dose of humanism came a near total neglect of the material. Moreover, in being mediated by human action, both agency and structure were entirely social concepts.

Herein lies one of the most powerful yet contentious precepts of post-processualism: that material culture can be read as if it were a text, or a representation of a culture's symbolic values. Artefacts are treated as if they are words, or signifiers of abstract concepts that clung to them both precariously and arbitrarily (fig. 3.6). The spatial organisation of these artefacts was therefore seen as a culturally prescribed syntactic form, much like a sentence. In this way, the material properties of archaeology were almost totally neglecting. They were meaningless elements in a socially constructed world where language dominated the very essence of reality (Tilley 1989, 192). As Tilley, one of the main proponents of 'material culture as text' within archaeology, writes: "objects do not just 'mean' themselves" (1991, 20). More recently, Steadman has argued that architecture and houses in particular are highly susceptible to such syntactic arrangements, and that it is the archaeologist's job to read these arrangements in ascertaining a structure's meaning (2016, 39–66). As will be demonstrated below, such a view permeates all aspects of Richards' post-processual approach.

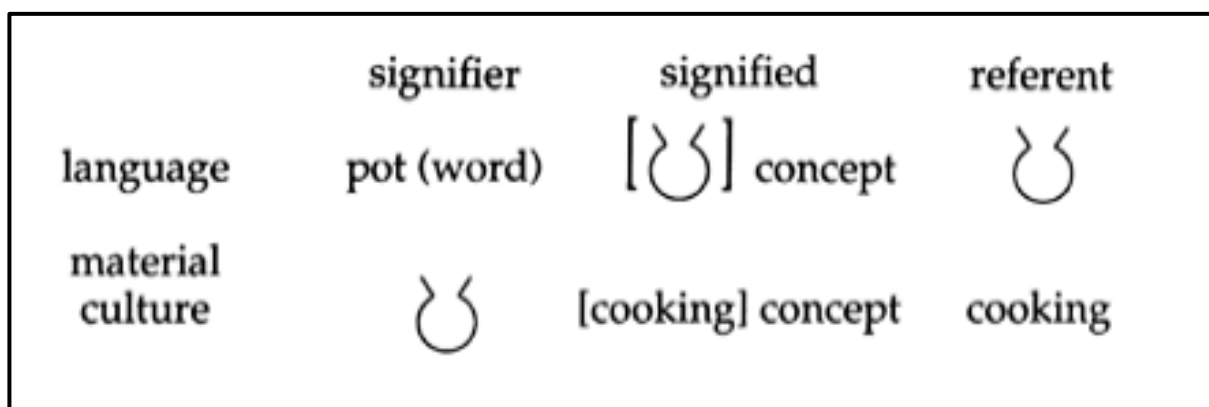


Figure 3.6. Relationship between signifiers (words) and signifieds (things) (from Hodder 1992)

The theoretical model employed by Richards was very much entrenched in the idea that social structure and human agency were interdependent. By the same virtue, it also revolved around the notion that past social structures could be read directly from the archaeological record. Yet for Richards, cosmology was also inextricably linked to social structure, so much so that both could effectively be treated as one and the same thing. In defining the term ‘cosmology’, Richards was careful to ensure that his readers did not conflate his notion of cosmology with the scientific study of the origins of the physical universe (Parker Pearson and Richards 1994b, 59). As a social structure, Richards’ cosmology was the study of how mythic narratives shaped daily life, along with how such narratives influenced the categorisation by people of the world within which they lived (Parker Pearson and Richards 1994c, 9–10). As Richards himself wrote:

“...concepts of order are inevitably cosmologically based: cosmologies allow a particular cultural understanding and categorization of the lived and experienced world; they represent a way of 'thinking about' the multiplicity of images and experiences of individuals. In this sense they are not simply abstractions but structure daily practices and perceptions of space and time: they are as real as people's lives.” (1996b, 193)

Such a view is a radical break with Renfrew’s theoretical approach in two major ways. Firstly, while Renfrew was concerned chiefly with how prehistoric societies evolved to become the way they were, Richards’ model of Neolithic Orkney appears as a largely unchanging scheme of categorisation. Under these circumstances, questions of how such a scheme may have evolved over time did not seem to burden him. Secondly, and perhaps more importantly within the context of post-processual thought, instead of viewing the Orcadian Neolithic solely as a long succession of chronological phases, Richards gave prime attention to the ways in which its inhabitants experienced their world from both a cultural and personal perspective. This approach effectively threw questions concerning the *longue durée* out the window, yet in many ways this was the price that had to be paid in order to create an archaeological analysis that was as humanist as possible. As Renfrew later surmised, such an approach recognised the human inhabitants of the archaeological past as “active, thinking individuals and not merely pawns of larger ecological or social processes” (2000, 2).

While Richards' model was set up to describe all aspects of Neolithic life in Orkney, it was the particular relationship between cosmology and architecture that was of central importance. This was especially true with regards to houses and domestic forms of architecture more broadly. On this matter Richards wrote:

“In utilising the architecture of the house, the builders were drawing on a particular potent metaphor, since as a model it provides a concrete expression: a physical sense of order to cosmological themes and beliefs...the principles of order and classification embodied within their architecture are realised in the order and classification of people, things and events which constitute daily life.”

(1992b, 67–8)

What Richards believed was that the ways in which the Neolithic inhabitants of Orkney both moved around and conducted activities within their houses had their grounding in a higher cosmological order. This interpretation was based heavily on the domestic structures discovered at the settlement site of Barnhouse, which Richards himself excavated. Many of these structures were concentric in form, having a circular outer wall with a cruciform layout within. The footprints of most of the houses at Barnhouse followed a very similar form to those at Skara Brae which Childe excavated in the 1920s and 1930s, as has been discussed within Section 3.2.1. In fact, when describing the interiors of the houses, Richards drew on the very same terminology devised by Childe, which drew inspiration from the Scottish Blackhouses (see Appendix A). Therefore, Richards' cosmological scheme revolved around five key elements of the Neolithic house, which included: the entrance, the hearth, the rear dresser and the two box-beds (fig. 3.7–3.10).

According to Richards it was this cruciform layout that served as a representation of the physical structure of the Neolithic cosmos. The house was therefore a kind of cosmic homology. Within this homology the hearth represented the centre of the cosmos as it was placed directly within the centre of the house. In addition, the hearth was representative of the birth of the cosmos and everything within it. These life-bringing qualities were mirrored in the actual function of the hearth, whose heat was an important transformative agent (Richards 1996b, 196).



Figure 3.7. House 3, Barnhouse, with its cruciform internal layout (www5)



Figure 3.8. Hut 1, Skara Brae, with its cruciform layout (photograph by author)



Figure 3.9. Hut 1, Skara Brae, view from interior (photograph by Andy Gray)



Figure 3.10. Illustration of domestic life at Skara Brae (from Garnham 2004)

By way of example, the hearth would transform clay into ceramic vessels, or raw vegetation and animal flesh into essential foodstuffs. Its location within the middle of the house also meant that when moving around the building's interior the inhabitants would have traveled concentrically around the hearth, which again heightened its importance. Moreover, Richards argued that it was in the division of the house into its left and right sides that the interaction between cosmology and social categorisation could be seen most clearly. In Appendix A, Childe's hypothesis regarding the gender divisions of the houses at Skara Brae is briefly outlined in which the females occupied the left half of the house and the males occupied the right. Following Hodder, who also elaborated on this idea within his work on the Orcadian Neolithic (1982, 218–29), Richards subsumed Childe's gender separation into his own

cosmological scheme for the Late Neolithic house (Parker Pearson and Richards 1994b, 44–5). According to Richards, further clues as to how this gender separation influenced the inhabitants’ cosmological perceptions could be discerned if the luminosity levels of the house are taken into consideration. He argues that as a large proportion of Late Neolithic houses in Orkney were constructed with a NW–SE orientation, the ways that sunlight passed through the entrance would have been relatively uniform. Therefore, by virtue of the fact that the midwinter and midsummer sunrises occur towards the east, and that the midwinter and midsummer sunsets occur towards the west, the left-hand (or west) side would have generally been darker than the right-hand (or east) side during daytime. Indeed, Richards described the left side of the house as being in a permanent state of ‘semi-darkness’ (1993a, 108). By combining these findings, Richards contended that as well as symbolising feminine qualities, the left half of the house was also synonymous with the concepts ‘inside’, ‘darkness’, ‘death’ and ‘midwinter’. When it came to the right half of the house, in addition to representing masculinity it was also associated with ‘outside’, ‘light’, ‘life’ and ‘midsummer’ (Richards 1990, 121; cf. Jones 2012, 85–98) (see Table 3.2 below).

Left-hand side of house	Right-hand side of house
Feminine	Masculine
Inside	Outside
Darkness	Light
Death	Life
Midwinter	Midsummer

Table 3.2. Richards' scheme for the Late Neolithic house in Orkney

Of course, Richards fully appreciated the fact that under no circumstance was a settlement site simply bracketed off from the wider landscape surrounding it. He therefore went on to argue that the cosmological organisation of the house also applied to the tombs and henge monuments nearby (e.g. Richards 1993b; 1996b; 1998). Embedded within the central chamber of Maeshowe, for example, are four monoliths, each forming part of its four corner buttresses. It is noted that these monoliths add next to nothing to the structural integrity of the chamber, and due to the restricted space within which they are situated it is noted by Richards that they were set in place as primary architectural elements, prior to the construction of the tomb proper (1993b, 155; 1996b, 196–7) (although see Section 6.5). Yet while being structurally superfluous, these monoliths do aid in bestowing a characteristic upon the tomb which Richards

saw as vital to its overall meaning – a cruciform internal layout similar to the houses seen at Barnhouse nearby (S. Jones and Richards 2005, 198). As a result, it is argued that these architectural members were a vital cosmological link between the domestic and mortuary spheres of Neolithic life. And the association between house and tomb went well beyond this within the context of Maeshowe, as excavations conducted by Richards himself uncovered the partial remains of what appeared to be an older structure underneath the clay platform on top of which the tomb sits (Richards 1996b, 195). The discovery of a drain in association with a paved surface, both running underneath the entrance passage, seems to give credence to the idea that this older structure was indeed a domestic one (Richards 1992a, 448; Challands *et al.* 2005b).

Connections between the spatial organisation of house and henge were less obvious. It has been recognised elsewhere that similarities existed between henges and Late Neolithic settlements within the context of deposition patterns, as broken maceheads and axeheads appear fairly prolifically at both (Simpson and Ransom 1992; Ritchie 1992; *cf.* Anderson-Whymark *et al.* 2017). Yet in terms of structure, these sites were unquestionably of an entirely different nature. Nevertheless, there were, for Richards, key structural ties to be observed linking house and henge at both the Ring of Brodgar and Stones of Stenness. The concentricity exhibited by the ring of monoliths and the outer banks and ditches at both sites were crucial in this regard, and so too was the incorporation of a single entrance (Richards 1996b, 199). In addition, the construction of a hearth at the centre of the Stones of Stenness further reinforced these ties. When it came to the cosmological ties linking the henge monuments with the Late Neolithic tomb, Richards saw the element of water as being vital. The ditches encircling the Ring of Brodgar, Stones of Stenness and Maeshowe were of course very similar in terms of their overall form, yet another physical feature shared between them was their capacity to hold water. Both Renfrew (1979, 39–41) and Ritchie (1976, 10–12) encountered this phenomenon first-hand when excavating the ditches of both henges respectively (*cf.* Richards 2004, 104), while pollen analysis taken by Childe from the fill of the outer ditch at Maeshowe indicated that significant waterlogging had occurred here too (Childe 1956a, 169–72). This waterlogging probably occurred due to a combination of a high water table and the watertight nature of the bedrock into which these ditches were cut. What this meant was that, when open, the outer ditches of these monuments would have formed a giant ring of water surrounding the monument proper. This was highly significant within the context of Richards' model as it suggested yet another

cosmological homology was at play. Simply put, these monuments were encircled with water in much the same way that the entire archipelago was (Garrow *et al.* 2005, 256). As a result, all three were able to frame the Neolithic inhabitant's conception of the importance of water within their cosmology. For Richards, therefore, the element of water could be read as a symbol of transition and purification, as its presence around these monuments bestowed upon them a sacred identity (1996a).

What we therefore have within Richards' model of Neolithic Orkney is a populace whose cosmological beliefs were imbued directly into their architecture, with each type of architectural structure realising certain aspects of this cosmology in different ways. Yet the vitality of this cosmology was of course mediated through human action. Accordingly, Neolithic cosmology was itself structured by the inhabitants of Orkney in much the same way that it structured these same inhabitants' daily lives. As Richards summarises:

“Architecture structures social practices by imposing a particular order on the contexts of daily life. Hence architecture is reflexive because people create their constructed environment and are then influenced by that creation” (Richards 1996b, 193).

Unfortunately, the idea that Neolithic architecture constituted a reflexive performance created a paradox that threatened to undermine Richards' theory completely. In fairness to Richards, this paradox was not limited to his work alone as it could be seen as a destabilising influence on post-processual archaeology as a whole. This paradox can be outlined in the following way: if a reflexive relationship existed between cosmology (or social structure) and human practice, then how, as archaeologists situated outside this ontological dualism, may we extract (or 'read') *any* meaning from archaeological remains? This paradox was briefly mentioned near the beginning of this section, and it was suggested that almost all post-processual thought treats archaeological remains as having been socially constructed. This problem will be dealt with in far more detail in Chapter 4, however it is worth iterating here that architecture is first and foremost materially constituted – any socially constructed elements that may have guided it must always be of secondary consideration.

This is not to say that neither cosmology nor representation has any part to play in the construction and use of architecture. Two of the most famous studies outlining the importance

of cosmology in non-western architecture are Hugh-Jones' study of Pirá Paraná longhouses in the northwest of the Amazon (1979) and Blier's study of Batammaliba houses in northeast Togo (1987). In the former it was discovered that the construction and orientation of Pirá Paraná longhouses along the river's edge always referenced a mythical journey taken by the ancestors, while in the latter it was noted that the Batammaliba house represented a complex anthropomorphised cosmos with multiple genders. Moreover, in the modern world the planned geometric forms of many religious buildings (such as churches, mosques, synagogues etc.) almost always serve as representations of a divine cosmological order (Hankiss 2001, 122). What is being argued in this thesis, however, is that if a cosmological or representational scheme did dictate certain forms of prehistoric architecture then its discovery must be built up to as a result of meticulous observation and description of the physical evidence (see Section 4.2).

3.4.2 Conclusion

In summary, there exist two elements of Richards' work that I aim throughout this thesis to combat. In fact, out of all the theoretical problems outlined within this chapter, these are the most important in terms of how they relate to the non-representational methodology that will be developed in the following chapter. These include:

- i) the assumption that the archaeological evidence is *a priori* representational, or that its primary function was represent a wider social structure or cosmology;
- ii) that archaeological evidence requires 'reading' (as if it were a text).

However, as a conclusion to this section I would like to draw attention to two primary elements of Richards' work that I believe will be very helpful when brought forward into the methodology underpinning this thesis. The notion that domestic, mortuary and monumental forms of architecture should all be drawn together in forming a cohesive picture of Neolithic Orkney is of prime interest in this regard. Rather than succumbing to the idea that analysis of only the more grandiose sites is sufficient in understanding this period, Richards fully understood that in order to comprehend Neolithic society in Orkney it is vital that all threads of evidence are woven together. This is certainly something that I aim to achieve within this thesis. This naturally leads on to a second vital element in Richards' work: the recognition that

the quotidian is of central importance. Indeed, it is archaeology's appreciation of the more unremarkable aspects of daily life that marks it out as a discipline that takes seriously the historical significance of the quotidian. As Lightfoot duly surmises, "it is the little routines that people performed day in and day out that produced much of the material remains recovered in the archaeological record" (2005, 17).

3.5 Conclusion

Throughout this chapter I evaluated the work of Childe, Renfrew and Richards, and in so doing I have delineated six assumptions that currently hamper our understanding of Neolithic Orkney. To recap, these assumptions include:

- i) the assumption that domestic and mortuary architecture (or houses and tombs) are strictly separable;
- ii) that tombs are architecturally varied while houses are collectively homogenous;
- iii) that the Neolithic period of Orkney can be viewed wholly through the lens of social evolutionary theory;
- iv) that the significance of monumentality surpasses that of domestic architecture in the analysis of Neolithic Orkney;
- v) that the archaeological evidence is *a priori* representational, or that its primary function was represent a wider social structure or cosmology;
- vi) that archaeological evidence requires 'reading' (as if it were a text).

I would argue that most of these assumptions are very easy to rectify, as what is required for their rectification is the willingness to acknowledge that the archaeological evidence should take centre stage in the analysis of our prehistoric past. In this way it becomes possible to cut through many of the preconceptions we may have regarding how the Neolithic of Orkney *should* look based on previous work within the area. The redressing of the last two assumptions (numbers v and vi), however, is a slightly more difficult task, as it requires us to reconsider the kinds of representational thought that have become engrained within traditional archaeological analyses. Therefore, while the following chapter will develop a methodology aimed at tackling all the assumptions listed here, its main focus will be the amendment of the final two in particular.

When summarising the theoretical impact of Childe, Renfrew and Richards on the Neolithic period of Orkney, it is important to mention that an interesting duality exists within their work. This duality revolves around the fact that, on the one hand, each of these authors produced interpretations explaining the archaeological data in specific ways, yet on the other these were the very people who produced this data via the process of excavation. And this duality arguably extends a step further, as the interpretive works of these authors, which were formulated according to abstract typologies, social structures and representations, can be contrasted with the pragmatic and matter-of-fact ways in which they wrote their excavation reports. Assuredly, it is in their excavations reports that these authors treat the material evidence of Neolithic Orkney most sensitively. It would therefore be a mistake to conclude that these authors wholly ignored the material constitution of the archaeological evidence. Rather, they considered this material constitution in their own way, based on the theoretical paradigms they were tied to. Indeed, the methodology proposed within the following chapter is but another way of considering material constitution. Moreover, the interpretations set out within Chapter 5 will be based on the same archaeological data upon which the works of Childe, Renfrew and Richards were based, as it is their excavation reports (amongst others) that will be analysed throughout. What this means, in effect, is that rather than viewing this thesis as a clean break from previous traditions of analysing Neolithic Orkney, it would be best to see it as an attempt to build upon them.

4 A Different Approach

4.1 Introduction



Figure 4.1. 'The Treachery of Images' by René Magritte, 1929

The aim of this chapter will be to formulate a non-representational methodology with which to analyse the Neolithic architecture of Orkney in a way that is as true as possible to the physical evidence. In this respect, it will refrain from assuming that the primary function of architecture (or archaeology for that matter) is to serve as a representation of something else, and instead it will aim at allowing the physical constitution of the archaeology to guide my analysis. As Figure 4.1 above demonstrates, representations are misleading. Did Magritte present a smoking pipe to his audience in 1929? Or did he present a painted canvas on which a representation of a smoking pipe was captured (see Foucault 1983)? In his contention that '*ceci n'est pas une pipe*' ('this is not a pipe'), Magritte perhaps believed the latter to be the case. Drawing on his analogy, the methodology proposed in this chapter will analyse the paint and the canvas first, before considering the sum total of that which it represents.

It would of course be naïve to think that any methodological approach could be completely freed from bias, or that it was at all possible for a researcher to be entirely self-reflexive within

their research. Bias is something that inevitably seeps into even the most objective of analyses and even in the process of becoming as self-reflexive as possible there will inevitably be ‘blind spots’, or pockets of bias that the researcher will always be unaware of (Valsiner and van der Veer 2000, 34). The methodology outlined here will, however, focus specifically on mitigating the kinds of bias discussed in Chapter 3.

In total, this chapter will delineate *three* theoretical principles that will form the core of this thesis’ methodology. These principles include:

- i) Description;
- ii) Becoming;
- iii) Fragmentation.

It should be mentioned that the relationship between these principals is a non-hierarchical one – they are equally important and have been devised in such a way as to interweave with another in the formulation of this thesis’ methodology.

4.2 Principle 1: Description

“...we may not advance any kind of theory. There must not be anything hypothetical in our considerations. We must do away with all *explanation*, and description alone must take its place.”

(Wittgenstein 1958, 47, emphasis in original)

As the above quotation demonstrates, for Wittgenstein the role of philosophy was not to present explanations about reality but merely to describe its constitution – the stuff that makes it up. For Wittgenstein, this was particularly relevant when it came to the language used in the act of describing, as he believed that description should be as true to the phenomenon under observation as possible. True description in his mind was an act that was always situated firmly in the present with next to no reference to either future or past. There are no ‘should bes’ or ‘could have beens’ within the philosophy of Wittgenstein: either something ‘is’ or it ‘is not’, nothing else. It goes without saying that such a stance flies in the face of traditional philosophy, a discipline whose purpose is to ask questions of the fundamental nature of reality and

existence. It is not my aim within this section to agree completely with Wittgenstein's stance, as the ultimate goal of archaeology is to ask these same kinds of fundamental questions of the archaeological past. On the other hand, when it comes to the initial stages of archaeological research, which involve *describing* the physical nature of an archaeological site, then the stance of Wittgenstein is immensely useful. Strathern argues that when a theoretical deadlock is reached when writing about cultures past or present, what is required is a change in theoretical vocabulary (in Borić 2010). I believe that the type of description that Wittgenstein advocates is precisely this change in vocabulary. Yet if this form of description is to be at all effective then it must be as thorough as possible. No stone should be left unturned and even the most seemingly insignificant observations should be recorded.

This kind of procedure is of course nothing new within archaeology, as it has been a staple of archaeological excavation for some time now. This is particularly true when it comes to excavations within commercial archaeology, which always revolve around descriptions and measurements of the smallest pieces of evidence. The same can also be said of buildings archaeology, which again involves the chaining together of sometimes miniscule architectural features in the illustration of a building's historic development (Morris 2000), ranging from the frogs and bats of its brickwork to the muntins and mullions of its windows. This highlights one of this thesis' most fundamental claims: that in order to formulate an archaeological analysis that is both detailed and accurate one must begin with the non-representational (the archaeological evidence itself) *before* building up to a representational theory. If this formula becomes deliberately inverted then it ultimately has a detrimental effect on our ability to describe in any accurate manner. This makes perfect sense, because rather than beginning the process of description with what is physically real, we are attempting to describe abstract representations (primarily in the form of presupposed social structures) directly. These social structures are after all moulded by our own present-day states of knowledge (Foucault 1972), and the process of describing them without foregrounding the material evidence will be replete with bias.

As has been summarised in Chapter 3, however, it is evident that the most prominent studies of Neolithic Orkney have had as their starting point some form of abstract hypothesis with which the archaeological evidence could be moulded into. For Childe, this hypothesis was mainly an ideological one as it was based largely on Marxist dialectics. For Renfrew it was

evolutionary theory, and for him the Neolithic of Orkney became almost a laboratory to test this particular theory. For Richards, of course, it was a representational one. Within his model it is almost as if the archaeological evidence was not trusted to reveal the intricacies of the past in its own terms. Rather, it needed to be strained through a filter of representational theory before it could do so. With the view of combatting this trend, I propose an archaeological approach that will discard the *a priori* hypothesis entirely. Instead, it will be suggested that, for a hypothesis to be wholly contextually and historically sensitive, it must surface *from within* the data under analysis, and may only emerge as a result of the chaining together of descriptive information.

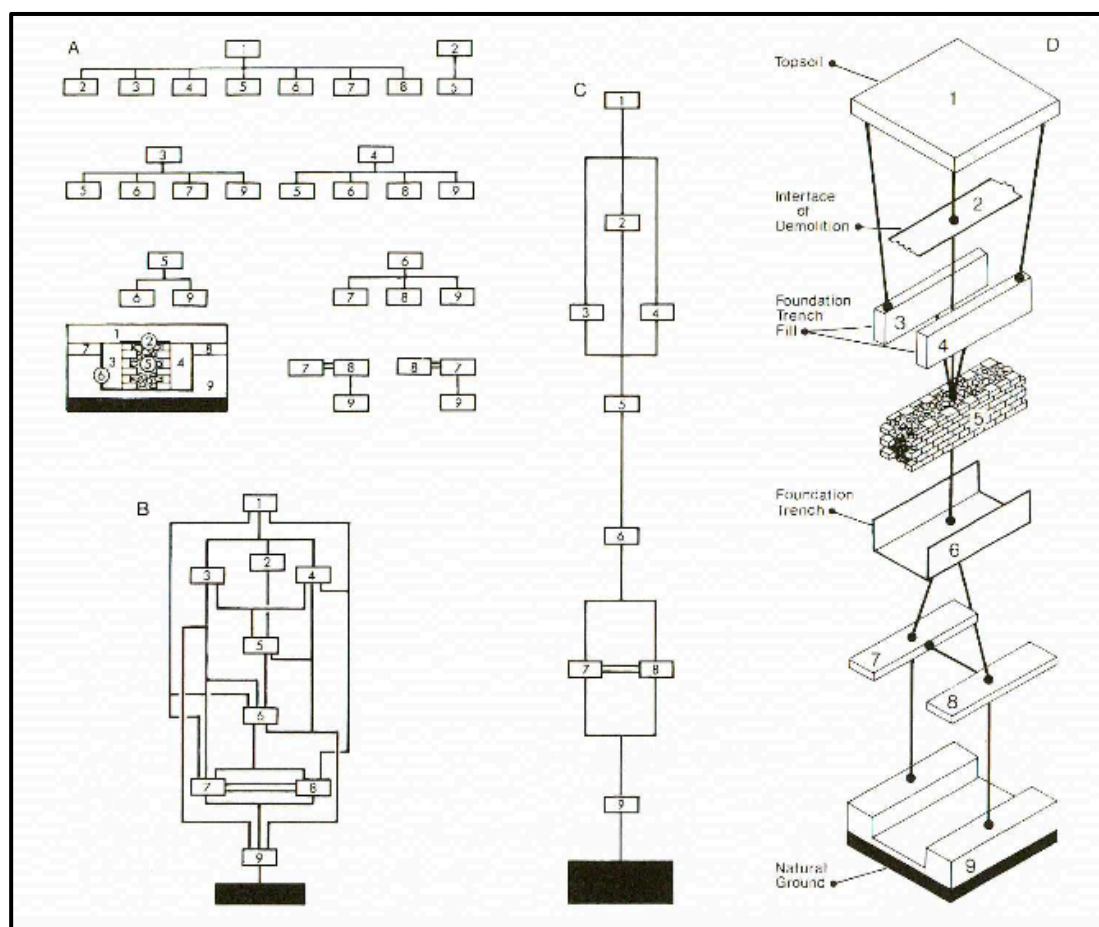


Figure 4.2. Example of a stratigraphic sequence with accompanying Harris matrix (from Harris 1989)

Yet in order to accomplish this I find it necessary not only to focus on the manner in which things are described but also on the structure that these descriptions take. Within traditional archaeological analyses, descriptions of archaeological remains very often take the form of a clean and linear narrative. That is to say, a narrative is formed around the archaeological

evidence into which it does not readily fit. This is because in most cases the history of an archaeological site is neither clean nor linear – it is often chaotic, structured in an unexpected way, and as a result the process of articulating its history regularly requires poring over jumbled collections of context sheets and complicated Harris matrices. The periodisation of a site into discrete phases perhaps typifies the most common way in which archaeological evidence is forced into a linear form, which by today has become an industry standard (fig. 4.2). In effect, an archaeological phase can be made up of any number stratigraphic units (see Harris 1989, 158), yet when these units are condensed into phases it sometimes leads to the complexities both within and between phases being overlooked (*cf.* Lucas 2012, 84).

As an example of this, let us consider the site of Barnhouse and in particular House 5. During the excavation of House 5 it was recognised that its stratigraphic sequence comprised so many instances of demolition and refurbishment that it was deemed necessary to divide its structural history into four primary phases: 5a, 5b, 5c and 5d (Downes and Richards 2005, 71–82). Yet this division is misleading. A closer inspection of House 5's stratigraphy does not reveal four discrete phases of habitation, but rather a continuous flow of structural change. During phase 5c, for example, the building incorporated as its outer wall a small section of masonry used during the initial acts of construction within phase 5a. This masonry was therefore situated directly above the glacial till, unlike the remainder of the walls associated with phase 5c. Accordingly, we can observe here how two phases had melded together to such an extent that their identification as discrete and separable units of analysis has come into question. The site of the Ness of Brodgar also demonstrates how problematic linear phasing can be. Although ongoing, excavations have so far revealed that almost all buildings on site underwent constant revision and episodic refurbishment. In this sense, buildings developed through a process of creative yet complicated reworking, as opposed to being predicated upon a preconceived blueprint. As a result, the task of assigning discrete phases to the stratigraphic sequence here has proved to be very difficult indeed (A.M. Jones pers. comm.). Furthermore, there is even evidence at Stove Bay to indicate that the position of the settlement in its entirety slowly altered over time (Bond *et al.* 1995), thus eroding any notion of spatial or chronological fixity.

The problems inherent within archaeological phasing are of course difficult to remedy, as the process of phasing a site has become so entrenched within standard archaeological practice. Yet a good place to start would be to refrain as much as possible from forcing our own sense

of linearity onto a stratigraphic sequence that is, much like that associated with House 5 at Barnhouse, non-linear in direction. Although uncommon and not particularly extensive in their scope, non-linear experimentations with narrative have previously been conducted within archaeological research (e.g. Cochrane and Russell 2007; Shanks 2004). Nevertheless, I believe that the novel *The Naked Lunch* by William S. Burroughs (1959) may be of most help to this thesis, as within it we can observe quite specifically how a non-linear narrative is formed. The novel comprises a collection of interlocking vignettes that bleed together to such an extent that they can be read in whichever order the reader pleases. Yet despite this non-linear structure there is an end goal to the narrative, which is to provide the reader with a comprehensive view of the mind of an addict, with all its associated insanity. Ultimately, this bleeding together of seemingly separate narratives shows how all phenomena, no matter how discrete they may at first seem, are interconnected in such a way that defies traditional views of spatial and chronological linearity. Chapter 5 will be implementing the same kind of narrative form, where connections between the archaeological evidence will be followed meticulously, regardless of how sporadic they may at first appear. As will be seen, each of these chapters will bleed together in such a way as to show that all aspects of the archaeological record are intrinsically linked and cannot in any sense be bracketed from one another. In this way I will be allowing the archaeological evidence itself to reveal the narrative of the Neolithic past, rather than superimposing a clean and linear one over the top of it.

It is also important to recognise that, while these kinds of non-linear narratives have not been fully realised within archaeological theory, they have witnessed sustained application within architectural theory. This is particularly true within the context of feminist architecture, which at its core can be seen as a critique of the western assumptions surrounding architecture and the cultural practices that pertain to them (Coleman *et al.* 1996). Rendell, for instance, in her treatise on ‘site-writing’ (2010), contends that the process of writing contributes to the formation of architecture in the same ways bricks and mortar do. In this respect, the process of writing, or textual communication, is an inseparable element of a building’s meaning. Within the work of Rendell, therefore, both subject and object, or the real and the fictive, bleed together to such an extent that they are, to all intents and purposes, one and the same. The work of Wigglesworth also deserves mention on this subject. As a practicing architect, Wigglesworth does not directly involve herself in the theory of textual description. However, the architecture of Wigglesworth can be seen as a means of communicating the idea that a building is, at its

most fundamental level, a vast bricolage of different and often unexpected fabrics and things. Her ‘Straw Bale House’ in London, for instance, is made up of walling composed of straw bales, sacks of cement and gabions filled with green concrete. Through this building, which is effectively a treatise on sustainable architecture, Wigglesworth highlights the fact that all buildings are composed of elements that bleed together in ways that elude everyday notions of time and space (Jencks 2011, 129). In many ways, both Rendell and Wigglesworth employ the same kinds of ‘bleeding devices’ put forward by Burroughs, and the narrative form of Chapter 5 will again take influence from these authors.

4.3 Principle 2: Becoming

It has been over a decade now since the movement known as *symmetrical archaeology* was introduced to archaeological theory (see Olsen 2007; Shanks 2007; Webmoor 2007; Webmoor and Witmore 2008; Witmore 2007 etc.). Symmetrical archaeology was based on several key principles that were set up in order to break through the perceived asymmetry within archaeological analyses between people and things. In this respect it can be seen as a ‘return to things’, predicated upon an ontological defence of them (Olsen 2010; Olsen *et al.* 2012, 12–14). More recently, these theoretical tenets have witnessed significant degrees of refinement and have resulted in the development of an assemblage theory quite specific to archaeology (e.g. Fowler 2017; Hamilakis and Jones 2017; Harris 2017; 2018; Jervis 2019; Jones 2016 etc.). As the name suggests, assemblage theory advocates a view of the archaeological record as constituting an assemblage comprising many different elements both physical and conceptual, or human and non-human. Within assemblage theory all of these different elements interact with one another in often surprising ways, and it is through these small-scale interactions that archaeological sites, features and artefacts are formed. As a result, their form is never predetermined, and they exist in a state where they “are shaped as they are made” (Hetherington and Law 2000, 131). Moreover, assemblages in assemblage theory are highly unpredictable formations – they are very rarely in a state of equilibrium and are susceptible to change at any moment (Fowler 2013, 24). In this sense, every entity within an assemblage has a tendency to merge together, thus breaking down our conceptions of the singular and the plural (Law 2004, 162).

The most notable influence on assemblage thought within archaeology has undoubtedly been the work of Deleuze, particularly his seminal publication *A Thousand Plateaus* (Deleuze and Guattari 1988). Yet several other authors deserve to be mentioned here, authors who helped pave the way towards archaeological theory's sustained interest in assemblages. For example, it was Latour, in his famous call for a 'parliament of things' (1993, 142–5), who played a major role in popularising the idea that an ontological symmetry exists between people and things – a symmetry that lies at the heart of his *actor-network theory* (ANT) (see Latour 2005). Moreover, through his critique of ANT's lack of temporality it was Ingold (2008) who introduced us to the notion of a *meshwork* – a system in which people and things are always in a state of flux and are always weaving in and out of differing configurations (see Ingold 2011). Bennett's oft cited thesis concerning 'vital materiality' (2010) was also important, as it demonstrated how agency, rather than being a universal human state, was in fact the outcome of an assemblage's specific configuration. Finally, the work of DeLanda can be seen as reinvigorating the ideas of Deleuze by making them more grounded and more applicable to a twenty-first century audience. Principally, he illustrated the illusory basis of both essentialism and idealism by arguing that all phenomena, regardless of scale, are highly specific and are best analysed through studying their constituent parts (e.g. DeLanda 2002; 2006; 2010; 2016).

Throughout the past decade or so, assemblage theory has been discussed rather intensively within the archaeological literature. Therefore, in terms of assemblage theory as a whole, there is little I can offer beyond a broad overview without repeating what has already been laboriously outlined before me. Yet there is a theoretical aspect closely associated with assemblage theory that I would like to advance here, one that has not necessarily been theorised to its full extent. That aspect is to do with the idea of *becoming*. In effect, *becoming* emphasises an archaeological feature or artefact's capacity to change over time and become something else. Such emphasis can be found within the works of both Deleuze and Ingold, however it is to the philosopher Henri Bergson that I would like to turn to in the development of this theory and its incorporation into this thesis' methodology. In particular, the work of Bergson is able to highlight a key ontological separation that lies at the heart of becoming, and that separation revolves around differences of *degree* and *kind*.

4.3.1 Differences of Degree and Kind

For Bergson, there were two forms of material configurations: those quantitative and those qualitative, with the former only occupying space and the latter occupying both time *and* space. To put this into perspective, when a collection of entities inhabits the dimensions of space alone, together they may be regarded as homogenous in that they only differ by *degree*. Yet if we were to introduce temporal dimensions to this situation, providing these same entities with the capacity for movement, then they would begin to display heterogeneity by falling in and out of differing configurations and would therefore begin to differ in *kind* (Bergson 1910, 122). An illustrative example that was often used by Bergson was that of sugar dissolving in a glass of water (e.g. 1911, 10). When considered in and of itself, a lump of sugar appears as a static and homogenous agglomeration. However, if we were to place it within a glass of water, allowing it to break down and interact with the water molecules, then its duration and capacity for movement is revealed to us. Deleuze later wrote that this particular analogy was an extremely important one, for it betrays duration (the meeting of time and space) not as an abstract universal but as a substantive phenomenon, or a change within a material configuration (1991, 37).

Within the philosophy of Bergson, changes in material configuration embody the most fundamental aspects of reality. Nothing ever stands still, because if it did its duration would be removed and it would exist outside time itself. For Bergson, therefore, every single entity within the universe, no matter how static or immutable it may seem, contains within it a force that threatens to destabilise it entirely. Yet this force is never a destructive one in the purest sense. In the words of Hallward, it can instead be seen as “the vehicle of continuous creativity” (2006, 15), or a force that propels the universe’s endless material evolution. In accordance with this view, the entire process of evolution can be defined by the continual transition of living or material entities from being different by degree towards different in kind, or from being spatially coexistent to durationally coextensive.

4.3.2 From One Thing to Another: Becoming Something Else

By recognising that reality comprises entities that exhibit both differences of degree and kind it then becomes possible to observe how these same entities are always in a state of *becoming*.

When I use the term ‘becoming’, what I am essentially referring to is the transformation of an entity into something else – a transition in *kind*. In order to fully comprehend precisely what this entails it is vital that we now reconsider the ontological basis of assemblage theory. In effect, it may be argued that a transition in kind can only occur when the assemblage constitutive of an entity has been reconfigured to such an extent that it is now unrecognisable from what it was before. Deleuze argued that such a transition occurs each and every time an entity is replicated, as this entity will be subtly different from that which went before it (1994). Such a proposition is true to a certain extent. If a potter attempted to manufacture a hundred identical pots, it would be impossible for each pot to be perfectly identical, no matter how skilled that potter may be. Each pot may appear identical at first glance, yet there will inevitably be subtle variations in, for example, fabric, even if such variation could only be properly observed under a microscope. However, by accepting Deleuze’s proposition unreservedly we are at risk of assuming that the only differences that count are those of degree and not necessarily those of kind. Subtle changes to an assemblage’s configuration can of course be significant ones, yet in my mind they fail to constitute a process of becoming in their own right. What we need instead is a theoretical approach that recognises the point at which an entity has truly become something else. To this end, let us consider what Harman terms *real* and *sensual* objects (2011).

According to Harman, *real* objects withdraw from us; they are not the equivalent of our conceptions of them and they therefore exist whether we conceive of them or not. This withdrawal is quite similar to what Heidegger termed *lēthē* or ‘concealment’ (1981, 193–4), through which a being’s place in the world is taken for granted and its true presence has been forgotten. In fact, Heidegger argued that such a state of concealment, or ‘ready-to-handness’, is the default state of all functional objects, and that this concealment is only shattered once the object is broken or malfunctions (Heidegger 1962, 102–7). As Harman says, it is ‘invisible *in principle*’ (2002, 45–6, emphasis in original). Yet within the context of the *real* object, this concealment differs in the sense that it is a concealment not of the utility of an object but rather its true form (Harman 2011, 35–50). Alternatively, *sensual* objects impinge upon our senses as they are coated with accidental qualities (Harman 2011, 20–34). These qualities conceal an underlying objective essence or *eidos*, and if we strip the object of these qualities, we will gain an understanding of what this object really is. In more basic terms, these accidental qualities are those characteristics of an object that are not essential to the object’s classification as a

specific type of object. For instance, if I had a brown cat sat in front of me right now, and by some magical ability I removed the brown colour from its fur, it would still be a cat. In other words, the brown fur is only an accidental quality for the cat.

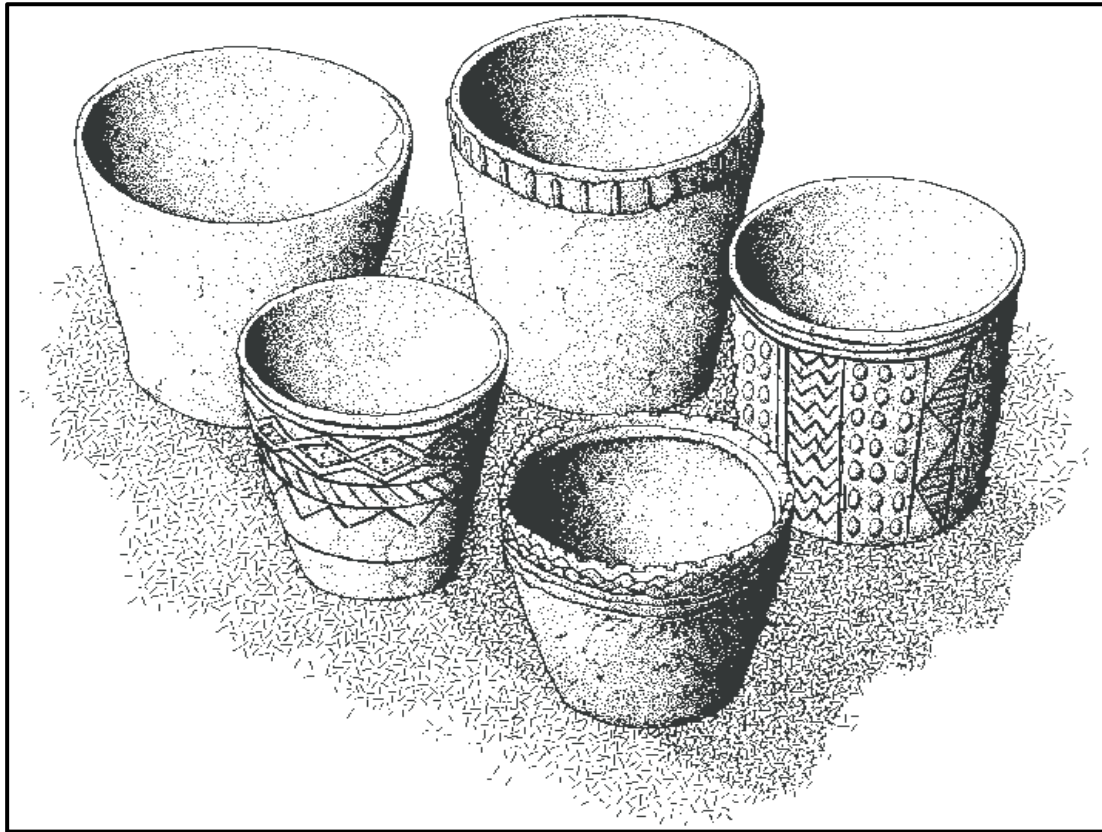


Figure 4.3. Illustration of Orcadian Grooved ware pottery (from Cowie and MacSween 1999)

In order to illustrate how this approach can be used to understand archaeological objects, let us consider one of the most meticulously studied collection of pottery from Neolithic Orkney: the Grooved ware assemblage from Barnhouse. Petrological analysis of this assemblage revealed the concurrent use of six distinct fabric types, which were identified as Fabrics A, B, B1, C, D and E. These fabrics were categorised in consideration of their tempering agents, which included, in respective order: rock with a frequency of 10-30%; rock with a frequency of 50% or greater; rock with a frequency of 50% or greater but with approximately 10% shell; shell with a frequency of 10-30%; untempered but with rounded quartz fragments; and completely untempered (Jones 2005b, 261). In addition, analysis of all the sherds collected throughout excavation revealed that vessel size ranged significantly, although three broad size categories were determined based on wall thickness and overall volume. These included ‘small’ (wall thickness between 3-7mm, internal volume of 2,000-3,000cc), ‘medium’ (wall thickness

between 9-15mm, internal volume of 2,000-8,000cc) and ‘large’ (wall thickness between 16-30mm, internal volume of 10,000-35,000cc) (Jones 2005b, 262–3). The decorations incorporated onto the outer walls of these vessels also displayed large degrees of variety, which included the employment of zones demarcated by, for example, incised lines or dot impressions, which were themselves infilled with a range of applied or incised decorative elements (Jones 2005b, 264–5). In fact, from a comprehensive perspective it seems as if the only element of the Grooved ware assemblage that remained consistent was the morphology of the vessel itself, which was in each case broadly bucket-shaped (Jones 2002, 120). The prevalence of this distinctive shape meant that next to no correlation could be identified between vessel morphology and function (A.M. Jones and Richards 2005, 39).

From this analysis, we can see that the Barnhouse pottery assemblage possessed two main accidental qualities that were not essential in the identification of each vessel as Grooved ware. These included the tempering agent and the precise decorative element applied to the vessel’s body. While these *were* vitally important elements of the assemblage, they appear to have been used more for the purpose of gifting each vessel with a sense of character and to differentiate it from others throughout the settlement. The essential characteristics within the assemblage, however, related to morphology. These characteristics included the vessel’s flat base along with its roughly bucket shape. In addition, it seems as if the manufacturing process defined each vessel as being Grooved ware as well, which always involved forming the vessel from the base upwards using thin coils of clay. If, for example, the Neolithic potter (for whatever reason) decided to incorporate both aforementioned accidental qualities when manufacturing the Grooved ware vessel, but simultaneously gave it a round base, then this vessel would no longer have been a Grooved ware pot and would have completely stood out among the assemblage as a whole. The pot would have *changed* from being Grooved ware into something else. Put differently, the assemblage constitutive of the pot would have undergone significant reconfiguration, and as a result the pot would have transitioned from being different by degree to being different in kind.

In sum, it is through understanding the qualities that make up an assemblage that we can pinpoint the moment at which that assemblage is able change qualitatively, by becoming something else. The beauty of this kind of analysis is that it can apply to all types of

assemblages, whether they constitute small-scale artefacts such as pots or flint tools, or far larger sites such as buildings, henge monuments or entire settlements.

4.3.3 Conclusion

Within this section I have outlined the importance of becoming as it relates to an archaeological assemblage. Within traditional archaeological thought, it is often assumed that artefactual change was imposed from the top down, implying that a material thing was always subordinate to the concept that formed it (*cf.* Ingold 2007; Conneller 2011; Fowler 2017). For the purposes of this thesis, this traditional view is inadequate as it is based entirely upon the idea that the function of archaeological features and artefacts are primarily to serve as conceptual representations. An emphasis on becoming is far more satisfactory, as it allows us to perceive how these same features and artefacts could change from the ground up, thus countering the notion that the things of the past were fundamentally static and inalienable. Within Chapter 5, the notion of becoming outlined here will be indispensable, as by treating the architecture of Neolithic Orkney as an everchanging assemblage, it becomes possible to appreciate the intricacies of how this architecture developed over time.

4.4 Principle 3: Fragmentation

4.4.1 Introduction

Within this section I will outline a methodological principle that is quite specific to the architecture of Neolithic Orkney. This aspect is based upon the idea of *deconstructivism*, and its implementation within the following chapters will again serve to counter our current representationalist view of Orcadian architecture. In particular, it will be argued that Richards' representational view of architecture as both static and unchanging is in fact a product of modern architectural thought. However, before positioning deconstructivist theory within this thesis it will first be necessary to outline the architectural tradition from which it emerged and against which it stands.

4.4.2 The Problem with Western Architecture

Since at least the time of Vitruvius in the late first century BC, western architecture has been at its heart an idealistic endeavour. Within his famous *Ten Books on Architecture*, Vitruvius outlined the key themes that every future architect should adhere to. These themes included *utilitas* (utility), *firmitas* (strength) and *venustas* (beauty) (Vitruvius 1960). The last of these themes is of course a rather subjective one, yet at the heart of Vitruvius' conceptions of beauty was both symmetry and proportion, as encapsulated within his *Vitruvian man*. In essence, the Vitruvian man was an idealised representation of the masculine body whose symmetry and proportions were so perfect that they were able to produce the perfect circle and the perfect square. The work of Vitruvius failed to properly take root within the Roman world and instead saw widespread popularity just under a millennium afterwards from Carolingian times onwards (Kruft 1994, 30–40). Yet it is Vitruvius that has shaped our perceptions of what 'good architecture' should look like like no other architectural theorist, and it remains doubtful whether anyone before him ever conceived of the ideals of symmetry and proportion within architectural design in the same way that he did (Hon and Goldstein 2008, 99–100). It should be mentioned, however, that Vitruvius did not treat architecture as idealised *per se*, as his work was first and foremost a treatise on civil engineering. That is to say, the work of Vitruvius laid out architectural *prescriptions*, or guiding principles, rather than exact blueprints. In this respect, Vitruvius gave large amounts of freedom to his builders or contractors, who were encouraged to adjust his prescriptions to fit the precise circumstances of the construction project at hand (Edlund-Berry 2005, 10).

The influence of the Vitruvian treatise could be felt particularly during the Renaissance, principally through the work of the Italian architect and polymath Leon Battista Alberti. In 1452 he published his own architectural treatise entitled *On the Art of Building in Ten Books* (Alberti 1988), which took Vitruvius' thematic triad (utility, strength and beauty) and expanded upon it (see Hendrix 2013, 63–83). More specifically, he was inspired by the geometric perfection encapsulated by the Vitruvian man, and Alberti strove to develop this geometric ideal into a concrete set of rules governing all architectural projects. As a result, it was the job of Alberti's architect to bring to the surface the deeply buried geometric order that underpins the whole of the physical universe (Alexander 2019, 117), such as the circle or the square. In order to accomplish this, Alberti abandoned the Vitruvian notion of architectural prescription

and instead he focused on creating blueprints that could be translated precisely, regardless of a building project's local circumstances. Here, Alberti placed prime importance on the act of drawing – or *disegno* – in setting out the concrete and inalienable contours of a building. Interestingly, direct parallels can be seen between Alberti's treatises on architecture and painting, as in both the act of drawing (whether it be a building or the human body) served as the most fundamental aspect of design (see Alberti 2005).

The period within which Alberti worked marked a major turning point in the role of the western architect, as it is during this time that we can see the architect becoming more of an artist and designer, and less of a craftsman and builder. The changing responsibilities of the architect in Elizabethan England demonstrates this shift rather well, where abstract drawings and models began to play an increasingly important role in architectural design, which in turn diminished the hands-on construction skills possessed by the architect in medieval times (Wilton-Ely 2000, 181). Overall, this evolved view created the illusion of architectural perfection. The modern architectural project thoroughly encapsulates such idealism, which begins with a blueprint, and through the process of construction this blueprint is then translated into a material form. The role of the architect within the western world, therefore, has been built up to a privileged position in which he or she is seen to have complete control over architecture and the material world in general (Awan *et al.* 2011, 27).

Moreover, setting up a direct equivalence between art and architecture in this way inevitably leads to a prioritisation of finished form. To an artist, the finished form that any given artwork will take means everything, as it is in this form that the weeks, months or even years of hard work necessitated by an artistic project will all come to fruition (or not). If executed well, this final form is the ultimate and most authentic embodiment of the artist's ideas. Broadly speaking, modern architecture is predicated upon the same set of ideals, and I would argue that it was Alberti's influence in particular that was responsible for this. Yet unlike a painting or sculpture, when the construction of a building has come to an end its final form is not simply preserved in a museum or gallery. Rather, the building is almost immediately put to use, and the activities of its inhabitants will continue to shape the building, to chip away at its 'final form' until it is no longer the idealised structure that the architect intended it to be. Or, as Till poignantly summarises:

“One knows in one’s heart of hearts that the suspension cannot last, but the state is hypnotic while it does... And when it all goes wrong afterwards, when reality truly does upset the ideals, one can always resort to the publication of a monograph to resuscitate and perpetuate the mythology of a perfected state of architectural production.”

(2005, 30)

Ingold also echoes these sentiments within his thesis on the process of building (2013, 47–59). Here, Ingold demonstrates just how foolhardy the privileging of the architect’s mind and ideas can be in practice. In his argument, he draws attention to the significant number of post-construction claims made against architects due to water damage, and how the prevention of such damage is usually never considered within an architect’s blueprints (Ingold 2013, 48; *cf.* Hill 2013). For Ingold, the job of the modern architect is to design a building that is artistically impressive in its finished form. Anything that happens to the building after the realisation of this final form (such as water damage) is of little consequence, as the dream has already been realised. Yet Ingold goes on to argue that in most cases this modern conception of architectural purity has little impact on the small-scale processes involved in constructing buildings. One of the examples that Ingold draws on in demonstrating this discordance is the process involved in forming an irregularly coursed medieval building, where the exact shape of a piece of masonry is always determined by the shape of the gap left by the previous pieces (2013, 54). Sometimes these gaps were quite large, in which case the builder would press smaller pebble-sized stones into the wet mortar between these gaps in order to ‘fill out’ the wall (a procedure known as ‘galleting’). Turnbull further demonstrates how the same improvisational processes went into the building of entire medieval cathedrals (2000, 55–90). According to Turnbull, the construction of a cathedral during this time was the result of multitudes of different contractors all collaborating together and feeding off each other’s ideas. In other words, when analysing the construction of a medieval cathedral it is impossible to pick out any one individual responsible for its design. In both of these instances it seems as if the prospect of an idealised finished form was simply not necessary in order to realise an architectural project that was fit for purpose.

Within her studies of the Early Neolithic long barrows of southern England, McFadyen has also demonstrated how western architectural ideals had little bearing during prehistory. McFadyen argues that these long barrows simultaneously embodied what she calls ‘slow’ and

‘quick’ architecture (e.g. 2006; 2007). The former mode of construction is quite conventional in that it involves a gradual accretion of building materials, which in turn create new layers of structural stability. The latter, on the other hand, is a far more erratic process. It comprises the fixing together of unstable building materials that are inclined to fall apart if not assembled rapidly. As an illustration, McFadyen outlines the fine-grained processes involved in the construction of the Ascott-under-Wychwood long barrow. She details how “[b]y setting stones on edge, an unstable material was created, and need was generated for future work; otherwise the building project would have collapsed” (McFadyen 2016, 55). Ultimately, it is argued that the construction of the long barrow consisted of events that were punctuated by spontaneity and expeditious on-the-spot decision-making where, for instance, human bodies propped up stonework so wooden panels could be jammed desperately into position (McFadyen 2006, 127–8). For McFadyen, the notion of a final idealised form meant next to nothing to these builders, as their long barrows were quite literally constructed on a bit-by-bit basis.

As has been demonstrated in the previous chapter with reference to the work of Richards (see Section 3.4), such a privileging of final form has deeply permeated our understanding of domestic and mortuary architecture within Neolithic Orkney. More explicitly, Richards treats all forms of architecture as adhering to a final form in which a cosmological representation is perfectly replicated. Such a model will inevitably view all elements of a building as being fundamentally homogenous. Any differences exhibited throughout the building will only be differences of degree, as each of its constituent parts is set up to represent, to one degree or another, the same thing. From an architectural perspective this position is a problematic one, as prehistoric architecture was, by definition, vernacular – it simply did not require the guiding hand of an almighty architect to delineate its final form, as demonstrated by McFadyen. Barrett has also argued the archaeologist’s obsession with the final form of prehistoric structures has impeded his or her ability to engage with their more practical aspects (1994, 12), which is true. From a certain viewpoint, what is perhaps needed in rectifying this is, to paraphrase Barthes (1977), ‘the death of the architect’. Although as Hill correctly remarks, it will suffice for us to recognise the death of a *certain type* of architect (2003, 70), one who mistakenly believes that they have total dominance over architecture. Furthermore, it is with this passing that we can change our perceptions of how prehistoric architecture was built.

4.4.3 Archaeology and Architecture

This section will briefly discuss the existing crossovers between archaeological and architectural theory, with the intention of providing a backdrop to the principle of fragmentation outlined in Section 4.4.4. Here it will be demonstrated that, while the methodology underpinning this thesis can be seen as an attempt to form a theoretical bridge between the disciplines of archaeology and architecture, this attempt has nonetheless been preempted by some important pieces of work.

Within the realm of archaeological theory, *Architecture and Order* (Parker Pearson and Richards 1994a) was significant, as it was one of the first publications that dealt exclusively with the means by which archaeologists should treat historic and prehistoric architecture. This publication was instrumental in underscoring the importance of architectural space as a medium for understanding the ways in which past peoples structured their daily lives. However, this publication adhered quite strictly to the post-processual school of thought, and as a result it is packed with the kinds of theoretical drawbacks discussed in Section 3.4, particularly those related to cosmology and representation. Indeed, Richards' analysis of the Late Neolithic house in Orkney formed an important part of this publication (Parker Pearson and Richards 1994b). *The Social Archaeology of Houses* (Samson 1990) was also significant for setting a broad foundation from which archaeological architecture could be studied, and in many ways this publication anticipated the kinds of ideas put forward by Parker Pearson and Richards. Yet a prime focus of this publication was the sociology of houses – scant attention was given to buildings themselves. More recently, the work of McFadyen (e.g. 2006; 2007) has made a very important contribution to the study of archaeological architecture, particularly as it views buildings not as pre-packaged wholes but as substantial construction projects that draw people into long-term commitments. As has been discussed above in Section 4.4.2, her work on Neolithic long barrows thoroughly epitomises this view, where she considers not only the archaeological materials that made up these structures but also the construction related performances that held them together. This focus on how people and things come together to form archaeological architecture was later expanded upon within *Elements of Architecture* (Bille and Sørensen 2016). Overall, the work of McFadyen and that of Bille and Sørensen can be seen as clear theoretical precursors to this thesis.

Although not situated within the field of archaeology *per se*, the work of Ingold has also demonstrated a tendency to draw on both archaeological and architectural theory in studies of the anthropological present. Ingold sees both archaeology and anthropology as the study of how humans interact with their wider landscape, albeit from different temporal perspectives (2000). Within this frame of thought, Ingold's take on the history of architecture is very interesting, as he views the process of constructing buildings as an adaptive mechanism shared amongst both human and non-human species. Most famously, Ingold has drawn attention to both the beehive (1983) and beaver lodge (2000, 173–8) as examples of non-human architecture that is built with a pre-determined form, but which does not necessitate a designer. Ingold views human architecture, particularly throughout the archaeological past, in much the same way. More recently, Ingold has discussed in further detail the importance of drawing into closer alignment both archaeological and architectural theory (2013). As has been mentioned above in Section 4.4.2 his later work has been instrumental in critiquing our current idealised vision of architectural design and its redundancy to the archaeological record. Although the use of archaeological theory within the field of architecture is a rarity, some significant contributions have nonetheless been made. Hill, in his recently published work on the architecture of ruins (2016; 2019), stands as an important example. Here, Hill counters the modern notion that architecture stops being architecture once it has become ruinous and argues instead that the dilapidation of a building is but another stage in a building's existence. Again, the works of Ingold and Hill serve as foundations from which this thesis can grow, particularly in relation to how they highlight the extended temporalities of buildings.

Furthermore, I find it important to mention here that the seeds of the non-representational approach outlined within this thesis have already been planted within the architectural theory, to one extent or another. The work of Till (mentioned above) is of course a fine example, in which the dominance of final form is actively challenged from within the discipline of architecture itself. In addition, many of the philosophers cited throughout this chapter have already had an influence within the field of architecture. For example, architectural theorists such as Ballatyne (2007), Brott (2013) and Frichot (2013) have advocated quite strongly for a Deleuzian vision of architectural design, while authors such as Parisi (2013) and Phillips (2017) have been influenced by Bergson's theory of time and space. Such non-representational approaches within the field of architecture are perhaps indicative of the fact that, much like archaeology, architecture is both a discipline *and* a practice. It is field that is predicated upon

abstract design and practical engagements with the physical world, or put differently, it necessitates an engagement with both the representational *and* non-representational.

4.4.4 Fragments of Architecture

Within this section it will be argued that the theories of *deconstructivism* and *fragmentation* offer the best means of countering the effects of the modern architectural mindset on our understanding of the Neolithic architecture of Orkney. It should be mentioned from the outset that, in order to avoid theoretical confusion, the methodology of fragmentation put forward here is unrelated to that devised by Chapman (2000; Chapman and Gaydarska 2007). However, as both forms of fragmentation involve the chaining together of archaeological fragments in forming unitary wholes, there will inevitably be overlaps between the two. It is *deconstructivism* – a school of thought based entirely upon buildings – that has formed the basis of the version fragmentation outlined within this section.



Figure 4.4. The Vitra Design Museum, Weil am Rhein, by Frank Gehry, 1989 ([www6](http://www.vitramuseum.com))

Within architectural theory, the practice of deconstructivism was first introduced during the mid-twentieth century by the philosopher Jacques Derrida, who originally trained as an

architect. This approach was based on his own theory of *deconstruction*, which was put forward as a tool for probing into, and thus dissecting, social phenomena such as literary texts, philosophical positions and political institutions, in order to reveal the paradoxical tensions that constitute them (Derrida 1976). Accordingly, Derrida saw the very moorings of society as being predicated on highly abstract structuring principles whose existence was both alienable and unstable as a result of this semiotic arbitrariness. It was precisely this instability, according to Derrida, that made social structures susceptible to an analytic deconstruction that “opens onto possibilities of arrangement or assembling, of being together...that are not necessarily systematic” (Derrida 1995, 212). Fundamentally, deconstruction works on the premise that there exists no underlying rational essence to reality. Rather, reality is a performative construct that is enacted under specific historical conditions.

Through the medium of deconstructivist theory, Derrida brought these principles into the field of architecture with the intention of critiquing traditional Euclidean conceptions of space and structure (Vitale 2018; Wigley 1995). Above all, deconstructivist architecture abolishes the notion that buildings embody a complete and harmonious integrity and alternatively it embraces an ‘aesthetics of fragmentation’, in which constituent architectural elements are visibly dismantled. As a result, deconstructivism transgresses western architectural thought as it embodies an approach to architecture that is “anti-form, anti-hierarchy, anti-structure – the opposite of all that architecture stands for” (Derrida in Tschumi 1996, 250).

To illustrate these precepts further, let us consider the Vitra Design Museum in Weil am Rhein, southern Germany (fig. 4.4), which stands as one of the seminal deconstructivist projects. Designed by Frank Gehry in 1989, this piece of architecture juxtaposes structural forms that are at once curved and angular, free flowing and rigid. Furthermore, these paradoxical forms are assembled into individual structural units, each one distinct from the next. Comprehensively speaking, the design of this building transgresses the rational and the logical; it is conspicuously both messy and deconstructed, yet each constituent element simultaneously “resolves itself into an entwined coherent display” (Heyer 1993, 234). From the audience’s perspective, this play on form lays bare the idea that the integral structure of a building, as perceived in its totality, is entirely dependent on its elemental parts. To phrase this another way: architecture is fundamentally *performative*, with each element contributing different attributes to its overall performance, and it is this performativity that creates the illusion of a

static harmony, or an underlying architectural essence. Yet in order to fully appreciate the performativity of architecture it is crucial that we recognise that architectural space is always heterogeneously constituted.

The heterogeneous constitution of space has been subjected to much discussion over the past few decades. For instance, in an attempt to ward off the perils of perceiving space in overly positivist terms, both Soja (1989) and Massey (1994; 2005) contend that space is, at its most fundamental level, a product of competing forces and is therefore highly unstable. For Soja, space is socially constructed and is *a priori* warped by politics and ideology. For Massey the ever-changing nature of space goes deeper than this, as it is continually shaped and reshaped by the passing of time. In this sense, when referring to the idea of space we should in fact be talking about ‘space-time’ (1994, 2), or in Bergsonian terms we should be referring specifically to the concept of *duration* (see Section 4.3.2). As the duration of space develops, so too does the multiplicity of humans and non-humans that make it up. Space is, from this perspective, a patchwork of different forces – it is defined by its ‘throwntogetherness’ (Massey 2005, 149–62). Within the context of architectural theory, Till also professes much the same view, yet his is one that applies specifically to built spaces. This view can be seen in his advocating of what he calls ‘slack space’ within architectural design (Till 2009, 133–4). Much like Massey’s thrown-together space, slack space is durational; it hinges on the realisation that architectural space is always predicated upon *change*. Till, however, argues that such change is never predetermined. Instead, he challenges us to conceive of architectural change as resulting from the infilling of a building’s space by different agencies over time. Within his famous *Arcades Project*, Walter Benjamin (1999) also recognised the multiplicity of agencies constitutive of architectural space. Yet Benjamin went a stage further than this, by observing the extent to which such agencies affected and played off one another, almost as if they were in a constant state of competition. In observing the activities of one Parisian arcade, Benjamin stated:

“If a shoemaker’s shop should be neighbour to a confectioner’s, then his festoons of bootlaces will resemble rolls of liquorice. Over stamps and letterboxes roll balls of string and of silk. Combs swim about, frog-green and coral-red, as in an aquarium; trumpets turn to conches, ocarinas to umbrella handles; and lying in the fixative pans from a photographer’s darkroom is birdseed.”

(1999, 872)

In my view, the above quotation wonderfully demonstrates the importance of architectural deconstruction. It was through deconstructing an arcade and describing (albeit in a poetic manner) its constituent elements that Benjamin became fully cognizant of the fact that architectural spaces are formed of entanglements of heterogeneous performances. Moreover, it was through such deconstruction that Benjamin was able to pick up on how each performance could change qualitatively in response to other performances being conducted within the same architectural space. Bootlaces could become liquorice; combs could become fish.

Within the context of Orkney, these kinds of observations are crucial as they have the capacity to demonstrate how simplistic our current representational view of Neolithic architecture really is. For example, it is clear to see that many pieces of domestic architecture in Orkney are broadly separable into a central area accompanied by conjoining recesses. Yet as a result of our representational understanding of this architecture, this structural form is often interpreted in its entirety as a cruciform layout, therefore obscuring the different performances that undoubtedly occurred within each of its spaces. Chapter 5 of this thesis has accordingly been structured in such a way as to accentuate the multiple performances that occurred throughout a given building. Put differently, by taking inspiration from deconstructivist theory these chapters will involve *fragmenting* Neolithic architecture into its constituent parts.

However, it is worth mentioning that deconstructivism does bring with it certain problems that relate to the postmodern tradition from which it emerged. While a philosophy of architectural fragmentation occupies a central precept of deconstructivism, each fragment is nonetheless conceived as a textual metaphor that requires ‘reading’ (see Section 3.4.1). In fact, some have gone as far as describing this approach as a practice of ‘archetexture’ (Woods 1999, 104). Furthermore, by focusing too much on structural disorder it may be argued that deconstructivism discards all notions of functionality, scale and context (Mitrović 2011, 163), resulting in the construction of buildings that are both meaningless and useless. Simply put, they cease to be architecture altogether (Salingaros 2004, 120). It is not my intention within this thesis to wholeheartedly endorse the philosophy of deconstructivism. An overreliance on metaphor and a neglect of function are, after all, precisely the kinds of drawbacks that I am earnestly trying to avoid within this thesis. What is being argued here is that the idea of fragmentation, once stripped of its postmodern connotations, is perfectly situated to impede

representational views of architecture and to bring to the fore its inherent *non-representationalism*. Or, by fragmenting a building into its constituent parts and studying them accordingly we can analyse a building from the *bottom-up*, rather than the *top-down*, as if we were taking it apart piece by piece and putting it back together again. By doing this, it becomes possible to avoid viewing this same building as a representational whole, or a structure predicated entirely upon its perceived final form.

Yet as DeLanda reasons, as much as we may theorise about the benefits of an inverted bottom-up approach based on epistemological reductionism, in practice it is impossible to completely abolish the idea of the representational whole (1997, 18). He argues instead that both the ‘top-down’ and ‘bottom-up’ approaches should be used to complement one another. This is a sober suggestion, as even within forms of analysis that identify with a ‘bottom-up’ epistemology the author will have to begin his or her study with at least some form of discrete entity, which will inevitably be defined as a whole in itself. This is an argument that will be considered constantly throughout this thesis. In analysing Orcadian architecture, it will be useful to consider each architectural element individually because, as mentioned above, such an epistemology actively facilitates the breaking of representation and linear narrative. So, how does one go about choosing the correct architectural elements to begin their analysis with?

Here, the scale at which each operates is of crucial consideration. When I use the term *scale*, I am intentionally refraining from defining it in terms of ‘small’ and ‘large’ or ‘micro’ and ‘macro’; such a bifurcation is overly abstract, implying high degrees of ontological fixity where there are perhaps none. Furthermore, this hierarchical vision of scale also actively ignores the effects of horizontal relationships on the ground (Marston *et al.* 2005). Again, following DeLanda I am considering scale as something that is immanent to the archaeological evidence, in the sense that the scale at which any entity operates may only be defined with reference to other surrounding entities (2006, 32). When analysing Orcadian architecture, it will be useful to choose as one’s starting point those elements that are ‘small’ in comparison with the structures within which they are situated, but not so small as to obscure the architectural context altogether. In considering this, it would be best to pick out those elements that would have presented clear areas of focus for Neolithic inhabitants. Within this thesis I will do just this, and I have chosen to deconstruct *hearths*, *entrances*, *dressers* and *recesses*. Focusing on these

elements in particular will also provide a firmer springboard from which to critique Richards' representational view, as these are the elements that are central to his cosmological scheme.

It is important to mention at this juncture that the relationship between parts and wholes within fragmentation theory does not always have to be a stringently hierarchical one. Whereas certain entities – be they structures, features or artefacts – *can* be drawn into and become part of a wider assemblage that itself constitutes a whole, this whole is never monolithic. There are three main reasons for this. Firstly, an assemblage is always susceptible to change, as discussed in Section 4.3.2, meaning that the precise relationship between part and whole is always in flux. Every assemblage, or whole, is after all haunted by the spectre of being organised in an entirely different way (Gagnolati and Holzhey 2017, 10–11). Secondly, the configuration of those constituent parts that make up an assemblage is not necessarily subordinate to a traditional or standardised way of constructing or designing buildings. As briefly touched upon in Section 4.2, Wigglesworth's bricolage technique is an excellent example of how these configurations can be more or less unique, being based more on happenstance than intentional planning (see Hanlon 2009, 215–16). Thirdly, all architectural components must be recognised for their proficiency to comprise a thing in itself in tandem with their capacity to constitute parts of a whole building. After all, if we are only cognizant of the relational properties of a certain component then it will be impossible for us to truly understand its intrinsic properties (Langton 1998, 129).

4.4.5 Crossing Divides

“When I designed the M2 building...I believed that if I created an architecture of fragmentation, the building would dissolve and blend into the chaos that surrounded it.”
(Kuma in Bogner 2005, 27–8)

Above, the Japanese architect Kengo Kuma encapsulates one of modern architecture's most misleading precepts – that a building somehow stands alone, divorced from and apparently unconnected to its wider environment and historical circumstances. Through the medium of the M2 building in Tokyo (fig. 4.5), which was at its heart a deconstructivist project, Kuma strove to demonstrate how architecture was always tied to the spatial and temporal chaos in which it was caught up in. In every sense of the word, the M2 building is a monstrosity; through

its construction Kuma attempted to bring classical architecture kicking and screaming into a postmodern world. On the one hand, it is composed of Romanesque arches, deconstructed entablatures, and features an enormous Ionic column at its centre. On the other hand, all these elements were constructed from reinforced concrete, and sit directly alongside imposing glass curtain walls. Overall, the M2 building has the appearance of a Greco-Roman temple, a Brutalist office block and a surrealist painting all mashed together into one structure.



Figure 4.5. The M2 Building, Tokyo, by Kengo Kuma, 1991 (from Steele 2017)

Despite its monstrous appearance, the M2 building illustrates quite spectacularly how the process of fragmentation can reveal the permeability of architecture. By fragmenting the M2 building into a series of distinct architectural influences, Kuma was able to demonstrate the extent to which seemingly distinct buildings can bleed into one another. Within architectural theory, the practice of dividing buildings into ‘types’ has been commonplace since at least the work of Quatremère de Quincy in the early nineteenth century. In this respect, the ways that architects treat buildings mirrors the ways that archaeologists treat artefacts. Indeed, it may come as no surprise that as well as being a pioneering architectural theorist de Quincy was also an avid antiquarian. For de Quincy, ‘type’ was a symbolic concept – it was an idea that provided a building with meaning and which served as a set of rules governing its construction (1999, 38). During the twentieth century the theory of architectural typology underwent significant refinement, particularly by authors such as Pevsner (1976), who created a chronological

sequence for western buildings based on function. Architecture for Pevsner could be divided into such functional types as theatres, shops, prisons, libraries, and so on. Moreover, it is clear that morphology as well as function plays a critical role in forming architectural typologies today (Jennings 2007, 48), and as such we can sub-divide buildings even further based on the shapes of their footprints.

Within the literature of Neolithic Orkney, such a bipartite architectural typology is all too familiar. In classifying mortuary architecture, for instance, it is customary to define a structure's function (e.g. 'tomb'), then its morphology (e.g. 'stalled'), before bestowing it with a 'type' (i.e. 'stalled tomb'). However, when it comes to analysing Neolithic architecture as a whole, there is an implicit assumption within the literature that there exist only three basic types: houses, tombs and monuments. Moreover, there also exists the twin assumption that there was very little overlap between these basic types, and that if such overlap did exist then it was merely an anomalous phenomenon, or an exception to the architectural rule. In Section 3.4.2 it was discussed how Richards attempted to reconcile this typological divide, with moderate degrees of success. Nevertheless, Richards' position is equally problematic, as it infers that all forms of architecture are representations of the same cosmology and are consequently all more or less homogenous. In order to thwart these problems, what is needed in this thesis is the recognition that different types of architecture – whether they are separable by function or morphology or both – have the capacity to cross typological divides in ways that allow their heterogeneous constitution to persist. The best means of accomplishing this is, in my opinion, through fragmentation.

It was discussed in Section 4.4.4 how a procedure of architectural fragmentation allows us to overturn the modern obsession with final form. What I failed to mention was that fragmentation also grants us the capacity to appreciate more thoroughly the permeability of a building's perceived boundaries. Simply put, it is by fragmenting a piece of architecture into its basic elements that it becomes possible to compare these elements on a building-by-building basis. It is of course true, as McFadyen rightly remarks, that "[a]rchitecture constantly extends beyond the limit of a building's walls" (2013, 366). However, what I am getting at here is that architecture constantly extends beyond typological as well as physical walls. By way of example, tombs may come in many shapes and sizes, yet the presence of at least one burial (probably human) within its confines is regarded as its most essential of defining

characteristics. If a human burial were discovered within the confines of a building that functioned as a *house*, then the typological bases of defining both houses and tombs would be brought into question. In short, both house and tomb would fuse together to such an extent that it would become difficult to draw any clear-cut boundaries between them. Such architectural fusion has been observed on a fairly regular basis throughout Neolithic Europe. Bradley, for example, saw that the construction Neolithic long barrows in northwest Europe was intimately connected to the construction of earlier Linearbandkeramic longhouses (1998b, 36–50; 2002, 29–34). He argued that as the long mounds broadly shared the same size, spacing, orientation and locality with the longhouses, then the latter must have evolved into the former. In this sense, “the houses of the living were supplanted by the houses of the dead” (Bradley 2002, 30).

In addition, this blurring of the domestic and mortuary can be synchronic as well as diachronic, and we need look no further than the Neolithic of Orkney in order to witness this. Within Hut 7 at Skara Brae the remains of two adult females were discovered beneath the right-hand wall, both held within a single cist (see Section 7.3). Indeed, it is due in part to its embodiment of both domestic and mortuary activity that Hut 7 is often considered a dwelling of special significance within the settlement (e.g. Richards 1991; *cf.* Clarke 2003). Yet beyond ascribing it with a special status, how do we go about describing Hut 7 in light of what was found there? The first thing that needs to be mentioned here is that traditional typological description is wholly insufficient. As will be seen throughout Chapter 5–8, through analysing chosen architectural fragments (i.e. hearths, entrances, dressers and recesses) on a cross-building basis it will become possible to observe precisely these kinds architectural transgressions. Overall, these transgressions are very important, as they serve to accentuate Neolithic architecture’s inherent non-representationalism.

4.5 Conclusion

Throughout this chapter I have outlined a methodology with which to analyse the Neolithic architecture of Orkney in a non-representational manner. To recap, this methodology comprises *three* main principles, including *description*, *becoming*, and *fragmentation*. The analyses conducted in the following chapter will revolve around these three principles. Moreover, this chapter will be structured with these principles in mind. In Section 4.2 it was stated that, following Burroughs’ *The Naked Lunch* (1959) as well as those narrative forms outlined in the

works of Rendell and Wigglesworth, Chapter 5 will be non-linear in format. As such, there will be no real beginning or end to the narrative. Therefore, the starting point from which my analysis develops will be a relatively arbitrary one. As Latour has argued elsewhere, when describing the constitution of a non-linear assemblage it seldom matters at which point one starts (2013, 30).

Having said this, I have chosen to begin each section of the Chapter 5 by describing the archaeological evidence pertaining to House 3 at the settlement of Barnhouse. I have decided upon this for a two key reasons. Firstly, Barnhouse is one of the few Neolithic settlements in Orkney that has been excavated in its entirety, and as a result a significant amount of data is available regarding the archaeological remains discovered here. House 3 was also one of the best preserved buildings on site, and incorporated within it all four architectural elements that I have chosen to centre my analysis (*hearths, entrances, dressers and recesses*). These elements were also discovered in high states of preservation. Secondly, Barnhouse dates to the later phases of the Neolithic. Consequently, the connections constitutive of its architectural structures can be traced backwards through time, all the way to the beginning of the Neolithic. For this reason, it will be possible to fragment each architectural element to its fullest chronological extent.

By implementing these three methodological principles it will also be shown how the architecture of Neolithic Orkney evolved or even *became* over time and adapted to the changing social circumstances of its inhabitants. In this way, the following chapter will provide as complete a picture as possible of Orcadian architecture, without assuming that it conformed neatly to a representational scheme.

5 The Architecture of the Neolithic Orkney (in Fragments)

5.1 Preamble

Within this chapter the Neolithic architecture of Orkney will be analysed through implementing the theory of fragmentation set out in the previous chapter. This chapter will be split into five parts, where a small series of key architectural elements will be analysed individually, with the aim of elucidating how these elements operated on a cross-building basis. By doing this, it will be possible to create an architectural history of Neolithic Orkney which discards some of the major problems associated with typological and representational thought. The key architectural elements analysed throughout this chapter are *hearths*, *entrances*, *dressers* and *recesses*. As has already been mentioned in Section 4.4.4, the reason that these particular elements have been chosen is because, on the one hand, they recur frequently throughout the architecture and Neolithic Orkney, yet on the other, they form the crux of Richards' cosmological scheme, therefore providing this thesis with the perfect means of rebutting his representational theory.

Before beginning this chapter proper it would be helpful to explain, for reasons of epistemological transparency, from where the data for this chapter originated. Predominantly, published archaeological data in the form of journal articles or larger monographs were relied upon. Data pertaining to the site of Barnhouse, however, derived primarily from context sheets held within Historic Environment Scotland Archives and Library in Edinburgh. Moreover, the fine-grained structural features of the extant domestic buildings at Skara Brae, Knap of Howar and Ness of Brodgar, as well as many mortuary structures, were studied with the aid of photogrammetric models created by Hugo Anderson-Whymark. These models are available here: <https://sketchfab.com/hugoandersonwhymark/models>.

5.2 The Hearth

5.2.1 Defining the Hearth

The term ‘hearth’ is quite a broad one, although in general it can be defined as a flat foundation on which to ignite fires. A ‘hearth’ can also be differentiated from a ‘fireplace’, which is normally situated beneath or connected to a flue or chimney, through which smoke or other hot gases can escape. There are, however, significant overlaps – the base of a fireplace is known as the ‘hearth’ or even ‘hearthstone’. From a modern perspective, therefore, the hearth is a mere element of the fireplace. The incorporation of a stand-alone hearth into a piece of architecture would, by today, be an uncommon occurrence, as the process of igniting fires within built spaces would almost always require a fireplace in combination with a chimney. In Europe, it is not until at least the Roman period that buildings began to incorporate within them rudimentary flues (Adam 1999, 547), while fireplaces do not appear within houses until the sixteenth and seventeenth centuries (Sparrow 1908, 85–6) (yet see kiln [034] of Hut 8, Skara Brae).

Within the archaeological record of Neolithic Orkney, no roof structure pertaining to any domestic building has ever survived, *in situ* or otherwise. However, it is a safe assumption that a smoke hole of some description would have been incorporated into the roof in order to allow the smoke generated by the hearth to escape the building. Moreover, there is no evidence to suggest that Neolithic hearths were in any way directly connected to flues or ducts. Therefore, according to our modern conception of the word, the features described throughout this chapter are indeed ‘hearths’. This means that, in this instance, Childe was correct in the terminology he used to describe the architectural arrangements of Orkney, despite the clear cultural bias he employed (see Appendix A).

In considering the above, a ‘hearth’, for the purposes of this chapter, will be defined as any stand-alone structure found across Neolithic Orkney within which fires were ignited on at least one occasion. On the other hand, for these structures to be hearths they cannot be enclosed within a superstructure, because such enclosure would mean that they were either ovens or kilns, but not hearths. Although rare, ovens and kilns were occasionally constructed within Neolithic Orkney, as will be demonstrated below, and physically speaking they are very similar in appearance to hearths. Distinguishing between Neolithic ovens and kilns can of course be

extremely difficult, as morphologically they were often identical. Yet the primary characteristic that separates them is their function, with ovens being used for cooking food in preparation for being eaten, and kilns for drying or hardening a range of different materials, such as pottery or grain. The distinction between hearths and ovens/kilns is slightly more straightforward, as the latter were used for heating raw materials *from the inside*, and not merely from below.

On a separate and perhaps more reverential note, the nineteenth century architect Gottfried Semper (1989) once proclaimed the hearth as one of the four essential components of architecture, alongside the mound, the wall and the roof. As will be seen throughout this chapter, Semper's treatise was indeed a correct one when applied to the architecture of Neolithic Orkney. It should be remembered, however, that Semper's view of the hearth was as a feature inescapably tied to the final form of his idealised house.

5.2.2 Preamble

All hearths and hearth-like features are detailed in Table B 1 of Appendix B. It is important to note here that not all hearths or hearth-like features across Neolithic Orkney were considered, mainly for purposes of concision. For the same reasons, the orientations of the hearths are not discussed in much detail either.

5.2.3 Barnhouse

The primary hearth discovered within House 3 [001] (fig. 5.1) did not survive in its entirety, as its stone lining was absent upon excavation (Downes and Richards 2005, 62–3). It is, however, safe to assume that such a stone lining did exist during the use of House 3, as irregular shaped slots filled with ashy clay were found demarcating this feature on its north and west sides. It is unclear whether these slots were cut directly into the yellow clay floor of the building or whether the clay floor was laid around them after they had been filled with lining slabs. These slots formed a box-shaped feature, which was centrally placed within the building and would have probably had an internal area of *c.* 1m². The hearth was situated in line with the building's entrance [081] and was in slight discord with respect to its surrounding furniture.

This feature's identification as a hearth was also indicated by a burnt layer of ashy clay, which was found within a shallow recess in the floor of the building, situated within the space formed by the foundation slots. The primary fill of this depression was seen to have spilled out across much of House 3's floor, forming a thin layer of ash concentrated around the central area. This must have been the remnants of the last fires burnt within the hearth.

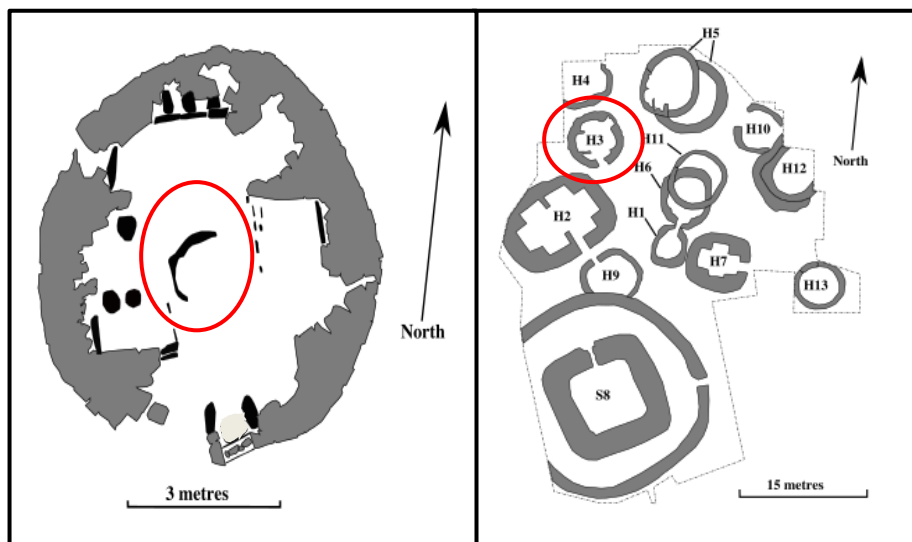


Figure 5.1. Position of hearth [001] within House 3, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

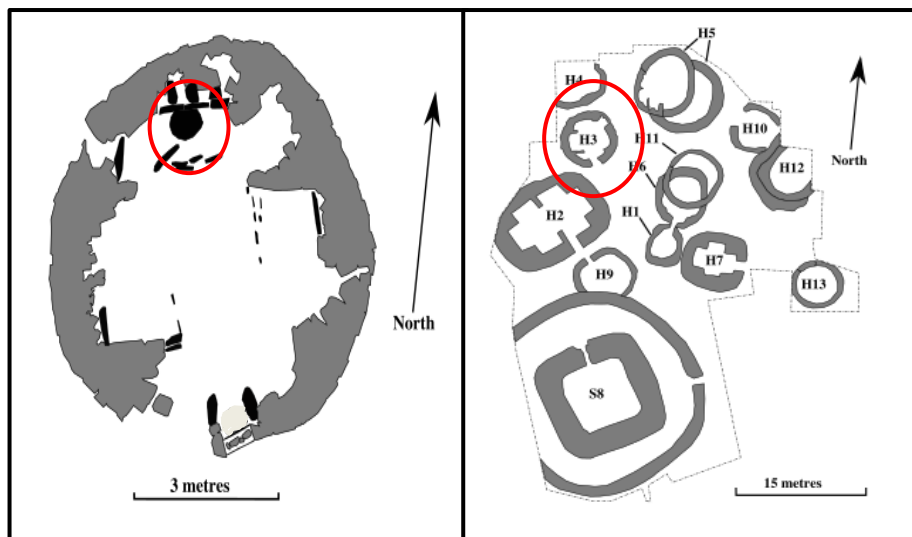


Figure 5.2. Position of hearth [002] within House 3, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

The southern and eastern sides of the hearth did not survive at all, as no slots were found corresponding to the ones just mentioned. Due to the irregular profile of the northern and

western slots, it seems likely that the lining slabs once contained within them were deliberately robbed out either during or after the abandonment of House 3. A large rectangular pit covering much of the northern part of the building's interior also cut directly into its later occupation horizons and was probably a robber cut for extracting the stones of [001].

After what seems to have been a long period of time in the use of House 3, another hearth [002] was constructed within the building's interior (fig. 5.2) (Downes and Richards 2005, 65), which was rather makeshift in appearance, particularly when compared to [001]. The substantial gap in time that existed between these two hearths was indicated by the two occupation horizons that separated them. The first was a loose spread of brown silty clay, rich in charcoal and abraded sherds of Grooved ware. This horizon lay directly above the original yellow clay floor of the building. The second, which had accumulated on top of the first, was a compact deposit of yellow clay with much charcoal staining throughout. The later hearth [002] lay immediately above, and was therefore directly associated with, this latter occupation horizon. Unlike [001] located at the centre of House 3, [002] lacked a stone lining. Instead, it was recognised as a shallow cut with a pair of ashy lenses within, one on top of the other. Put together, these two lenses were only 0.11m deep. In plan, the area covered by these lenses measured 1m x 0.64m and was amorphously shaped. Moreover, this hearth was situated towards the building's northern wall. It was also demarcated along its northern edge by a slab screen that formed part of dresser [135], and was partially blocked off to the south by a partition screen defining compartment [212]. Hearth [002] was therefore situated directly inside this compartment. At a later date, hearth [002] was covered up with another layer of flooring. This new layer merely lapped up against the sides of dresser [135], but completely sealed the hearth. Overall, we can envisage this hearth as a crudely dug scoop that was relatively short-lived in terms of use.

The hearth associated with the earliest occupation deposits of House 5 [003] was very ephemeral (no illustration available) (Downes and Richards 2005, 71–5). It was located in the southwest quadrant of the building, but in considering the trajectory of the surviving walling belonging to this earlier phase it would have occupied a central position within House 5 at the time. The only surviving element suggestive of its existence was a linear slot measuring 0.98m x 0.30m. This slot probably once contained a lining slab. Underneath its brown silty clay fill it was seen to include several upright packing stones set up against its edges, which supported this idea. The western end of this slot had been heavily truncated by later demolition activity. This slot also cut through House 5's initial occupation layer, which comprised a mix of yellow

clay and midden material, which itself sat directly above two discrete spreads of clay flooring along with a thin layer of burnt material.

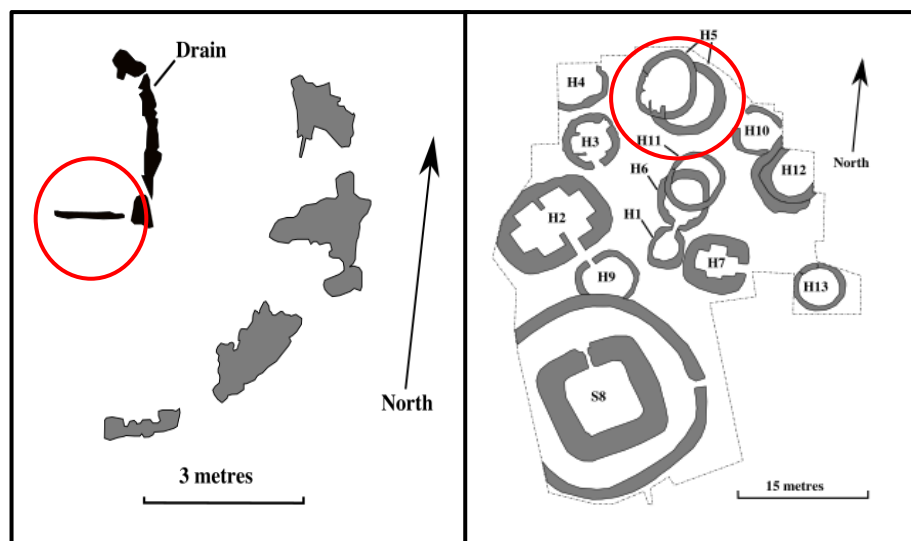


Figure 5.3. Position of hearth [004] within House 5, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

Later in the use of House 5 another hearth was constructed [004] (fig. 5.3) (Downes and Richards 2005, 75–7), measuring *c.* 0.74m x 0.63m, which also cut into the initial occupation deposit within the building. This hearth, much like the previous one (which had now gone out of use), was centrally placed within the building – a building that by now had been almost completely remodelled. The extant elements of this hearth included a single lining slab situated within its southern foundation slot, along with three other slots filled with clay. A bed of pebbles was laid out within the centre of this hearth directly after the lining slabs were inserted into their respective slots. Placed directly on top of this was the hearthstone, which survived *in situ*. This hearthstone was completely covered by a thin layer of reddish brown clay, rich in charcoal, which derived from the last fires ignited within the hearth. At least one episode of re-flooring accompanied the use of this hearth, as a thin spread of greenish yellow silty clay was spotted to the hearth's east side. This deposit accumulated immediately above a layer of dark grey clay containing much charcoal and other evidence of burning (e.g. patches of red discolouration). This layer derived from the removal of the hearth's lining slabs but it may also have accumulated as a result of the hearth's ashy contents being raked out during use. Rather than being cleared away and removed from the building, it seems as if the remnants of the hearth's last fires were simply covered over by a fresh layer of flooring. A northerly running

drain was also situated adjacent to the hearth, which would have run beneath the northern wall before exiting the building. The cut for this drain was topped with a series of flagstone lintels.

Directly above the primary occupation layer of House 5, which pre-dated the cutting of the foundation slots of hearth [003], were the possible remains of another hearth [005] (illustration not available) (Downes and Richards 2005, 77), perhaps built in order to replace hearth [004]. The presence of this hearth was tentative – the only feature suggestive of its identification was a single lining slab, measuring 1.40m x 0.10m x 0.40m deep. The flooring immediately surrounding this slab was completely removed by the digging of a large pit, measuring 2.40m in diameter. This pit cut through the final yellow clay floor of House 5, thus indicating how late it was in the building's stratigraphic sequence. It was probably dug in order to retrieve the stones of hearth [005].

After the construction of tentative hearth [005], but before the digging of the large pit, another hearth [006] was built within House 5 (illustration not available) (Downes and Richards 2005, 78). This hearth was associated with the final yellow clay flooring mentioned above, which ran directly up to its edges, and was therefore contemporary with it. It also seemed as if the hearth was constructed first, and the clay flooring was put down afterwards in a manner that respected the position of the hearth. The internal area of this hearth measured 0.70m x 0.63m. At the centre of the hearth a large hearthstone was found along with several small slabs. Immediately above these slabs were the apparent remains of a secondary hearthstone, which was much better preserved than the first. This secondary hearthstone was placed directly above the original, which was left *in situ* as opposed to being removed beforehand. Situated beneath this mess of stone slabs were two intermixed layers of burnt clay. The aforementioned stone-lintelled drain, which ran in a northerly direction from hearth [004] towards the building's northern wall, also appeared to cut through both these burnt horizons. This interpretation was based on the fact that the stone slabs, which acted as the lining for this drain, seemed to overlay both burnt lenses. The overall preservation of hearth [006] was notable high.

While very little remained of House 9 upon excavation, its associated hearth [007] nonetheless survived *in situ* (fig. 5.4) (Downes and Richards 2005, 82–5). This hearth was centrally placed within the building. It survived as twin lines of lining slabs, which formed its southeastern and northwestern sides. Both of these sides were made up of two adjoining slabs respectively. The remainder of the hearth's stone lining was missing, probably as a result of it having been robbed

either during or after the abandonment of House 9. The hearth's internal area measured *c.* 1.10m x 1m. The foundation slots associated with its lining slabs cut directly into the glacial till, upon which the foundations of House 9 and its primary flooring deposit rested. On the inside of these lining slabs a discrete lens of red silty clay, rich in charcoal, was observed. This lens also incorporated within it some burnt stones along with a single sherd of Grooved ware. Another layer of burnt clay occupied an area slightly to the east of the hearth, which contained a poorly struck flint scraper, probably discarded during manufacture (Middleton 2005, 313–4), along with five sherds of Grooved ware.

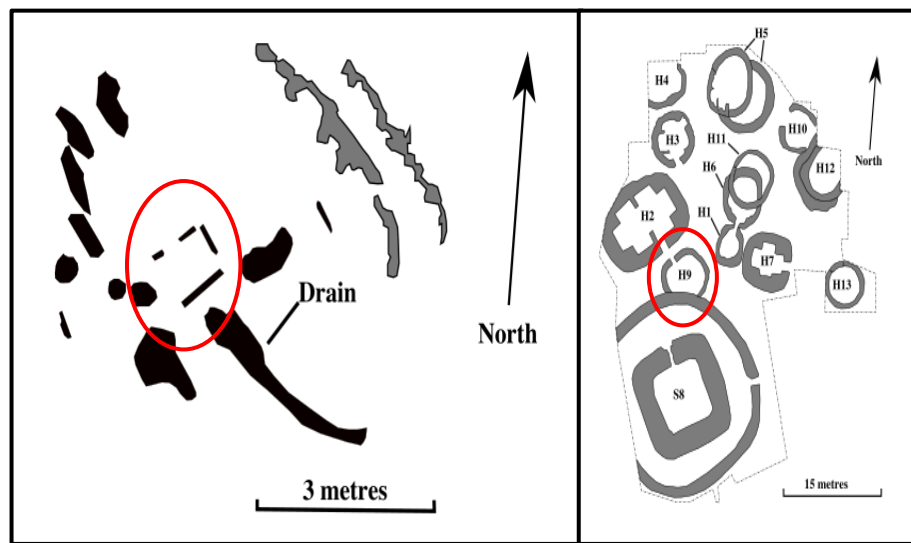


Figure 5.4. Position of hearth [007] within House 9, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

This thin layer of clay may have formed during the raking out of the hearth's ashes. Once this hearth had been fully excavated it was seen to immediately overlie an older drain, which ran in a southeasterly direction through the interior of House 9 and up towards Structure 8 nearby (Downes and Richards 2005, 82–5). This drain was covered by a series of flagstone lintels.

The hearth in the west of House 2 [008] was well preserved (fig. 5.5) (Richards 2005c, 140–2), as three of its four stone lining slabs survived perfectly intact, while the fourth (its northwestern slab) survived marginally intact. The area that these slabs contained measured 1.35m x 1.20m. The base of the hearth was occupied by a large hearthstone, which rested below three successive layers of soil. The uppermost layer comprised a series of broken slabs set within a grey clay matrix. This layer clearly accumulated during the abandonment of House 2. Below this were two ashy lenses, both consisting of burnt silty clay. Abutting the southeastern

corner of hearth [008], underlying three successive layers of yellow clay flooring, a deposit of burnt clay sitting within a shallow ovular pit [009] was discovered (fig. 5.6) (Richards 2005c, 141), measuring c. 0.55m². This deposit was black and red in colour and was made up of silty clay mixed with small stones and much charcoal.

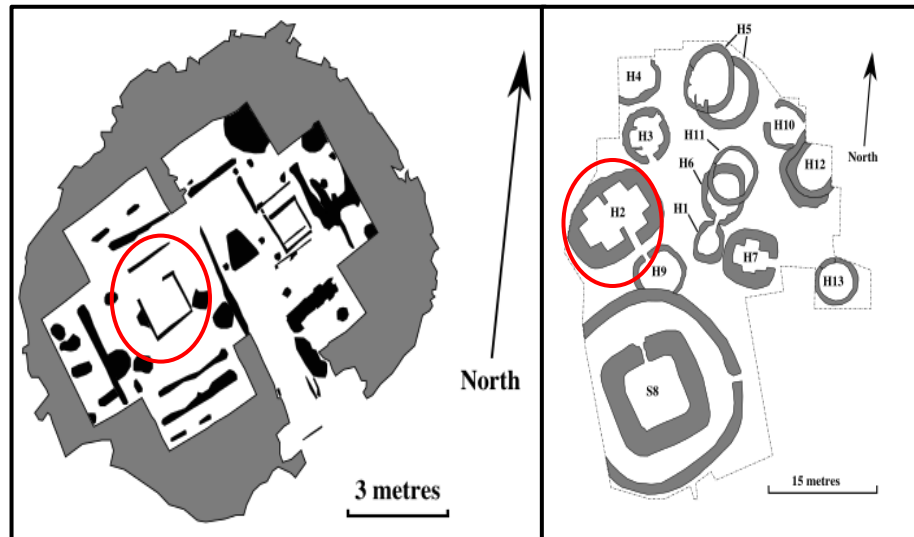


Figure 5.5. Position of hearth [008] within House 2, Barnhouse (illustrations by author, adapted from Richards 2005c and Bayliss et al. 2017)

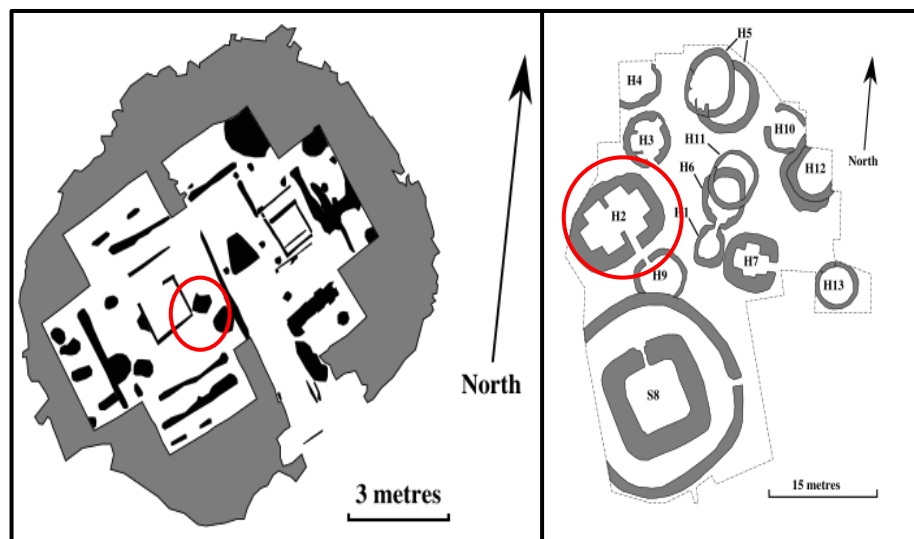


Figure 5.6. Position of oven [009] within House 2, Barnhouse (illustrations by author, adapted from Richards 2005c and Bayliss et al. 2017)

. A thin layer of charcoal also lined the base and sides of the pit, which was observed as a black ring in plan. In considering these strains of evidence, this feature was likely an oven, and the ring of ash surrounding it probably demarcated the edges of its domed superstructure. There

was also the suggestion of a flue at its southwestern edge. The earliest of the three flooring layers mentioned above was spread over this feature after it had been put out of use, but it nonetheless respected the position of hearth [008], which remained intact. The relationship between hearth [008] and oven [009] remains uncertain, although they appeared to be connected in some way. Yet it remains possible that hearth [008] partly truncated the western edge of [009], in which case the latter was earlier than the former.

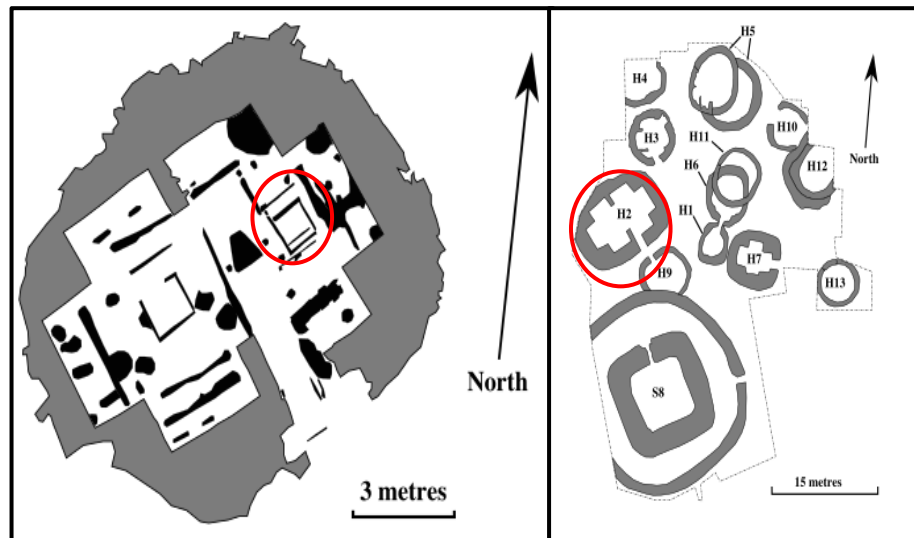


Figure 5.7. Position of hearth [010] within House 2, Barnhouse (illustrations by author, adapted from Richards 2005c and Bayliss et al. 2017)

The hearth in the east of House 2 [010] was less well preserved than its western counterpart [008], although all four of its lining slabs were discovered *in situ* (fig. 5.7) (Richards 2005c, 133–8). The area that the hearth contained measured *c.* 0.92m². Heavy scorching, in the form of bright red discolouration, was observed on the internal faces of its lining slabs. The fill of the hearth consisted of charcoal-rich silty clay. As there was a substantial amount of ash to the southwest of the hearth, which was sealed intermittently by successive episodes of re-flooring, it seemed that the hearth witnessed extensive use throughout House 2's lifespan. The overall impression given by this hearth was that it was used far more extensively than [008] was. A cut was noted in the lower ashy layer that appeared to have served the purpose of replacing the hearth's southwestern lining slab. This indicated that the hearth was enlarged at some point. The new southwestern slab extended well beyond the hearth's centre and connected up with a short slab slightly to the northwest. This was accomplished with the aid of a smaller slab situated in between. The short slab had a counterpart to the southeast of the hearth, and together they served to flank and partly enclose the hearth. A small area located *c.* 2m to the southwest

of the hearth was divided off from the rest of the eastern bay's interior. It seems that this area was allocated to allow settings of furniture such as pot hangers to stand close to the fire. Slightly to the west of the hearth were two shallow pits that cut through the building's floor, straight into the glacial till below. Given that the fills of both these pits consisted of identical greyish silty clay, they were probably infilled simultaneously.

The hearth in House 7 [011] occupied a central position within the building (fig. 5.8) (Downes and Richards 2005, 90–1). It was reasonably well preserved, with three of its four lining slabs being discovered *in situ*, albeit in a fragmented condition. This hearth was fairly large, having an internal area of *c.* 0.90m². The centre of the hearth was infilled with a lens of pink silty clay with much charcoal flecking throughout. Within this lens a single sherd of Grooved ware was found.

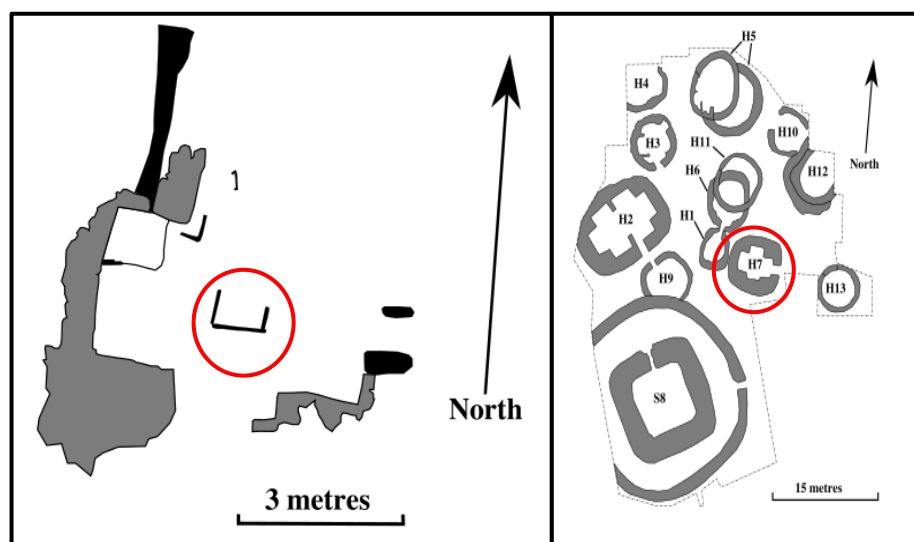


Figure 5.8. Position of hearth [011] within House 7, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2007)

Although not discovered within an architectural context, another hearth [012] was situated beyond the eastern wall of House 7 (no illustration available, but see fig. 5.9) (Downes and Richards 2005, 91). This hearth was approximately square in form and all four of its lining slabs survived *in situ*. Moreover, a sizable fragmented slab was discovered at its centre. This additional slab may have once constituted the hearthstone of [012], although its position above the hearth's fill may negate this idea. Upon discovery it was thought that this hearth was part of House 7 (A.M. Jones and Richards 2005, 37), and that the hearth's position outside its eastern wall suggested that the building was remodelled at some point, with [012] being a

replacement for [011], or *vice versa*. However, as no courses of masonry were discovered in association with [012], this hypothesis was impossible to prove. If this hypothesis were true, then it is quite curious that hearth [012] survived in its entirety while the walls surrounding it were completely destroyed. On the other hand, such curiosity does not necessarily render this hypothesis void. There of course exists the other possibility regarding the context of hearth [012] – that it was constructed in an extramural setting. Unfortunately, the dimensions of [012] are not available.

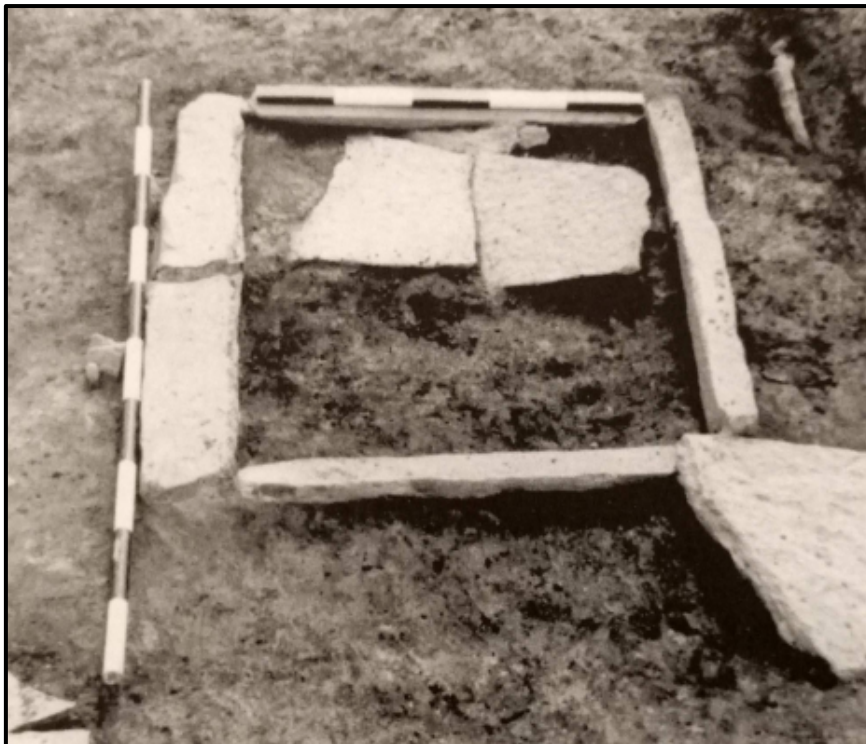


Figure 5.9. Photograph of hearth [012] near House 7, Barnhouse (from Downes and Richards 2005)

The hearth at the centre of House 11 [013] was discovered in a relatively high state of preservation, with three of its four lining slabs being intact (fig. 5.10) (Downes and Richards 2005, 117). The hearth was of a rectangular shape, and the area it enclosed measured 0.90m x 0.80m. The stratigraphic sequence associated with House 11 was very interesting, as hearth [013] was set within what was once the north wall of House 6. Additionally, this hearth did not appear to be have been a primary architectural feature, as its foundation slots cut directly into the yellow clay flooring of the building's interior. The centre of this hearth consisted of at least six different charcoal- and ash-rich fills, indicating that it was used extensively.

At House 6, the hearth [014] was again situated within the centre of the building's interior (fig 5.11) (Downes and Richards 2005, 93–4). All that remained of the hearth's lining was its southern slab, along with part of its northern slab, which had its western half removed at some point. The internal area of the hearth measured 0.52m x 0.41m.

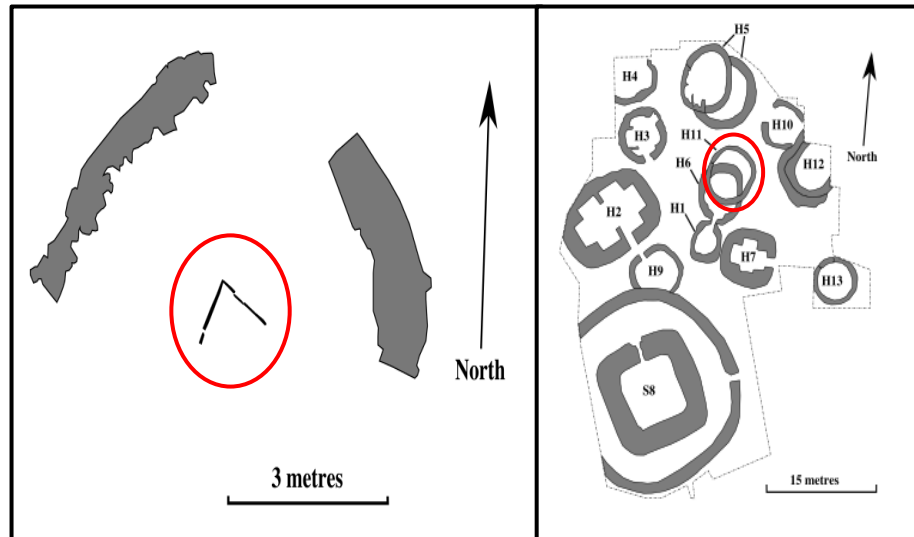


Figure 5.10. Position of hearth [013] within House 11, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2007)

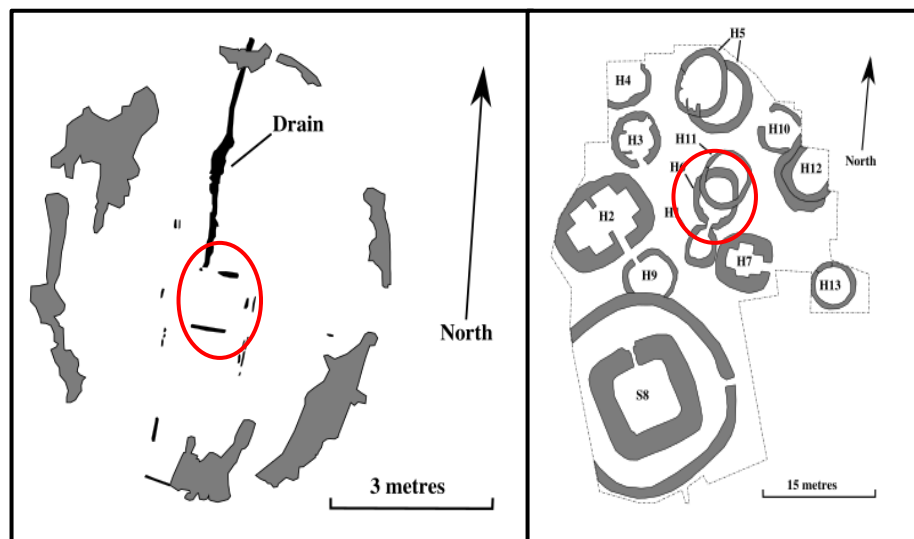


Figure 5.11. Position of hearth [014] within House 6, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2007)

The primary yellow clay flooring of House 6 sat stratigraphically above its foundation slots; thus, the hearth had clearly been set in place before the floor of the building was laid down. The basal fill of this hearth was a compacted silty clay deposit, rich in charcoal. The remainder

of the hearth's fills comprised three ashy lenses of clay, all rich in charcoal, along with a black and yellow silty clay deposit. A narrow drainage channel was also seen to run from the northern edge of the hearth. This drain breached the northern wall of House 6 before feeding into a larger drainage channel that encircled the building in its entirety.

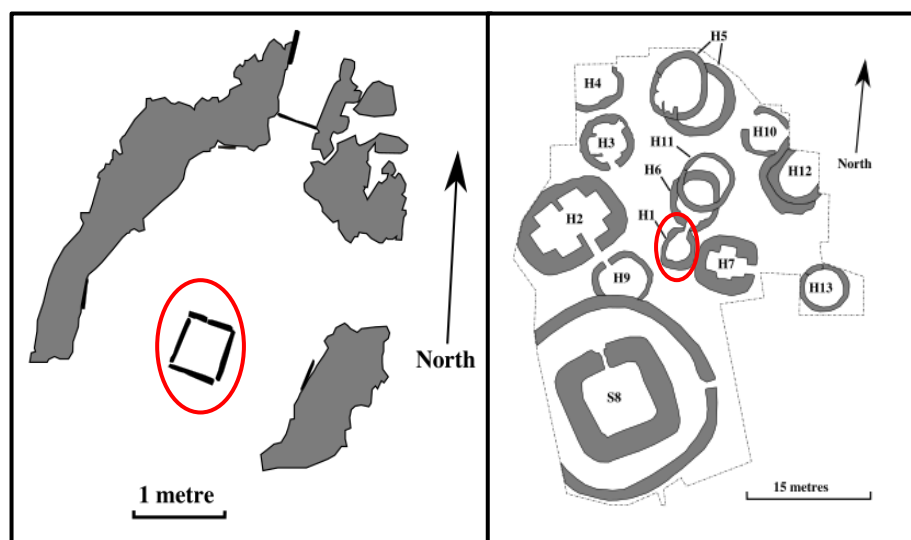


Figure 5.12. Position of hearth [015] within House 1, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

House 1, situated directly to the southwest of House 6, also contained a centrally placed hearth [015] (fig. 5.12) (Downes and Richards 2005, 110). It was formed of four lining slabs meeting at right angles, which all survived *in situ* within their respective foundation slots. The internal area of this hearth was *c.* 0.75m². In the centre of the hearth was a deposit of grey ash that contained intermittent lenses of charcoal. Moreover, larger spreads of ash and charcoal were seen to surround the hearth along its northern, eastern and southern edges. Stratigraphically, it seemed as if the construction of [015] was contemporary with that of House 1's walling, as the yellow clay floor lining the interior of the building lapped up against both.

The hearth at House 10 [016] was centrally placed within the building (fig. 5.13) (Downes and Richards 2005, 105). It was composed of four lining slabs that defined a central rectangular area, measuring 0.80m x 0.64m. Three large slabs were set at the base of this hearth, which together formed its hearthstone. On top of this hearthstone a layer of orangey silty clay was discovered, which included a noticeable quantity of burnt animal bone. These bones appeared to have been burnt *in situ* and must therefore have resulted from the hearth being used. Directly below the hearthstone were two other deposits, which included a pair of stone slabs along with

a layer of charcoal-rich silty clay. Both of these deposits infilled a shallow scoop cut into the glacial till during the hearth's construction, and therefore provided a level surface for the upper hearthstone.

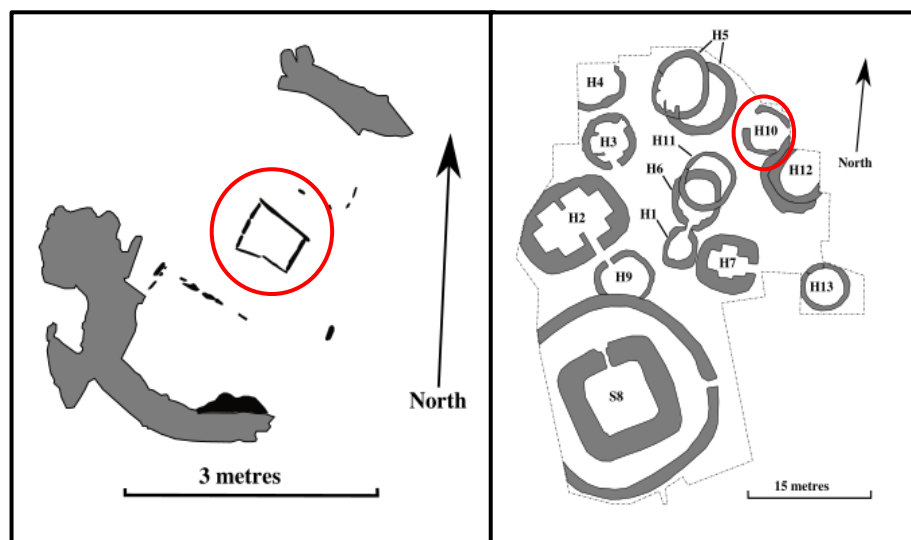


Figure 5.13. Position of hearth [016] within House 10, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

Immediately surrounding hearth [016] was a significant deposit of compacted orange silty clay that contained a high quantity of charcoal and which banked up to around 0.05m below the tops of the hearth's lining slabs. Overall, it covered an area measuring c. 2.50m x 2.10m. This deposit was also seen to slope downwards as it encroached into areas away from the hearth, becoming progressively thinner as it did so. The majority of this deposit was located in the southern quadrant of House 10 and was less diffuse within the northern quadrant. This deposit undoubtedly formed during the raking out of the hearth's ashes, which were later trampled over by foot, giving the deposit its compacted texture and slightly glossy appearance.

The hearth at the centre of Structure 8's inner building [017] was in a damaged condition upon excavation (fig. 5.14) (Hill and Richards 2005, 164–73). Three of its lining slabs had been removed at some point (probably through modern ploughing). However, the lining slab set along its northeastern edge was preserved relatively well. The hearth was rectangular in plan, and it enclosed an area measuring c. 0.80m x 0.70m. The centre of the hearth was filled with a layer of reddish silty clay that contained much ash. The slots for the missing lining slabs did survive. The ones along the hearth's southeastern and southwestern sides had been filled with numerous sandstone chips and flakes set within a dark brown silty clay matrix. It may be

assumed that these chips and flakes would have originally provided packing for the lining slabs. Within the slot along the hearth's northwestern side a series of fragmentary slabs was spotted, all deposited in a linear fashion. These had been wedged into upright positions and abutted the large rounded stones that infilled an earlier foundation cut for the hearth. This earlier cut lay directly underneath the northwestern and northeastern lining slots. It was broadly L-shaped, forming a clear right angle at its northern corner. The compacted yellow silty clay infilling this cut was itself cut by the aforementioned foundation slots for the later lining slabs.

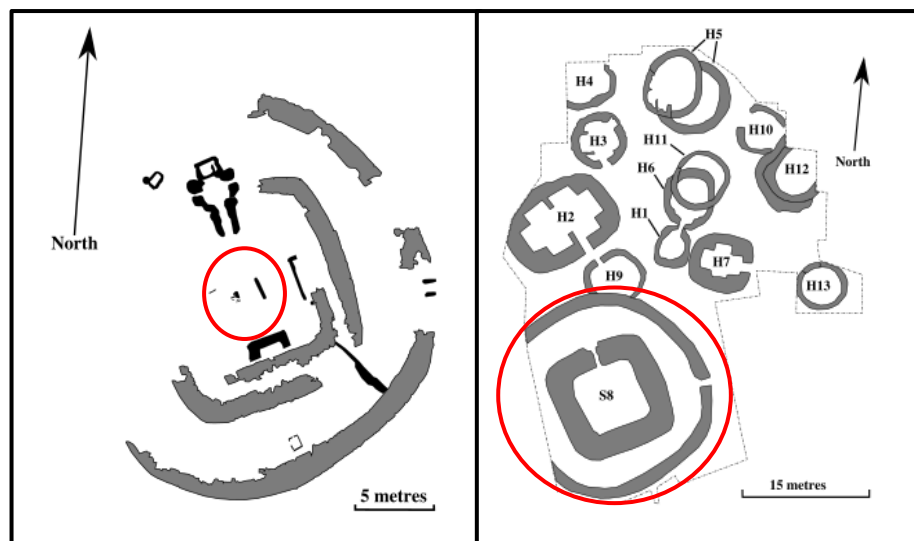


Figure 5.14. Position of hearth [017] within Structure 8, Barnhouse (illustrations by author, adapted from Hill and Richards 2005 and Bayliss et al. 2017)

Along the opposite sides adjoining this L-shaped slot were two other slots, which were far shallower. Thus, the original appearance of hearth [017] would have been that of an approximately rectangular box-like feature, with its northwestern and northeastern sides being substantially larger than its southwestern and southeastern sides. The area it would have enclosed measured c. 2.15m x 1.90m. This hearth therefore started its life as an almost anomalously large feature, particularly when compared to the other hearths on site. At a later date, the lining slabs associated with this earlier phase were removed, and the hearth in its entirety was remodelled and made noticeably smaller. The aforementioned yellow silty clay that infilled the earlier L-shaped slot belonged to precisely the same spread of clay used to form the initial flooring layer of Structure 8's interior. As a result, a stratigraphic relationship was established between the remodelling of the central hearth and the construction of the building – it was clear that both events coincided with one another. Following this line of inquiry further, it would also seem that hearth [017] began as an extramural feature constructed within an open-

air environment on the edge of the settlement. It therefore pre-dated the erection of both the inner and outer buildings of Structure 8, along with the laying of the inner floor surface and outer clay platform.

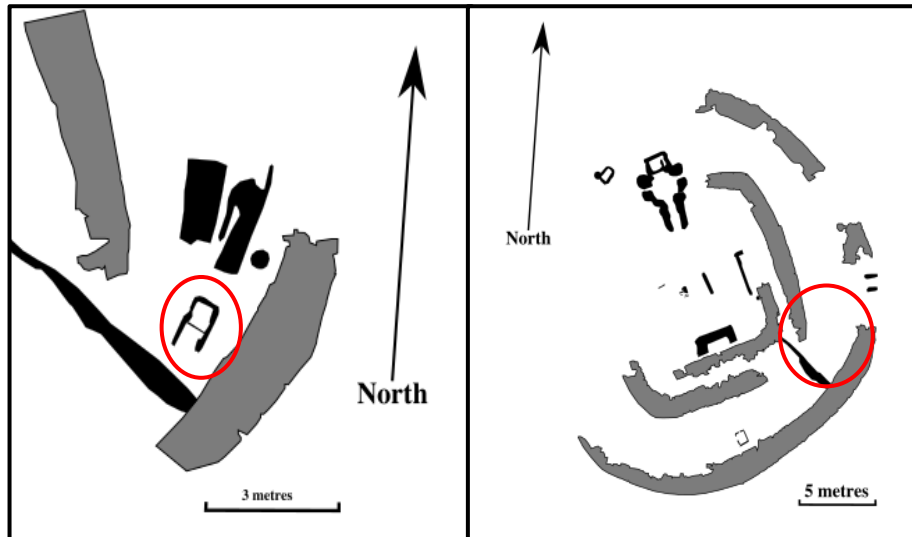


Figure 5.15. Position of hearth [018] within Structure 8, Barnhouse (illustrations by author, adapted from Hill and Richards 2005)

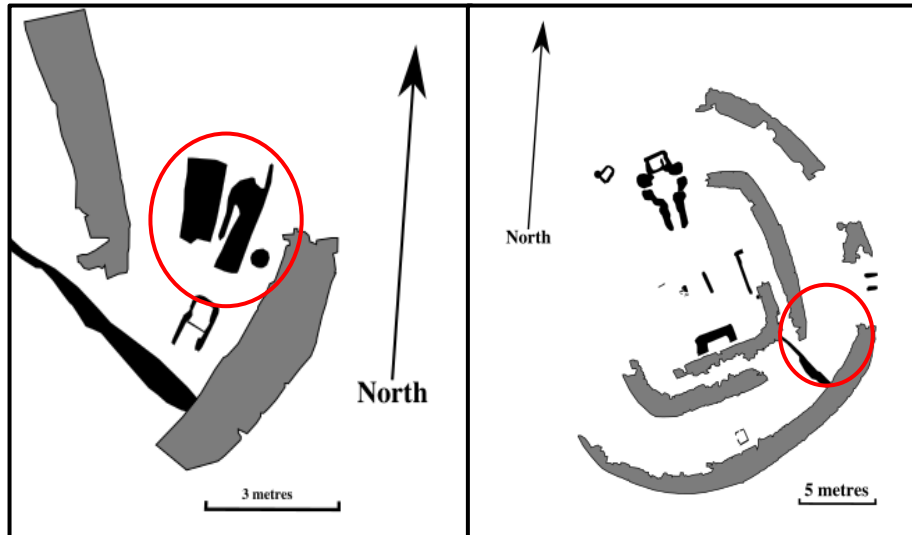


Figure 5.16. Position of hearths [019] (right) and [020] (left) and oven [021] (right of [019]) within Structure 8, Barnhouse (illustrations by author, adapted from Hill and Richards 2005)

Another hearth [018] was found a few metres to the southeast of the inner building, within of Structure 8's gallery, which almost abutted the inside face of the outer casing wall (fig. 5.15) (Hill and Richards 2005, 174–86). Its foundation slots cut directly into the outer clay platform. It was rectangular in form and was defined on its northeastern, northwestern and southeastern

edges by linear foundation slots meeting at right angles. These foundation slots originally held its lining slabs in place. No corresponding foundation slot was discovered on its southwestern edge, however. The area it contained measured *c.* 1.10m x 0.39m. At the base of this hearth were three layers of burnt ashy clay that overlay some flagstones situated within each corner. A burnt area of reddish brown silty clay, rich in charcoal, was also seen emanating from the hearth. The fills of this hearth were concentrated to its northeastern side, and seemed to wane towards its southwestern side, before dying out completely. Indeed, it appeared as if this latter side sustained far more damage than the former, which explained why the southwestern lining slab was missing entirely. It is possible that [018] was in fact a collection of short-lived hearths all constructed one after the other in approximately the same spot, yet this remains difficult to prove.

Directly to the northeast of hearth [018] were the partial remains of two rectangular features that may have also been hearths (fig. 5.16). The easternmost is described here as [019] and comprised a distinct area of burnt soil, flanked on its southern edge by a spread of charcoal and burnt bone, and by a small patch of red ash on its northern edge. Put together, these deposits may have formed an elongated hearth measuring *c.* 2.39m x 0.77m. Alternatively, they may have been the burnt residues from a series of makeshift hearths, which may have even been single-use. In either case, no clear stone lining was observed demarcated these deposits. The second [020] was situated immediately to the west of [019] and comprised a discrete spread of red ash measuring *c.* 1.62m x 0.77m. It was partly sealed on its western edge by a small lining slab and it therefore seems likely that [020] was indeed a hearth. Again, there still remains the possibility that [020] comprised a collection of short-lived hearths.

Furthermore, the remains of an oven [021] (fig. 5.16) were discovered slightly to the east of possible hearth [019]. This feature was circular in form, and its internal area was *c.* 0.30m in diameter. The fill within the oven comprised a dark reddish brown silty clay deposit encircled by a halo of ash. It seems likely that this ash demarcated the edge of this oven's superstructure.

Towards the southern end of Structure 8's gallery, adjacent to the inner face of the outer casing wall, were the remains of another hearth [022] (fig. 5.17). This hearth was notably well preserved, and all four of its lining slabs survived *in situ*. It was square in form and had an internal area of 0.62m².

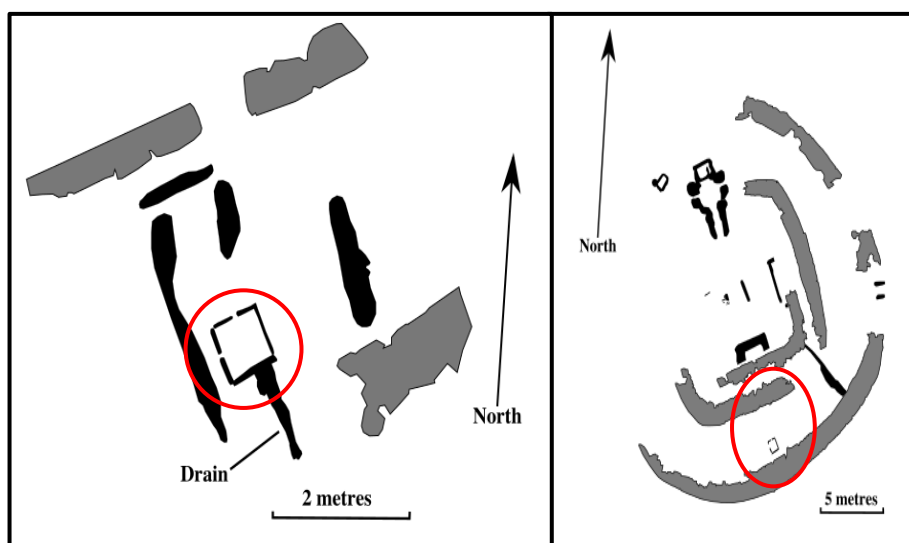


Figure 5.17. Position of hearth [022] within Structure 8, Barnhouse (illustrations by author, adapted from Hill and Richards 2005)

At the base of this hearth were the fragmentary remains of at least one hearthstone, which were heavily fire damaged, and above this stone was a deposit of burnt soil. Also in association with hearth [022] were the remains of various pieces of furniture, including the foundation slot for a N–S aligned longitudinal slab roughly 2.80m long; a corresponding longitudinal slot approximately 2.20m to the east, measuring 1.67m long; an E–W aligned latitudinal slot running perpendicular to the inner wall circuit, measuring 1.10m long; a large flagstone measuring *c.* 0.60m x 0.74m; and a drainage channel running from the southern end of the hearth and out through Structure 8’s outer casing wall. Alternatively, it has been suggested that this arrangement could be the remains of an older house, with [022] being its central hearth (Hill and Richards 2005, 178). This seems unlikely, however, as the aforementioned features associated with [022] did not seem to be structured in any sort of house-like fashion.

Another hearth [023] was discovered within the northwestern part of Structure 8’s gallery, which cut directly into it the underlying clay platform (fig. 5.18). Unfortunately, this part of the platform had sustained significant amounts of ploughing activity, and both the platform and hearth were found badly damaged upon excavation. Consequently, little can be said of this hearth other than it was formed of four foundation slots with an internal area measuring *c.* 0.75m x 0.32m.

Located on the outside of the inner building's entrance ([087]) was another hearth [024] (fig. 5.19). This hearth was relatively poorly preserved, as it had been robbed of all its lining slabs prior to excavation. Three foundation slots formed its northeastern, southeastern and southwestern sides. The nature of its northwestern side was slightly more difficult to discern. It appeared as if the threshold stone incorporated into the building's vestibule, which survived solely as an elongated cut, doubled as the hearth's lining slab.

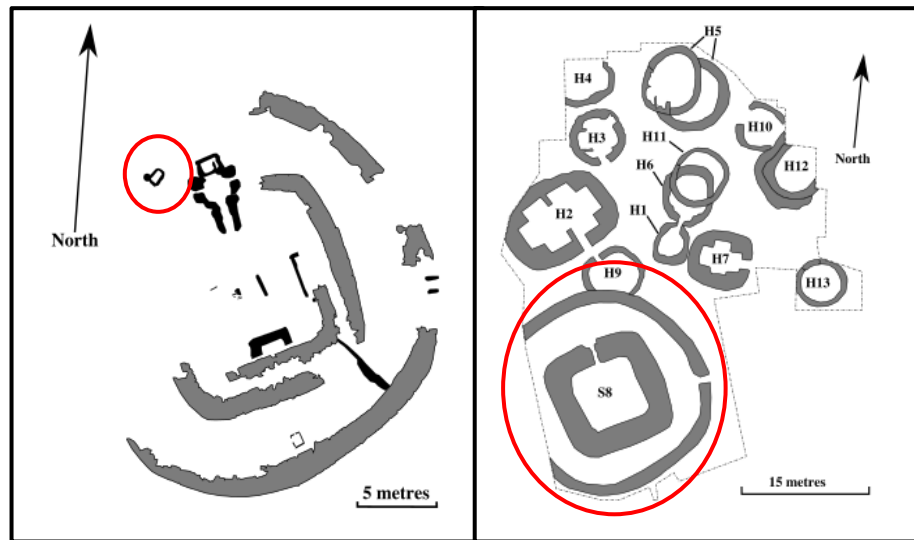


Figure 5.18. Position of hearth [023] within Structure 8, Barnhouse (illustrations by author, adapted from Hill and Richards 2005 and Bayliss et al. 2017)

Each foundation slot was filled with fragmented slabs set within a silty clay matrix. These broken slabs would have acted as packing for the hearth's lining slabs. A layer of ash was also situated along the hearth's southeastern and northeastern sides. This can be seen as having accumulated during the raking out of the hearth's ashes. The paving stones that were laid at the base of the entrance passage would have covered this hearth, thus putting it out of use. Overall, this hearth had an internal area of c. 1m x 0.79m.

House 4 was discovered in a very ruinous state, but luckily the remains of a hearth [025] were spotted during excavation, which were centrally placed within the building (no illustration available) (Downes and Richards 2005, 114). This hearth had been badly damaged. A series of collapsed lining slabs were discovered in and around the hearth's centre, all showing evidence of burning. The fill of the hearth consisted of grey silty clay with frequent ash and charcoal throughout. It also contained some highly abraded sherds of Grooved ware. Unfortunately, nothing else could be said of hearth [025].

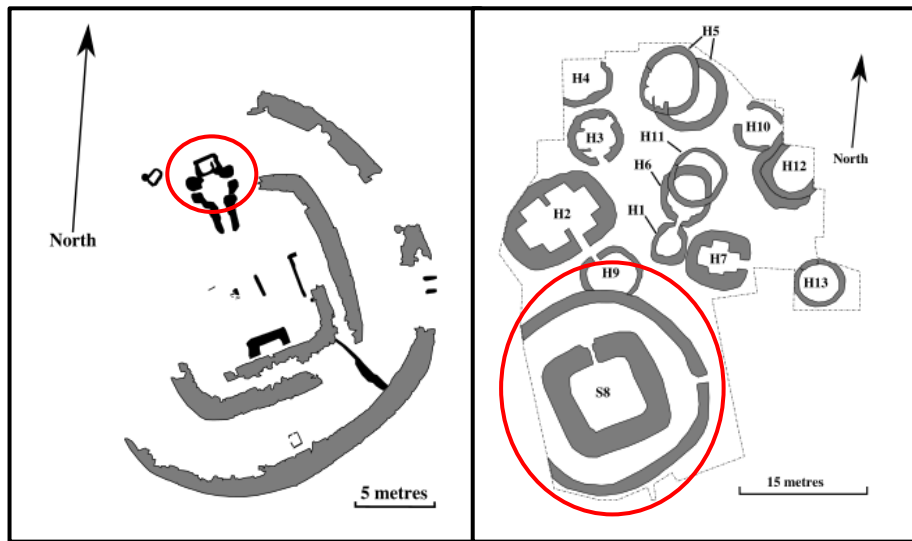


Figure 5.19. Position of hearth [024] within Structure 8, Barnhouse (illustrations by author, adapted from Hill and Richards 2005 and Bayliss et al. 2017)

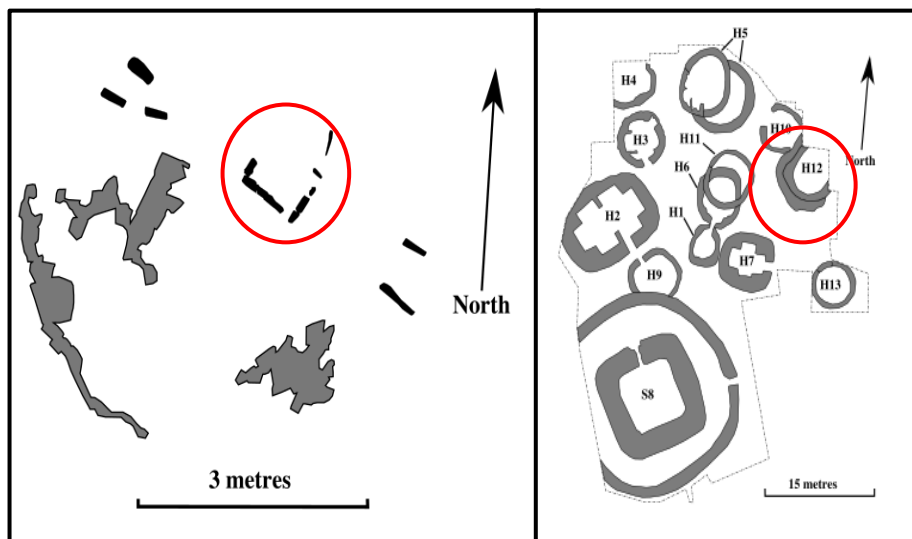


Figure 5.20. Position of hearth [026] within House 12, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

The hearth within House 12 [026] was again discovered in a badly damaged condition, and so too was the rest of the building (fig. 5.20) (Downes and Richards 2005, 119–20). Only its southwestern lining slab survived fully intact, while the ones along its northwestern and southeastern sides survived partially. Within the centre of the hearth was a deposit of reddish silty clay. Internally, this hearth measured *c.* 0.72m x at least 0.45m.

No hearth was discovered within House 13, making it the only building on site that was not associated with at least one hearth. On the other hand, a narrow drainage channel was seen to emanate from within the confines of the building, which fed into the drainage channel that ran around the perimeter of House 7 (Downes and Richards 2005, 121–2). Given its position and trajectory, it is possible that this drain was originally associated with a central hearth, although this idea is naturally a tentative one.

5.2.4 Beyond Barnhouse

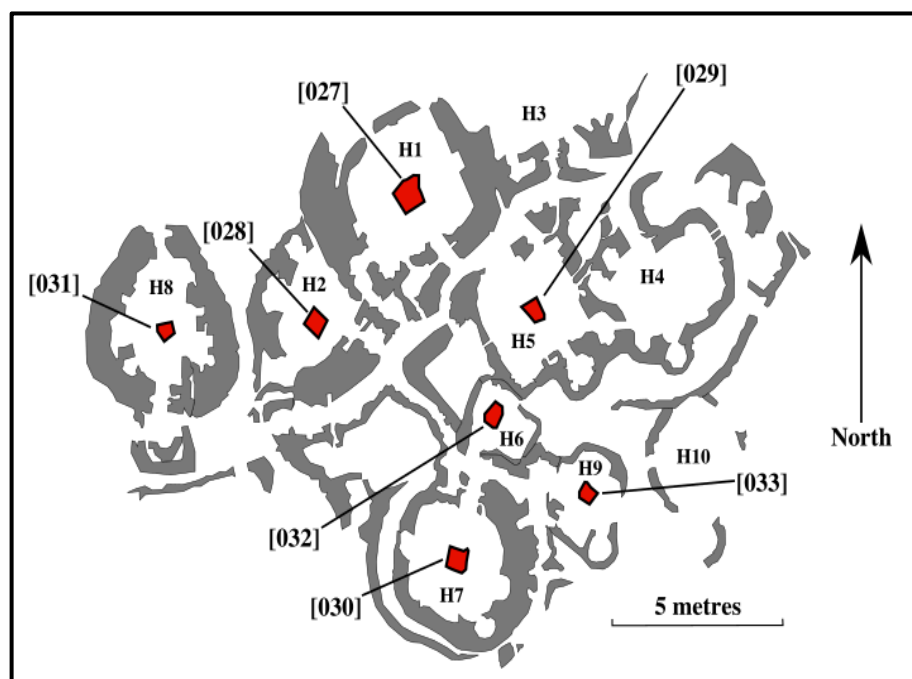


Figure 5.21. Position of hearths at Skara Brae (illustration by author, adapted from www7)

Throughout Barnhouse an obvious pattern occurred in which a hearth frequently occupied the centre of a building. This pattern also continued well beyond Barnhouse. At Skara Brae all the buildings discovered within its latest phases of construction had intact central hearths (fig. 5.21) (Childe 1930; 1931a; 1931b; Clarke 1976a; 1976b). These included the hearths of Huts 1 [027], 2 [028], 5 [029], 7 [030] and 8 [031]. Only two intact hearths were discovered in association with the earliest known phases on site, which included those pertaining to Huts 6 [032] and 9 [033]. With regards to the remainder of the earlier buildings, their associated hearths were either missing or found in such a damaged state that little could be said of them. Moreover, all hearths at Skara Brae were square to rectangular in form and were defined by lining slabs set within linear slots meeting at right angles. The largest hearth unearthed at Skara Brae was [027]

within Hut 1, which had an internal area of *c.* 0.70m x 0.67m, meaning that no exceedingly large hearths such as [017] (within Structure 8 at Barnhouse) were discovered here. The dimensions and physical descriptions of Skara Brae's hearths have been included within Table B 1 of Appendix B.

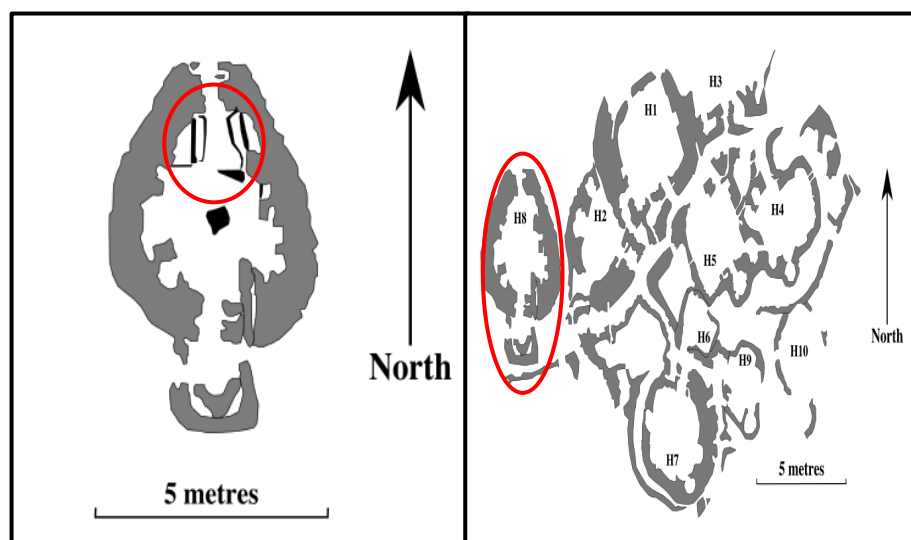


Figure 5.22. Position of kiln [034] within Hut 8, Skara Brae (illustrations by author, adapted from www7)

As well as possessing a central hearth, Hut 8 at Skara Brae also incorporated within it a feature that appeared to be a corn-drying kiln [034]. This kiln was situated within annex [237] towards the rear of the building (fig. 5.22). The surviving remnants of this kiln were scant – the main piece of evidence indicating its existence came in the form of a dense concentration of fire-scorched stone laid upon the floor of the annex. Upon discovery, it was initially thought that these stones were merely a collection of pot-boilers (Childe 1931d, 51), yet this is unlikely as their compaction suggested that they constituted a fixed deposit within the building. Overall, kiln [034] would have taken up most of the rear annex's space, indicating that it was rather open and not particularly concealed like a traditional kiln or oven. It was suggested by Scott that this openness in form served as a clear indication that the kiln was designed to be heated at relatively low temperatures, perhaps with the aid of peat as fuel (1951, 208). The only type of low temperature kiln that [034] could conceivably have been, therefore, is a corn-drying kiln. A pair of slabs set on edge also enclosed the western and eastern edges of this aforementioned burnt area, both measuring 0.72m in length. It was also suggested by Scott that a layer of straw could have been suspended between the tops of these slabs on top of which the grain could have rested while being dried. In considering this, the use of [034] would have first

entailed the burning of fuel within its central area, allowing the basal stones to absorb the resulting heat, before suspending grain above this heated area. Yet the function of kiln [034] was far more elaborate than this, as it also brought into play entrances [095] and [096], located within the front porch, as well as opening [097] immediately to the north (see Section 5.3). In terms of its dimensions, kiln [034] covered an area of *c.* 1.04m x 0.91m.

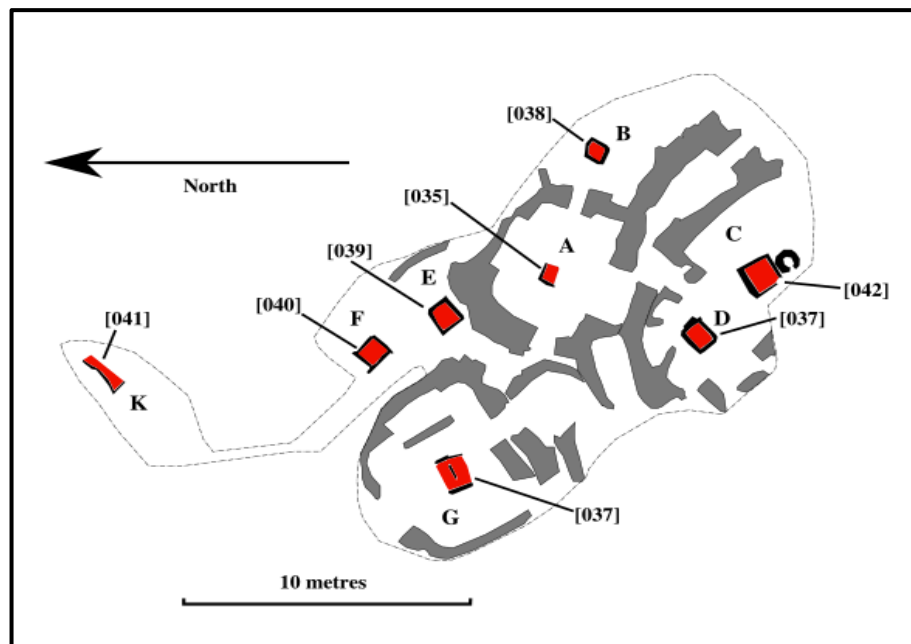


Figure 5.23. Position of hearth at Rinyo (illustration by author, adapted from Childe and Grant 1947)

Broadly speaking, the same pattern also applied to the settlement at Rinyo, where some of the hearths were seen to conform to those of Barnhouse in terms of their placement (fig. 5.23) (Childe and Grant 1938; 1947). Here, the hearths associated with Dwellings A [035], D [036] and G [037] could be positively identified as occupying a central position within the building. The hearths associated with Dwellings B [038], E [039], F [040] and K [041] may have also occupied central positions. However, the architectural settings within which they were situated were too ruinous to confirm or deny this. The hearth within Dwelling C [042] was interesting as it appeared to be offset in relation to the entire building and it was noticeably large, having an internal area of *c.* 1.20m². Again, all hearths were rectangular in form and were stone lined. The dimensions of all Rinyo's hearths can be found in Table B 1 of Appendix B.

An oven [043] was also discovered within Dwelling C at Rinyo, similar in form to [009] within House 2 at Barnhouse, but this one was far better preserved (fig. 5.24) (Childe and Grant 1938,

14–15). It was located to the southeast of hearth [042] and seemed to be directly abutting it. The cut defining the foundations of this oven was square in form but had roughly filleted corners. It measured 0.70m x 0.26m, while the clay walls of its superstructure survived to 0.20m in height.

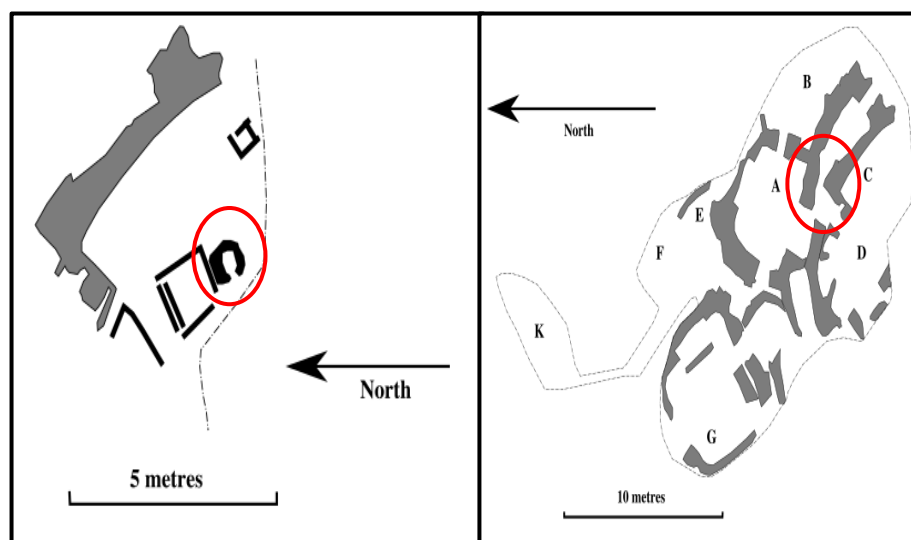


Figure 5.24. Position of oven [043] within Dwelling C, Rinyo (illustrations by author, adapted from Childe and Grant 1947)

A small gap in its western side may be seen as evidence of a flue, as here the clay walling narrowed and protruded outwards in funnel-like form. It was also built directly over a small stone slab, which acted as the oven's base. The heat of [043] during use had actually scorched a negative impression on the surface of this slab. Along its eastern clay wall, a pair of roughly square-shaped stones had been set in place for support. This must have been the back of the oven, as it was directly opposite the side where the flue was located. Between the southernmost lining slab of hearth [042] and the northern wall of [043] was an additional slab set on edge, and this slab effectively acted as a juncture between the two features. Very little was said about this slab in Childe and Grant's excavation report yet judging by their plan and section drawings it seems possible that they were connected in some way. It should be recalled that oven [009] also abutted hearth [008] within House 2 and Barnhouse.

The remains of another small clay oven [044] were found within Dwelling C (no illustration available) (Childe and Grant 1938, 11). Overall, this feature was in a very ruinous condition. Its clay superstructure had been crushed by a fallen slab, which seemed to have originally been a pillar incorporated into the building's walling.

A centrally placed stone lined hearth [045] was also discovered within House 2 at Knap of Howar (fig. 5.25) (Ritchie 1983; Traill and Kirkness 1937) – a domestic site that was constructed significantly earlier than Barnhouse.

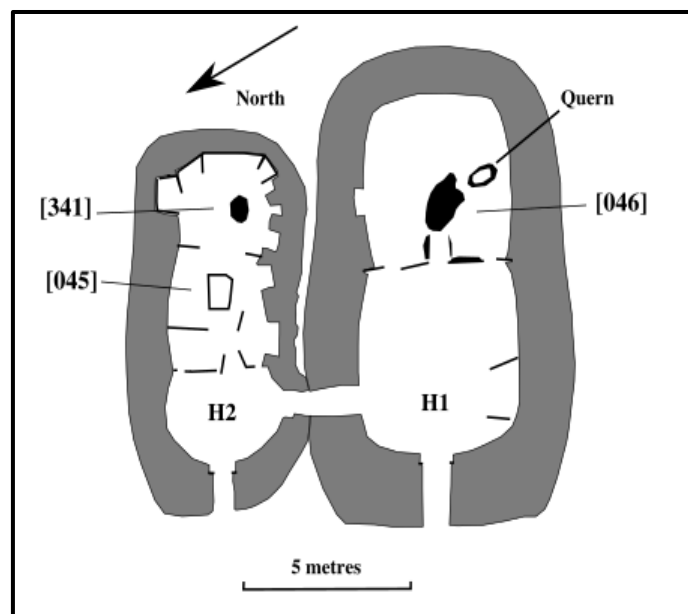


Figure 5.25. Position of hearths at Knap of Howar (illustration by author, adapted from Ritchie 1983 and Traill and Kirkness 1937)

This hearth had an internal area of *c.* 0.80m x 0.66m and was rather typical in comparison with those hearths from Barnhouse, Skara Brae and Rinyo. However, House 2 had an elongated footprint and had no real cruciform internal arrangement. Therefore, hearth [045] cannot be seen as a concentric axis around which the building's furniture could revolve. The hearth within House 1 [046] to the southwest was very different. It consisted solely of an ash-filled scoop, covering a total area of *c.* 1.30m x 1.20m. Furthermore, this hearth was not located in the centre of the building but was instead situated towards the front of House 1's rear bay ([338]). Furthermore, hearth [046] was associated with a sizeable trough quern, which was situated near its southern edge. At a later date in the site's use, a third and final hearth [341] was constructed towards the rear of House 2, directly within bay [338]. Much like hearth [046] in the neighbouring building, [341] constituted a simple scoop hearth, which measured *c.* 0.90m². As its use appeared to be contemporary with the build-up of House 2's final occupation deposits (Ritchie 1983, 51), this hearth was probably dug just before the abandonment and subsequent sealing up of the building.

Much like [046] and some other examples at Barnhouse (e.g. [002], [018], [023], [024]) there were other hearths across Neolithic Orkney that can be said with certainty not to have occupied a central architectural position. The stone-lined hearths discovered so far at the Ness of Brodgar serve as excellent examples. To date, the oldest known buildings on site are Structures 1, 8, 12 and 14 (Card *et al.* 2018), and all contained multiple hearths that were not centrally situated.

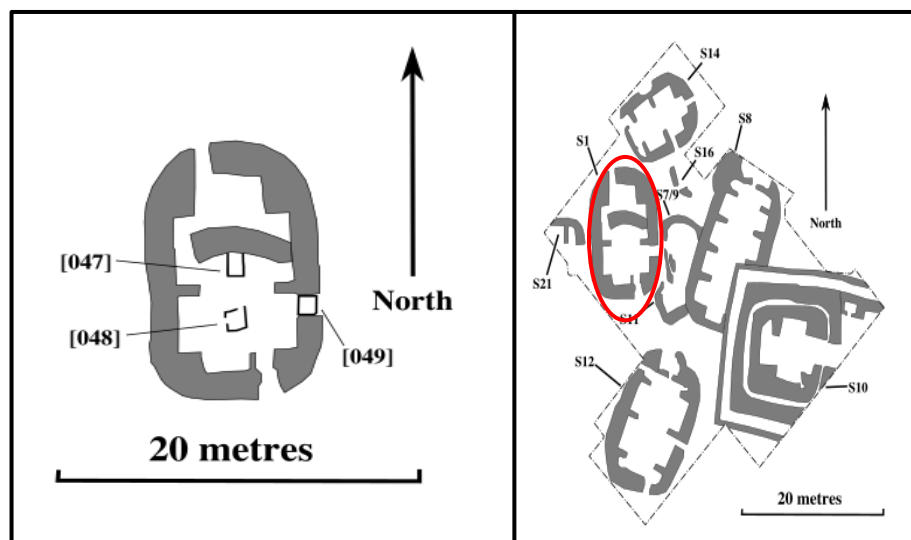


Figure 5.26. Position of hearths within Structure 1, Ness of Brodgar (illustrations by author, adapted from Card *et al.* 2018)

Structure 1 incorporated within it three hearths (fig. 5.26). The first [047] was situated towards the south of the building, the second [048] was situated to the north, and the third [049] was constructed within the building's eastern entrance [107]. Hearth [047] was broadly square in form, having an internal area measuring *c.* 1m². It had been remodelled on at least one occasion, as demonstrated by the remains of two older lining slabs sunk into the floor towards the hearth's southwestern edge. These slabs had obviously been left *in situ* upon remodelling, rather than being removed. Hearth [048] was a very interesting feature, as a vertical orthostat was found within it. This orthostat belonged to a sizeable curved wall that was constructed at a later date, which cut straight through Structure 1's northern half. Overall, the hearth was rectangular in form and its internal area was *c.* 1.09m x 0.73m (after being truncated by the curved wall). The construction of the curved wall therefore put an end to [048] for good. However, in being situated directly within the building's entrance, hearth [049] was perhaps more interesting still. The westernmost lining slab of this hearth projected upwards from a shallow slot situated in the building's floor, thus creating a split-level between the eastern threshold and the interior

proper. The easternmost lining slab was connected to the paving stones of a narrow pathway that truncated and partially destroyed the western edge of Structure 11. Moreover, its lateral lining slabs directly abutted the reveals on either side of entrance [107], within which it was contained. Comprehensively speaking, [049] was square in form and had an internal area measuring *c.* 0.80m².

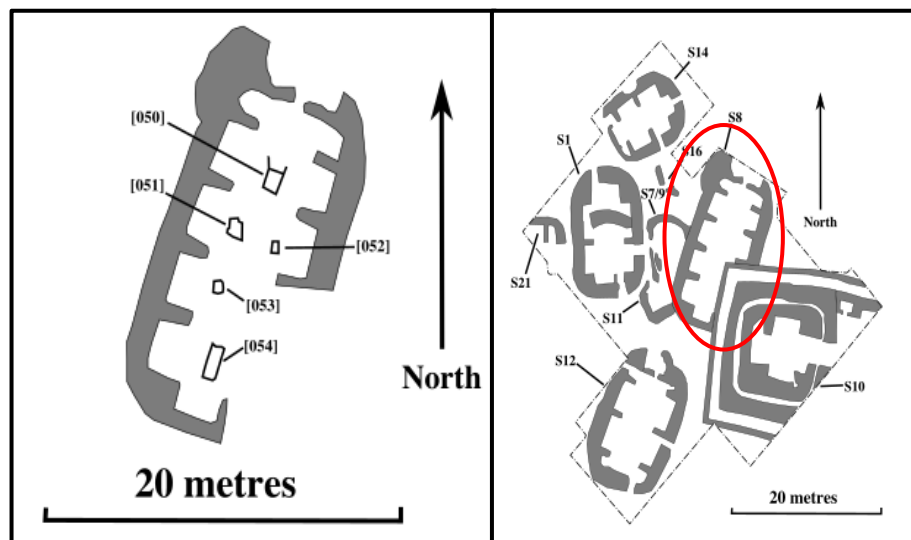


Figure 5.27. Position of hearths within Structure 8, Ness of Brodgar (illustration by author, adapted from Card et al. 2018)

Structure 8 at the Ness of Brodgar incorporated within it at least five hearths (fig. 5.27). Hearth [050], situated closest to the building's principal entrance, was a rather unique double-hearth, which comprised an elongated stone-lined box with a divisional slab running down its middle, effectively splitting it in two. Both sides of this hearth contained separate fills, indicating that it was indeed a twin hearth setting. The southern half of this hearth had an internal area of *c.* 0.80m x 0.65m, while its northern half was incomplete and badly damaged. Within the building's third bay ([266]) were two hearths. The first [051] was situated to the exterior of alcove [258], while the second [051] was to the exterior of alcove [263] on the opposite side. Both were fairly standard in form, with the centre of [051] measuring *c.* 0.70m x 0.65m and [052] measuring a significantly smaller 0.44m x 0.38m. Within the building's fourth bay ([268]) was another hearth [053], situated to the exterior of alcove [259]. Again, this hearth was fairly standard in form, having an internal area of 0.46m x 0.41m. The final hearth [054], situated towards the rear of the building, just outside alcoves [260] and [264], was notably elongated, containing an area measuring *c.* 1.50m x 0.60m.

Within Structure 12 two hearths were discovered, each situated within the building's twin bays (fig. 5.28). Hearth [055] was situated in the south of the building and contained an area measuring 1.15m x 1.10m. Hearth [056] was situated in the north, and was similar in both form and size, measuring c. 1.10m x 1.05m. While neither could be said to occupy a truly central position within the building, they were both broadly positioned within the centres of their respective bays. These hearths were therefore akin to [008] and [010] within House 2 at Barnhouse.

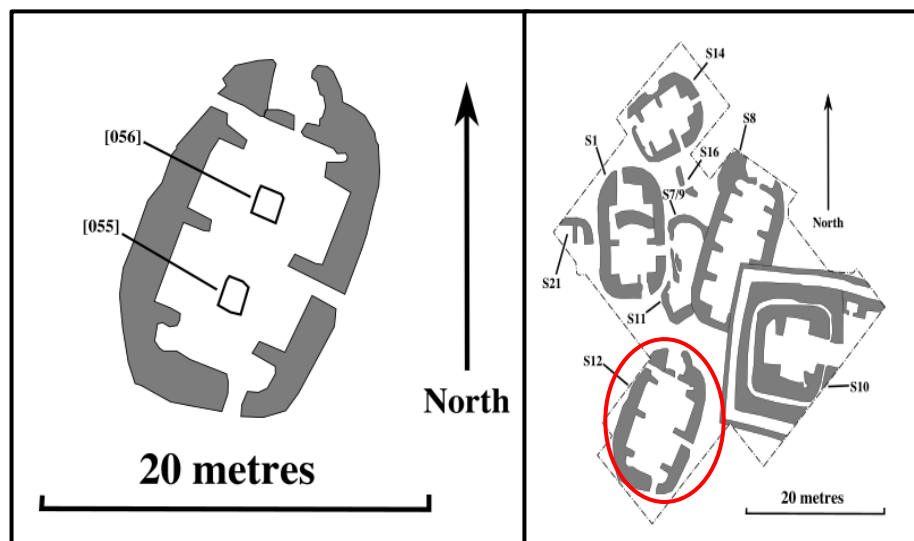


Figure 5.28. Position of hearths within Structure 12, Ness of Brodgar (illustration by author, adapted from Card et al. 2018)

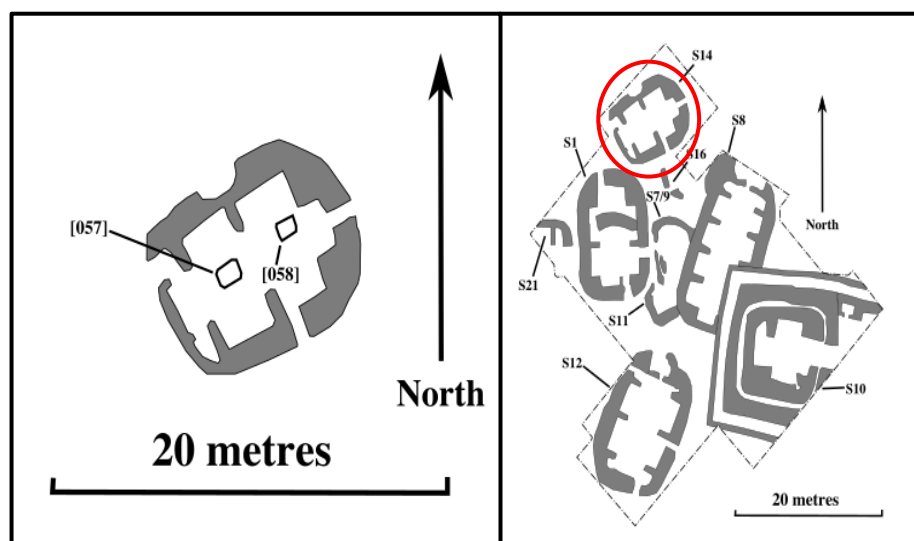


Figure 5.29. Position of hearths within Structure 14, Ness of Brodgar (illustration by author, adapted from Card et al. 2018)

The two hearths within Structure 14 had a similar placement to [055] and [056] in Structure 12, as each occupied a prominent position within the central bays of the building (fig. 5.29). Hearth [057] was situated to the west of the building and had an internal area of *c.* 1m x 0.70m, while hearth [058], located to the east, measured *c.* 0.80m x 0.65m. Hearth [057] occupied a central position within its respective bay, however hearth [058] did not, and was offset slightly to the north.

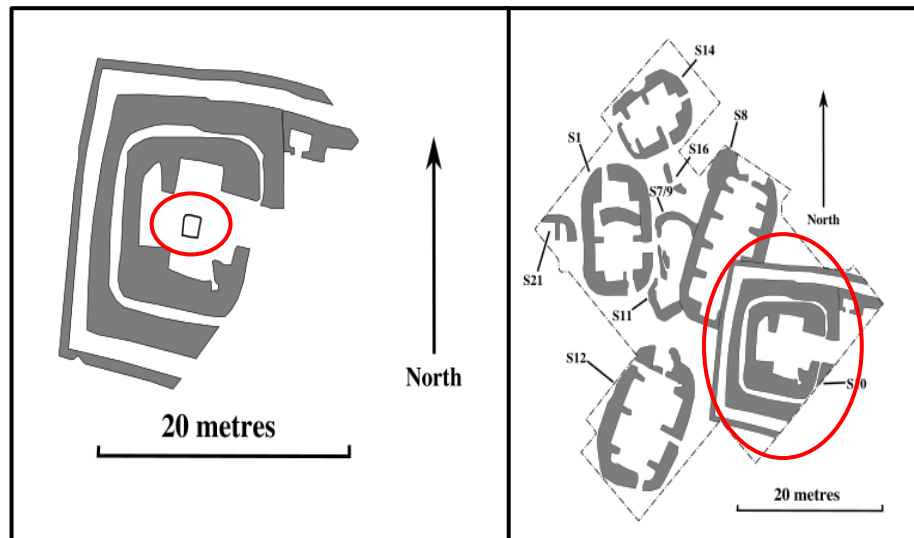


Figure 5.30. Position of hearth [059] within Structure 10, Ness of Brodgar (illustration by author, adapted from Card et al. 2018)



Figure 5.31. Aerial photograph of hearth [059] within Structure 10, Ness of Brodgar (www8)

Finally, a hearth of large proportions [059] was unearthed at the centre of Structure 10 (fig. 5.30 and 5.31). Four very large stone slabs lined the hearth on all sides, each measuring over 1m in length. These came together to form a roughly square box, measuring *c.* 1.10m². An upturned cattle skull was also discovered within the centre of the hearth. It appears that this skull was placed carefully in this location very shortly after the hearth's final use (Card *et al.* 2018, 248–9). Moreover, the pathway surrounding Structure 10 was then enveloped with enormous quantities of cattle bone, mostly tibia. This episode of deposition seems to have occurred over a relatively short period of time and may have even constituted a single event (Mainland *et al.* 2014, 875). At around this time the building's interior was also covered with a mixture of midden and rubble, while its walling was systematically robbed of masonry (Card and Thomas 2012, 117), thus putting an end to Structure 10's use.

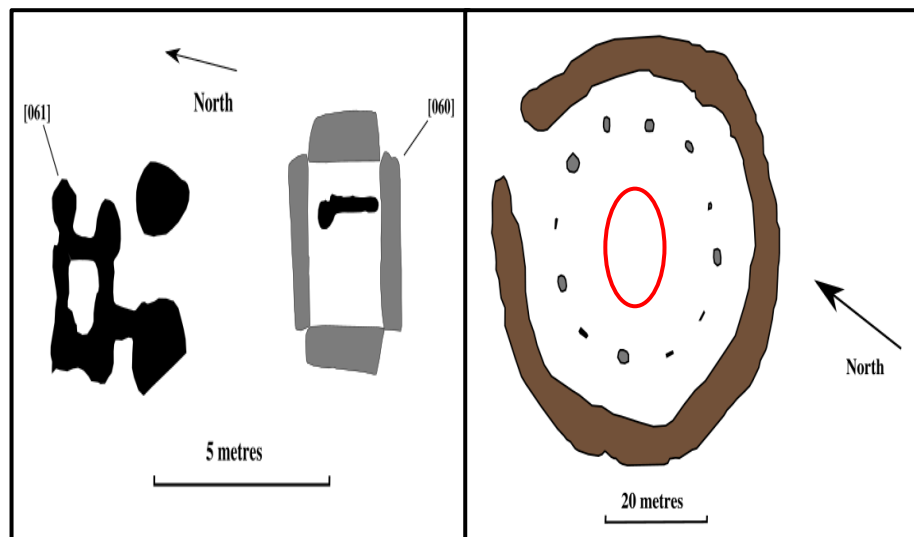


Figure 5.32. Position of hearths at Stones of Stenness (illustrations by author, adapted from Ritchie 1976 and www9)

One of the more obvious connections between Barnhouse and its wider Neolithic setting lies at the nearby monument of the Stones of Stenness. Here, a large stone-lined hearth [060] was built almost exactly within the centre of its circle of monoliths (fig. 5.32). Its lining slabs were discovered *in situ*, which had been set into four evenly dug slots meeting at right angles to form a box-like feature. The area that these slabs enclosed was very large, covering an area measuring 2.1m x 1.9m (Ritchie, 1976, 12). It was observed that another elongated slot had been dug into the central area of the hearth, which appeared far thinner than those for the lining slabs and which ran parallel to the eastern slot. At its northwestern end it projected slightly outwards forming an ovular protrusion. During its excavation, this feature was interpreted as a

beam slot with an adjoining stone-lined posthole incorporated at its end, which would have facilitated some form of wooden setting, possibly a pot hanger or even a spit. The slots for this wooden setting also lay directly beneath the fills of the hearth (Ritchie 1976, 13), and its foundations were cut into the glacial till, just like the slots for the lining slabs. The fills of the [060] consisted mainly of ashy soil with animal remains throughout, primarily in the form of charred sheep bones (Hodder, 1982, 224). Large quantities of cramp were also found within the centre of the hearth (Ritchie 1976, 12). The first phase of activity associated with [060] was the cutting of an L-shaped slot directly into the glacial till, and it would therefore have been of very similar appearance to hearth [017] at the centre of Structure 8 at Barnhouse. Again, much like with [017], two of the foundation slots for the later lining slabs cut directly into the fills of this L-shaped slot. Having been dug along the northwestern and northeastern sides of the hearth, this L-shaped slot likewise corresponded exactly with [017] in terms of its position and alignment. In considering these similarities, it has been argued that the lining slabs from the large hearth at Structure 8 were dismantled and later transported to the Stones of Stenness (Challands *et al.* 2005a, 221). However, there is little physical evidence to support such a direct connection, as the slabs in question are completely absent. It must be noted that both of these L-shaped slots were of similar dimensions and depths, and even if we disregard the idea that both these hearths shared the same lining slabs, there is still a clear point of similarity between the two. Much like hearth [017], hearth [060] was also constructed within an open-air environment.

A little over 3m to the north of hearth [060] was another box-shaped feature [061], which survived as four linear foundation slots meeting at right angles enclosing an internal area of *c.* 1m² (fig. 5.32). A pair of protrusion along its eastern edge was also discovered, which were reminiscent of postholes, and again there may be the suggestion of additional wooden settings having been set up here. It has been suggested elsewhere that this feature constituted an additional hearth (Richards 2013c, 72). In considering the current evidence, this suggestion seems a valid one. Indeed, although there was little evidence of burning in association with this feature, it is difficult to imagine what else it could have been other than a hearth. The stratigraphic relationship between [060] and [061] could not be accurately determined. However, given that the lining slabs of the latter were robbed out while those of the former were not, it could be inferred that [060] was constructed in order to replace [061].

Much like at Barnhouse, we can see other hearths throughout Neolithic Orkney that were associated with drainage channels. This was certainly the case with regards to hearth [035] at the centre of Dwelling A at Rinyo (fig. 5.25). Running parallel to its northeastern lining slab was a narrow channel measuring 0.1m wide (Childe and Grant 1938, 11). A twin series of slabs at either side once walled this channel, but only two survived *in situ*. This channel terminated at, and was connected to, an irregularly dug pit located to the east of the hearth. The fill of this pit was very similar to the midden material spread over the floor of the building's interior, but it could be distinguished from it by both its softer texture and darker colour. This fill had therefore been deposited appreciably later than the flooring deposits. The stone-lined channel was regarded upon excavation as an artery running from the settlement's primary drain, which itself ran on a curved trajectory through the centre of the site, from E–W. This arterial drainage channel was also seen to run directly underneath the hearth; therefore, the hearth was constructed later and partially on top of both the channel and pit.

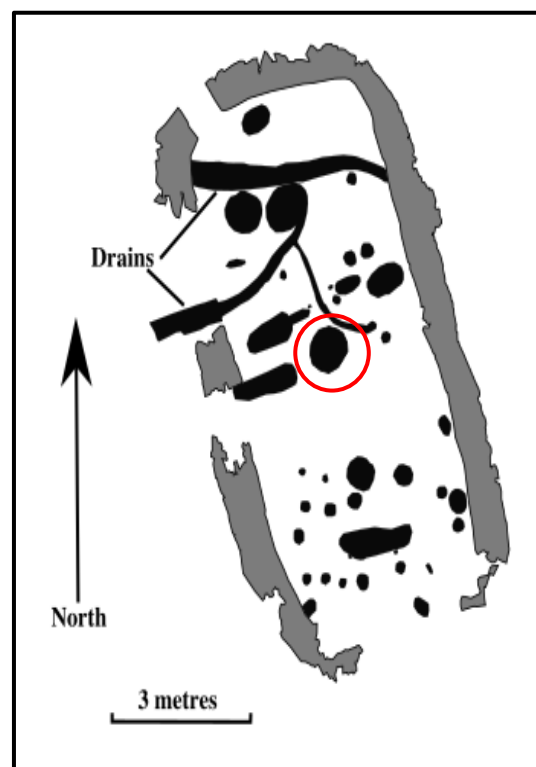


Figure 5.33. Position of hearth [062] within Smerquoy Hoose (illustration by author, adapted from Gee et al. 2016)

At Smerquoy Hoose it was observed that the remodelling of both the building's internal drainage system and the central hearth coincided with one another (fig. 5.33) (Gee *et al.* 2016, 77–9). At Smerquoy Hoose it was observed that the remodelling of both the building's internal

drainage system and the central hearth coincided with one another (fig. 5.33) (Gee *et al.* 2016, 77–9). The hearth here [062] began its life as a simple scoop cut directly into the glacial till, which lacked any form of stone lining. It was remarkably shallow and was ovular in form, measuring *c.* 0.68m x 0.60m. In concurrence with the digging of this rudimentary hearth a narrow gully was built that extended from its eastern edge and joined up with the main drainage channel running downslope and out under the western wall of the building. A large pit was also dug into the floor of the building towards the northern back wall, which connected to the end of the drain. This drain clearly acted as an overflow channel for the liquids contained within the aforementioned pit. As has been suggested by Gee *et al.* (2016, 77), this pit, along with another immediately to the west, may have functioned as some kind of immersion pit, possibly for dyeing textiles. A collection of burnt igneous rocks was discovered within the fill of this pit, suggesting that it was used for the purposes of heating liquids. Indeed, it has been noted elsewhere that dye extraction within prehistoric societies often required both the raw material and the textile being dyed to undergo submersion in hot liquids (e.g. Barber 1991, 223–43). Due to a scarcity of evidence, such an interpretation naturally remains tentative, yet whatever manufacturing process was being implemented here it is clear that hearth [062] was integral to it.



Figure 5.34. Aerial photograph of Smerquoy Hoose with secondary hearth [063] near centre (from Gee *et al.* 2016)

Later in Smerquoy Hoose's use hearth [062] was replaced (no illustration available, but see fig. 5.34). This occurred at some point after it had been deliberately backfilled with clay. A new rectangular cavity was dug slightly further south, measuring *c.* 1.16m x 0.67m, and a stone lining was set up around it, forming a replacement hearth [063]. At around this time the northward running drain was also backfilled and was both relocated and extended slightly further southward. After this stage of renovation both the hearth and drainage system were remodelled further, although the precise stratigraphic relationships between these acts of remodelling were difficult to establish. It was however possible to conclude that the hearth's lining slabs were later removed and replaced with new ones. In addition, another drainage channel was dug into the floor, which again ran downslope towards the northern end of the building. Overall, it seemed likely that the remodelling of the drainage system revolved around and was a response to the remodelling of the hearth, or *vice versa*.

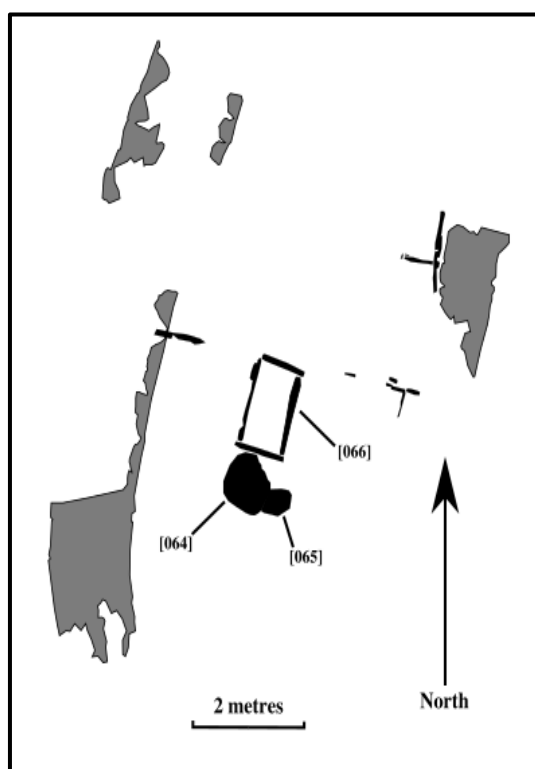


Figure 5.35. Position of hearth within domestic building at Knowes of Trotty (illustration by author, adapted from Downes *et al.* 2016)

The first hearth to be constructed within the Neolithic building at the Knowes of Trotty [064] also came in the form of an irregularly dug scoop, which was roughly ovular in form (fig. 5.36) (Downes *et al.* 2016, 47–8). It measured 0.12m in depth and covered an area measuring *c.*

0.93m x 0.79m. A large flagstone had been placed over the top of it, and immediately below this flagstone, sealed within the cut of the hearth, was a charcoal-rich fill comprising reddish brown silt. This fill was found in a very well-preserved condition, so it seemed likely that the flagstone capping was placed above it almost immediately after the hearth's final use.

Another shallow scoop hearth was found at the Knowes of Trotty [065] (fig. 5.35). It was located to the south of the building's later stone-lined hearth [066], near its eastern edge (Downes *et al.* 2016, 54), which cut directly through the fill of [064]. Yet by this point, [064] had gone completely out of use. This hearth was a lot smaller in size, covering an area of *c.* 0.57m x 0.43m, but had a far more regular oval shape to it, and its burnt ashy fill spread out quite significantly across the southeastern side of the building, forming a discrete amorphous area measuring 1.50m in diameter. The construction of this hearth appeared to coincide with a series of major architectural adjustments. For example, at around this time the entire building was both shortened and narrowed, while the inside corners of the inner wall were squared off, contrasting with their previous appearance, which was rounded. However, the most noticeable alteration was the burial of the building's previous southern and eastern walls under a large banked up heap of rubble and re-deposited glacial till (Downes *et al.* 2016, 48–50). A later stone-lined hearth [066] was constructed on the northern edge of [065], after it had been put out of use (Downes *et al.* 2016, 51–3). All four of its lining slabs survived *in situ*, and it was rectangular in form, having an internal area of *c.* 1.29m x 0.68m. This hearth was clearly used on an extensive basis, as evidenced by the scorched and laminated condition of its lining slabs. One of the lower fills of this hearth was seen to have a distinctive red colouration, which suggests that it was heated to a temperature exceeding 400°C.

Within Timber Structure 1 at Wideford Hill a scoop hearth [067] was discovered (fig. 5.36) (Richards and A.M. Jones 2016, 22–3). Sealed within the hearth were two basal deposits of burnt orange clay, which were overlain by an upper lens of charcoal-rich clay. The cut within which these deposits were contained measured *c.* 0.62m x 0.59m. A significant spread of ash was also seen to emanate beyond the confines of the hearth. Surrounding the hearth was a series of nine postholes forming a ring measuring *c.* 3.5m in diameter. The hearth was situated more or less centrally within this ring of postholes. This setting of postholes once formed the outer walls of Timber Structure 1, which would have stood as a rather small wooden building with a circular footprint.

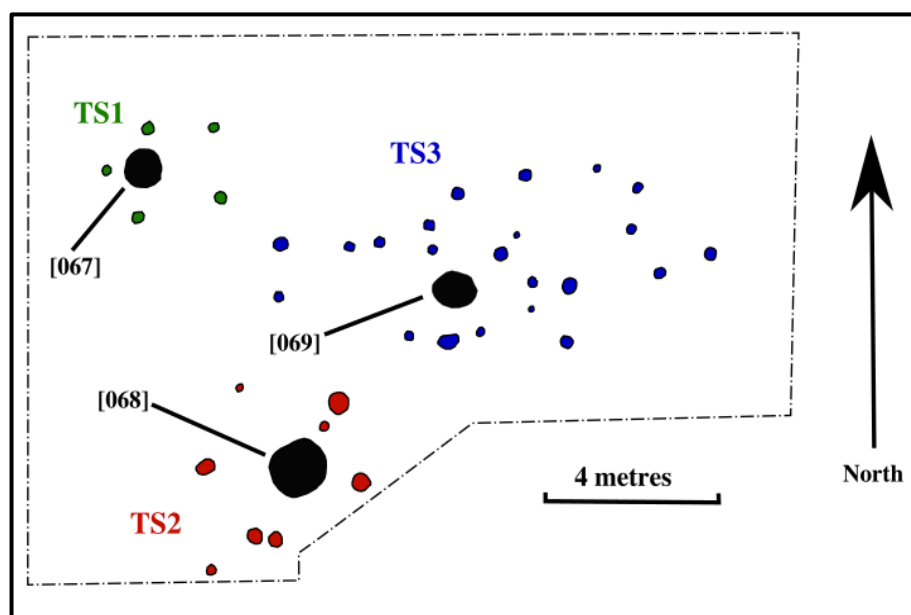


Figure 5.36. Position of hearths at Wideford Hill (illustration by author, adapted from Richards and A.M. Jones 2016)

Another scoop hearth [068] was associated with Timber Structure 2 at Wideford Hill (fig. 5.36) (Richards and A.M. Jones 2016, 24–6). The arrangement of this building was much the same as Timber Structure 1, as it comprised a ring of postholes, although the hearth within was not centrally placed. Rather, it would have been situated adjacent to the northwestern corner, right up against the wall. The fill sealed within the hearth consisted of friable black ash. Directly above the base of [068] was a horizontally laid hearthstone. Overall, [068] covered an area around 0.48m x 0.45m.

Yet another scoop hearth [069] was discovered at Wideford Hill's Timber Structure 3 (fig. 5.36) (Richards and A.M. Jones 2016, 26–30). This building was of a different shape, being sub-rectangular in form. Its scoop hearth was located towards the east end of the building. The hearth was ovular in form and covered an area measuring 0.80m x 0.60m. Within the hearth were two distinct fills. Its basal fill was a dark layer of ash, while its upper fill consisted of orangey brown ash. It is likely that this building began as a circular wooden structure and was later remodelled into a sub-rectangular one. It therefore seems that prior to this remodelling the hearth occupied a central position within the primary circular building.

At the site of Barnhouse Odin, a large scoop hearth [070] was discovered that cut directly into the glacial till (no illustration available, but see fig. 3.37) (Challands *et al.* 2005a, 208–10).

This feature had clearly served as a hearth as it contained two discrete fills of red ash. A thin lens of re-deposited yellow clay separated these fills, indicating that the hearth was simply left open in between uses. Like hearths [017], [060] and [061], this hearth was constructed within an open-air setting. Immediately surrounding the hearth was a halo-shaped area of scorched clay, *c.* 0.02–0.04m in width, which also served as evidence for the hearth's use. A large ash and cramp heap was located within the hearth's vicinity as well, showing that it had an extensive history of use. Overall, the internal dimensions of the hearth were *c.* 1.05m x 0.95m. There were significant scatters of worked flint, mainly in the form of debitage, all around the area that the hearth occupied. Immediately to its west some sherds of Grooved ware along with a broken stone macehead were discovered. Additional artefacts were also found to the south including more sherds of Grooved ware, more flint debitage, a single piece of pumice and some degraded lumps of cramp. These particular finds were sealed within a deposit of burnt ashy clay, which exhibited a pink to red hue.



Figure 5.37. Section of hearth [070], Barnhouse Odin (from Challands et al. 2005a)

The overall purpose of hearth [070] is somewhat of a mystery. Given the large amounts of Grooved ware and flint debitage in association with it, it may be tempting to consider it as some form of kiln in which pottery was fired or where flint nodules were heated prior to knapping. There was, however, no direct evidence of pottery production, and the quantities of fire-crazed flints discovered here were not particularly large. It has instead been suggested that hearth [070] is best seen as a food preparation area, where meat and other foodstuffs were cooked over the hearth's fires (Challands *et al.* 2005a, 209). If this hypothesis is correct, then

the insufficient numbers of animal bones found in association with the hearth serves as an indication that the food was removed from site and taken elsewhere for consumption.

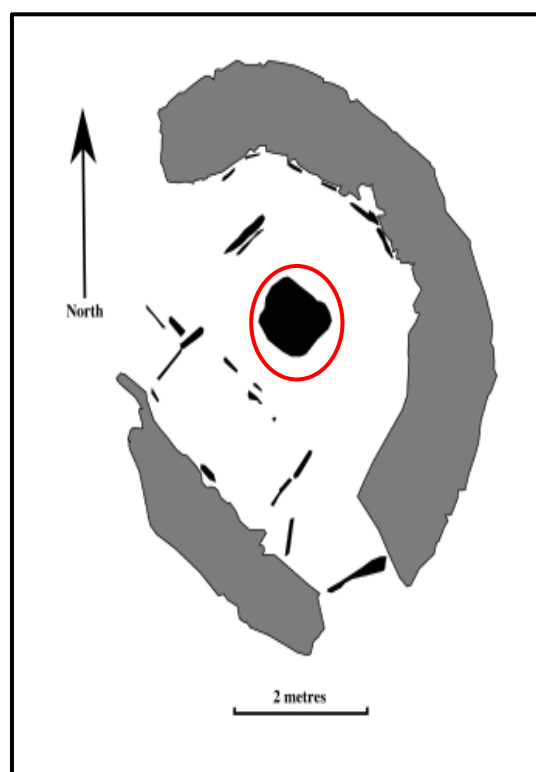


Figure 5.38. Position of hearth [071] and cist [072] within Structure 1, Stonehall Farm (illustration by author, adapted from Richards et al. 2016a)

Both beyond and within the domestic sphere of Neolithic Orkney we can see that hearths were occasionally associated with mortuary activity. Within Structure 1 at Stonehall Farm there is evidence that at a later date in the building's use the central hearth [071] was replaced by a cist [072] (fig. 5.38) (Richards *et al.* 2016a, 134–46). The remains of hearth [071] were very obscure, as the later cist had been supplanted directly over the top of it. However, a series of ashy bands were seen to emanate from underneath the cist, which spread across the floor of the building. These derived from two occupation layers that spread outwards from a central area. This small area measured *c.* 0.95m x 0.90m. Given the amount of ash within the building's interior, along with the concentric pattern that it formed, emanating from such a small space, it seems likely that a hearth did indeed occupy this area originally. The interior of the building was also re-floored on at least two occasions, and these re-flooring episodes respected the position of the hearth. On the other hand, there is no evidence indicating the structure of the hearth, and no definitive cut could be found. Cist [072] was essentially a stone-lined box. It also had a flagstone capping that sealed its contents. Its foundation slots cut through the yellow

clay flooring of the building, meaning that its construction was associated with a much later phase in the building's use, possibly dating to the abandonment of the building. It measured 0.58m x 0.56m x 0.20m deep. Within the cist was a deposit of silt intermixed with decayed bones. Unfortunately, due to the abraded condition of these bones it was impossible to determine whether they were human or animal in origin.

Moreover, within Structure 1 at Stonehall Farm an oven [073] was found (no illustration available) (Richards *et al.* 2016a, 140). It was discovered on the eastern edge of central hearth [071] and cist [072] and was observed as a bowl-shaped depression overlying the building's primary occupation deposit. This oven therefore occupied a relatively late phase in the building's stratigraphic sequence, but it was not as late as cist [072] as the final flooring deposit of the building appeared to spread over it. The oven was capped with a small flagstone, and below this it was formed entirely of unbaked yellow clay. Underneath the flagstone and within the feature itself some sizable pieces of burnt birch were found, which would have been used as fuel. In total, [073] covered an area measuring *c.* 0.99m x 0.64m.

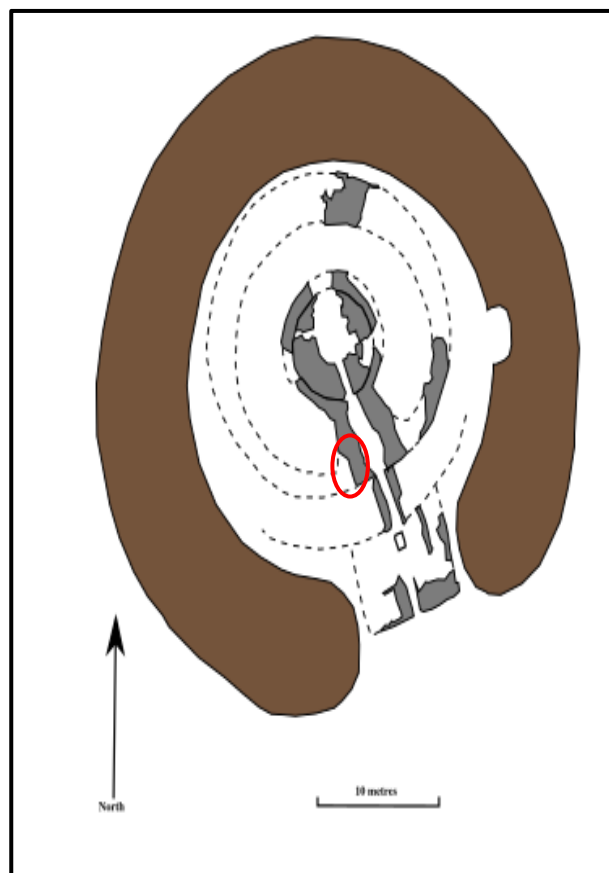


Figure 5.39. Position of cairn [074] within domestic building at Howe of Howe (illustration by author, adapted from Carter *et al.* 1984)

The stone-lined cist [074] discovered at the Howe of Howe was very similar to cist [072] at Stonehall Farm. This cist appeared to belong to a domestic building situated adjacent to another building that also seemed domestic in nature (fig. 5.39) (Carter *et al.* 1984, 61; Ballin Smith 1994). In total, it covered an area measuring 1.20m x 0.70m. Unfortunately, this cist contained no finds. Furthermore, a Neolithic stalled tomb was constructed over the top of this building, which was itself replaced at an even later date by what appeared to be a Maeshowe-type chambered tomb.

On the eastern edge of the Huntersquoy chambered tomb a scoop hearth [075] was unearthed that had a hearthstone at its base (no illustration available) (Calder 1938, 197). This hearthstone measured *c.* 0.76m x 0.46m and had been partially fragmented and discoloured through burning. Above and slightly beyond the edges of the hearthstone was a deposit of ashy peat with frequent burnt stones throughout. This hearth was difficult to date as no clear stratigraphic relationship was determined between it and the tomb. However, similar slabs to this hearthstone were found to infill the remainder of the excavation trench (Henshall 1963, 204), so it seems likely that the hearth was at least contemporary with the final construction phases of the outer cairn.

Approximately 2m south of the entrance passage to the Bookan chambered tomb was a pair of small shallow scoops [076] and [077] that were circular in form (no illustration available) (Card 2005, 174). Both were *c.* 0.20m in diameter and only 0.05m deep. They had been infilled with dark charcoal-flecked soil, probably deriving from carbonised heather, which provided an indication that these features were rudimentary hearths. Both hearths were situated beneath the stone revetments that were added to the tomb's mantling cairn at a later date.

Furthermore, along the southern perimeter of the Bigland Round stalled tomb a small and shallow scoop [078] was dug into the subsoil (no illustration available) (Davidson and Henshall 1989, 102). It was located 3.4m from the tomb's entrance and 0.13m from the outer face of its mantling cairn. This hearth measured 0.50m x 0.40m x 0.16m deep. At its base it was lined with a thin deposit of clay, while the rest of the fill consisted of black peaty ash.

The same situation was seen at the Knowe of Craie stalled tomb. Here a small scoop hearth [079] was cut directly into the bedrock on the northern side of the tomb's entrance (Davidson and Henshall 1989, 132). It measured *c.* 0.45m in diameter x 0.23m in depth. The fill of this

hearth consisted of significant amounts of ash, fragments of burnt bone, flint debitage and sherds of Unstan ware pottery.

The final hearth-like feature to be described in this section is slightly different from the others. At the Knowes of Trotty the remains of a bonfire [080] were discovered within a yard to the exterior of the Neolithic building (no illustration, but see fig. 5.40) (Downes *et al.* 2016, 55–8). The overall dimensions of this feature were difficult to determine, as it was not fully uncovered. The bonfire and its immediate environs appeared to be enclosed by a low-lying drystone wall. The base of the bonfire was extremely coarse and was composed mainly of gritty silt but with lumps of baked clay intermixed within. At first, it was thought that [080] constituted a pottery kiln, which would have made it the only feature of its kind ever to be discovered in Neolithic Orkney. For [080] to be classified as a kiln, however, the presence of a clay or stone superstructure would have been a prerequisite. Unfortunately, no evidence existed on site to support the presence of such a superstructure. Instead, it constituted a simple bonfire within which pottery was fired. Therefore, the use of [080] accorded with all other pottery manufacturing techniques across Neolithic Orkney (Jones and Brown 2000) and for that matter prehistoric Britain and Ireland as a whole (Gibson 2002).



Figure 5.40. Structural debris of bonfire [080] in section (from Downes et al. 2016)

Significant quantities of ceramic sherds were situated in and around its confines. In all, 27 sherds and other miniscule fragments were discovered in association with [080], comprising a total of 14 individual vessels. Physically speaking, it appeared that [080] was originally covered by a mass of compacted black material, all organic, but degraded to the point of it being unidentifiable. In this sense, it probably constituted a bonfire encased within a clamp consisting of whatever organic materials were available to hand, such as turf or pieces of green wood. In addition, analysis of the sherds found within [080] revealed that they had been fired to a temperature of *c.* 400°C, which is a relatively low temperature for firing pottery, even within open fire settings. In fact, it was noted that almost all sherds were more or less under-fired. Overall, these sherds could not be typologically identified with much accuracy, mostly due to their under-fired texture and rusticated form, yet they likely date to the fourth or early third millennium BC (MacSween *et al.* in Jones *et al.* 2016, 404–7).

5.2.5 Discussion

By the end of the fourth millennium BC the process of constructing hearths had become more or less standardised. Therefore, hearth construction during this period replicated remarkably similar looking hearths each time. This procedure revolved around the incorporation of three main elements. Firstly, a hearthstone was placed at the base of the hearth. Secondly, four lining slabs were fixed in place, which surrounded the hearthstone on all sides. Thirdly, the hearth was constructed with a roughly rectangular or square shape. In addition, the hearth was very often built in the centre of a domestic or at least non-mortuary building. This was clearly the case at settlements such as Barnhouse, Skara Brae, Rinyo, the Ness of Brodgar and others.

Of course, there were some obvious variations to be seen in terms of their overall size. If we discount the anomalously large form that [017] originally took, then the average internal area of the hearths at Barnhouse was *c.* 0.64m². This figure derived from those hearths that were complete or at least relatively complete, which can be seen in Table B 1 (Appendix B). Again, discounting the anomalously large [017], the average internal area of those hearths that could be positively identified as centrally placed was more or less the same, being 0.62m². This situation can be contrasted with Skara Brae, where the average internal area of those complete or relatively complete hearths was significantly less, being *c.* 0.28m². Discounting the incomplete hearth of Dwelling K ([041]), the average internal area of the hearths at Rinyo was

c. 0.56m². The average size of Rinyo's hearths was therefore more in line with those of Barnhouse than Skara Brae. The hearths of the Ness of Brodgar that were considered here varied quite significantly in terms of their overall sizes, yet their average internal area was significantly larger than those of Barnhouse, Skara Brae and Rinyo, being c. 0.76m². However, when calculating this figure, the incomplete hearth [047] within Structure 1 was discounted.

The central position granted to many of these hearths would indicate that a major aspect of their function was to provide warmth to their associated buildings and inhabitants. Yet the light given off by these hearths would have also illuminated the interiors of these buildings (see Jones 2012, 85–98). This luminosity would have been vitally important, particularly in the winter months, where the interior spaces of Neolithic Orkney were plunged into long-lasting darkness. Of those buildings whose purpose was to be inhabited (or at least visited frequently), almost all had hearths, whether centrally placed or not. Moreover, of those buildings that were clearly not inhabited or only visited episodically, none had hearths within their interiors. Of course, the buildings that fall into the latter category are almost exclusively mortuary in nature. This pattern also seems to apply to the mid-fourth millennium BC, although it should be noted that no hearths were found in association with the earliest buildings at Pool (Hunter *et al.* 2007, 28–31). On the other hand, this absence may have been a result of poor preservation.

With regards to the fuel being burnt within these hearths, it seems as if locally available sources were being exploited on an *ad hoc* basis (Cartwright 2005). With regards to the fuel being burnt within these hearths, it seems as if locally available sources were being exploited on an *ad hoc* basis (Cartwright 2005). For instance, wood or twigs were used as fuel in locations near groves or scrublands, while seaweed was often exploited in locations close to the seashore (Miller *et al.* 2016, 513–16). In other instances, turf was often exploited (French 2005; Hinton 2005). Overall, the process of seeking out suitable fuel for hearths was probably quite an arduous task at times (Stapleton and Bowman 2005, 381), which goes some way in explaining the *ad hoc* nature of its procurement. Indeed, the varying quality of pottery at sites such as Pool, which was likely caused by a corresponding variety of fuel sources used in their firing (Spencer and Sanderson 2012), highlights this trend very well. While on this subject it is also worth mentioning the presence of cramp in association with some hearths, most notably [060] and [070]. The inclusion of this substance within prehistoric deposits has been recognised across the Northern Isles since at least the mid-nineteenth century (Henderson *et al.* 1987, 97).

However, the nature and meaning of its deposition has always been somewhat of a mystery. Certainly, its slag-like and vitrified appearance, resembling “white opaque glass” (Callander 1936, 443), is a clear indication that it was effectively molten upon formation. The raw materials responsible for its formation are probably sand in combination with marine vegetation such as seaweed (Stapleton and Bowman 2005). While it has been suggested that cramp was sometimes deliberately produced, particularly in Bronze Age cremations (Photos-Jones *et al.* 2007), its presence within archaeological deposits in the Neolithic period was probably accidental.

We can also see that the function of many hearths, particularly those from the Late Neolithic, varied from site to site or even from building to building. The non-architectural or ‘open-air’ environments within which hearths [060], [061], [070] and [017] (during its initial use) were constructed mark them out as being qualitatively different from the others. These particular hearths were probably used in commemorative feasting and were generally far larger than those intramural examples. However, it seems as if some intramural hearths were also constructed with the explicit intention of being implemented in the manufacture of foodstuffs. Hearths [008] and [010] within House 2 at Barnhouse are key examples, which were clearly caught up in rather intricate cooking procedures, as evidenced by the wooden settings surrounding them. This may also have been the case with respect to hearths [018], [019], [020] and [022] within Structure 8 at Barnhouse. Certainly, a strong case can be made for [022] having been implemented in cooking. Yet determining the precise nature of the others remains problematic.

Within the context of Barnhouse, if we take the initial building phases of Houses 2 and 9 as a relative start date, then the construction of stone-lined hearths began around the thirty-second and thirty-first centuries BC (Richards *et al.* 2016d, Table 2). Establishing corresponding dates for Skara Brae, Rinyo and the Ness of Brodgar is difficult at present, either due to the incomplete nature of their excavations or because of insufficient radiocarbon samples (or both). I would conjecture that stone-lined hearth construction at Rinyo began at around the same time, with the same activities beginning at the Ness of Brodgar from at least the thirtieth or thirty-first centuries BC (Card *et al.* 2018, 249). For Skara Brae, based on available radiocarbon dates (e.g. Renfrew and Buteux 1985) it may be suggested that the upper stratigraphic levels of the site formed around the early thirty-second or late thirty-first centuries BC (Ashmore 2005, 388; Wickham-Jones 2015, 8; Bayliss *et al.* 2017, 1184). Yet the stoned-lined hearth discovered at

Knap of Howar [045] shows that this kind of constructional procedure was occurring closer to the middle of the Neolithic period. It seems likely that the oldest structure on site (House 2) was constructed either during or significantly before the thirty-fourth century BC (Griffiths 2016, 290). The shallow scoop hearths [046] and [341] within House 1 and 2 nevertheless indicates that on rare occasions stone-built rectangular hearths were built alongside more rudimentary ones.

On the other hand, the broad degrees of uniformity with which these hearths were constructed belie their historical development. The first hearths that appear within the archaeological record of Neolithic Orkney are scoop hearths. The ones discovered at Smerquoy Hoose ([062]), the Knowes of Trotty ([064] and [065]) and Wideford Hill ([067], [068] and [069]) illustrate this pattern well. The sizes of these hearths varied quite wildly, with their internal areas measuring anywhere from 0.22m² to 0.73m². Such lack of formality undoubtedly betrays their makeshift construction. Moreover, in terms of their superficial appearance these scoop hearths were almost indistinguishable from pits, and much like pits they appeared as simple functional features with very little in the way of aesthetic embellishment. In fact, if we consider the internal of arrangement of Smerquoy Hoose during its earliest phases, we can see that the hearth failed to enjoy any kind of special architectural position within the building. Indeed, in terms of its overall importance, hearth [062] was more or less on an equal footing with those pits and drains surrounding it, as each feature within this area of the building was tied to an intricate system of manufacture, the sum of which being greater than its parts. While no suitable radiocarbon sample could be obtained from [062], it is possible that the initial phases of construction date to the earlier thirty-third century BC. The building at the Knowes of Trotty is potentially even earlier, dating to anywhere between the thirty-fourth and thirty-second centuries BC (Griffiths 2016, 291), while the earliest building at Wideford Hill dates between the thirty-sixth and thirty-fourth centuries BC (Griffiths 2016, 287). So, what happened to the hearth between the middle and end of the fourth millennium BC? And why did the heath transform from a simple functional feature into one of central architectural importance? In answering this question, we must take a closer look at what was happening within mortuary architecture at the time.

The implementation of laminated slabs in defining architectural space was a near ubiquitous feature of mortuary architecture from the very beginning. The creation of such thin slabs was of course down to the stratigraphic composition of the local sandstone, which could be easily

laminated. However, cist [074] placed at the centre of the Neolithic building at Howe of Howe is most pertinent to this discussion. That a cist was constructed on the exact spot on which a hearth would normally be found is interesting, as we are witnessing the hearth *becoming* a cist. Although no radiocarbon samples were taken from this site, the fact that the building here directly underlies a stalled tomb surely attests to its great antiquity. This may suggest that, at some point during the earlier phases of the Neolithic period, the hearth began to take on architectural elements normally associated with burial cists, culminating in its later box-like appearance through the use of lining slabs meeting at right angles. The same situation occurred within Structure 1 at Stonehall Farm; however, in this case there was definite evidence that cist [072] had been supplanted over the top of an area originally occupied by a hearth ([071]). The midden deposits underlying Structure 1 may potentially date as far back as the late thirty-fourth century BC (Griffiths 2016, 292), so here again we are witnessing the colliding together of cist and hearth during the earlier Neolithic phases.

In addition, it is during the middle of the Neolithic that the concepts of ‘mortuary’ and ‘domestic’ begin to suffuse into one another. This occurred both within the context of the hearth and the cist. Hereafter we find increasing evidence for cist structures being used for domestic purposes (i.e. chests). This is seen at, for example, Hut 3 at Skara Brae, where chests [177] and [178] were used for storing valuable objects (see Section 5.4). Equally, hearths had to some degree taken on a mortuary association. The placement of an upturned cattle skull within hearth [061] at the centre of Structure 10 illustrates this well. The hearth here acted as a focal point in the closing of the structure, where the mass slaughter of cattle seemed to echo the killing of the building itself. These cattle died an estimated 135–320 years after the hearth here was last used, during a period occupying the twenty-fourth or twenty-third centuries BC (Card *et al.* 2018, 247).

While the appearance of animal bones was a common feature of several domestic sites from the late fourth millennium BC onwards (Jones 1998; Jones and Richards 2003), this form of mass deposition is very curious, being generally associated with mortuary structures such as Isbister, Cuween Hill and the tomb at Pierowall Quarry. These particular sites were characterised by the mass deposition of sea eagles, dogs and sheep respectively (Ritchie 1959; Hedges 1984; Charleson 1902; Sharples 1984). Moreover, within the tomb of Holm of Papa Westray North a huge variety of different animal remains were discovered, including sheep, deer, dog, otter, and so on (Ritchie 2009, 18–19). The mass slaughter of red deer at the

settlement site of Links of Noltland also draws some parallels here (Sharples 2000), although the context was slightly different both in terms of the species that were deposited and their location with relation to the rest of the settlement. The period during which the deer were deposited also differs slightly, as this event was associated with Beaker pottery rather than Grooved ware, and therefore dated to the Bronze Age (Clarke *et al.* 2017, 76–77; Marshall *et al.* 2016). Yet a far closer parallel has recently been discovered at Links of Noltland, during an excavation of Structure 9. Here, the entrance passage was obstructed by a mass deposit of animal bones, including 18 cattle skulls and 6 sheep skulls, while a further pair of sheep skulls was found in association with the door checks of the building's entrance (Moore and Wilson 2013). Again, this deposit probably related to the decommissioning of the building as a whole.

The closing ceremony of Structure 10 at the Ness of Brodgar is important to this discussion as it brought the building's hearth into play. We can therefore see that in this case the hearth immediately took on a mortuary or even sacrificial association. The building of scoop hearths near the tombs of Bookan ([076], [077]), Bigland Round ([078]) and the Knowe of Craie ([079]) also show that hearths were sometimes important in mortuary performances. Drawing on the evidence from Structure 10 at the Ness of Brodgar, the hearths associated with these sites may have been used in order to seal or close off the tombs. On the other hand, it is equally possible that they were dug and lit by the builders of these tombs so that they could cook food and feed themselves on site. These particular tombs have not at present been accurately dated.

It should also be noted here that although the construction of formalised hearths has never been attested to within the interiors of Neolithic tombs, the presence of fire and burning has been recorded, often in significant quantities. This is particularly true with respect to the stalled and chambered tombs of the early to mid-fourth millennium BC. For instance, all four compartments within the main chamber of the Knowe of Yarso yielded evidence of *in situ* burning, which came in the form of reddened masonry along their sidewalls in conjunction with charcoal and ash strewn across the floor (Callander and Grant 1935, 339). At the Knowe of Ramsay, many of the human and animal remains discovered throughout its stalls yielded evidence of burning. These bones were not cremated; rather, they were deposited within the tomb's chamber and were set on fire afterwards (Callander and Grant 1936, 413). Finally, in the southernmost compartment at the Unstan chambered tomb, a significant black deposit comprising peat and charcoal was discovered (Clouston 1885, 343) – a clear indication that a bonfire had been lit within the tomb's confines. Jones has argued that this burning can be seen

as an act of purification (2007, 112), presumably to render the interiors of these tombs safe from potentially harmful ancestral forces. This is sober suggestion, as it seems that whole areas of these tomb were set on fire in an attempt to cleanse their interiors. All in all, this evidence serves as an indication that fire was an important agent in mortuary processes from the very beginning of the Neolithic. Resultantly, it is only a matter of course to suggest that the mortuary association of fire also passed over to the later hearth once it had changed its form. Indeed, hearths [024] and [049], which were constructed in the middle of entrances [087] and [107], show how important the hearth was as medium of purification from the end of fourth millennium BC onwards. The buildings that these hearths were association with (Structure 8 at Barnhouse and Structure 1 at the Ness of Brodgar) were highly significant, both for their sizes and the activities conducted within them. It may therefore be argued that hearths [024] and [049] were lit in order to achieve safe passage into their associated buildings, within which potent forces likely dwelt.

With reference to the construction of ovens/kilns, they have so far featured very rarely within the archaeological record of Neolithic Orkney. All ovens/kilns discussed here date to the end of the fourth millennium BC and the start of the third. There are obvious associations here between hearths and ovens/kilns, although it is clear that the latter were used in more specialised forms of heating that the hearth alone would not allow. The most common feature of this type was the oven, and all those examples considered here were intramural. These included [009] and [021] from Barnhouse, [043] and [044] from Rinyo and [073] from Stonehall Farm. The reason that these features have been interpreted as ovens rather than kilns is twofold. Firstly, there existed no clear evidence that non-victual items (such as pottery) were being fired within them. Once this factor is taken into account there does remain the possibility that these were corn-drying kilns, yet their small sizes seem to discount this idea. This naturally leads onto the second reason; that the extremely close association of three of these features to nearby hearths would surely attest to the fact that they were intended to be heated to temperatures well beyond those attained for drying grain, which can be significantly less than 100°C. In considering these inferences, the strongest remaining hypothesis is that these features were ovens. In particular, the association of [009] with the intricate cooking processes undertaken within House 2 at Barnhouse would attest to this idea. Only a single feature could be positively identified as a kiln proper, and that was corn-drying kiln [034] within Hut 8 at Skara Brae. As will be seen in Section 5.3, [034] was considerably important in determining the layout of the entire building within which it was constructed. Finally, in being a clamped

bonfire, [080] from the Knowes of Trotty was functionally very similar to these aforementioned features, although in form it was perhaps more akin to hearth [070] at Barnhouse Odin.

However, in the majority of cases cooking in Neolithic Orkney did not require the use of enclosed ovens. Certainly, Grooved ware vessels by the end of the fourth millennium BC were being used for cooking as well as serving and storing food, as many vessels have evidence of sooting, indicating that they were placed directly in an open fire. The same can also be said of earlier Unstan ware bowls, some of which (the Plain bowls) were hung directly over the fire (Jones 1999). It is a safe assumption that the cooking of foodstuffs in these instances would have been accomplished by utilising the hearth. This idea is further supported by the presence of charred animal bones within the ash dumps of many of Barnhouse's buildings (King 2005). Furthermore, we can see how the later hearth was itself connected to important victual performances. For example, lipid analysis of the Grooved ware vessels from House 2 at Barnhouse yielded the only evidence on site for the cooking of beef, cow's milk and barley (Jones 1997; 2000; 2002, 66; Jones *et al.* 2005). Higher quantities of barley were also discovered in association with hearth [010] (within the eastern bay of House 2) than anywhere else across the entire settlement (Hinton 2005, 343). Consequently, it is possible to observe that a building's specific function or identity was partly reliant on the different ways in which the hearth was used. In the case of House 2, it seems likely that the activities conducted within revolved around preparing special foodstuffs for feasts, with the higher quantities of barley in association with [010] perhaps suggesting that different foods were being prepared within its western and eastern sides respectively.

In sum, as the Neolithic period progressed, we can see that the assemblage constitutive of the hearth spread out exponentially and became many different *kinds* of features as a result. In this sense, the hearth as both a physical structure and a concept was a remarkably fluid one by the late fourth millennium BC. These later hearths could be placed at the centres of domestic buildings; they could be constructed outside in the open; they came in a variety of different sizes; they had clear mortuary associations; they had links with other similar features such as cists and ovens/kilns, and so on. In this respect, the later stone-lined hearth took on many variations in degree as well as kind. Yet all these variations can be traced back to a single feature – the simple shallow scoop of the mid-fourth millennium BC.

5.3 The Entrance

5.3.1 Defining the Entrance

The architectural terminology used to describe entrances can vary, and for this reason it would be useful to outline in detail what I mean when using some basic terms, in order to mitigate any potential confusion that may arise. First, the term ‘jamb’ is defined here as an upright slab that comes in pairs and frames the vertical edges of an entrance. This definition can be contrasted with, for example, Foster’s, who defined a jamb as being the wall face immediately adjacent to an entrance (2007, 82). Within the literature of Neolithic Orkney, these features are more often than not described as ‘doorjambs’, yet as this term presupposes the incorporation of a door, I prefer the more neutral term ‘jamb’. Second, the jamb will generally abut the return face of the building’s wall, and this return face is referred to here as the ‘reveal’. This term should not be confused with that applied to rabbet-like features situated on the edges of more modern doorframes, which are also known as ‘reveals’. As will be seen below, some entrances do not have jambs and are defined simply by a pair of opposing reveals. Third, the horizontal member of an entrance is referred to here as the ‘lintel’ (as opposed to the ‘header’). Fourth, a ‘passageway’ is defined here as a narrow elongated channel that leads from one place to another. Depending on the thickness of the wall being breached in the construction of an entrance, there may be some overlap between the terms ‘entrance’ and ‘passageway’, as those entrances that breach very thick walls will by necessity be notably elongated. Therefore, a ‘passageway’ will also be defined here as a channel that has been purposely elongated to an extent that exceeds the thickness of a building’s wall. Within this section, passageways have not been included as entrance-like features, as it seems that one of their primary purposes within the context of Neolithic Orkney was to link one entrance to another. Moreover, the term ‘passageway’ should not be confused with the term ‘corridor’, which denotes a type of passageway that links more than two entrances together. Finally, the term ‘door check’ is used here to describe an architectural member whose purpose is to hold a portable door in place, thus stopping it from falling over. This term is not regularly used in modern architectural parlance, although when it is used it often denotes a mechanism that allows a door to close automatically. The term ‘door check’ has been used relatively frequently throughout the twentieth century within studies of Neolithic Orkney, and has been used by authors such as Childe (e.g. 1931b; 1931c; 1931d) and Ritchie (e.g. 1983; 1995). There are modern parallels to these features – the stile jutting from the face of a jamb effectively performs the same task

as those Neolithic door checks, as its purpose is to provide a parallel surface on which a door can rest once closed. Yet these features are known simply as ‘door stops’. However, the term ‘door check’ is preferred throughout this chapter in order to remain consistent with previous literature.

The significance of entrances throughout prehistory and beyond has been subject to much discussion within both archaeological and architectural theory. Perhaps the most famous interpretation of Neolithic entrances is Hodder’s, who saw the entrance as dividing two fundamentally separate worlds. He referred to the entrance as the *foris*, and for him it was a juncture between the tamed interior of the house (the *domus*) and the untamed wilderness surrounding it (the *agrios*) (Hodder 1990). Accordingly, the entrance was for Hodder an architectural element that quite literally embodied the whole of idea of the Neolithic revolution, or the taming of the natural world in the creation of the cultural. Such an interpretation is also mirrored in Richards’ view of the Neolithic tombs of Orkney (1992b), which revolves around the idea that the tombs’ entrances represented gateways leading from the world of the living to that of the dead. From a far broader perspective, Unwin has also suggested that the entrance – and in particular the doorway – is the most fundamental of all architectural features as it both pre-dates and contains within it the seeds for the construction of the wall (2007, 16). Furthermore, entrances have always been *loci* of architectural embellishment. This is particularly true with regards to principal doorways, which are generally the first points of contact a visitor or inhabitant makes with a building. Therefore, principal doorways often incorporate elements that are designed to impress, such as decorative mouldings or grand arches. Indeed, the principal doorway’s centrally significant position within a building can be heightened even further by incorporating it with such features as porches, passageways, vestibules, and so on. As will be seen throughout this chapter, the principal doorways or entrances of Neolithic Orkney were no different.

5.3.2 Preamble

All entrance and entrance-like features are detailed in Table B 2 of Appendix B. It is important to note here that not all entrance or entrance-like features across Neolithic Orkney were considered, mainly for purposes of concision.

5.3.3 Barnhouse

The entrance leading into House 3 [081] was located towards the south of the building (fig. 5.41) (Downes and Richards 2005, 61–2). It was defined by a breach in the southern wall *c.* 1.53m long and was oriented NNE–SSW, with its outward façade facing south-southwest. Two linear slots once held the jambs in place. Unfortunately, these jambs were missing upon excavation, although a series of packing stones, comprising fragmentary stone slabs, was discovered within both. These slots were 0.70m long and were anywhere between 0.17m and 0.25m wide. They were also situated slightly beyond the reveals on both sides of the entrance. On the other hand, the southern edges of the jambs would have been both flush and parallel with these reveals. Nestled in between these slots was a sizeable paving stone, measuring 0.60m x 0.40m. Towards the south of the jamb slots was a pair of slightly raised stone slabs that would have been in perpendicular alignment with the jambs. These slabs defined the northern and southern edges of the building's threshold. This threshold was 0.60m wide and the space between its side slabs was *c.* 0.20m. Although the slots for these slabs cut through an occupation deposit underlying the building proper, they did not cut through the underlying glacial till. The reason for this was probably due to the slightly sloping nature of House 3's floor, which sloped marginally downwards towards the south. The process of entering House 3, therefore, would have involved stepping over a raised threshold and onto a paving stone on the other side.

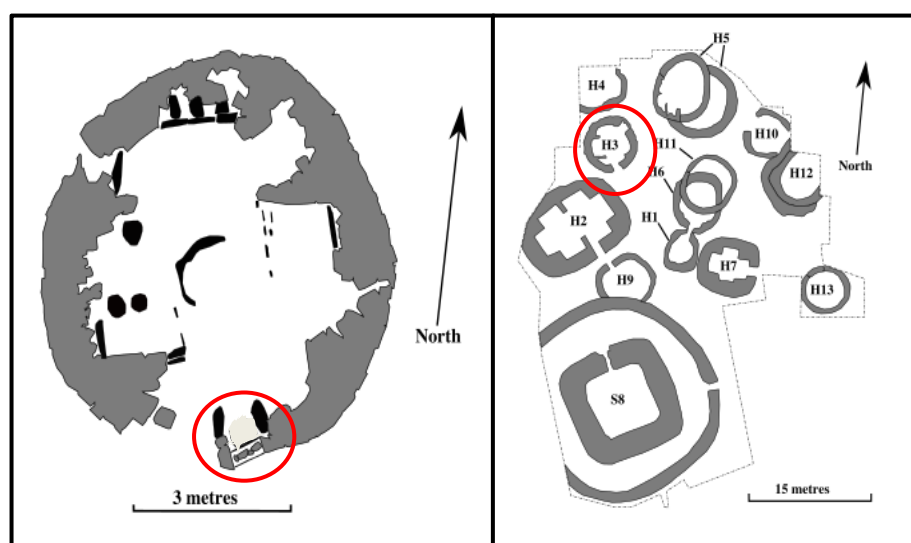


Figure 5.41. Position of entrance [081] within House 3, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

No evidence suggestive of an entrance was discovered associated with the initial construction phases of House 5 (Downes and Richards 2005, 71–5). This was due in large part to the extensive episodes of rebuilding that occurred here, which greatly obscured the stratigraphic sequence of the building’s earliest form. Later in the use of House 5, an area of paving was built into the eastern side of the building, which seemed to run through both the inner and outer wall faces as if a sizeable break had been incorporated into them (fig. 5.42) (Downes and Richards 2005, 75–7). This area of paving consisted of a series of large and flat stone slabs, each measuring *c.* 0.50–0.70m x 0.30–0.40m. As the eastern wall was discovered in a highly ruinous state, it remained unclear whether an entrance once existed here. Moreover, there was no evidence that jambs had been erected in this area at this time. This area of paving served as the only piece of evidence suggestive of an entrance into the building. Although completely missing upon excavation, here this entrance will tentatively be assigned the number [082]. If real, this entrance’s alignment would have been roughly E–W and would have faced outwards towards the east.

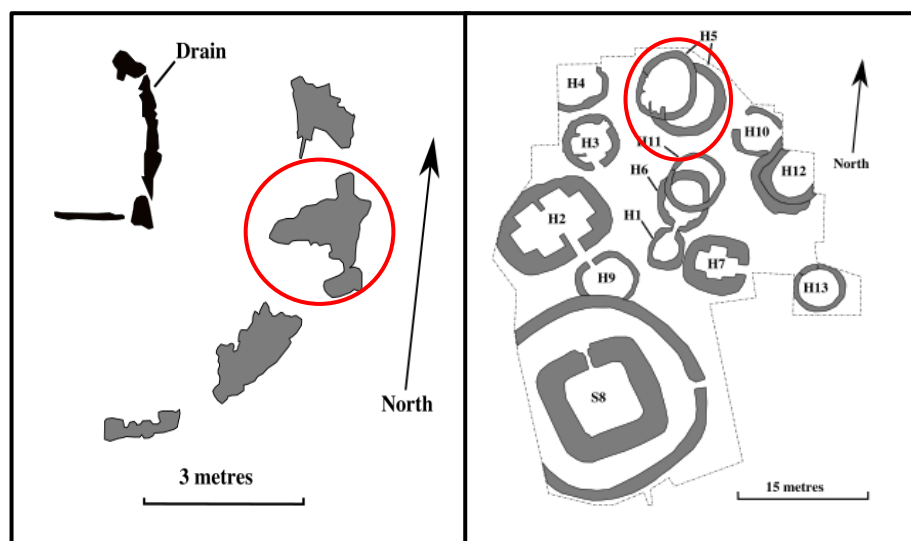


Figure 5.42. Position of possible entrance [082] within House 5, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

While large portions of House 9’s walling had been destroyed prior to excavation, traces of its entrance [083] were nonetheless observed (fig. 5.43) (Downes and Richards 2005, 84–5). The only evidence indicative of this entrance was a pair of parallel linear slots situated towards the northwest of the building – slots that would have originally held the jambs in place. The westernmost slot measured *c.* 0.88m x 0.25m while its eastern counterpart was roughly the same length but 0.34m wide. The space between these slots measured 0.42m. Both slots had

been filled with fragmentary stone slabs, all set in approximately upright positions. These would have acted as packing stones for the jambs. It seemed likely that the jambs of [083] were originally flush with the reveals on either side and were therefore perpendicular to the building's northwestern wall. A small pit had been dug into the northwestern corner of the easternmost jamb slot. This was presumably done in order to retrieve the corresponding jamb once House 9 had gone out of use. A sizeable rectangular paving stone was also seen to partially overlie both jamb slots, measuring 0.55m x 0.22m. This would originally have been part of the path linking House 9 with House 2 nearby. The reason that this paving stone was situated above the jamb slots was probably because it had been knocked out of place during House 9's demolition. Although none of the building's walling had survived in this area, it was clear that entrance [083] would have had a NW–SE orientation, facing outwards towards the northwest.

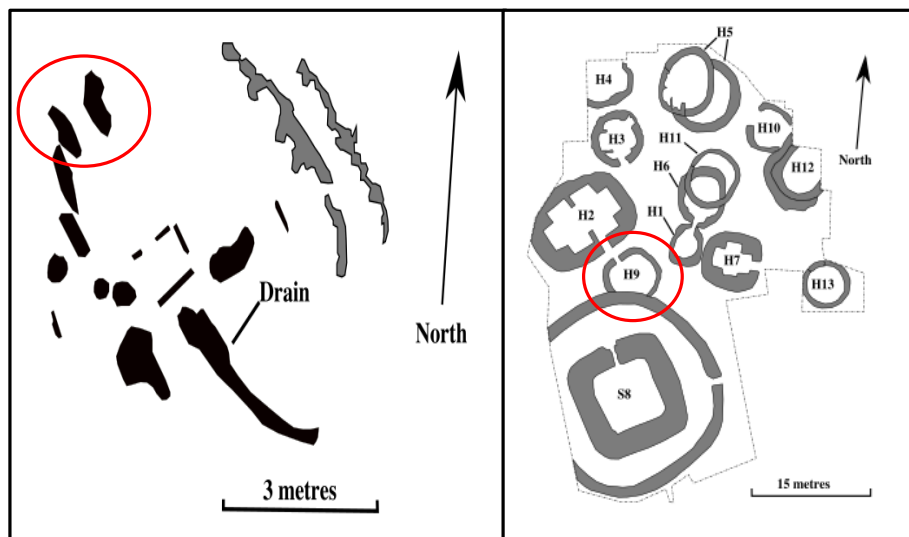


Figure 5.43. Position of entrance [083] within House 9, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

House 2, situated directly opposite House 9, was accessed via a single entrance [084] (fig. 5.44) (Richards 2005c, 133–4). This entrance breached the building's southeastern wall and was located in between a pair of adjacently situated alcoves ([218] and [221]) that spanned the entire length of the building. The orientation of the entrance was NW–SE, with its outer façade facing southeast. No jambs were discovered in association with this entrance. At the southernmost end of [084] was a paving stone measuring c. 0.83m x 0.50m. A pair of narrow slots had been dug along the northwestern edge of this paving stone, directly into the glacial till, which contained a pair of shallow set slabs wedged in place with stone packing. Together, these slabs formed House 2's threshold. Beyond this threshold were three large paving stones,

the largest of which measured *c.* 1.08m x 0.75m. The two innermost paving stones were laid directly over a shallow cavity. These could be contrasted with the outermost paving stone, which lay directly on top of a bed of gravel. It may be that this cavity was dug in order to create a series of split-levels leading into the interior of House 2. Indeed, the process of walking through entrance [084] would have involved passing over a series of steps, with the outermost paving stone being situated around 0.15–0.17m higher than the innermost. Wedged against these paving stones on both sides were the sidewalls of the entrance, which were formally constructed using pairs of large upright slabs, set into corresponding foundation slots. Due to the thickness of the southeastern wall, the breach constitutive of this entrance was markedly elongated, measuring *c.* 2.80m long, while its width was 1.20m.

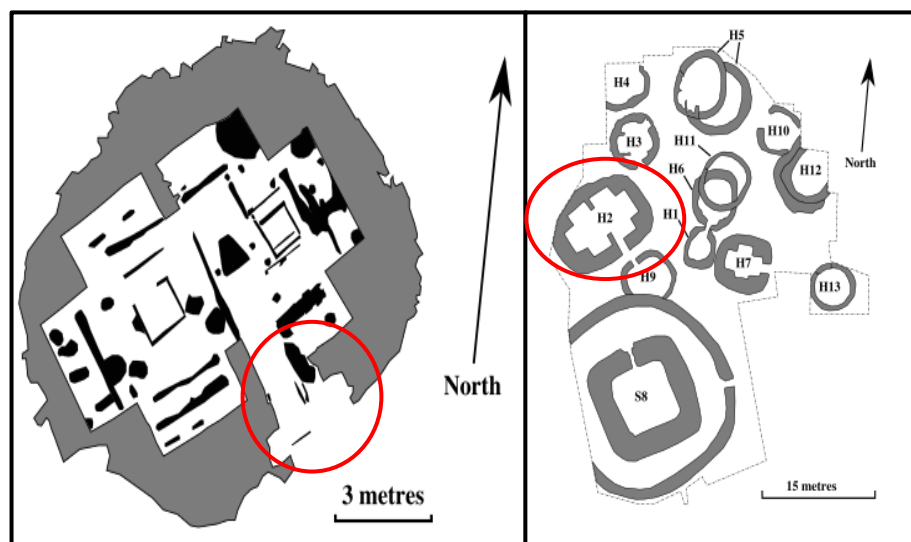


Figure 5.44. Position of entrance [084] within House 2, Barnhouse (illustrations by author, adapted from Richards 2005c and Bayliss et al. 2017)

As well as sharing the same NW–SE alignment, the entrances into Houses 9 and 2 ([083] and [084]) also faced one another and were connected by virtue of a narrow intermural path (no illustration available) (Richards 2005c, 129–30). The paving stone directly southeast of the threshold of [084] was seen to form part of this path. However, beyond this paving stone the remains of the path became increasingly dilapidated, before disappearing entirely prior to reaching entrance [083]. It was apparent that the poor levels of preservation associated with this end of the path were a result of House 9's demolition. The distance between the threshold of [084] and the edges of the jambs of [083] was *c.* 2m, which gives some idea of the overall length of this path. It was also discovered that the path was constructed directly above a curvilinear drainage channel, which ran around the outside of House 2 and which fed into

another drain encircling House 9. Interestingly, this particular drain ran from the southeastern edge of hearth [007] at the centre of House 9. The relationship between the path and this drainage system may at first glance suggest that Houses 2 and 9 were originally separate structures and were only afterwards connected together. On the other hand, there existed no clear indication that the drainage channel had gone out of use by the time the path was constructed, and it is likely that both path and drain were contemporary. In other words, the drainage channel was constructed in such a way as to flow freely beneath the path. There was no evidence to suggest that this path was roofed in any way, which is why it has not been described here as a passageway proper.

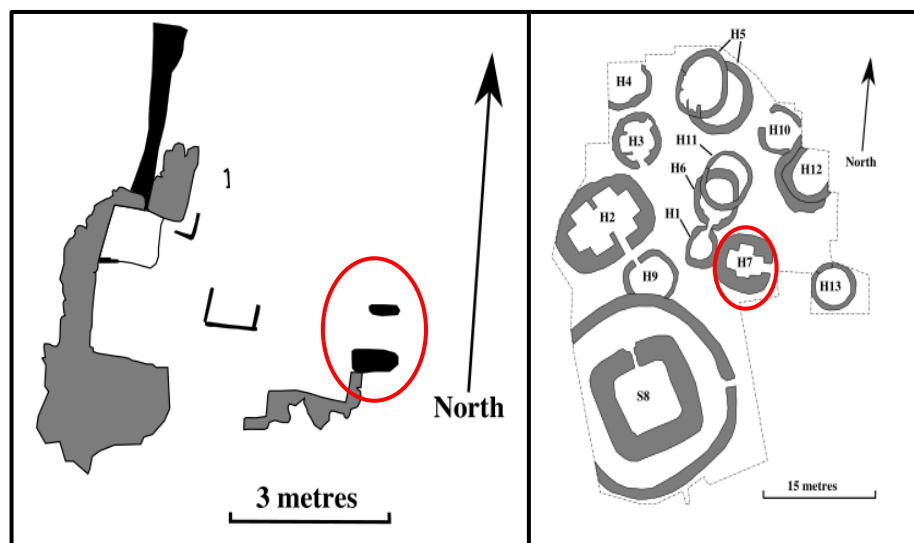


Figure 5.45. Position of entrance [085] within House 7, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

The entrance leading into House 7 [085] was defined by a pair of jamb slots, which were flush with the reveals on both sides and therefore perpendicular to the building's eastern wall (fig. 5.45) (Downes and Richards 2005, 89). Both of these slots were filled with significant amounts of fragmentary stone, which would have acted as packing for the jambs. While the northernmost slot was found to be empty, its southernmost counterpart contained the partial remains of a jamb, which was wedged tightly in between the packing stones. In terms of their overall dimensions, the southernmost slot, which measured *c.* 0.75m x 0.32m, was far larger than the northernmost, which measured *c.* 0.50m x 0.20m. A likely explanation for this discrepancy is that the jamb situated within the former was forcefully removed during the abandonment of House 7, while the jamb within the latter was simply left in place, only to be later broken *in situ*. The gap between these jamb slots was *c.* 0.57m. Due to the poor levels of

preservation on this side of the building, where entire stretches of walling were completely missing, these jamb slots constituted the only evidence pertaining to entrance [085]. With reference to orientation, entrance [085] had a roughly NNW–SSE alignment, with its outer façade facing south-southeast. As the eastern wall of House 7 was completely destroyed, it was not possible to ascertain the extent to which [085] breached the building’s eastern wall.

Due to the badly preserved condition in which the building was discovered, no entrance was found in associated with House 11 (Downes and Richards 2005, 116–17).

The state of House 11 could be contrasted with that of House 6 situated directly below it, and in keeping with this situation the entrance leading into House 6 [086] was discovered in a relatively high state of preservation (fig. 5.46) (Downes and Richards 2005, 92–3). Two linear slots defined the positions of the jambs, one to the east and one to the west. A number of packing stones sealed within a clay matrix were all that remained within the western slot. However, the partial remains of a jamb were discovered within the opposing slot. The gap between these slots measured between 0.50m and 0.58m, while the overall orientation of the entrance would have been NNE–SSW, facing outwards towards the south-southwest. Moreover, the jambs of [086] were in perpendicular alignment with House 6’s southern wall. In between the jamb slots was a shallow scoop or pit, which was roughly ovular in form. It measured 0.30m x 0.28m x 0.12m deep and was seen to cut directly into the yellow clay floor of the building. The purpose of this pit was unclear, yet the westernmost jamb had partially sunk into it, prior to it having been infilled with grey silty clay. It was also unclear why such a pit was dug immediately within the building’s entrance. It remains possible that the pit once contained fragile organic material, such as human or animal bone, which had disintegrated entirely prior to excavation. In any case, the fact that this pit was situated directly below one of the large paving slabs on the inside of the entrance shows that it pre-dated the entrance itself. Running parallel to the building’s outer wall was a thin slab set on edge that spanned the entire width of the entrance. This slab functioned as the entrance’s threshold. Beyond this threshold was a series of paving stones, with the better-preserved stone measuring c. 0.55m². This paving stone aided in creating a small downward step into the building’s interior. The jambs of [086] were situated c. 0.55m beyond its threshold. Therefore, the process of entering House 6 would have first involved passing through the unadorned reveals of the outer wall before reaching the jambs. Moreover, while the westernmost jamb was seen to directly abut the western reveal, the

easternmost jamb did not abut anything and was a freestanding feature within the building. In fact, the nearest parallel wall to the easternmost jamb was a full 0.60m to its east.

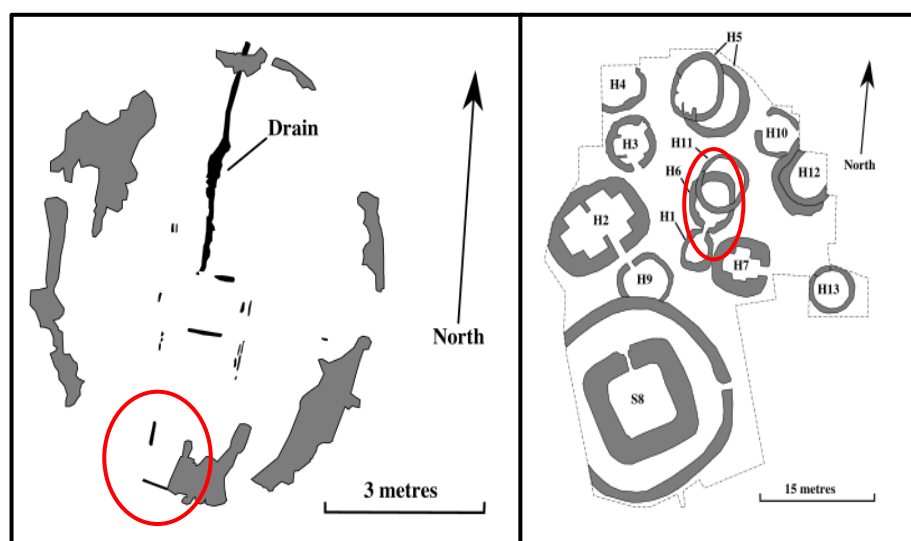


Figure 5.46. Position of entrance [086] within House 6, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

Later in the history of House 6, it seems as if its entrance was backfilled with silty clay and rubble and therefore deliberately put out of use. During excavation, it became immediately obvious that this backfilling event contributed enormously to the high state of preservation that [086] was discovered in. In addition to this, another episode of deliberate backfilling was noticed. This occurred later in the stratigraphic sequence and was observed as a large rubble deposit situated at the juncture between Houses 1 and 6. Due to the preservation levels of entrance [086], it was possible to roughly estimate that its lintel originally stood at c. 1.50m in height. The position of the lintel in relation to the threshold and jambs was not possible to determine, although there remains the possibility that no formal lintel was positioned here at all. The extent to which this entrance breached the building's southern wall was c. 1.33m.

It has been noted that House 1 was fairly unique within the context of the settlement as it appeared to lack a principal entrance (Downes and Richards 2005, 110). However, given the relationship between House 1 and 6, it seems likely that the entrance into House 6 was in fact [086] described above (fig. 5.47). In other words, rather than constructing a brand-new entrance in conjunction with the erection of its walling, the builders of House 1 simply appropriated the entrance of House 6, which had probably gone out of use by this time. It may be tempting to suggest that Houses 1 and 6 were in contemporaneous use, and that upon the construction of

the former, [086] may have acted as a communicating entrance between the two structures. On the other hand, given that no other entrance was discovered in association with either structure, this hypothesis remains improbable, as there would have been no way of entering either building from the outside.

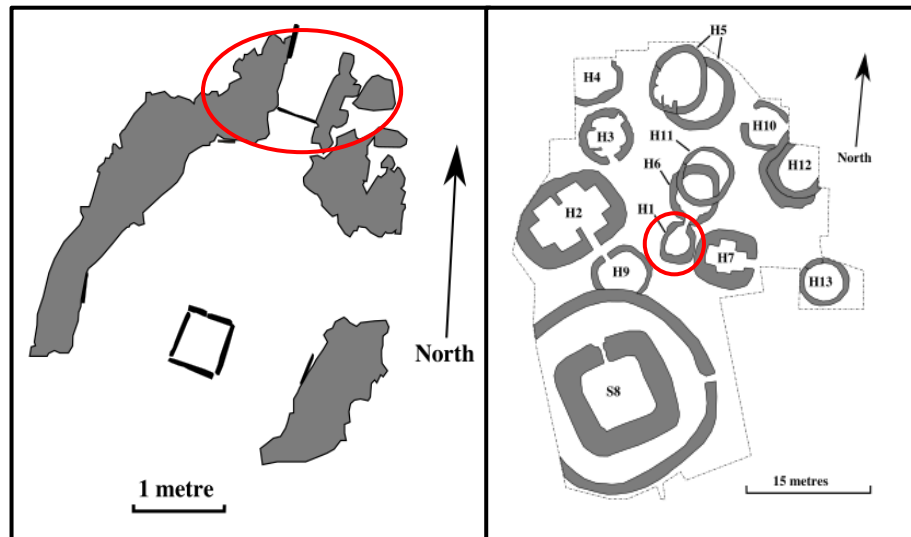


Figure 5.47. Position of entrance [086] within House 1, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

Overall, entrance [086] seems to have kept its original structure when incorporated into House 1 and had precisely the same dimensions as before. In addition, it appears that the same threshold stone was used, which was again kept in its original position. Yet in terms of its orientation, although the alignment of [086] would have stayed the same upon the construction of House 6, its outer façade would have shifted towards the north-northeast.

Unfortunately, no entrance was discovered at House 10 (Downes and Richards 2005, 102). It seemed likely that the entrance was demolished during later rebuilding episodes across the entire settlement. The rest of the building, however, exhibited high degrees of preservation.

Structure 8 was formed of an inner walling circuit that was itself surrounded by an outer casing wall. This architectural arrangement meant that Structure 8 consisted of both an inner building and an outer gallery. The nature of this architectural formation meant that access to the inner building involved walking through part of the gallery first. The inner building was accessed via a single entrance [087], which breached its northern wall (fig. 5.48) (Hill and Richards 2005, 167–8). This breach was c. 1.80m in width x 2.89m long and was formally defined on

either side by a pair of substantial orthostats, which did not survive *in situ*. The presence of these orthostats was, however, evidenced by the discovery of a corresponding pair of foundation slots. The westernmost slot was *c.* 0.80m x 0.75m while the easternmost slot measured *c.* 0.70m². Both slots were roughly circular in form but were distinctly irregular. Furthermore, both had been deliberately infilled with packing stones in the form of large fragmentary slabs at their bases.

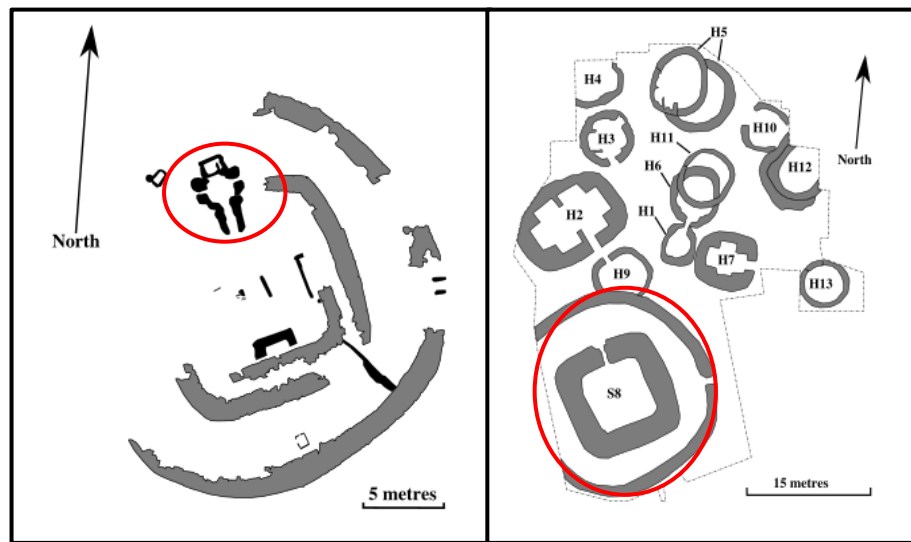


Figure 5.48. Position of entrance [087] within Structure 8, Barnhouse (illustrations by author, adapted from Hill and Richards 2005 and Bayliss et al. 2017)

The precise form that these orthostats took remains largely uncertain, although it seems likely that they would have constituted the jambs of [087]. It was also evident that these jambs were of a different nature to others discovered across the settlement, which came in the form of thin linear slabs. Alternatively, judging by the shapes of their foundation slots the jambs of [087] appeared to constitute large pillar-like orthostats that were rather excessively spaced apart. The distinctive nature of these jambs was further accentuated by the fact that they would have been connected to an additional series of upright slabs towards the southeast. Again, most of these uprights did not survive *in situ*, and were recognised as a pair of linear slots running parallel to one another in a NNW–SSW direction. On the other hand, a few fragments of the original stone uprights did survive within the western slot, which comprised laminated slabs set on edge. Packing stones were also seen to line the bases of both slots, which were rather prolific in quantity. These slots, in conjunction with the upright slabs originally held within them, formed a narrow passageway that ran perpendicular to the inner building's northern wall. The width of this passageway varied, although it measured on average *c.* 0.65m wide. Another pair of slots

was observed linking jamb to passageway, one on each side, yet these additional slots were set at an angle of around 45 degrees, with the western slot oriented NNW–SSE and the eastern oriented NNE–SSW. The edges of these slots were not fully determined as both were intricately connected to the foundations of the jambs and passageway walls, although again both were filled with packing stones, suggesting that additional uprights were originally held within them. The incorporation of these additional slots meant two things. Firstly, the passageway of [087] was significantly narrower than the space separating its jambs. Secondly, when put together the jambs and passageway of [087] was funnel-shaped, with the space at the top of this funnel constituting a vestibule (fig. 5.49). In combination with the exceedingly large jambs, it seems that the overall purpose of this vestibule was to heighten the impressiveness of [087] when entering Structure 8's inner building. In terms of its orientation, entrance [087] had a NNE–SSW alignment, facing outwards towards the north-northeast.

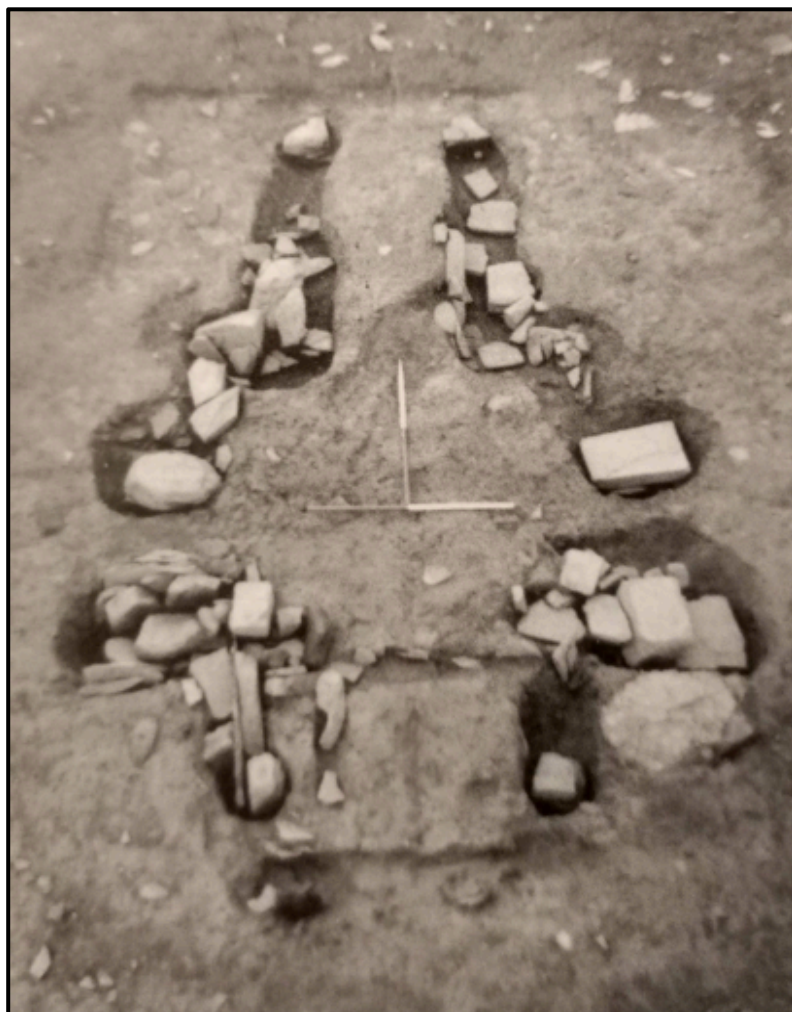


Figure 5.49. Photograph of entrance [087], facing interior of Structure 8's inner building (from Hill and Richards 2005)

Towards the northern exterior of the jambs of [087] were the remains of hearth [024], and towards the southwestern and southeastern edges of this hearth were two exceedingly large foundation slots, both roughly circular in form. The slot to the southwest was *c.* 1.20m x 0.90m while the southeastern slot was *c.* 0.75m². Both were lined at their bases with packing in the form of fragmentary slabs, while in the southeastern slot a series of small uprights survived *in situ*, wedged tightly in between the packing slabs at the base. This serves as an indication that a pair of sizeable orthostats once stood within these slots. These orthostats would have been unconnected to the walls of Structure 8, and aside from their probable association with the roof of the building, the only other feature in their immediate vicinity was hearth [024]. Overall, it seems as if these orthostats would have served in formalising or physically embellishing both hearth [024] to the north and entrance [087] to the south, as they flanked the hearth on both sides while at the same time were parallel with the jambs of [087]. Moreover, lining the northwestern edge of hearth [024] was a linear slot that probably held the threshold stone associated with [087], which was missing upon excavation. This slot was *c.* 1.10m x 0.21m. Entrance [087] was therefore designed to impress. Accordingly, the process of entering the inner building of Structure 8 would have firstly involved stepping over a threshold stone; secondly, walking either through or over a hearth; thirdly, walking between two enormous orthostats; fourthly, passing through the jambs and into the small vestibule beyond; and finally traversing the passageway that led directly into the inner building's interior (fig. 5.49). Put together, the area that this sequence of entry would have covered was *c.* 5.30m in length, and it extended well beyond the breach in the inner building's wall. Surprisingly, entry into the inner building proper would have been rather restrictive. It has been suggested that entrance [087], as well as the passage leading from it, would have measured *c.* 1m in height (Richards 1993b, 166–7), and both would have necessitated an average-sized person to crouch in order to pass through. It also seemed as if the passage shrunk as it went further into the building, as for the final 3m of its length it narrowed to 0.90m wide.

Entrance [087] can be contrasted with Structure 8's presumed principal entrance [342]. Remarkably, this entrance merely consisted of a narrow breach in the eastern end of building's outer casing wall, measuring 0.70m wide (fig. 5.50) (Hill and Richards 2005, 177 –8). This breach was originally defined on either side by a pair of jambs, which survived as a corresponding pair of foundation slots. These slots were perpendicular to the casing wall. The northernmost slot measured 0.85m x 0.30m, while the southernmost measured 0.76m x 0.31m.

The orientation of this entrance was E–W, and its outer façade faced east. Due to the fact that Structure 8’s casing wall was badly damaged in this area it was not possible to determine the true length of [342]. There does remain the possibility that this entrance was merely a secondary access point into the gallery, and that the true principal entrance was located either towards the north or the west – an area completely destroyed prior to excavation. However, in considering the available evidence it must be assumed that [342] was indeed Structure 8’s principal entrance.

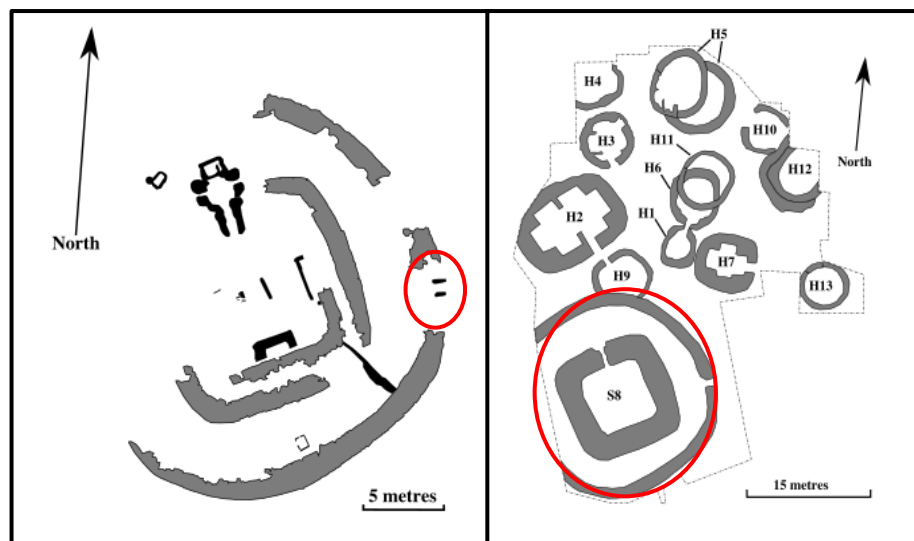


Figure 5.50. Position of entrance [342] within Structure 8, Barnhouse (illustrations by author, adapted from Hill and Richards 2005 and Bayliss et al. 2017)

No entrance was discovered breaching the walling of House 4 (Downes and Richards 2005, 114). This was due to the highly dilapidated condition that the building as a whole was discovered in. It seemed likely that the entrance leading into the building was originally located towards the northeast, beyond the limits of excavation.

At House 12, an entrance was discovered [088] whose remains consisted of a pair of parallel slots dug with the intention of holding a corresponding pair of jambs (fig. 5.51) (Downes and Richards 2005, 118). The space between these slots measured *c.* 0.52m. Both contained fragmentary upright slabs, although it was unclear whether these were the remains of the jambs themselves or merely acted as packing to hold the jambs in place. In either case, the jambs of [088] would have been in perpendicular alignment with House 12’s southeastern wall. Judging by the positions of these slots, the entrance would have been oriented NW–SE, facing outwards

towards the southeast. Little more could be said of entrance [088] as it was discovered in a highly ruinous condition.

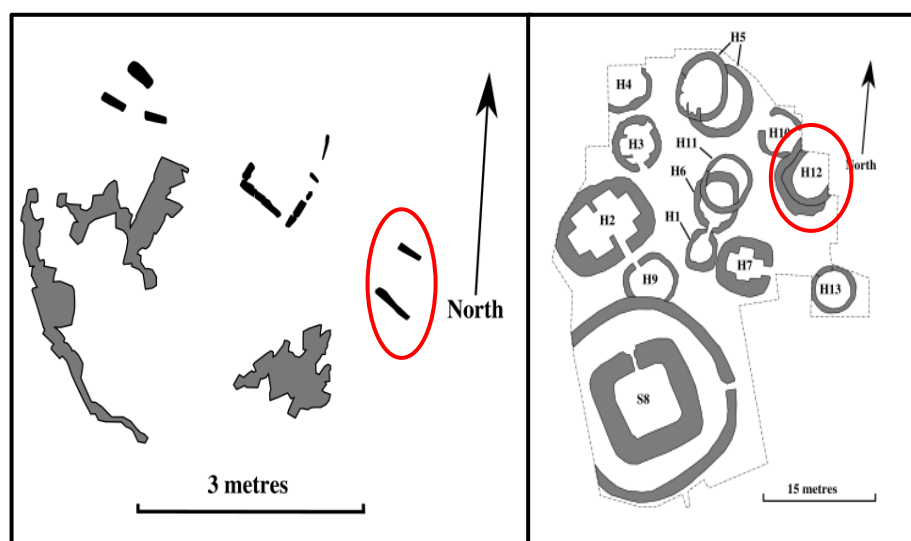


Figure 5.51. Position of entrance [088] within House 12, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

As the majority of House 13 had been completely destroyed prior to excavation, no entrance was discovered there.

5.3.4 Beyond Barnhouse

The most obvious point of comparison for the entrances discovered at Barnhouse lies at the site of Skara Brae, both in terms of the ways in which entrances were constructed and in the relatively narrow entranceways created by the jambs. However, there does exist a key divergence between the entrances of Skara Brae and Barnhouse, and that divergence lies in the clear evidence at the former for the presence of *lintels*, and to some extent *doors* as well. The principal entrance of Hut 7 [089] serves as a key example in this regard (fig. 5.52). During the excavation of Hut 7 it was noted that the entrance's lintel survived perfectly intact, which stood at a mere 0.91m above the floor of the building (Childe 1931c, 48–9). This lintel comprised a long and relatively flat slab, whose edges sat directly above the tops of the jambs, which were of similar physical appearance to the lintel itself. The space between the jambs measured just under 0.61m, while the extent to which the entrance breached the northeastern wall was *c.* 0.73m. The length of the lintel was slightly over 0.61m, as its eastern and western edges were

keyed into the masonry on either side, therefore extending marginally beyond the tops of the jambs. In the centre of the entrance was a threshold stone, which constituted a slab set on edge that projected slightly upwards from the floor, creating a step into the interior of the building. This threshold stone was located north of the entrance's jambs, towards the exterior of the building. Much like the examples from Barnhouse, these jambs were flush with the entrance's reveals and therefore perpendicular to the building's northern wall. The orientation of [089] was NNE–SSW, and it faced outwards towards the north-northeast.

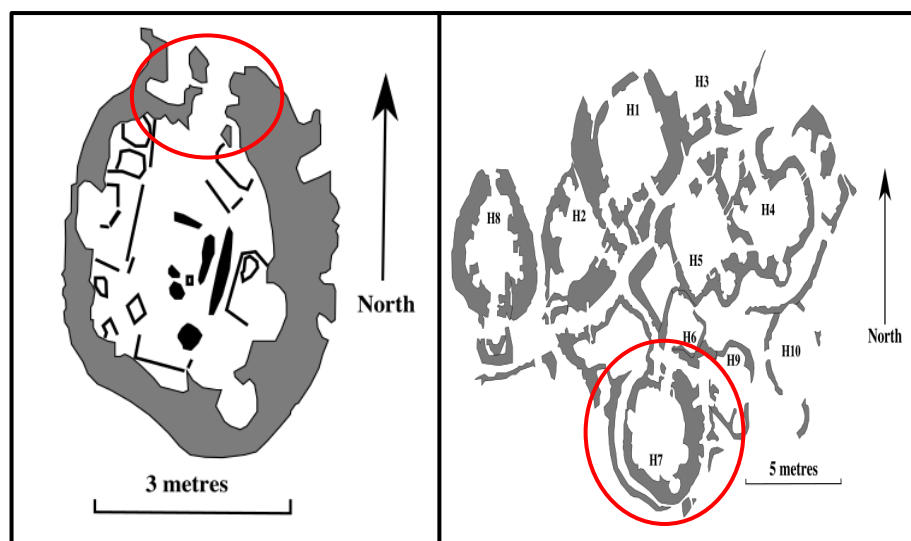


Figure 5.52. Position of entrance [089] within Hut 7, Skara Brae (illustration by author, adapted from www7)

Moreover, a pair of narrow channels was discovered within the reveals of [089], just to the exterior of its jambs. The left-hand channel (when facing the interior of Hut 7) was *c.* 0.10m wide and went *c.* 0.16m into the eastern reveal. The corresponding channel, however, was markedly different. This channel ran directly through the western reveal and into an adjoining cell ([251]). This channel was 0.10m wide x 0.20m long. It seemed that the only explanation for these channels was that they allowed a small stone bar or slab to be slid across the front of the entrance's door, thus locking it. This notion is also supported by the fact that a pair of sizeable perforations was cut into the entrance's jambs so that the bar associated with this locking mechanism could pass straight through them. This procedure could only be performed from the inside of cell [251] and would have involved somebody pushing the bar through the western channel, over the face of the door, and into the eastern channel. Interestingly, cell [251] could not be accessed from the inside of Hut 7, implying that the door of [089] could only be locked from the outside.

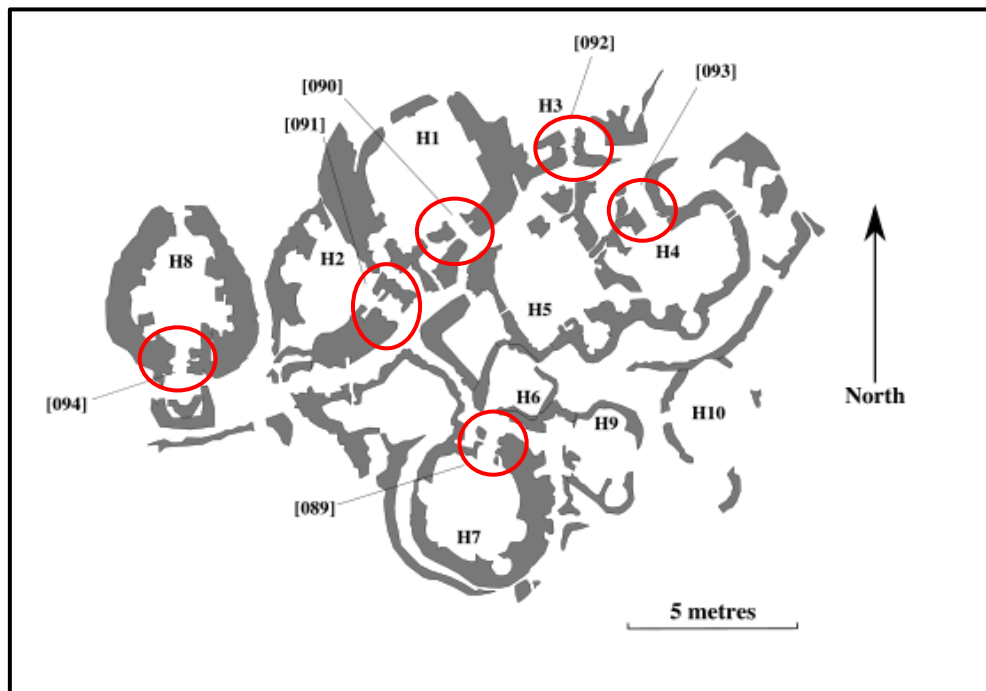


Figure 5.53. Principal entrances of Skara Brae (illustration by author, adapted from www7)

The only other surviving principal entrances at Skara Brae were those leading into Huts 1, 2, 3, 4 and 8. These entrances also incorporated within them locking mechanisms of a similar form to that of [089]. Indeed, one of the locking channels of Hut 4's entrance had within it the remains of a stone bar (Childe 1931c, 48). These entrances are not discussed in much detail here, although information regarding their dimensions and structure has been included in Table B 2 of Appendix B. In respective order, these entrances are numbered [090], [091], [092], [093] and [094] (see fig. 5.53). The locking mechanisms associated with [090], [091] and [093] were operated from side cells. On the other hand, this was not the case for [092], as the locking channels of this entrance only penetrated partway in its reveals, perhaps implying that the crossbar was manoeuvred in place from above rather than from the side. Furthermore, it should be mentioned that entrance [093] (Hut 4) appeared different from all other principal entrances on site by virtue of the fact that it incorporated within it *two* pairs of jambs: one situated parallel to the reveals and another keyed into them in perpendicular fashion.

Hut 8 was also an exceptional building as it had numerous entrances associated with it. Its principal entrance [094] was N–S aligned and opened up onto the building's interior from the south. A lintel, in the form of a thin laminated slab, formed the top of the entrance. This lintel was found to be dislodged upon excavation and defining a precise height for the entrance proved difficult. On the other hand, the entrance's western edge, which seemed perfectly intact,

stood at a height of 0.69m (Childe 1931d, 50). Overall, [094] measured 0.40m wide and was *c.* 0.65m long. One jamb was incorporated into this entrance, which was keyed into the eastern reveal and was therefore in parallel alignment with the inner wall face. Unlike the entrance's western reveal, which constituted the return face of Hut 8's outer wall, the eastern reveal was formed via a large buttress measuring *c.* 0.64m x 0.42m. A single channel was also incorporated into the eastern reveal, slightly beyond the position of the corresponding jamb when leaving the building. This channel completely penetrated the masonry of the adjoining buttress and measured approximately 0.08m x 0.35m. On the other side of this buttress was a narrow gap *c.* 0.24m wide that was crudely infilled with pieces of poorly bonded masonry. It seems possible that this gap would have constituted a narrow cell from which the lock of [094] (in the form of a stone bar) could be slid into place, from E–W. Yet in considering the extreme narrowness of this gap, this suggestion is a contentious one. Rather than incorporating a corresponding channel, the opposite (western) reveal had a slight groove within it, which was in line with the channel just mentioned. It seems clear that the locking bar of [094] would have fit neatly into this groove once slid into position from the east.

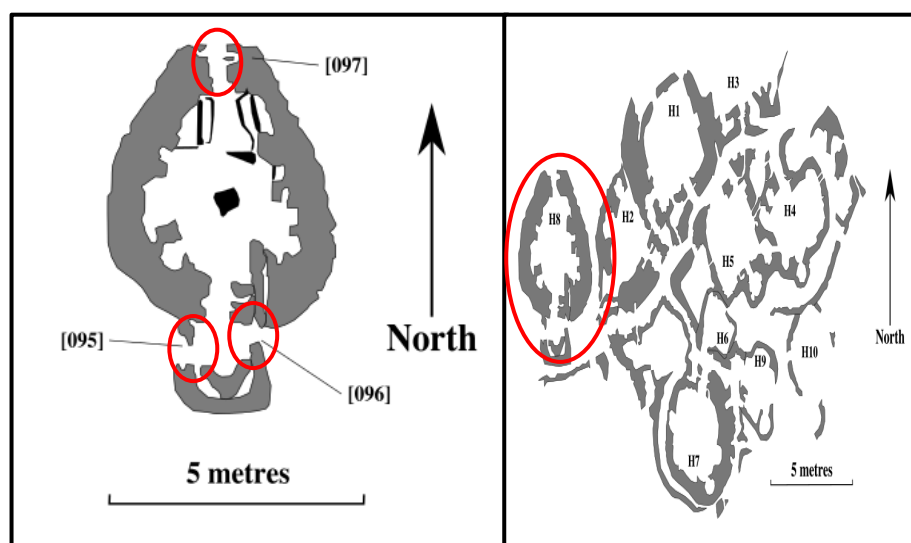


Figure 5.54. Position of secondary entrances and rear opening within Hut 8, Skara Brae (illustration by author, adapted from www7)

Entrance [094] was also associated with a horseshoe-shaped porch (Childe 1931d, 52–3). Upon discovery, it was evident that this porch was a later addition to the building, as the return faces of its walling crudely abutted Hut 8's southern wall, rather than being keyed into it. Incorporated into the eastern and western sides of the porch were two entrances ([095] and [096] respectively) (fig. 5.54). The eastern entrance [095] lacked jambs and there was no

evidence that it ever incorporated a door within it. Overall, it measured 0.30m x 0.22m x 1.17m in height. The western entrance [096] was slightly different in that it had a single jamb, situated on its right-hand side upon entry. This jamb was bulky in form, constituting a large sandstone block with no real alignment. In width, [096] measured c. 0.30m and its length was c. 0.33m. However, the height of [096] was not noted.



Figure 5.55. View of Hut 8's interior, Skara Brae, through opening [097] (from Childe 1931d)

At the northern end of Hut 8 was a breach in the wall, which opened directly onto annex [237] (fig. 5.54 and 5.55). Although in a dilapidated state, it was clear that this opening constituted a rather simple (almost crude) breach, and did not seem to have jambs, lintel or a threshold associated with it. The width of this breach measured c. 0.77m x 0.30m, and its orientation was N–S, facing outwards towards the north and beyond the limit of excavation. A familiar locking channel was incorporated into the eastern reveal. Measuring 0.30m in width, this channel was anomalously wide, although the extent to which it breached the wall was fairly standard, being c. 0.25m in length. The anomalous size of this channel may have been due to dilapidation, although its size could also be due to the possibility that a very large locking bar was associated with it. This opening is numbered here as [097] (fig. 5.54). It has not been described as an entrance as its function did not seem to involve allowing inhabitants to pass through it and to enter Hut 8 from the north. Alternatively, the far more neutral term ‘opening’ is preferred here. This interpretation is supported by the fact that, aside from the inclusion of a locking mechanism, this opening lacked the kinds of formality in structure expressed by all

other entrances across site. In addition, [097] opened more or less directly onto Skail Bay, and this factor, twinned with the location of corn-drying kiln [034] a few metres to its south, would suggest that the purpose of this opening was to ventilate annex [237], and to aid in the kindling of [034]. In this respect, [097] constituted a rudimentary vent. Describing it as a flue would, however, be a stretch too far, as it was not an elongated channel. Moreover, it did not seem as if great efforts were made to concentrate smoke specifically in its direction.

Across Skara Brae there were also a series of smaller intramural entrances. These entrances always led from the central area of a building into a recessed cell. Describing these entrances in detail would be quite a wearisome process, and in order to maintain this thesis' succinctness this process has not been conducted here. Structurally, they were always made up of short jambs, bulky in form, which were embedded directly into the entrance's reveals. Sometimes, these entrances were defined by only a single jamb with a completely unadorned reveal on the opposite side and were therefore very similar to [096] within Hut 8's porch.

The final entrances from Skara Brae that are discussed here are the ones on the western end of the settlement's main corridor (fig. 5.57). This corridor (commonly known as 'Passage A') meandered through the centre of Skara Brae, and gave access to Huts 1, 2, 3, 4, 5 and, by virtue of a short passageway ('Passage B'), Hut 7. Entrance [098] gave access to the main corridor from the west and was discovered in a very well preserved state (fig. 5.56) (Childe 1931d, 44). Structurally, it was composed of a pair of jambs keyed directly into the corridor's masonry. These jambs were perpendicular to the walls of the corridor, and the space separating them measured 0.53m. These jambs were far larger than any others discovered on site. A threshold stone, in the form of a thin slab set on edge, spanned the distance between these jambs. A lintel was also discovered *in situ*, comprising a very large slab resting on the tops of the jambs. The height at which this lintel was suspended from the corridor's floor was 1.04m. A locking channel was incorporated into the masonry on the eastern edge of [098], which measured c. 0.47m x 0.15m. On the opposite edge of [098] a small groove was cut into the masonry covering the western side of the corridor. Together, this channel and groove would have held a crossbar in place across the front of entrance [098]. Around 1.80m to the west of entrance [098] and just east of the paved area known as the 'marketplace' was entrance [099], which was very different in form. Its jambs were fairly crude in appearance, and notably bulky. As a result of their bulkiness, they had no real orientation in relation to their associated reveals. Nevertheless, they

were both keyed directly into them. The gap between these jambs was 0.53m, which was spanned by a threshold stone in the form of a slab set on edge. A lintel was also discovered *in situ* above the jambs of [099] and was suspended 0.99m above the floor. Unlike [098], no locking mechanism was discovered in association with [099]. Strictly speaking, this entrance did not give direct access into the settlement's main corridor. Instead, it led into a small space that one would walk through before reaching entrance [098] and therefore the corridor proper. This small space could arguably be interpreted as a form of anteroom.



Figure 5.56. Entrance [098] leading into Skara Brae's central corridor (from Childe 1931d)

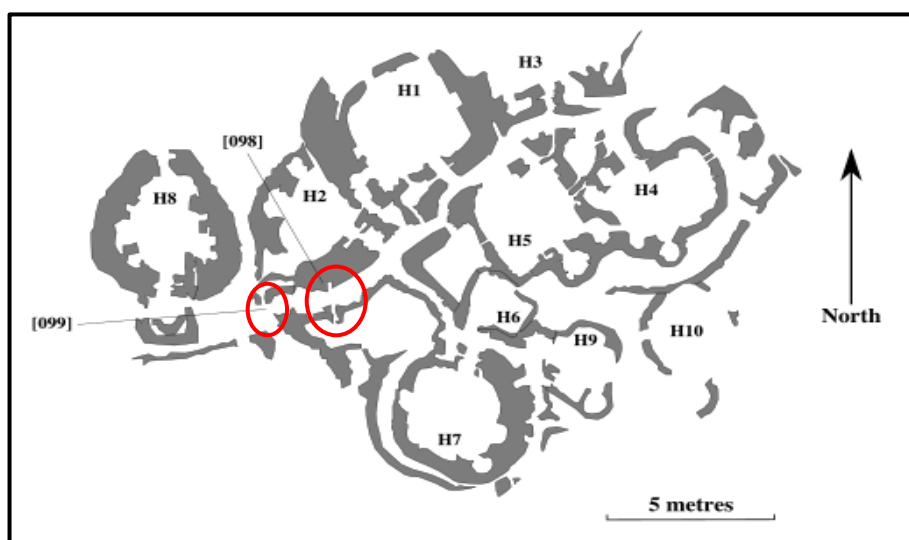


Figure 5.57. Position of entrances leading into Skra Brae's central corridor (illustration by author, adapted from www7)

There are some major similarities to be seen when comparing the entrances at sites such as Barnhouse and Skara Brae with those of the stone-built tombs. At Maeshowe, for example, the principal entrance [100] (fig. 5.58), which led into the tomb's passageway, was composed of a pair of jambs with a long lintel, in the form of a stone slab, placed over the top. Also running in between the jambs was a long and thin threshold stone, which created a slight step down into the passageway beyond. The space between the jambs of [100] was *c.* 0.68m, while the distance from the top of the threshold stone to the base of the lintel was 1.10m. These jambs, along with the lintel, witnessed a rather extensive amount of pick-dressing (Phillips and Bradley 2000, 106), and it seems as if the entrance and the masonry within its vicinity enjoyed a large amount of care and attention during construction. The juncture between these jambs and the surrounding masonry was also seamless, as the former were keyed directly into the latter. The jambs of [100] were also perpendicular the passageway's sidewalls. Slightly beyond entrance [100] was a small recess, situated on the left-hand side of the long entrance passage when entering the central chamber. This recess was *c.* 0.30m to the northeast of the threshold of [100] and was roughly triangular in form, measuring 0.97m wide x 0.56m deep. In association with this recess was a large boulder, originally discovered in the middle of the entrance passage, whose dimensions corresponded almost precisely with those of the aforementioned recess (Stuart 1864, 250). Currently, this boulder sits within the recess, and aside from a gap of 0.15m that separates the top of the boulder from the ceiling of the passage, it fits perfectly within (Henshall 1963, 220). It is therefore clear that this boulder acted as a blocking stone that could be manoeuvred in place from within its corresponding recess. Furthermore, this blocking stone

was covered almost entirely with incredibly intricate pick-dressing (Eogan 1992, 123), demonstrating that meticulous care was exercised in order to ensure that this boulder conformed to an exact shape and dimensions. Indeed, the boulder was a mere 0.03m narrower than the width of the entrance passage, which meant that it could be slid into place while simultaneously ensuring a sufficiently tight seal.

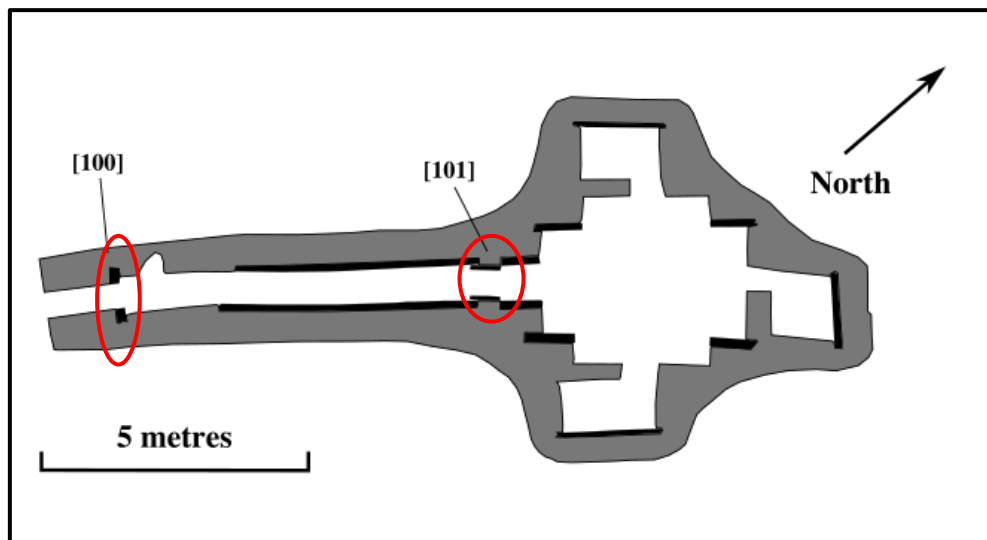


Figure 5.58. Position of entrances within Maeshowe (illustration by author, adapted from RCAHMS 1946 and Stuart 1865)

Another entrance was also built into Maeshowe [101] (fig. 5.58), located towards the opposite end of the entrance passage, c. 1.50m southwest of the central chamber. In its construction, this entrance differed to [100] in that its jambs were both flush with and parallel to the passage's sidewalls. The gap between these jambs measured c. 0.68m, and a lintel, in the form of a flat slab, rested above them. This lintel was suspended c. 1.30m above the floor of the passage. No threshold stone was discovered in association with [101].

A further factor to consider when analysing the entrances of Maeshowe is their association with the passageway's orientation. In being oriented NE–SW, both entrances and passageway were perfectly aligned with the sunset of the midwinter solstice (Mackie 1997). It is during this time that the rays of the dying sun penetrate entrance [100], travel down the tomb's long passageway, before passing through entrance [101] and illuminating the central chamber. Indeed, this is a phenomenon that can still be witnessed today. Significantly, this phenomenon still would have occurred even with the passageway's blocking stone in place, as the small gap

between the top of the stone and the passageway's ceiling allowed a horizontal slither of light to pass through (Moir 1981, 223; Wickham-Jones 2015, 63).

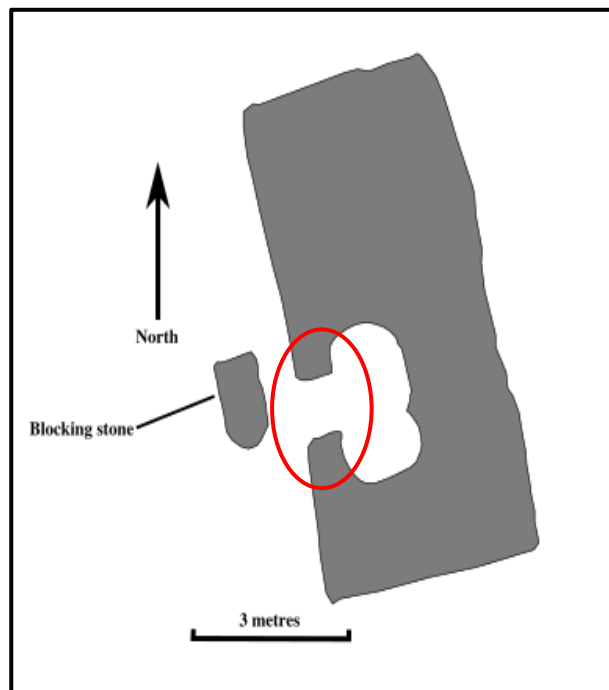


Figure 5.59. Position of entrance [102] within the Dwarfie Stane (illustration by author, adapted from Henshall 1963)

Maeshowe was certainly not the only Neolithic tomb in Orkney to have its entrance blocked with stone. Perhaps the most outstanding example of this process can be seen at the Dwarfie Stane – a rather unique tomb probably constructed during the late fourth millennium BC. In effect, the tomb constitutes an enormous sandstone block measuring 8.60m x 4m x 2.50m in height (Ritchie 1995, 121), which likely derived from a nearby cliff face to the southeast (Watson and Keating 2000, 261). Rather than being constructed from individual pieces of masonry, the entrance and internal chambers were hewn directly into the rock. Put differently, the tomb is an entirely was a negative feature. The entrance [102] could be accessed from the south-southeast and had a NNW–SSE alignment (fig. 5.59). In terms of its structure it was completely unadorned; it had neither jambs nor threshold stone. Neither did it have anything that resembled a lintel. In fact, the only real way of describing this entrance would be as a rectangular aperture leading into the tomb's central chamber. The gap between the top of the entrance and its base measured 1m, while its width and length were 1.12m and 0.70m respectively. The reveals of [102] also extended around 0.80m into the tomb's interior before merging into the westernmost return faces of the central chamber's side compartments.



Figure 5.60. Entrance [102] and associated blocking stone at Dwarfie Stane (photograph by Bruce McAdam)

Furthermore, the southern edge of [102] was 2.84m from the southernmost corner of the sandstone block into which the tomb was hewn, while its northern edge was 4.95m from the block's northernmost corner. As the tomb was situated on a slope, it seems that the reason for this off-centre entrance was to allow the central chamber to be situated at the tomb's highest point (Calder and Macdonald 1936, 218–19). This entrance was therefore positioned in such a way as to allow the most expedient entry into the tomb. A large boulder was also associated with [102], weighing c. 1500kg (fig. 5.60) (Calder and Macdonald 1936, 224). In terms of its dimensions, it was c. 1.55m x 0.81m x 0.64m in height (Henshall 1963, 197). This boulder was discovered towards the exterior of the tomb, which originally acted as a blocking stone used to seal the tomb. Investigations of the Dwarfie Stane in the sixteenth century recorded this boulder as being situated firmly within [102] (MacFarlane in Mitchell and Clarke 1908, 323). However, by 1792 it was described as having been placed on end towards the western exterior of the tomb (Gordon 1792, 265) – a position it still occupies today.

On rare occasions the entrances of domestic buildings were deliberately blocked up as well, and one of the more notable examples was found at the Knap of Howar. Here, both Houses 1 and 2 could be accessed from the northwest via a pair of principal entrances aligned NNW–SSE (fig. 5.61). The one incorporated into House 1 [103] was formed via a breach in the

building's northwestern wall. Due to the extensive thickness of the wall at this end, this breach was akin to a short passageway, measuring c. 0.80m wide x 1.80m long. Keyed into its reveals in perpendicular fashion was a pair of stone slabs. These likely functioned as door checks. These door checks were also situated behind the innermost facing stones of the building's interior. In between these door checks was a threshold stone, whose width corresponded with that of the entrance. Moreover, a lintel was discovered *in situ*, which spanned the tops of the door checks. Both the lintel of [103] and the roof of the passageway stood at c. 1.30m in height (Ritchie 1983, 42). A pair of jambs was also discovered in association with [103]. These came in the form of stone slabs whose lateral edges butted the door checks, and whose longitudinal edges were flush with the reveals of the interior facing stones. These jambs extended slightly beyond the height of the lintel, which was situated marginally behind them.

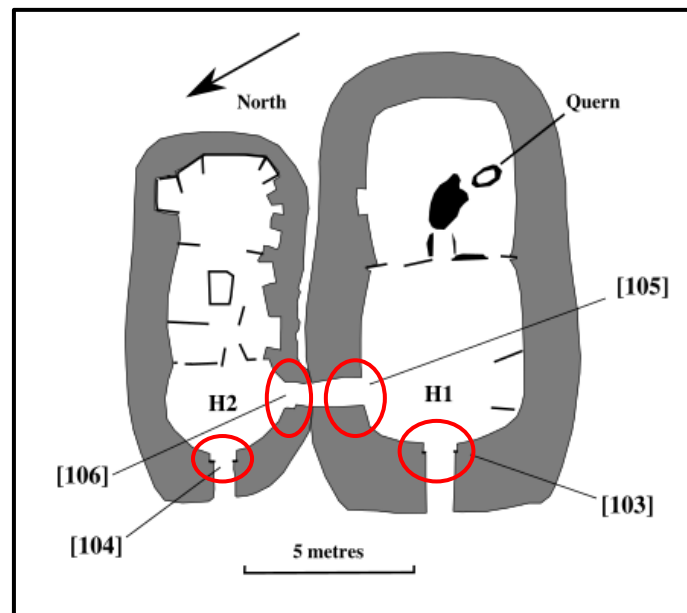


Figure 5.61. Position of entrances at Knap of Howar (illustration by author, adapted from Traill and Kirkness 1937 and Ritchie 1983)

The principal entrance leading into House 2 [104] was much the same in structure, although it was discovered in a more ruinous condition than [103], owing to the fact that it was probably demolished during the abandonment of the building. Again, the breach constituting this entrance was rather long, measuring c. 1.60m. Its width varied but measured anywhere between 0.60m and 0.70m. A pair of door checks defined the sides of [104] and both were keyed into the reveals on either side, being perpendicular to them. A lintel was also discovered above these door checks, which has now collapsed. However, it was recorded as being *in situ* during the

building's initial excavation and was noted as measuring marginally over 1m in height (Ritchie 1983, 43). No threshold stone was discovered in between the door checks. In addition, a pair of jambs was associated with this entrance, which were precisely the same in terms of structure and situation as those of [103]. Another interesting aspect of this entrance was the fact that it was flanked on either side by stone posts (fig. 5.62). These posts were incorporated directly into the masonry of the westernmost wall, and each was situated c. 0.30m from the jambs of [104]. Additionally, both pillars differed in terms of form. The southernmost constituted a thin slab, while the northernmost was far bulkier. During her investigation of House 2, Ritchie described the former as a 'panel' and the latter as a 'post' (1983, 43).



Figure 5.62. Entrance [104] of House 2 at Knap of Howar, with flanking 'posts' (from Ritchie 1983)

The function of these vertical members remains unclear, as only an excavation of the entire wall would reveal this. The stratigraphic sequence associated with [104] and its surrounding wall can, however, hint at their purpose. The two stretches of walling that they abutted on either side formed part of the inner facing course, which was contemporary with both pillars. Yet it seems that the facing stones situated towards the inside of these pillars were later additions, as they were abutted by the jambs of [104] and were built up against its door checks. What this effectively means is that these pillars may have originally defined the edges of a small vestibule-like space to the inside the entrance, before it was narrowed by the addition of these later facing stones. This would also indicate that the jambs were later additions as well.

Furthermore, both Houses 1 and 2 were linked via a short passageway that breached the northernmost wall of the former and the southernmost of the latter. This passage was c. 0.84m wide x 2.54m long. It seemed as if very little effort was made to bond these two walls at the point at which they met, meaning that both buildings remained somewhat separate. This separation was best observed partway along the passageway, where the outer wall faces formed a straight joint, rather than being keyed into one another. At either end of this passageway was another pair of entrances, both aligned NE–SW. Entrance [105] opened up into House 1 while [106] opened into House 2 (fig. 5.61). The former incorporated a pair of jambs that directly abutted the reveals on either side, and had a lintel spanning the space above them. Neither door checks nor a threshold stone was associated with [105]. The latter was demonstrably different in construction. It incorporated door checks that were keyed into the masonry on either side and were effectively nestled in between the inner facing course of House 2 and the outer course of the passageway's walls. A pair of jambs also abutted these door checks. Likewise, a threshold stone was discovered in between these jambs, and so too was a lintel, situated immediately above them. In terms of width, [105] measured c. 0.63m while [106] was c. 0.80m. During the abandonment of House 2, both [104] and [106] were deliberately blocked up with stone (Traill and Kirkness 1937, 311). Significant quantities of rubble were discovered within the passageway leading up to [106], while several stone slabs had been piled up between the jambs of [104]. This latter event was seen to post-date the partial collapse of the latter's lintel, which was partly overlain by the blocking slabs. The deliberate blocking of both [104] and [106] seems to have coincided with the abandonment of House 2 in its entirety. Aside from the demolition of these entrances and some collapsed walling that had tumbled into the interior, the remainder of the building was kept relatively clear and untouched. After the abandonment and deliberate sealing up of House 2 it seems as if House 1 continued to be inhabited (Ritchie 1983, 44). Overall, it was unclear why House 2 was not simply demolished, instead of remaining attached to House 1 as an empty husk of a building.

Another key example of an entrance being physically impeded can be seen within Structure 1 at the Ness of Brodgar (fig. 5.63). The easternmost entrance [107] was 1.10m wide x 0.28m long, was oriented E–W and was accessed from the east via a passageway that led from Structure 7 nearby. The most interesting feature of this entrance was the inclusion of hearth [049] at its centre. This entrance also appeared to lack jambs and a threshold stone. However, it could be argued that hearth [049] was this entrance's threshold, as entry into Structure 1 from

this end would have involved stepping over this hearth. Stratigraphically, it appeared that [107] was a relatively late addition to Structure 1.

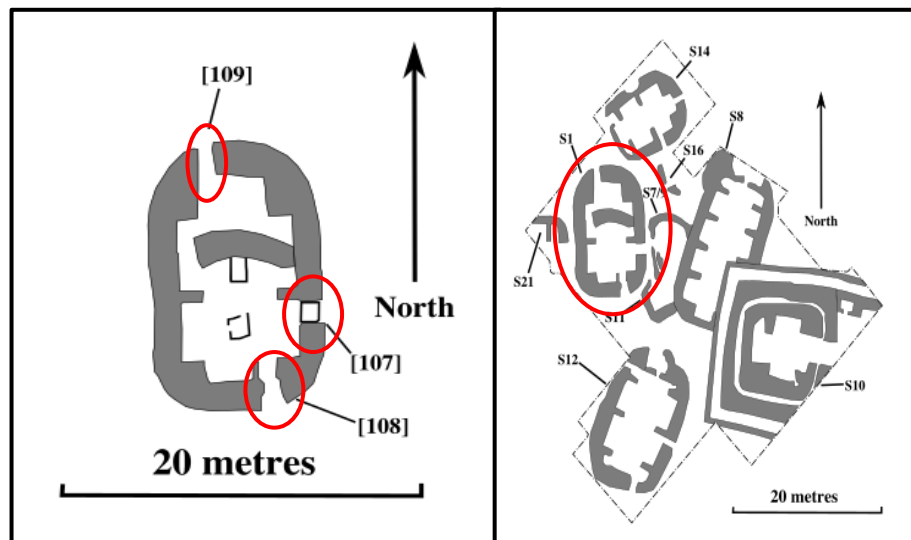


Figure 5.63. Position of entrances within Structure 1, Ness of Brodgar (illustrations by author, adapted from Card et al. 2018)

Structure 1 could also be accessed via two other entrances, one to the south [108] and one to the north [109] (fig. 5.63). In terms of its architectural composition, [108] was rather simplistic. It was constituted by a breach in the southern wall measuring *c.* 1.40m wide at its mouth, although the width of the breach decreased to *c.* 0.90m towards the building's interior. This narrowing was caused by two factors. Firstly, rather than being perfectly perpendicular to the southern wall, the eastern reveal had a slight transverse alignment. Secondly, the western reveal had a small return within it, which extended *c.* 0.20m into the centre of the entrance before continuing on a northward trajectory. This small return marked the point at which the outer casing wall (which was a later addition) and the inner wall course met. It seems possible that this return functioned as a door check, although this suggestion is tentative as no corresponding return was present on the entrance's western side. Apart from a flat threshold stone towards its outer edge, [108] was completely unadorned. Despite the simplistic architectural composition of this entrance, its masonry was nonetheless adorned with incised decoration (Thomas 2016, 186). This decoration mainly consisted of lines and chevrons and covered both the left- and right-hand side reveals, although it was more profuse across the former. At around the same time that entrance [107] was constructed this entrance was blocked up with compacted masonry, which was also covered in incised decoration. Again, this decoration consisted of

lines and chevrons. In terms of its orientation, [108] was aligned N–S with its outer façade facing south. The maximum length of the breach constitutive of this entrance was c. 0.51m.

In a fashion similar to [108], entrance [109] on the northern end of Structure 1 comprised a simple breach in the building's wall. This breach was 0.84m wide and was rather long, measuring c. 1.75m. It was also oriented N–S, being accessed from the north of the building. Although no jambs were discovered in association with [109] it did incorporate a threshold stone, which comprised a flat rectangular slab situated towards the outer edge of the entrance. A stone-lined box-drain was also discovered running in a northerly direction under its western reveal.

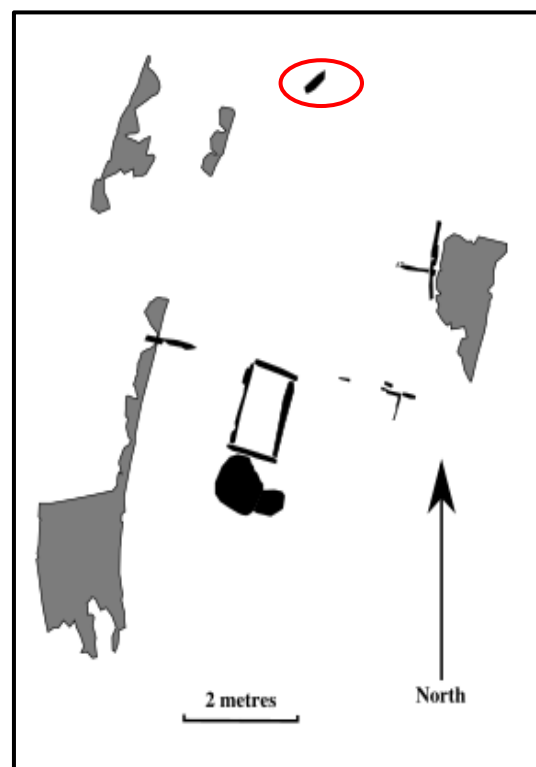


Figure 5.64. Position of entrance [110] at Knowes of Trotty (illustration by author, adapted from Downes et al. 2016)

Travelling further back in time, we can see some key affinities between the entrances of the earlier and later phases of the Neolithic. The domestic structure at the Knowes of Trotty illustrates these affinities quite well. The first phases of construction associated with this building were highly disturbed, however it was possible to observe the remains of a probable threshold stone towards its northern edge (fig. 5.64) (Downes *et al.* 2016, 44). This stone had clearly been dislodged prior to excavation and was found partially embedded within the

remains of the building's northern wall. This stone was long and thin in form and was completely flat on one side, measuring *c.* 0.93m x 0.04m. It therefore stood out amongst the rustic block-shaped masonry surrounding it. Here, this stone will be interpreted as having formed the threshold of tentative entrance [110] and given the dimensions of this threshold stone we can also deduce that [110] was probably *c.* 0.93m wide.

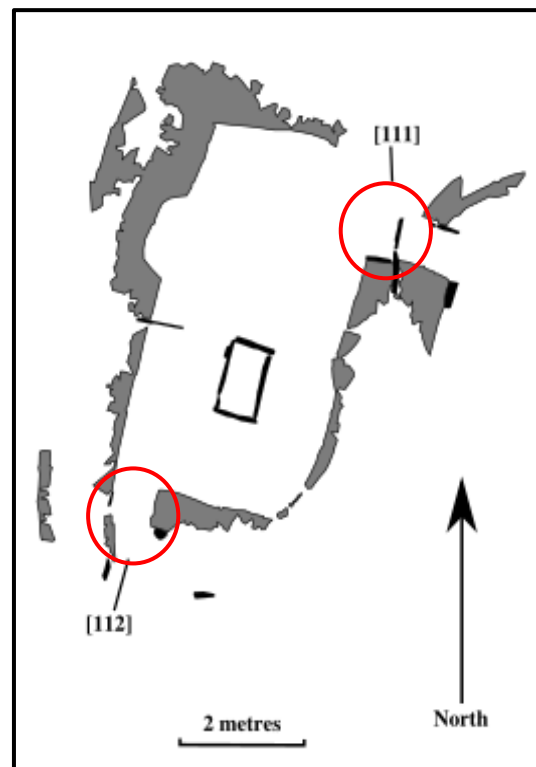


Figure 5.65. Position of later entrances at Knowes of Trotty (illustration by author, adapted from Downes *et al.* 2016)

Later in the building's use another entrance [111] was constructed, which was seen to breach the eastern wall, and which had an E–W alignment (fig. 5.65) (Downes *et al.* 2016, 48). The construction of this new entrance coincided with a series of significant refurbishment episodes, which were witnessed across the entire building. This entrance was in a significantly better state of preservation than [110], and its threshold stone was discovered *in situ*, which measured *c.* 1.07m x 0.13m. Furthermore, this threshold stone stood 0.15m above the level of the floor, creating a small step into the building's interior. To the south of the threshold stone was another stone slab. This slab abutted the threshold stone at a perpendicular angle and jutted slightly into the interior of the building. In plan, this slab measured *c.* 1m x 0.13m. Overall, it seems likely that this slab formed the southern jamb of [111], although as the northern end of the entrance was completely destroyed, no northern counterpart could be discovered. Beyond the threshold

of [111] (to the east) was a short passageway that would have originally led into an adjoining building. This passageway was *c.* 2m in length and was paved with flagstones. The southern wall of this passageway was composed entirely of drystone masonry. However, on its opposite side were the partial remains of upright slabs. These slabs were flush with some surviving stretches of masonry to the north, which may suggest that the remainder of the passageway was walled in this way. The width of the passageway was consistent throughout and corresponded almost directly with the width of the threshold stone of [111].

In concurrence with later renovations to the building was the construction of another entrance [112], which breached the southern wall towards the southwestern corner (fig. 5.65) (Downes *et al.* 2016, 50). This breach was *c.* 0.89m long. Neither jambs nor a threshold stone was discovered in association with this entrance, and although its reveals were formalised with facing stones, these stones were quite crudely set in place. This was evidenced by the significant gaps in between them. However, it was clear that [112] was once a doorway, as a roughly circular posthole was discovered towards the exterior of the eastern reveal. It seems probable that the timber post once held within this posthole held either a door or a locking bar in place, which could have been slid across the face of [112] from its east end. In considering the evidence from Skara Brae, where far more elaborate locking mechanisms were constructed, this particular example seems quite rudimentary. The width of this entrance was 0.79m and it was oriented NNW–SSE, facing outwards to the south-southeast.

The entrances associated with the stalled tombs of Orkney were much the same in structure to those of the late fourth and early third millennium BC entrances described above, yet the ways in which they functioned were often very different. The principal entrance leading into Midhowe [113], for example, constituted a narrow breach in the southeastern wall of the tomb, which was accessed via a short passageway (fig. 5.66). This passageway was around 4m in length and was anywhere between 1.10m and 1.20m wide. Entrance [113] was situated at the northwestern end of this passage, which opened up onto the tomb's main chamber. It was defined on either side by a pair of jambs, in the form of slabs, that were flush against the return wall faces on either side and were therefore perpendicular to the passageway's sidewalls. Both jambs were *c.* 0.70m long – a figure that corresponded directly with the extent to which the central chamber opened up laterally beyond the walls of the passageway. The gap between these jambs was *c.* 0.80m. During the tomb's excavation it was noted that this entrance was

deliberately blocked up with stone (Callander and Grant 1934, 325). In addition, the southeastern end of the passageway was also blocked up with stone. Beyond [113], when travelling into the interior of the tomb's chamber, was a series of stone slabs almost identical in composition to the jambs just mentioned. These were keyed into and thus protruded from the sidewalls of the chamber at fairly regular intervals. They were also constructed in pairs, with each pair constituting two slabs that were directly in line with one another. These slabs effectively created a linear sequence of stalls along both sides of the chamber. However, when viewed in comparison with the jambs of [113] they can also be seen as forming another linear series of cased openings. In total, there are 11 cased openings situated beyond the principal entrance of Midhowe, and they are described here from SE–NW as [114]–[124] (fig. 5.66) (see Table B 2 of Appendix B for their dimensions). The final cased opening ([124]) opened directly onto bench [168]. Cased openings [115], [120], [121] and [124] had *in situ* lintels, meaning that their heights could be measured directly. Moreover, the jambs of these cased openings were relatively short towards the principal entrance (around 1.50m high), were significantly taller towards the middle of the tomb (just over 2m high), before shrinking again to around 1.50m in height towards the rear.

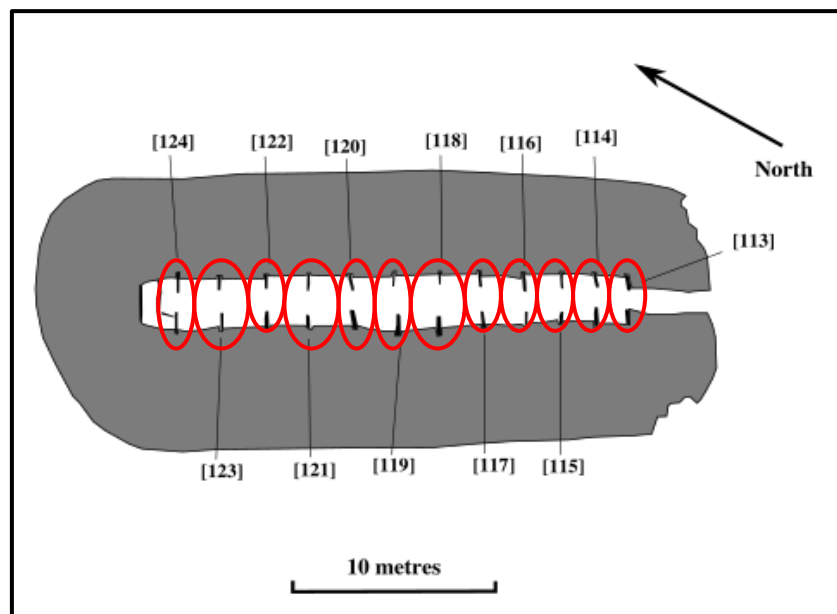


Figure 5.66. Position of principal entrance and cased openings within Midhowe (illustration by author, adapted from Callander and Grant 1934)

Another early tomb that incorporated a similar structural sequence to Midhowe was the tomb of Blackhammer. Much like Midhowe's nearby, the main chamber of Blackhammer has

remained in a high state of preservation. However, one notable difference between the two lies is the fact that Blackhammer was accessed laterally, via a principal entrance [125] that breaches the main chamber's southernmost sidewall (fig. 5.67). Due to the thickness of this sidewall, the breach constitutive of this entrance was very long, and in almost every respect it was akin to a passageway. With its N–S alignment, the orientation of [125] was slightly oblique, as the outer wall that it breached was aligned WNW–ESE.

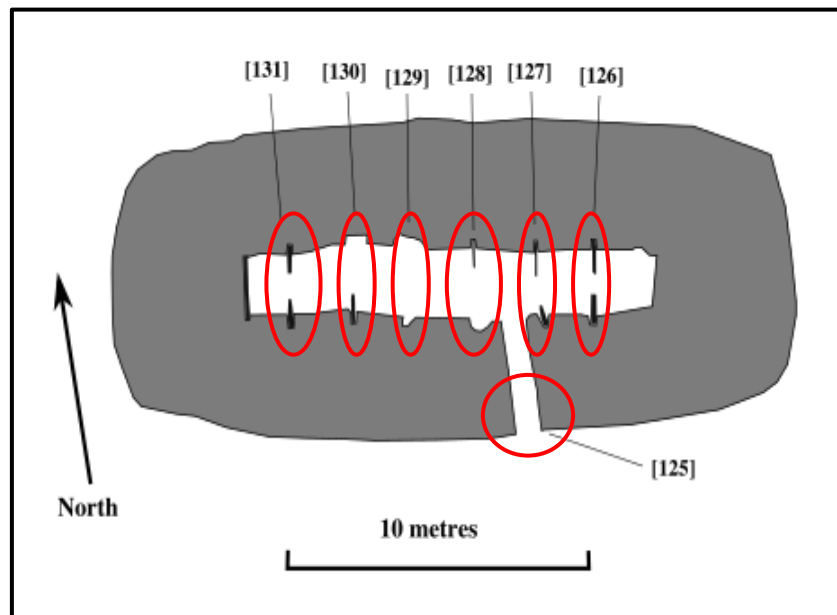


Figure 5.67. Position of principal entrance and cased openings within Blackhammer (illustration by author, adapted from Callander and Grant 1937)

The overall length of [125] was *c.* 3.10m, while its width was 0.72m. Much like at Midhowe, this entrance was deliberately blocked up with a mass of stone. Yet the blocking stones associated with Blackhammer were far more numerous and were rammed in place along its entire length. Indeed, the extent to which Blackhammer's principal entrance was blocked up was so great that upon excavation it was thought that the southern wall of the tomb had no breach in it at all (Callander and Grant 1937, 297). Entrance [125] opened up near the middle of the main chamber, and along this chamber's length was a series of opposing stone slabs that had been keyed into the masonry of the sidewalls. These slabs created stalls along both sides of the chamber, however much like at Midhowe they can also be regarded as forming a sequence of cased openings, six in all. Again, the dimensions for these cased openings are outlined in Table B 2 of Appendix B. From E–W they are numbered here as [126]–[131] (fig. 5.67). It should be noted that some of these cased openings were partially destroyed. For

example, the southernmost slab originally incorporated into [128] along with the northernmost of [130] were removed at some point during antiquity, while those associated with [129] were missing entirely.



Figure 5.68. Photograph of the Deepdale Stone, overlooking the Loch of Stenness (www10)

While on the subject of cased openings, an important link can be observed between the stalled tombs and the standing stones at Deepdale. Today, only one of the site's monoliths is still standing, and is known locally as the 'Deepdale Stone' (fig. 5.68). Yet originally it had a companion (no illustration). The surviving stone comprises a laminated sandstone slab, standing at c. 2.13m in height x 1.60m in width, and is therefore relatively small in comparison to other monoliths discovered across Orkney. Evidence for the existence of its neighbouring monolith came in the form of a backfilled socket, situated c. 36.60m to the north. Burton's excavation of this socket (1978) discovered the base of the monolith it originally contained, which rested against the socket's northwestern edge, implying that it was forcefully pulled into an erect position from this direction. The base of this monolith measured c. 1.30m in width. Originally, the longitudinal edges of both monoliths would have been oriented NW–SE, and when approached from the southeast, they effectively constituted a pair of jambs leading onto the Loch of Stenness beyond. In addition, this longitudinal alignment can be seen as referencing the form of the cased openings within the stalled tombs. It is for these reasons that the monoliths

at Deepdale have been interpreted here as a cased opening and have been assigned the number [343].

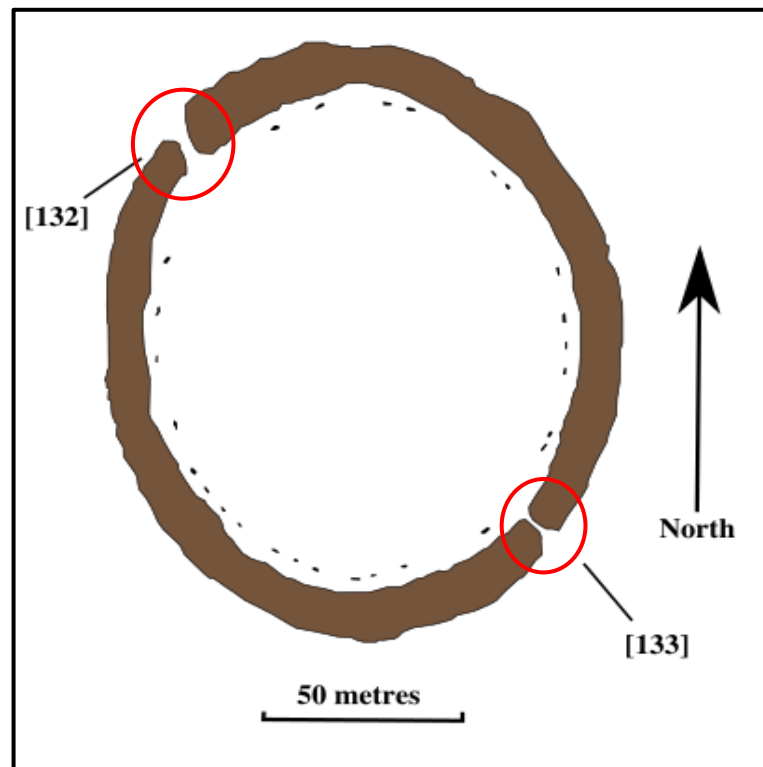


Figure 5.69. Position of entrances at Ring of Brodgar (illustration by author, adapted from Downes *et al.* 2013)

The final type of entrance that will be considered here is the ‘monumental’ entrance, or those entrances that lead into the henge monuments of Neolithic Orkney. The outer bank and ditch circuit of the Ring of Brodgar incorporated within it a pair of entrances on its northwestern and southeastern ends (fig. 5.69). Perhaps surprisingly, the ditch was dug out in sections, possibly even in piecemeal fashion (Downes *et al.* 2013, 111). Today, the outer bank has been destroyed, yet traces of it were detected during Renfrew’s excavations (1979, 43), situated slightly to the outside of the ditch, indicating that it was deliberately removed at some point in the past. Put simply, both the northwestern entrance [132] and its southeastern counterpart [133] constituted ‘gaps’ in the monument’s ditch. Although the ditch has witnessed episodic investigation over the past few decades (e.g. Renfrew 1979; Downes *et al.* 2013), the areas in and around these entrances have not been excavated. However, rather than being true ‘gaps’ in the ditch, it is assumed that these entrances were causeways constructed after the ditch had been dug and were the product of backfilling. This has long been recognised, and during a mid-nineteenth these causeways were described as “narrow earth-banks across the fosse” (Thomas 1852, 103).

Entrance [132] measures *c.* 12m long x *c.* 3.05m wide, although its edges fan out to *c.* 9.60m wide at its northwestern end and to *c.* 7.50m wide at its southeastern end. On the other side of the monuments, entrance [133] measures *c.* 9.50m long x *c.* 1.18m wide, but again its edges fan out to *c.* 3.50m wide at its northwestern end and to *c.* 6.40m at its southeastern end. Referring back to the piecemeal construction of the outer ditch, it seems that the internal ring of monoliths was also erected in an intermittent fashion. A total of 21 monoliths still stands here today, of which eight were re-positioned in the early twentieth century (Ritchie 1988). Together these comprise seven distinct types, each deriving from different quarry sites across Orkney, including those located at Vestra Fiold, Staneyhill and Houton (Downes *et al.* 2013). It is unlikely that any of these stones derived from within the local bedrock as the compacted fission patterns of the sandstone bedding planes prevents the removal of any sizeable monoliths (Richards *et al.* 2013a, 123). As approximately 60 standing stones once stood here in total, potentially comprising an even wider array of rock-types, it is almost inconceivable that that all of these monoliths were erected at the same time. It has therefore been suggested that their erection was a long and drawn-out process (Richards 2013c, 85). If both the outer ditch and inner stone circle of the Ring of Brodgar were constructed in such a piecemeal way, then, by inference, the positions of the entrances were probably not planned. Rather, it is far more likely that their positions were decided upon long after the monument's initial phases of construction, once the ditch had been dug in its entirety and after a significant number of monoliths had been erected.

Unlike the Ring of Brodgar, the Stones of Stenness only has one entrance [134] incorporated into its outer bank and ditch circuit (fig. 5. 70). This entrance is situated on the monument's northern edge, measuring *c.* 7m long x *c.* 8.05m wide, but fanning out to *c.* 13.40m wide on its southern end. In considering the significant width of the causeway constitutive of entrance [134], it seems unlikely that it was constructed in the same manner as [132] and [133] at the Ring of Brodgar. A more likely explanation is that it is simply a gap in the bank and ditch. Although the ditch here has not been investigated to the same extent as the Ring of Brodgar's, it has been noted that its profile and construction on either side of [134] were markedly different (Ritchie 1976, 11), suggesting that it was dug in piecemeal fashion. It has also been suggested that the 12 monoliths originally situated within the monument's interior were all extracted from the local bedrock while the outer ditch was being dug (Collins in Ritchie 1976, 44–5). In this sense, it seems as if the stone circle here was erected in a fairly unitary manner, unlike the one

at the Ring of Brodgar. If the Stones of Stenness was constructed in such a way, then it may suggest that the incorporation of entrance [134] occurred fairly early on in the monument's construction. However, Richards has rightly indicated that according to Collins own lithology report of 1976, the monoliths at the Stones of Stenness may have constituted as many as five widely sourced rock-types. In considering this, Richards argues that the construction of the Stones of Stenness was intermittent, therefore mirroring the construction of the Ring of Brodgar nearby (2009, 57). At present, therefore, both the monument's chronological sequence and precise manner of construction remain largely undefined.

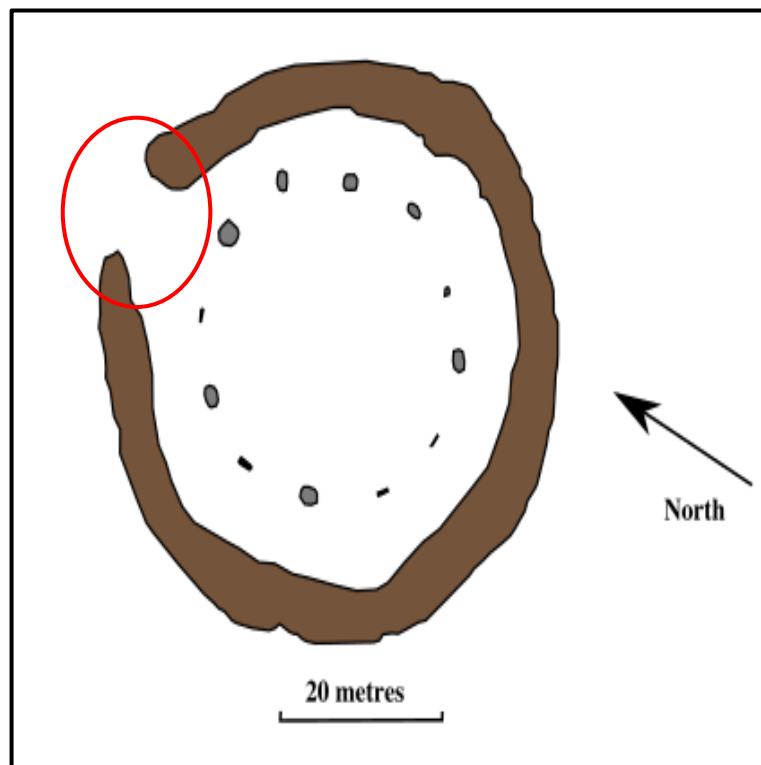


Figure 5.70. Position of entrance [134] at Stones of Stenness (illustration by author, adapted from Ritchie 1976)

5.3.5 Discussion

Throughout Neolithic Orkney the construction of entrances always revolved around the same principal – that a building or indeed an entire site could be accessed via a clearly defined breach in its boundary. It therefore goes without saying that, apart from Maeshowe, whose outer bank and ditch ostensibly lacked a breach or causeway (*cf.* Cummings and Richards 2017, 235–6), all architectural structures and sites across Neolithic Orkney could be accessed via some form

of entrance. Furthermore, the entrance can typically be seen as a juncture between two spaces that were qualitatively different, or spaces that differed in kind. Accordingly, when passing through an entrance one could be transitioning from exterior to interior; from central bay to recessed cell; or even from the exterior landscape to an intermediary passageway to an enormous central chamber (see entrances [100] and [101] at Maeshowe). Throughout most of the Neolithic period it seems that the construction of entrances was more or less uniform, and this was a uniformity that applied to both domestic and mortuary architecture. The construction of these entrances revolved around the incorporation of jambs, a threshold stone and a lintel. While not all entrances during this period had all three of these features, in most cases it could be observed that at least one was incorporated.

In his assessment of Skara Brae, Childe grouped all entrances discovered on site into three basic types. These types were as follows:

- i) Type 1: entrances with jambs composed of thin slabs that jut out from the reveals in perpendicular fashion;
- ii) Type 2: entrances with jambs composed of thin slabs that are parallel to their reveals;
- iii) Type 3: entrances with block-like jambs that sometimes only adorn one reveal and not the other.

(Childe 1931d, 13)

Of the entrances discussed in this chapter, the majority could be categorised using this basic tripartite scheme, showing that Childe's hypothesis still mostly rings true today. On the other hand, while this typological scheme remains effective in describing the jambs of Orcadian entrances, it accounts for very little else, either in terms of an entrance's size or structure. That is why, from the point onwards, Childe's typology will be used to describe *jambs* alone. Type 1 jambs occurred frequently throughout Skara Brae and were incorporated into entrances [091] (Hut 2), [092] (Hut 3), [094] (Hut 8) and [098] (main corridor). The appearance of Type 2 jambs was slightly less frequent, with entrances [089] (Hut 7) and [090] (Hut 1) having these. Entrance [093] (Hut 4), however was fairly unique, as it comprised two sets of jambs, one of the Type 1 variety and another of Type 2. Of those Type 3 jambs, most were intramural, and led into the various recessed cells found within many of the buildings. Yet entrances [095], [096] (Hut 8) and [099] (end of main corridor) could also be described as Type 3. No clear

chronological pattern could be observed in the use of these jamb types, and it seems that all three were built contemporaneously throughout the site.

When the entrances of Skara Brae are compared to those of Barnhouse, some clear discrepancies arise. Apart from [084] (House 2) and [087] (Structure 8), all entrances at Barnhouse had Type 2 jambs. Entrance [084] lacked jambs entirely, while [087] seemed to defy typological classification, as while it did incorporate jambs, these were in the form of two enormous pillars. Furthermore, no Type 1 jambs whatsoever were discovered at Barnhouse. From a more comprehensive perspective, Type 1 jambs are the first to appear in the archaeological record, and as far as is possible to tell, the stalled tombs of the mid–late fourth millennium BC contain the first instances of this jamb type. The most conspicuous of these are the principal entrances, and [113] from Midhowe serves as a good example. Although not discussed in detail here, the principal entrances associated with other early tombs such as Knowe of Yarso, Knowe of Craie, Bigland Round and Kierfea Hill also had Type 1 jambs. Yet not all of these tomb’s principal entrances had jambs, as evidenced by entrance [125] at Blackhammer. Additionally, the principal entrances of other early tombs such as Holm of Papa Westray South, Unstan and Isbister also lacked jambs. Within the context of domestic architecture, Type 1 jambs do not appear profusely until *c.* 3000 BC, with Skara Brae being the only site that incorporated these jambs in abundance. Yet there are some points of similarity; the door checks of principal entrances [103] and [104] at Knap of Howar were very similar in appearance, although in both cases these were situated behind the entrance’s real jambs and were partially hidden from view.

Unlike Type 1 jambs, the Type 2 variety does not appear within the stalled tombs. Of those entrances discussed in this chapter, the first recorded instances of Type 2 jambs are those belonging to either [111] at Knowes of Trotty, or those principal entrances at Knap of Howar ([103] and [104]). Although difficult to date in any precise manner, it appears that all three were constructed between the thirty-fourth and thirty-second centuries BC (Griffiths 2016, 290–1). Moreover, they appear within the entrances of domestic buildings throughout the entire Neolithic thereafter. Yet Type 2 jambs were rarely incorporated into the entrances of later tombs, with entrance [101] at Maeshowe being a notable exception. Type 3 jambs are harder to define beyond the confines of Skara Brae, and very few of those entrances detailed in the previous section could be accurately described as having these types of jambs.

One of the most important questions to be asked of the Neolithic entrances of Orkney is whether or not doors were incorporated into them, and the answer to this question revolves around determining which entrances were doorways and which ones were cased openings. Although this determination has been made within Table B 2 of Appendix B, there nonetheless remains a certain degree of doubt as to the exact classification of many entrances. By way of example, all entrances from Barnhouse have been interpreted as doorways, even though no door checks or locking mechanisms were discovered in association with them – features that would have proved the existence of a door. The reason for my bestowing the classification of ‘doorway’ upon these entrances lies in the fact that, apart from [103] at Structure 8, all of these entrances were principal ones. Indeed, it is difficult to imagine that the sole entrance into a domestic building would have been left perpetually open, allowing the interior to fall victim to damaging exterior forces. However, this classification does not mean that the doors associated with these entrances were permanent architectural fixtures. Malone has suggested that the dwellings at Barnhouse were likely sealed with simple coverings made from either stone or wood (2001, 58). In considering the lack of any firm evidence for permanent doors at Barnhouse, this is a rather sensible idea. Indeed, it may be argued that the reason almost all entrances on site had jambs that were situated beyond the reveals was so that a portable cover could rest against their lateral edges from the inside of the building. In this respect, the jambs of Barnhouse’s entrances may have doubled as door checks. The situation at Skara Brae was slightly different, as here we can see an increased emphasis on privacy and security, as evidenced by the number of locking mechanisms associated with its building’s entrances.

With regards to cased openings, we can see that these types of entrances were normally associated with the largest architectural structures and were constructed to mark junctures between different bays or other such spaces. These structures were, more often than not, tombs. Yet at Skara Brae we can see that cased openings were regularly used to give access to the small side cells of a building. Chronologically, the first definitive evidence for the incorporation of doors can be found at Knowes of Trotty, where entrance [112] was associated with some form of sliding mechanism for either a door or lock, but also at Knap of Howar in the form of those door checks associated with [103] and [104]. These doorways can be dated to anywhere between the thirty-fourth and thirty-second centuries BC, and interestingly they coincide with the emergence of Type 2 jambs within domestic architecture.

In terms of size, if we discount the exceedingly large entrances associated with House 2 and Structure 8's inner building, then the average width of those surviving entrances at Barnhouse is 0.54m. The width of the entrance leading into House 2 ([084]) was more than double this figure (1.20m) while the width of entrance [087] (leading into Structure 8's inner building) was over treble this figure (1.80m). The comparatively large sizes of these entrances are almost certainly due to the special nature of the buildings they gave access to. However, it should be remembered that the presumed principal entrance of Structure 8 [342] was markedly narrow and simplistic, demonstrating the secretive nature of this building as a whole. This pattern can be contrasted with the entrances at Skara Brae, which were on the whole significantly narrower. The average width of the surviving principal entrances here is 0.38m, while the porch entrances of Hut 8 ([095] and [096]) were even narrower, each measuring 0.30m wide. Indeed, the narrow nature of the entrances at Skara Brae is entirely in keeping with the restrictive and enclosed character of the settlement as a whole. Overall, the entrances of Skara Brae were seen to be significantly smaller than all others included in this section. Yet those of Barnhouse were also on the smaller end of the scale. By contrast, the entrances at the Ness of Brodgar were highly variable and some of them were exceedingly wide. The ones discussed here were all from Structure 1 and ranged between 0.84m and 1.40m in width. Yet if we were to consider the entrances associated with all structures that have been excavated so far then we begin to see that entrance size at the Ness of Brodgar varies further still, from as narrow as 0.54m (Structure 14) to as wide as 2.54m (Structure 10). This variation in size is a clear reflection of the variable nature of the architecture on site, where no two buildings quite look the same. A clear contrast can be made here with both Barnhouse and Skara Brae, where the majority of buildings were of a similar size and incorporated within them entrances of correspondingly similar widths. Furthermore, the widths of those mid-fourth millennium BC entrances considered here were more or less in line with the later ones, although it seems that the grand and exceedingly large entrance (e.g. [087]) was missing from this period entirely.

The height at which an entrance's lintel was suspended above the floor is of course extremely difficult to analyse in any general way, as very few lintels have been discovered *in situ*. Nevertheless, of those lintels discussed here all were suspended at very short distances from the floor, and their associated entrances rarely exceeded 1.50m in height. Of course, the average person (even during the Neolithic period) would have had to duck in order to pass through these entrances. What this means is that unlike today, where the lintel or header of an entrance

is normally suspended well beyond 2m high, the process of entering a Neolithic building in Orkney would have been a physically pronounced one. Simply put, by ducking down in order to pass through an entrance, a building's inhabitant or visitor becomes immediately aware that a physical juncture is being crossed. Entrances such as [090] leading into Hut 1 at Skara Brae, which was significantly under a metre in height, would have heightened this experience more than any other.

The lengths of all entrances discussed here were highly variable on both an inter- and intra-site basis. Within the context of domestic architecture, this variation was not so much a product of the entrances themselves. Rather, an entrance's length was determined by the thickness of the wall within which the entrance was incorporated. This same principal also applied to mortuary architecture, where the extremely thick cairn material enveloping the tomb necessitated the construction of long passage-like entrances. A clear exception to this pattern, however, can be seen at Maeshowe. Here, the central chamber was accessed via an inordinately long passageway that incorporated within it two clearly defined entrances ([100] and [101]). In this particular case it seems as if the cairn material towards the front of the tomb was deliberately extended in order to facilitate a passageway of this enormity. In other words, it was the structure of the passageway that determined the thickness of the cairn, and not the other way around.

With respect to orientation, little could be said of the earliest entrances considered here. On the other hand, it has been noted by Hodder that the stalled tombs of Orkney have a tendency to face towards the east (1984, 55; *cf.* Fraser 1988), which is broadly true. With respect to orientation, little could be said of the earliest entrances considered here. On the other hand, it has been noted by Hodder that the stalled tombs of Orkney have a tendency to face towards the east (1984, 55; *cf.* Fraser 1988), which is broadly true. However, an equally significant number of these tombs are oriented in a southerly direction, and while not as significant in number, a handful of stalled tombs are oriented in both westerly and northerly directions. In general, the same could be said of most entrances constructed from the end of the fourth millennium BC onwards. At Barnhouse, for example, 44% of the surviving entrances were constructed with roughly NW–SE alignments, while those with an approximate NE–SW alignment also constituted 44% of the total. The only possible exceptions to this pattern were entrance [082] of House 5 and [342] of Structure 8, which were E–W aligned. Furthermore, just over half

(55%) of these entrances faced outwards in a broadly southerly direction, either to the SW or SE.

It was outlined in Section 3.4.1 how Richards argued that the orientations of many of these entrances with the midsummer and midwinter sunrises and sunsets affected the levels of luminosity within their associated buildings (Parker Pearson and Richards 1994b, 44–5). It was also mentioned in Section 5.2.5 how Jones added further nuance to this picture, by considering the dynamic interplay between entrance and hearth in the facilitation of a given building's luminosity (2012, 85–98). Both Richards and Jones are certainly correct in highlighting the entrance's role in affecting light levels across the building. I will, however, take issue with Richards' contention that the annual solstices were key factors in entrance orientations. While it is true that a significant number of Barnhouse's entrances were broadly aligned NW–SE (i.e. with the midwinter solstice) and NE–SW (i.e. with the midsummer solstice), the precise angle at which these entrances were oriented varied. For example, the orientation of entrance **[085]** at House 7 is best described as NNW–SSE, and in this sense, it straddles a fine line between facing the midwinter solstice and the spring and autumn equinoxes. The same could also be said of entrance **[081]** at House 3, which was aligned NNE–SSW, or between the midsummer solstice and the biannual equinoxes. Overall, while many entrances at Barnhouse shared similar orientations, only an extremely broad pattern could be discerned, meaning that the relationship between entrance and solar event has perhaps been overstated in this instance, and perhaps even across prehistoric Britain and Ireland in general (see Ruggles and Barclay 2000).

This is not to say, however, that solar alignments were entirely insignificant from the late fourth millennium BC onwards. Indeed, entrances **[100]** and **[101]** at Maeshowe thoroughly demonstrate how important the relationship was at this particular tomb between orientation, luminosity and solar activity. As has already been mentioned, the light given off by the midwinter sunset travels down the tomb's passageway, between the aforementioned entrances, and illuminates the central chamber (see Mackie 1997). The portable nature of the blocking stone within the passageway leaves no doubt that this alignment was intentional, as the moving of this stone into its corresponding recess would have allowed this illumination event to take place. Moreover, the portability of this blocking stone suggests that the opening up of the central chamber to the outside world was only allowed to happen during the midwinter solstice, and that its interior was physically concealed during the rest of the year. It was also mentioned

how a small amount of light could still enter the chamber even with the blocking stone in place, as the blocking stone was marginally shorter than the passageway's ceiling. However, there is no reason to assume that this discordance in size was deliberately created. Rather, it was a necessary perquisite in providing the blocking stone with enough headroom to be moved in the first place.

This aspect of Maeshowe completely set it apart from both previous and contemporary traditions of mortuary architecture, which always revolved around concealment and darkness. Certainly, the permanent nature of the blocking stones associated with entrances [113] at Midhowe and [125] at Blackhammer indicates that great efforts were made to maintain these conditions within these tombs. Additionally, although the blocking stone associated with entrance [102] at the Dwarfie Stane was moved at some point, given its sheer size and weight it is difficult to imagine that it was intended as a portable feature. In consideration of this, it seems that while all other tombs across Neolithic Orkney were highly secretive locations, Maeshowe was completely different. Here, it may be argued that an annual rebirth of the ancestral dead occurred – a phenomenon not witnessed anywhere else during this period. In this respect, Maeshowe was unique to the archipelago. Yet parallels can be observed here between Maeshowe and, for example, Newgrange in Ireland and Bryn Celli Ddu in Wales, which also have passageways oriented with solstitial events. At present, the exact period during which the construction of Maeshowe occurred is unknown, although 2700 BC is often regarded as a realistic construction date (see Renfrew 1979, 31; Towers *et al.* 2015, 3).

It has been argued above that the relationship between entrance orientation and solar activity has sometimes been exaggerated. Yet the relationship between entrance and wind has often been neglected or ignored entirely. Ventilation was unquestionably of prime concern during the construction of domestic buildings within Neolithic Orkney, and this concern would have revolved around both the inward and outward flow of air. The importance of ventilation was due in significant part to the presence of a hearth within the building. The incorporation of a smoke hole into the roof would have been key in facilitating the outflow of smoke, yet the entrance would have also played its part, primarily for its capacity to allow air into the building and to aid in the kindling of the hearth's fires. In fact, I would argue that one of the main factors in situating the later Neolithic hearth in the centre of the building was so it could be directly in

line with the entrance, and therefore have maximum exposure to the ventilated air that passed through it.

Yet the interplay between entrance and ventilation was far more sophisticated than this. It was described in the previous section how opening [097] was instrumental in allowing air from outside to kindle the fires of corn-drying kiln [034] within Hut 8 at Skara Brae. However, it is towards the other side of the building, in the form of entrances [095] and [096], that we can observe, in an incredibly intricate way, how the relationship between entrance and ventilation could play out. It will be recalled that these entrances were incorporated into the front porch of Hut 8, and had laterally aligned orientations, with [095] oriented to the east and [096] to the west. The fact that both [095] and [096] were entrances is undeniable, as with the inclusion of the porch they were the only means of accessing principal entrance [094] and therefore the interior of Hut 8. Scott, however, once suggested that these entrances were positioned in such a way as to allow the smoke produced by [034] to escape Hut 8 but without leading to backdraughts (1951, 208). Given the coastal location of Skara Brae, draught would have been a significant presence across the whole site in general. In a building containing large amounts of smoke, the effects of backdraughts would have been potentially disastrous. Indeed, the amount of smoke accumulated within Hut 8 would have undoubtedly been significant, as it contained a corn-drying kiln *and* a centrally placed hearth. In this respect, as well as granting access to the building's interior, both [095] and [096] also functioned as cowls. On the other hand, the fact that the front porch was a later addition shows that the amount of smoke accumulated throughout the building was not initially a concern to the builders of Hut 8. This porch, therefore, was only constructed after it was realised that having a single centrally aligned entrance simultaneously allowed smoke to escape *and* to re-enter the building. Accordingly, almost all aspects of Hut 8's entrances were built with ventilation in mind. Opening [097] was constructed to provide sufficient draught in order to kindle the fires of kiln [034], yet simultaneously this draught could then force the resulting smoke along the length of the building and allow it to exit through both [095] and [096]. Elsewhere, it has been suggested that malting took place within Hut 8 (Dineley and Dineley in Wickham-Jones *et al.* 2000, 196–8), for which there is little direct evidence. Although in considering its rather intricate ventilation system it is easy to imagine that winnowing (which malting would surely entail) was undertaken within the building's annex, where the draught from opening [097] would help

separate the grain and the straw. This adds credence to the idea that grain processing was absolutely central to the function of Hut 8.

The final aspects of Neolithic entrances that will be discussed here concerns the development of the cased openings discovered within the stalled tombs. These cased opening, such as [114]–[124] at Midhowe or [126]–[131] at Blackhammer, were composed of Type 1 jambs with lintels running across the top of them, and they all bestowed a rigidly linear spatial structure upon the main chambers of their respective tombs. It should be noted that with one notable exception (i.e. Richards 1992b), these features are not usually interpreted as entrances. Instead, they are viewed solely in terms of their capacity to divide the main chamber into a twin series of stalled compartments. This long-held interpretation is of course a correct one. Yet the similarities between the protruding slabs of these stalls and the jambs of the tombs’ principal entrances are inescapable. During his assessment, Richards described the stalled tomb as a “covered pathway through a series of doorways” (1992b, 72), and this is precisely the line that is being taken here. Above it was mentioned that one of the primary functions of entrances was to separate spaces that were qualitatively different from one another. However, these cased openings operated in a different manner, as rather than separating different *kinds* of space, they were used to separate different *degrees* of space. In other words, while these cased openings led to a qualitatively different location, this location could only be reached by passing through all of them. Yet as these cased openings did not technically lead anywhere *real* (other than the back wall of the tomb), it may be argued that only the dead could make this journey. In this light, these cased openings can be seen as having facilitated a staggered journey from the world of the living into that of the ancestral dead. By inference, this would also mean that those tombs that incorporated more cased openings offered a more pronounced experience of travelling into this different world.

By the beginning of the third millennium BC the structure of the tomb had altered significantly, as the elongated main chamber was replaced with a central chamber with branching side cells. Naturally, these chambers did not incorporate cased openings within them, as their non-linear spatial organisations were ill-fitted to accommodate such features. This is not to say that these later tombs embodied a clean architectural break from earlier ones. Instead, the structure and footprint of the later chambered tomb stemmed from a rearrangement of the earlier stalled tomb, and the entrance, as a fluid architectural feature, was critical to this rearrangement. The

tomb of Maeshowe demonstrates this very well. The passageway leading into its central chamber clearly referenced the long and linear spatial structure inherent within the stalled tombs' main chambers. Yet a key difference lies in the experience of this structure; where the latter incorporated multiple spaces that were small, staggered and sequential, the former offered an elongated and almost never-ending spatial structure. Furthermore, when Maeshowe is considered from this perspective the four so-called monoliths embedded within its central chamber become much more comprehensible. These monoliths were essentially rearranged jambs – an idea supported by the fact that, in constituting vertically set slabs, they were identical in form to most other jambs found across Neolithic Orkney. It may also be argued that their inclusion within the tomb's central chamber demonstrates that they were inspired by the cased openings of earlier tombs. However, their parallel (rather than perpendicular) alignment with the chamber's sidewalls and enormous size indicates a drastic rearrangement of previous architectural traditions. This rearrangement seems to suggest that rather than facilitating access through the chamber (as the jambs of a cased opening would), the monolithic jambs of Maeshowe were implemented to *contain* the central chamber (*cf.* Richards 2013a; 2013b; 2013c).

In conclusion, the entrance was a critical architectural feature of Neolithic Orkney. Its primary function was to provide access to an architectural space, but much creativity was often implemented in embellishing entrances with various orthostatic members or other such features. Yet this was always the case for the Neolithic entrance, right from the mid-fourth millennium BC. Chronologically, while we can see that entrances changed fairly significantly by degree throughout the Neolithic, on the whole they failed to change qualitatively and become something else. There is one notable exception to this, however – the monoliths at Deepdale, which may be seen as an attempt to monumentalise the entrance in an extramural setting.

5.4 The Dresser

5.4.1 Defining the Dresser

The term 'dresser' is quite an interesting one, especially when applied to prehistory. Normally, this is a term used to describe a type of sideboard located in kitchens or dining rooms within which pieces of crockery can be both stored and put on display. The original name for these

kinds of sideboards was ‘Welsh dresser’, and they were particularly common throughout Britain during the nineteenth century, not only as functional pieces of furniture but also as lavish displays of household prosperity (Pennell 2016, 104). Superficially speaking, it seems as if the ‘dressers’ of, for instance, Skara Brae conformed to a similar tradition to those nineteenth century ones. Not only did these pieces of furniture incorporate shelves within them, but they were also situated in visually prominent locations at the rears of buildings.

In terms of structure, the dressers of Neolithic Orkney often revolved around three key members. It is worth clarifying here what these members are. Firstly, there are the ‘shelves’, which are flat and level members, horizontally suspended, on top of which items could be placed. Secondly there are the ‘end panels’ (composed of flat slabs) or ‘end pillars’ (composed of blocks or masonry), which formed the sides of the dresser. Thirdly a ‘centre stile’ was often incorporated in the middle of the dresser, which allowed the shelves to be split into different compartments. As will be seen throughout Sections 5.4.3 and 5.4.4, there did exist within Neolithic Orkney far more basic dressers that, while having end panels or pillars, lacked both centre stiles and shelves. For purposes of differentiation, these features will be referred to here as ‘cupboards’. Within modern parlance, the term ‘cupboard’ is of course a very broad one, but it is often used to denote a very basic form of upstanding storage unit. The term has been included here solely to denote a type of Neolithic dresser.

Furthermore, while the analysis conducted in this section focuses mainly on the dresser, it also branches out to encompass other features that were also used for storage or were structurally very similar to the dresser. As will be seen, storage was an incredibly important factor to consider when constructing the Neolithic buildings of Orkney, and it would be a mistake to focus solely on dressers while ignoring the wider tradition of storage that they were intricately tied to. These other features include, in no particular order, ambries, chests (i.e. domestic containers), cists (i.e. mortuary containers), benches, beds and occasionally pits. The term ‘chest’ is preferred here to other more commonly used terms (e.g. ‘limpet box’, or simply ‘box’) as it captures the function of these features far more thoroughly, which revolved around the safekeeping of certain items. On the other hand, for reasons of concision these particular features are considered only briefly.

5.4.2 Preamble

All dressers and dresser-like features are detailed in Table B 3 of Appendix B. It is important to note here that not all dressers or dresser-like features across Neolithic Orkney were considered, mainly for purposes of concision.

5.4.3 Barnhouse

Within House 3 the remains of a dresser [135] were discovered towards the rear of the building's interior (fig. 5.71) (Downes and Richards 2005, 64–6). The construction of [135] clearly post-dated the erection of the northern wall, as in order to make room for this dresser a rather large quantity of masonry was removed from the wall, thus creating a sizeable cavity. The creation of this cavity was accompanied by the digging of a shallow scoop, which measured *c.* 1.20m in diameter x 0.40m deep. The base of this scoop consisted of the same yellow clay that constituted the floor of the building, indicating that it was dug before the flooring deposits of House 3 were laid down. Three orthostatic features were then placed within this cavity, which included two end pillars and one centre stile. The later infilling of the shallow scoop within which they were placed effectively secured these members in place. The western end pillar along with the centre stile comprised broad sandstone blocks. The eastern end pillar, however, consisted of coursed masonry. Each of these members was *c.* 0.40m in height and was no more than 0.27m wide. Each was also keyed into the rear wall's masonry. Together, these three members covered an area measuring 1.56m wide, and they aided in dividing the dresser into two compartments. No definitive evidence for shelving was associated with these members. Yet shelving may have originally been placed above the surviving end pillars and centre stile. In between the three surviving orthostatic members, at the base of [135], were the crushed remains of a Grooved ware vessel. Later lipid analysis showed that barley was once stored within this vessel (Jones 1999, 65). Three slabs were placed directly in front of these orthostatic members, which sealed the inside of [135] from view. These slabs have been interpreted elsewhere as forming amoveable screen or door for [135] (Downes and Richards 2005, 64–5). However, the slabs in front of [135] were clearly immovable, as evidenced by the fact that they had their own shallow foundation slots. Instead, it seems more likely that these slabs were set in place in order to decommission [135]. Scoop hearth [002] abutted these slabs on their southern sides.

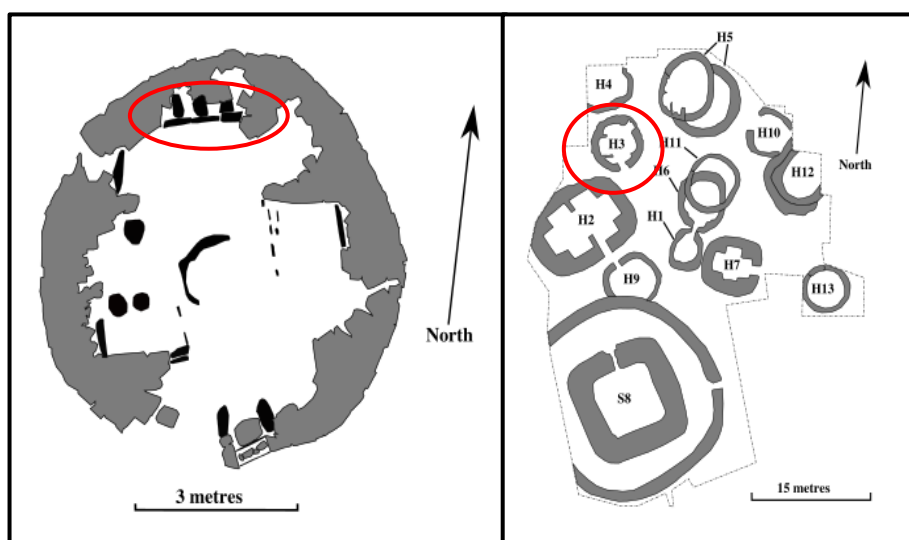


Figure 5.71. Position of dresser [135] within House 3, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

Around 0.95m south of these slabs and running parallel to them was an additional series of slabs, three in all, covering an area *c.* 1.18m wide. Upon excavation, these slabs were interpreted as the remains of a secondary dresser, however in Section 5.5 it is argued that they instead constituted a series of large dividing panels, which defined compartment [212].

Due to the extensive remodelling witnessed by House 5 and the resulting disturbance it caused, next to no internal furniture was discovered here (Downes and Richards 2005, 69–82).

The same situation was observed within House 9, which was found in a badly damaged state (Downes and Richards 2005, 82–8). This was particularly noticeable towards the rear of the building, where the walling had been completely destroyed.

While House 2 survived in a fairly high state of preservation (Richards 2005c), nothing within the building could be described as a dresser. However, a series of storage features discovered within its confines are worth detailing here (fig. 5.72). Firstly, a large triangular flagstone was situated slightly to the west of hearth [010] in the eastern half of the building. This flagstone measured 0.97m x 0.89m and was 0.03m in thickness. Its edges were pressed directly into the yellow clay flooring and were seen to overlie a relatively shallow ovular cavity measuring 0.86m x 0.78m. Within this cavity was a layer of silt containing several fragments of bone. The bones were in such a degraded condition that it was impossible to tell whether they were human

or animal. Yet it is safe to assume that they had been deliberately placed at the base of the cavity. This feature can therefore be regarded as a cist and has been assigned the number [136].

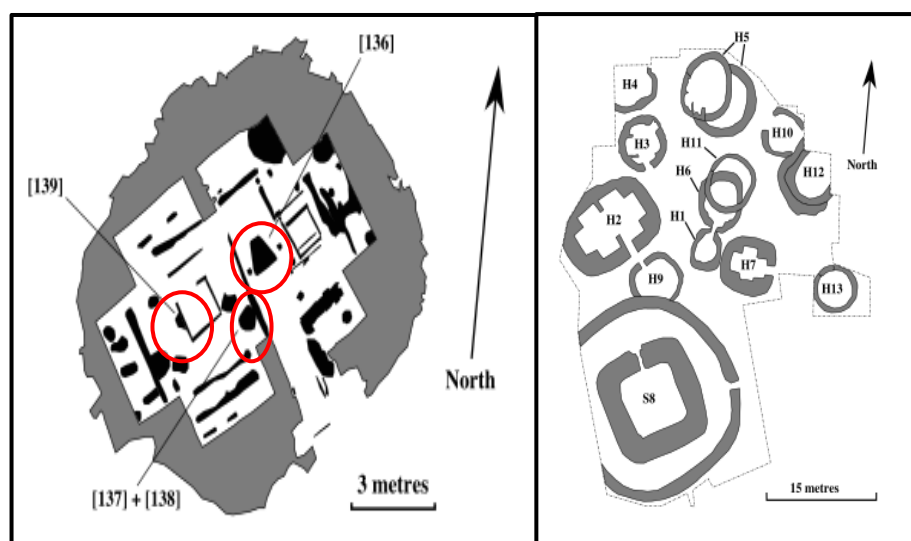


Figure 5.72. Position of storage features within House 2, Barnhouse (illustrations by author, adapted from Richards 2005c and Bayliss et al. 2017)

Secondly, towards the southeast of the building's central partition were the remains of a stone-lined chest [137]. This chest was recognised as an L-shaped cut in the floor, within which a fragmented slab was discovered *in situ*. In total, the internal dimensions of this chest were c. 0.70m x 0.65m x 0.50m deep. Within this chest was a mixed deposit of light brown silty clay and small stone fragments. Thirdly, situated directly beneath chest [137] was a storage pit [138]. This pit measured 0.60m in diameter but was rather amorphous in form. A collection of small upright slabs lined the outside of this pit. Stratigraphically, [138] was separated from [137] by a flooring deposit of yellow clay, indicating that once this pit had gone out of use it was simply floored over. Nothing of interest was discovered within this pit. Finally, abutting the southwestern edge of hearth [008] was another storage pit [139], measuring c. 0.40m in diameter, which cut into the building's primary flooring deposit. In profile, this pit was notably steep-sided, almost bucket-shaped, and because of this it has been suggested that [139] originally contained a Grooved ware vessel (Richards 2005c, 141). This vessel was missing upon excavation.

Despite the fact that the back wall of House 7 was found in a relatively good state of preservation, not a single piece of evidence was discovered indicating that a rear dresser had

occupied a position here (Downes and Richards 2005, 88). The same could be said for the rest of the building, which was mostly destroyed.

House 11 was again discovered in a highly dilapidated condition (Downes and Richards 2005, 115–18), and apart from hearth [013], no internal features were discovered in association with the building. However, slightly beyond the outer wall of House 11, to the northwest, were the remains of a stone-lined chest [140] (no illustration, but see fig. 5.73). This chest was discovered in a high state of preservation – all four of its lining slabs survived more or less *in situ* and so too did its basal slab. Apart from a deposit of reddish brown silty clay, nothing of interest was discovered within [140]. Unfortunately, the dimensions of [140] were not recorded.

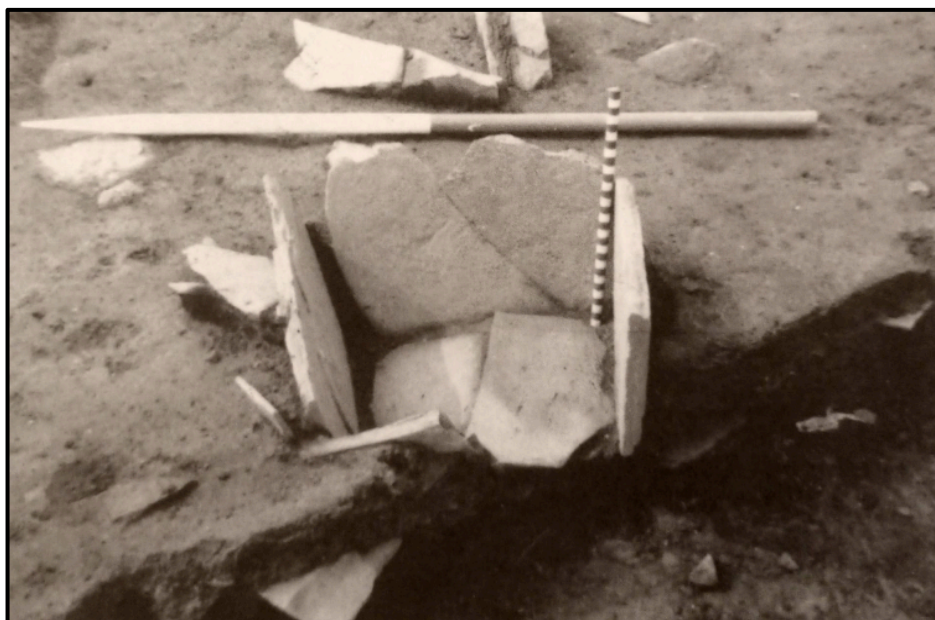


Figure 5.73. Photograph of chest [140] near House 11, Barnhouse (from Downes and Richards 2005)

Within House 6 there existed only a partial indication that a dresser had been situated at the rear of the building (Downes and Richards 2005, 97–8). This indication lay solely in the fact that a discrete rubble deposit was found here, which presumably derived from collapsed furniture. Although a rather large spread of rubble covered the entirety of House 6, the rubble at the rear of the building was the only deposit that demonstrably derived from within its confines. Unfortunately, the evidence for the existence of a dresser at the rear of House 6 was too scant to be considered here.

Again, there existed no clear evidence that a dresser had ever been situated within House 1, and for that matter there was scant evidence for furniture in general (Downes and Richards 2005, 110).

Although not intact, the collapsed remains of what appeared to be a dresser [141] were discovered within the southeast of House 10's interior (fig. 5.74) (Downes and Richards 2005, 98–105). As no entrance was discovered leading into the building, the process of accurately determining whether or not this area was the rear of House 10 was difficult. These remains consisted of three irregularly shaped slabs, each resting on top of the other. Two were found leaning towards the north at an angle of around forty-five degrees, while the third, which was situated below the other two, leant to the south at roughly the same angle. These slabs measured 0.50m x 0.30m x 0.05m; 0.46m x 0.26m x 0.06m; and 0.65m x 0.40m x 0.06m. Determining the precise function of these slabs proved difficult, however it is possible that they either constituted end panels, centre stiles or shelves, or perhaps a combination of all three. In association with these remains was a pair of foundation slots, one of which contained a fragmented upright slab. It seems likely that these slots were also part of [141], although again it was difficult to precisely ascertain their function. Overall, the size and form of [141] remains unknown.

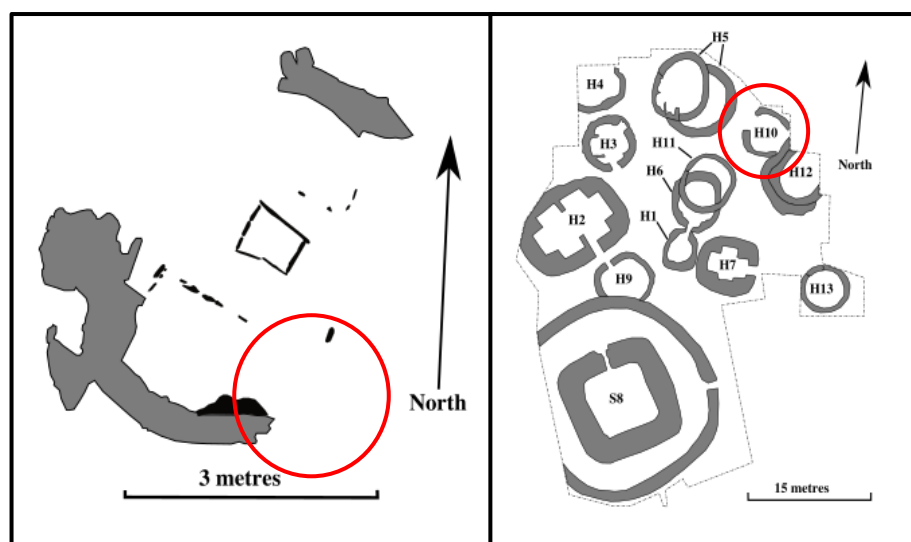


Figure 5.74. Approximate position of dresser [141] within House 10, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

At the rear of Structure 8's inner building were the remains of a sizeable dresser [142], which came in the form of three foundation slots (fig. 5.75) (Hill and Richards 2005, 170). From E–

W, these slots measured *c.* 0.50m x 0.29m; 0.37m x 0.18m; and 0.40m x 0.46m. From these slots we can envisage a dresser rather similar in form to [135] at House 3, as the eastern and westernmost slots held a pair of end pillars within them while the central slot held a centre stile. The overall width of this dresser was *c.* 2.03m. Unfortunately, nothing more could be said of [142]. Later in the use of Structure 8, dresser [142] was dismantled. Both its end pillars and centre stile were removed, and their now empty foundation slots were infilled with a mixture of clay and fragmented stone slabs in order to maintain an even interior surface. The removal of these members was accompanied by the digging of three linear foundation slots, each meeting at right angles. The southern edges of the eastern and western slots directly abutted the rear wall of the building, thus the feature that these slots constituted was effectively box-like in form. The area that this feature covered measured *c.* 2.15m x 0.75m. Originally, these foundation slots would have held within them three slabs set on edge, and together they would have formed chest [143]. Nothing was discovered within the interior of this chest.

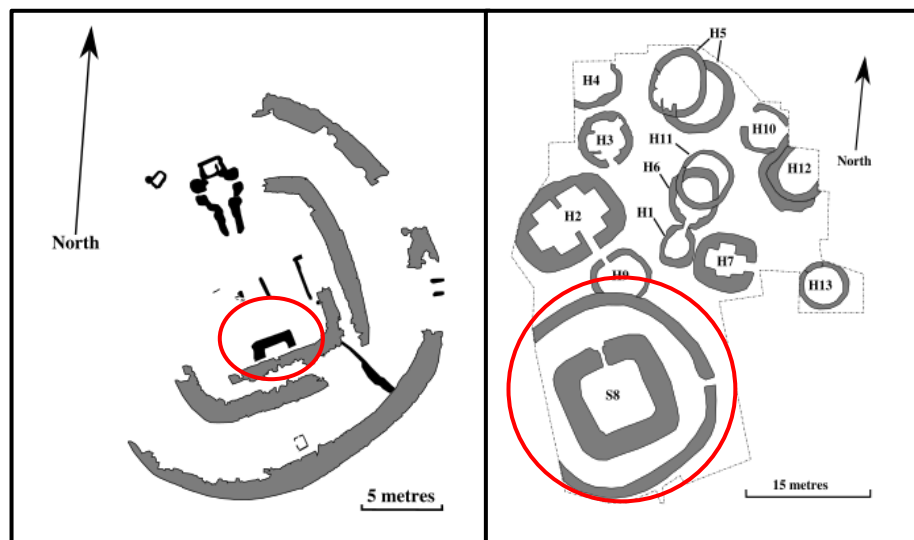


Figure 5.75. Position of dresser [142] and chest [143] within Structure 8, Barnhouse (illustrations by author, adapted from Hill and Richards 2005 and Bayliss et al. 2017)

The remains of what appeared to be an additional pair of stone-lined chests were also discovered within the inner building of Structure 8, one to the west of hearth [017] and another to the east (fig. 5.76) (Hill and Richards 2005, 170). The westernmost chest [144] was defined by a pair of linear foundation slots in parallel alignment with one another, but which would have been perpendicular to the western wall face. These slots were situated *c.* 2.22m apart. The northernmost slot measured *c.* 0.96m long, while the southernmost was *c.* 1.11m long. Within the southernmost slot, a large but fragmented *in situ* slab was discovered towards its southern

edge. The remains of the easternmost chest [145] came in the form of a short linear slot running perpendicular to the eastern wall face, in conjunction with a longer linear slot running parallel to this same wall face. The former slot measured *c.* 0.30m long, while the latter measured *c.* 2.89m long. The construction of [144] and [145] appeared to belong to a slightly later phase in the use of Structure 8 and was probably contemporary with the dismantlement of dresser [142] and the subsequent construction of chest [143].

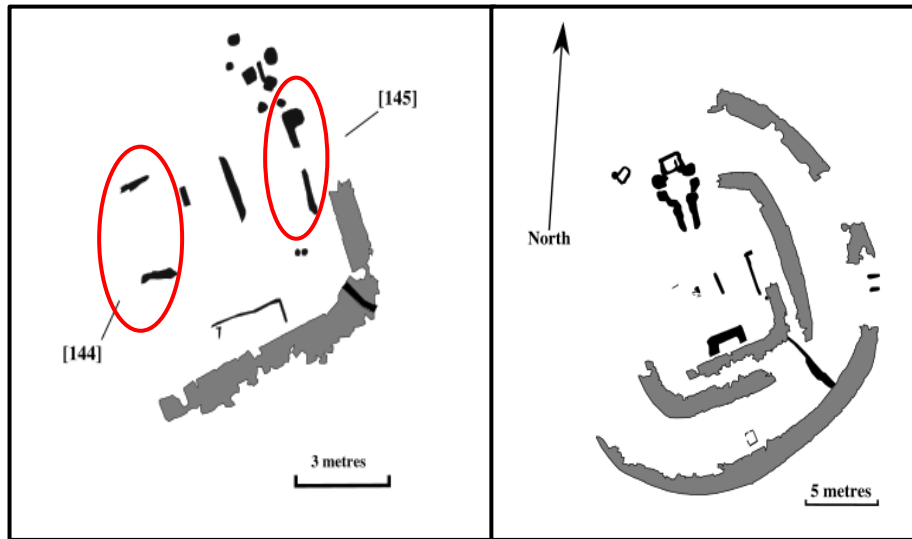


Figure 5.76. Position of laterally situated chests within Structure 8, Barnhouse (illustrations by author, adapted from Hill and Richards 2005)



Figure 5.77. Photograph of storage pit [147] within Structure 8, Barnhouse (from Hill and Richards 2005)

In addition, a storage pit [146] was discovered within the vicinity of dresser [142] (no illustration available) (Hill and Richards 2005, 159). This pit contained a Grooved ware vessel that was in a remarkably intact state, yet nothing of interest was contained within. Another storage pit [147] was discovered in the northeastern corner of the inner building (no illustration available but see fig. 5.77). This pit was irregularly shaped and contained a total of 14 unworked flint nodules (Hill and Richards 2005, 172). The dimensions of neither [146] nor [147] were not recorded.

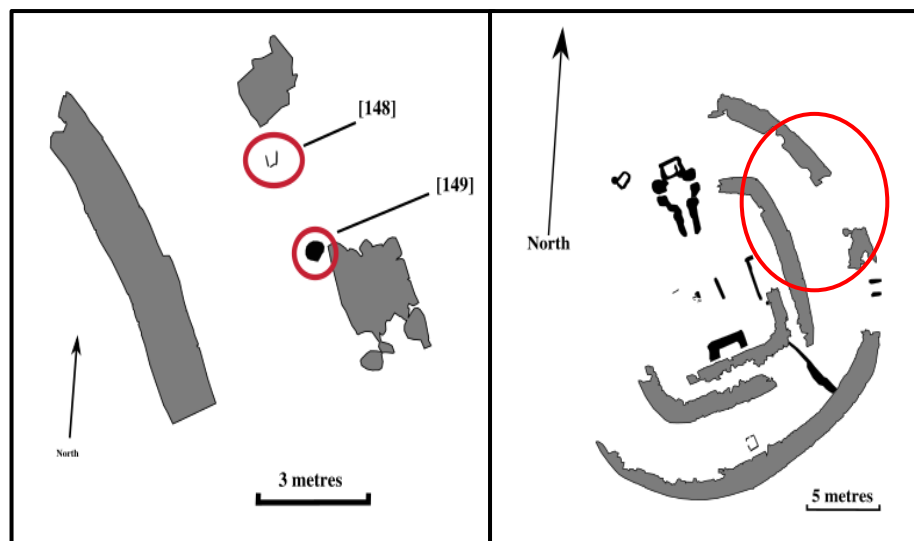


Figure 5.78. Position of chest and storage pit within northeast of Structure 8's outer building, Barnhouse (adapted from Hill and Richards 2005)

The remains of a stone-lined chest [148] were also discovered on the eastern edge of Structure 8's gallery (fig. 5.78) (Hill and Richards 2005, 181). All four of its lining slabs were discovered *in situ*, whose foundation slots cut directly into the clay platform on top of which Structure 8 was built. A basal slab was also found lining the base of this chest. Overall, [148] measured 0.34m x 0.16m x 0.12m deep and was therefore notably small. Unfortunately, nothing was found within chest [148]. Finally, another storage pit [149] was discovered immediately to the south of chest [148], which was also situated adjacent to the inner face of the outer casing wall. This pit was circular in form and measured 0.40m² x 0.15m deep. Moreover, this pit was found to contain some abraded sherds of Grooved ware, all deriving from large vessels.

Due to the highly dilapidated state of House 4, almost nothing could be said of the internal furniture once held within it.

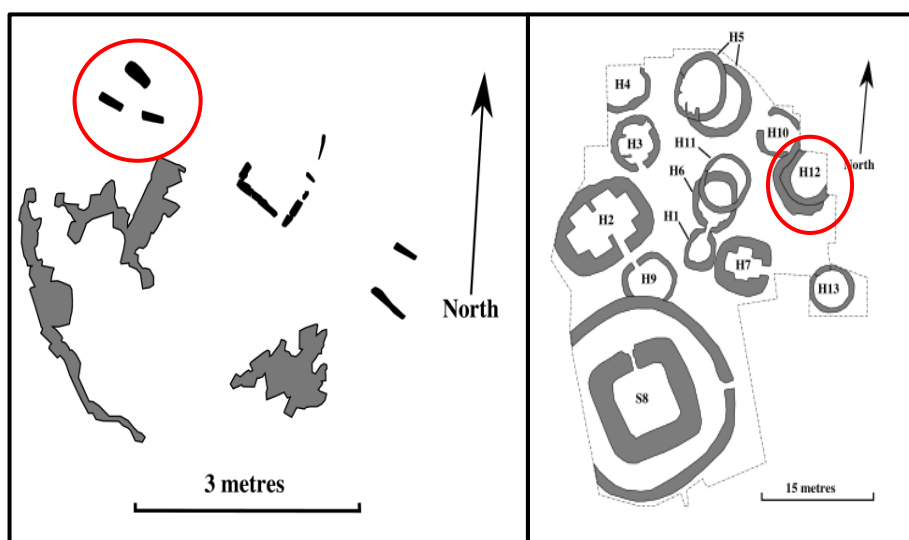


Figure 5.79. Position of dresser [150] within House 12, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

Within House 12, a pair of stone uprights was discovered towards the rear of the building that seemed to have originally belonged to a dresser-like feature [150] (fig. 5.79) (Downes and Richards 2005, 120). Although no stretches of walling survived at this end of the building, it was fairly clear that [150] occupied a rear position because, firstly, it was directly in line with entrance [088] to the southeast, and secondly both [150] and [088] were equidistant in relation to hearth [026]. The surviving stone uprights of [150] were situated *c.* 0.27m apart, and they were in parallel alignment with one another, being oriented NW–SE. The partial remains of an additional stone slab were also discovered within the immediate vicinity of [150], which had clearly been knocked out of place. Given the almost miniscule distance between the two *in situ* uprights, there are two possibilities as to what [150] originally constituted. Either these uprights were the end panel and centre stile of a dresser, with the misplaced slab having constituted the other end panel, or these uprights were both end panels, meaning [150] was an extremely narrow cupboard. On the face of the evidence available, the former interpretation seems more plausible.

The state of dilapidation that House 13 was discovered in was so great that no articles of furniture could be discerned within (Downes and Richards 2005, 120–2).

5.4.4 Beyond Barnhouse



Figure 5.80. Photograph of dresser [151] within Hut 7, Skara Brae (www11)

The dressers discovered at Barnhouse have clear parallels at Skara Brae. The dresser within Hut 7 [151] serves as a good example (fig. 5.80 and 5.81), and it is certainly one that has been thoroughly studied in the past (e.g. Childe 1931d, 39), primarily due to the remarkable state of preservation it was discovered in. This dresser was situated at the rear of the building and was partly keyed into the southern wall. Both the western and eastern edges were defined by end panels formed of slabs set perpendicular to the inner wall face. These were both faced at the front with addition panel-like slabs, which were set perpendicular to their northern edges and which jutted slightly inwards towards the centre of the dresser. These slabs effectively framed the lower compartments on both sides. In between these framing slabs was a centre stile, which again constituted a slab set on edge. However, this centre stile was unconnected to the building's rear wall, and a void was therefore situated directly behind it. Above the framing slabs and centre stile were pairs of stacked slabs, which protruded from within the rear wall,

almost like joists. Towards the edges of the dresser, these slabs partly overlay the end panels as well. Above these slabs sat the dresser's first shelf, which came in the form of a sizeable horizontally laid slab, suspended 0.91m above the floor. Sitting above the western and eastern edges of this shelf were an additional pair of end panels. These comprised slabs set on edge that abutted the rear wall face. Towards the middle of the shelf another centre stile was present, which sat towards the front edge, and which comprised a bulky stone block. Behind this centre stile was a joisting slab similar to those supporting the shelf below, yet this one projected from a slot incorporated into the wall's masonry. Resting directly above these end panels and centre stile was an upper shelf, composed of a flat slab suspended 1.32m above the floor.

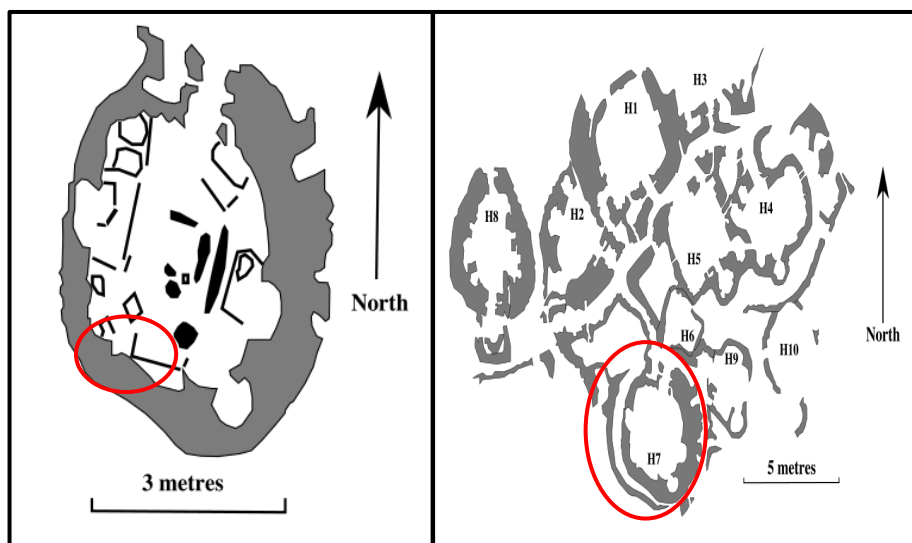


Figure 5.81. Position of dresser [151] within Hut 7, Skara Brae (illustrations by author, adapted from www7)

Overall, the storage spaces incorporated into [151] were as follows: a pair of loosely separated compartments was situated at the bottom; an additional pair of fully separated compartments was incorporated into the middle; and an open shelving space was situated at the top, similar to a mantel. In plan, this dresser measured *c.* 0.80m wide. Predictably, the dresser's shelves were mostly bare of items, although the lowest shelf did have some abraded sherds of Grooved ware and animal bone resting on top of it (Childe and Paterson, 1929, 253).

The rear dresser in Hut 1 [152] also survived to a very high degree of preservation (fig. 5.82 and 5.83). This dresser's form was identical to that of [151], albeit with one key difference – rather than incorporating end panels, its lateral edges were formed by end pillars built from coursed masonry (Childe 1931d, 30). This masonry jutted out from the northwestern wall face

and was rather intricately keyed into it. The lower shelf of [152] was suspended 0.70m from the floor, while its uppermost shelf stood at 1.30m in height. The overall width of [152] was 1.08m.



Figure 5.82. Photograph of dresser [152] within Hut 1, Skara Brae (www12)

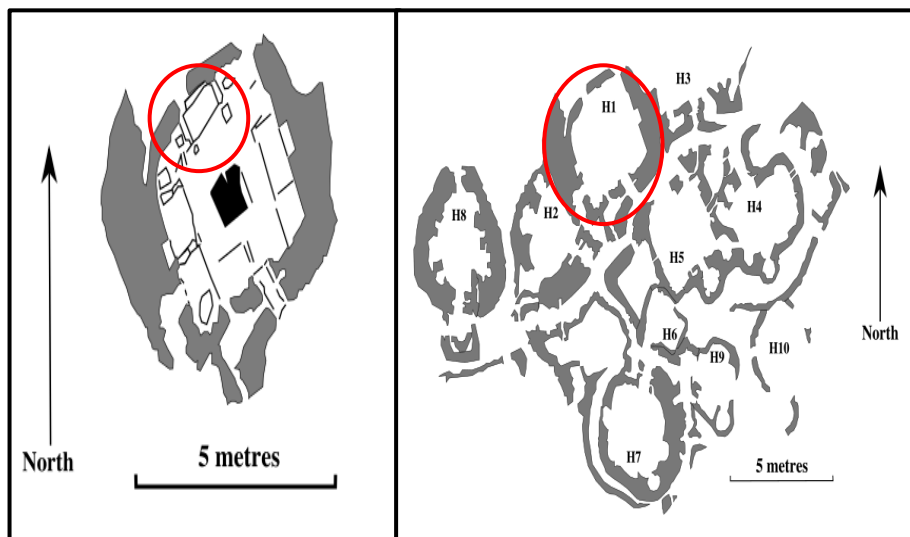


Figure 5.83. Position of dresser [152] within Hut 1, Skara Brae (illustrations by author, adapted from www7)

The dresser located at the rear of Hut 4 [153] was of an entirely different appearance to [151] and [152]. Rather than being constructed against the rear wall, this dresser was instead recessed

into it (fig. 5.84). In effect, this meant that as the rear wall of the building was being constructed, so too was the dresser. The recessed space constitutive of [153] was markedly shallow, being no more than 0.18m deep. In terms of its position, [153] was offset in relation to the building's entrance ([093]). At each end of this dresser was an end pillar, and due to its recessed construction, these end pillars doubled as piers, as the superincumbent weight of the upper wall courses was held above them. In between these pillars was a dislodged centre stile, which was discovered resting against the dresser's back wall. No shelves were found in association with this dresser and in comparison with [151] and [152] it seemed structurally quite stark. However, this structural scarcity was probably due to dilapidation or even the dresser's deliberate dismantlement – a suggestion that is supported by the position that the centre stile was discovered in. The overall width of [153] was c. 0.62m.



Figure 5.84. Position of dresser [153] within Hut 4, Skara Brae (illustrations by author, adapted from [www7](#))

At the rear of Hut 2 the situation was more different still. Here, a rear storage cell ([240]) was recessed into the back wall, and two architectural features occupied the breach formed by this recess. Firstly, on the left-hand side was the entrance of [240], which consisted of a pair of jambs and a threshold slab. Secondly, on the right-hand side were the remains of a cupboard [154], measuring 0.27m wide, which consisted solely of a pair of end pillars along with a backing slab (fig. 5.85). Moreover, the left-hand end pillar of [154] doubled as the right-hand jamb of the rear cell's entrance. It should be mentioned that Childe interpreted [240] as constituting the interior space of a rear dresser (1931d, 32). Yet in considering the fact that a backing slab was incorporated into [154], which partially blocked this space off from the rest

of the building, this interpretation seems unlikely. Furthermore, the presence of a threshold slab within this area also negates Childe's interpretation. The same could also be said for the rear of Hut 5, which had precisely the same arrangement, with a cupboard [155], measuring 0.33m wide, situated to the side of the rear cell's entrance (fig. 5.86).

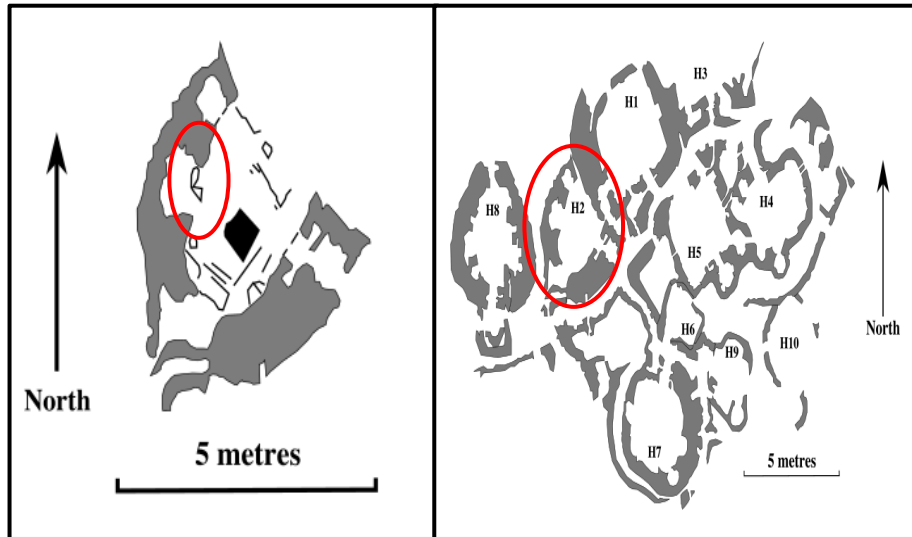


Figure 5.85. Position of cupboard [154] within Hut 2, Skara Brae (illustrations by author, adapted from www7)

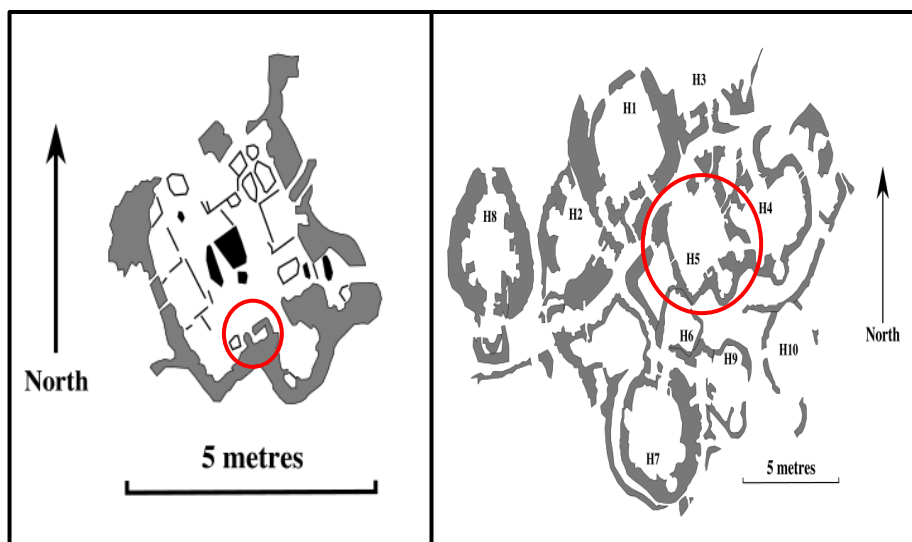


Figure 5.86. Position of cupboard [155] within Hut 5, Skara Brae (illustrations by author, adapted from www7)

Rather than occupying a position at the rear of the building, the dresser within Hut 8 [156] was recessed into a side buttress within the eastern wall of the building and was rather unusual in form (fig. 5.87). Instead of incorporating end pillars or panels, its edges were formed of the

same masonry that constituted the buttress within which it was recessed. In addition, this dresser lacked a centre stile. In terms of storage space, [156] had two shelves, which were topped with a lintel. As for its dimensions, this dresser was 0.23m in width.

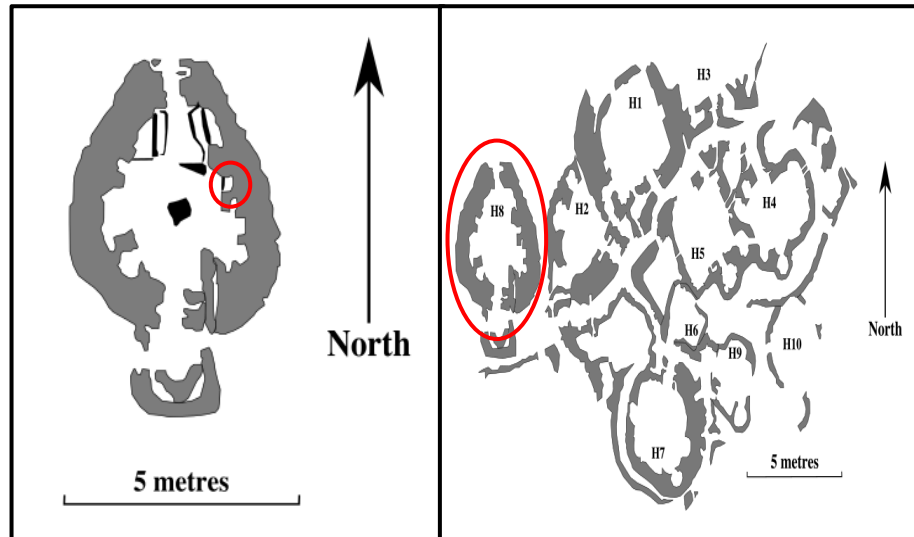


Figure 5.87. Position of dresser [156] within Hut 8, Skara Brae (illustrations by author, adapted from [www7](#))

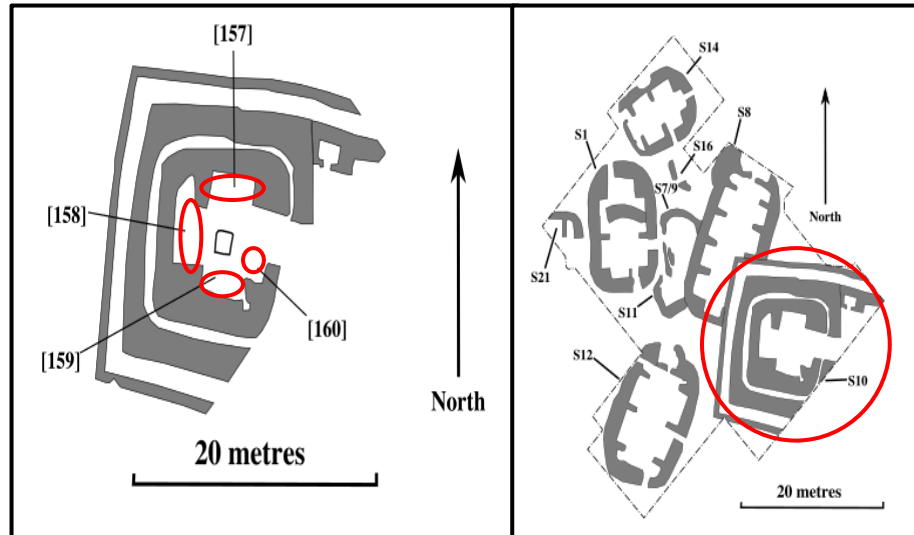


Figure 5.88. Position of dressers within Structure 10, Ness of Brodgar (illustrations by author, adapted from Card et al. 2018)

At the Ness of Brodgar several dressers have been discovered, each occupying prominent locations within their respective buildings. Structure 10 was most interesting in this regard, as it incorporated a total of four dressers, each situated within one of the four recessed alcoves of the building. Positioned within the northern alcove was dresser [157], while dressers [158],

[159] and [160] occupied the western, southern and eastern alcoves respectively (fig. 5.88). These dressers were unlike those discovered at Barnhouse and Skara Brae, as they were entirely freestanding. Each dresser was discovered in a highly ruinous state; however it could be discerned that they consisted of end pillars along with a centre stile. Little else could be said of their structure, and it was unclear as to how many shelves each incorporated, although it was apparent that each of these dressers enjoyed much care and attention in their construction. This was demonstrated by the remains of [158] at the rear of the building in particular, whose centre stile comprised a finely pick-dressed slab of red sandstone (Thomas 2016, 138). Furthermore, the northernmost end pillar of this dresser constituted a large block of yellow sandstone, which was elaborately decorated with various incised motifs. Its northern edge, for example, displayed a series of wavy triangles achieved in bas relief, while an incised zigzag was included at the base of the pillar, facing downwards into the floor. The southernmost end pillar was completely different, as it was constructed using coursed masonry. It appeared that dresser [158] belonged to Structure 10's primary construction phase and would have originally been the only dresser in the building. Dressers [157], [159] and [160] were constructed at a later date, during an episode of mass modification that effected the building in its entirety (Thomas 2016, 140). In discerning the kinds of items once placed on these dressers, some clues were discovered during excavation. A polished stone axehead was found at the base of [159], while [157] was associated with three elaborately decorated stone balls. In terms of their sizes, [158], which was 2.10m wide, was the only dresser that could be assigned any definitive dimensions. Dresser [157] was probably just over 1.50m wide, [159] was probably over 1.77m wide, while the size of [160] remains unknown. From an overall perspective, it has been suggested that these features cannot be described as 'dressers' in the strictest sense, due to the heavily ritualised context within which they were situated. Therefore, the alternative term 'altar' has been put forward instead (Card 2016, pers. comm.).

Altar-like features have also been discovered within mortuary contexts throughout Neolithic Orkney. At the tomb of Midhowe, a series of benches were observed on top of which human remains could be placed (fig. 5.89). It has been noted that these benches only appeared within the final seven stalls on the northeastern side of the tomb (Reilly 2003, 134). At the rear of the tomb was another compartment, which contained an additional low bench. These benches came in the form of laminated stone slabs, wedged in between the space created by the lateral jambs situated along the tomb's length, and were probably suspended above the floor, anywhere

between 0.23m and 0.48m high (Callander and Grant 1934, 329), via the aid of stacked masonry (i.e. end pillars). Moreover, some of the fragmented slabs associated with these benches were situated on their lateral edges towards the front of their respective stalls, which may suggest that the fronts of these benches were faced as well. This was demonstrably the case with the bench at the rear of the tomb, which was fronted by a slab set on edge that was still *in situ*. From SE–NW, these benches have been numbered [161]–[167], while the bench towards the rear of the tomb has been numbered [168]. The dimensions of these benches have been included in Table B 3 of Appendix B. During the excavation of Midhowe, it was observed that, apart from [165], each of the laterally situated benches had resting on top of them the remains of between two and four human bodies (Callander and Grant 1934, 329–30). Each of these bodies had been placed in a foetal position (Reilly 2003, 137). Furthermore, the remains of another body were discovered below [162], situated in between its end pillars. Therefore, these benches comprised two storage spaces – one above and one below.

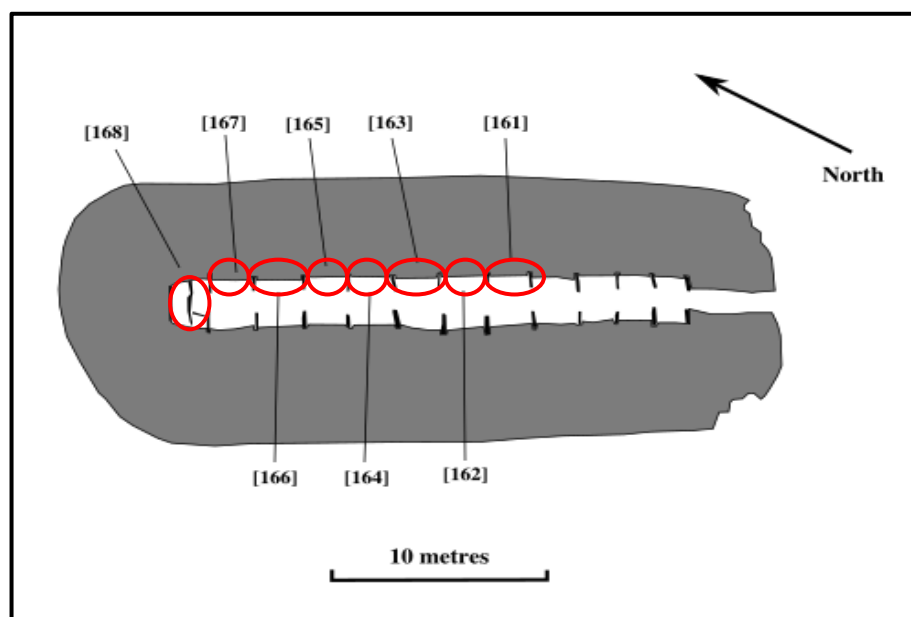


Figure 5.89. Position of benches within Midhowe (illustration by author, adapted from, adapted from Callander and Grant 1934)

We can also see that benches of this nature were occasionally associated with domestic architecture. Within House 2 at Stonehall Knoll a low bench [169] composed of stacked laminated slabs, 2–3 courses in height, was discovered on the right-hand side of the building when entering (no illustration available) (Richards *et al.* 2016b, 100).

We can also see that benches of this nature were occasionally associated with domestic architecture. Within House 2 at Stonehall Knoll a low bench [169] composed of stacked laminated slabs, 2–3 courses in height, was discovered on the right-hand side of the building when entering (no illustration available) (Richards *et al.* 2016b, 100). The remains of House 2 were in a significantly ruinous condition, and the possibility remains that the coursed slabs constitutive of this assumed bench were in fact the lowest courses of the building’s inner wall face. On the other hand, the position of these slabs appeared offset in relation to the trajectory of the surviving wall courses, therefore the likelihood of [169] being a bench-type feature is stronger.

Another bench-type feature that is sometimes found within domestic buildings is the so-called ‘box-bed’. These features were relatively rare within Neolithic Orkney, yet several examples were discovered at Skara Brae. Like many of the buildings on site, Hut 7 had two such features, built against the western and eastern walls (fig. 5.90). These were remarkably well preserved.

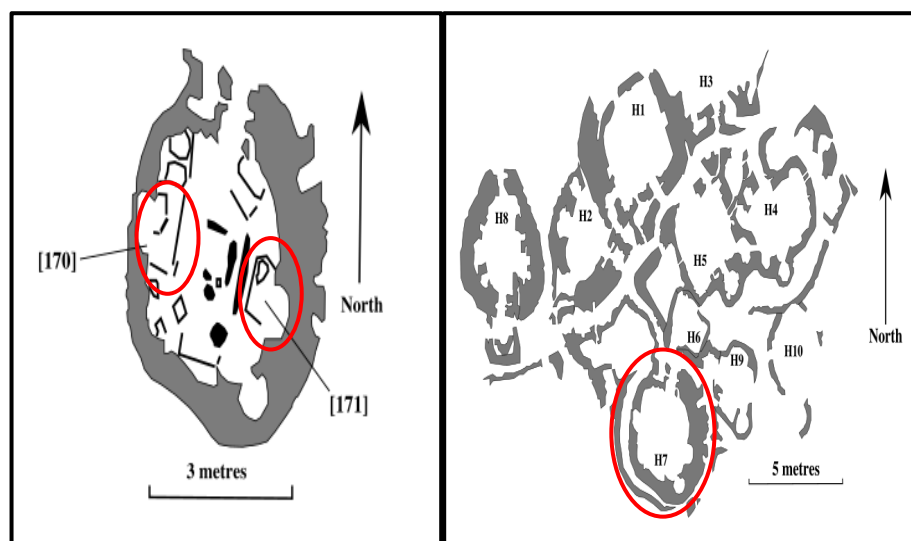


Figure 5.90. Position of beds within Hut 7, Skara Brae (illustrations by author, adapted from www7)

The one to the west [170] measured *c.* 0.97m x 0.48m and was composed of end panels with a front panel meeting their edges at right angles. The end panels stood at heights of 0.81m and 0.91m (Childe 1931d, 39). This discrepancy in height may suggest that the latter was the headboard, and that the former was the footboard, yet this is tentative. The top of the front panel was notably smoothed and worn, as if it had regularly been used as a sitting place (Childe 1931d, 15–16). The bed to the east [171], measuring *c.* 0.47m x 0.69m, again consisted of end

panels and a front panel. These end panels were both 1.22m in height. Both [170] and [171] were built up against their respective sidewalls; the members of neither were keyed into the surrounding masonry.

There existed little direct evidence that these features were slept in, yet in considering their lengths, which would have accommodated an average sized person lying in a curled up or foetal position, then it seems feasible that these were indeed sleeping places. Certainly, the worn edges of the front panel of [170] would suggest that they were at least regularly sat on. In terms of amenities, animal skins or plant fibres such as bracken could have been placed on the floor of the bed (Clarke and Maguire 1989, 11). Not only would this have made the sleeping inhabitants comfortable, but it also would have protected them from the damp and filthy floor. In consideration of the discovery of beads within the internal space of [171], Childe suggested that these beds also doubled as storage spaces (1931d, 15). This is a salient suggestion, as the box-bed would have been one of the safest places in the building in which to store valuable objects.

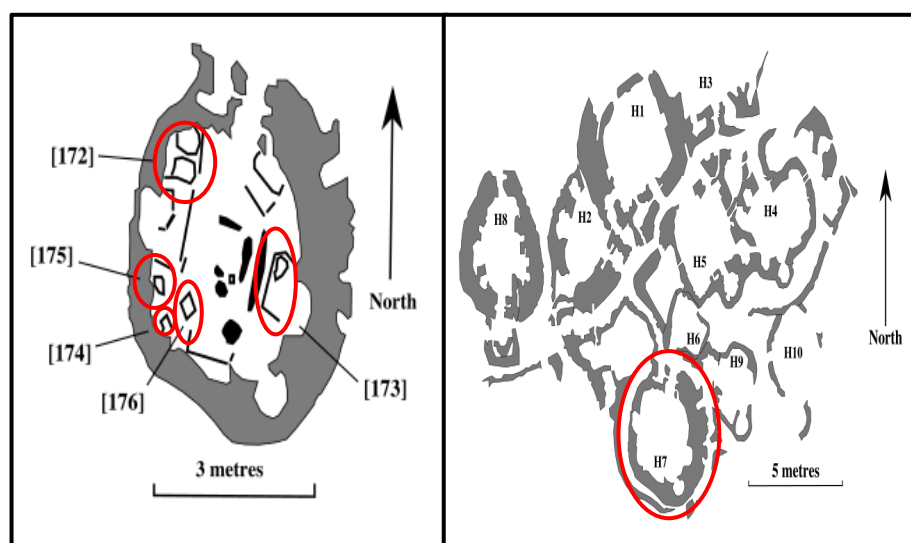


Figure 5.91. Position of additional storage spaces within Hut 7, Skara Brae (illustrations by author, adapted from www7)

Other than dresser [151] towards the rear of Hut 7 (along with beds [170] and [171]), several other storage units were discovered here. Yet Hut 7 was no different to any other building on site in this respect. One of the more prominent of these features was located immediately west of entrance [089], abutting the northern edge of bed [170], and is numbered here as [172] (fig. 5.91). This feature consisted of a boxed-off area in the northwestern corner of the building,

measuring 0.62m x 0.57m. Its southernmost edge constituted the northern end panel of [170], its western and northern edges comprised the inner wall faces of the building, and its eastern edge comprised a slab set on end within a shallow foundation slot. Furthermore, the floor of [172] consisted of a paving slab situated above a deposit of packing stones. This effectively created a split-level, where the floor of [172] was marginally higher than the primary floor of the building. This feature seemed similar in both appearance and structure to beds [170] and [171]. It either constituted a storage space or, as was hinted at by Childe, a sleeping place for small children (1931d, 16). On the eastern side of the Hut 7, underneath the building's eastern wall near bed [171], was a sub-mural cist [173] that contained the skeletons of two aged women (fig. 7.21) (Childe, 1931b, 50). The cist itself was constructed using stone slabs and was therefore very similar to those storage chests discussed throughout the rest of this section. The dimensions of this cist were 1.10m x 0.81m x 0.36m deep (Childe 1931d, 140). Within, each skeleton was placed in a foetal position. In fact, the skull of one of these skeletons was resting on a flat slab, situated within the cist, measuring 0.36m x 0.12m x 0.06m deep. This slab was described by Childe as being akin to a pillow (1931d, 141). Interestingly, this cist was a later addition to Hut 7, and its placement within the building involved the dismantling and later rebuilding of the eastern wall (Marwick 1929, 20).

In addition, three chests were discovered in the southwest corner of Hut 7, and each was composed of four lining slabs meeting at right angles, while the base of each was sunk into the floor. The chest towards the rear wall is referred to here as [174], while the ones to its northwest and northeast are numbered [175] and [176] (fig. 5.91). In respective order, these chests measured 0.16m x 0.09m; 0.15m x 0.13m; and 0.17m². The joints between the lining slabs of each chest were also sealed with clay caulking, meaning that they would have been watertight (Childe 1931c, 50). This is a clear indication that efforts were made to keep the items stored within dry and undamaged. They were therefore valued significantly by the building's inhabitants. Moreover, the clay caulking applied to these chests shows that the interiors of the buildings at Skara Brae were highly susceptible to damp. Indeed, the presence of caulking on the lateral edges of these chests would even suggest that rainwater penetrated the buildings' roofs on a fairly regular basis. Across the remainder of Skara Brae other chests were constructed, and through those within Hut 3 we can get a glimpse of the kinds of items that were stored within them. Several chests were discovered throughout the building, however one of the chests towards the northern back wall [177] contained within it a stone paint pot or

mortar, while another in the immediate vicinity [178] contained a spiked macehead, also of stone (no illustration available) (Childe 1931d, 34).

We can also see that cists similar to [173] were incorporated into the interiors of the early stalled tombs. The fourth compartment of the stalled tomb of Point of Cott, for example, included a pair of rectangular stone cists composed of freestanding slabs set on edge. These were located parallel to one another near the eastern and western inner walls (no illustration available) (Barber 1997, 11–12). Nothing of interest, however, was found inside either of them. The eastern cist [179] measured 0.63m x 1.68m x 0.43m deep, while its western counterpart [180] was 0.50m x 1.55m x 0.43m deep.

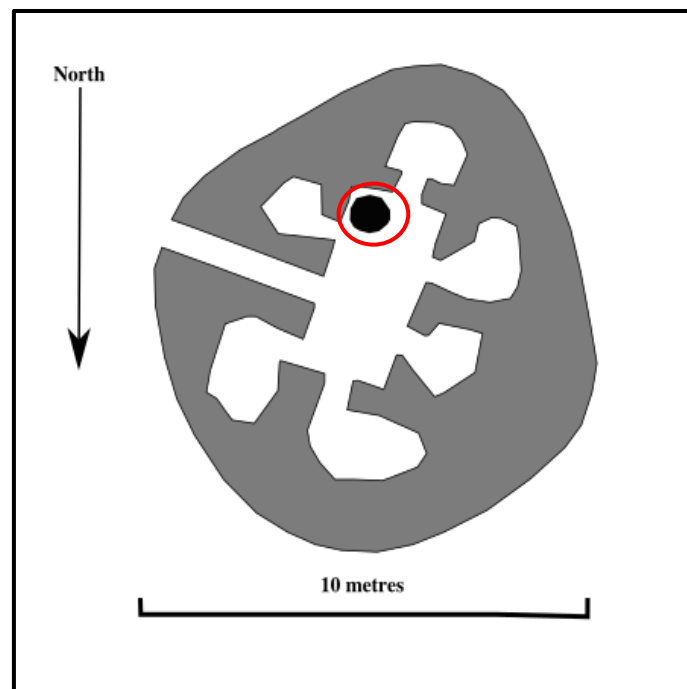


Figure 5.92. Position of cist [181] at Quoyness (illustration by author, adapted from Childe 1952)

Cists were also associated with the tombs of the third millennium BC, yet these cists displayed higher degrees of structural variation. For instance, at Quoyness a cist [181] was constructed in the southeastern corner of the large central chamber (fig. 5.92) (Childe 1952, 126). Its foundations cut directly into the floor of the chamber, terminating at the bedrock below. This cist was circular in plan and measured 0.84m in diameter x 0.20m deep. Three thin stone slabs fixed firmly against its battered walls were the only remaining elements of its lining that survived *in situ*. However, several other similar slabs were strewn across the chamber's floor, which may have also been associated with the cist. Stored within the cist were some human leg

and arm bones (Farrer 1870, 400). Given the highly decayed state that these bones were found in it seems likely that other human remains may have originally been interred within the cist that had long since degraded.

Near the tomb of Maeshowe another large cist [182] was discovered (fig. 5.93) (Childe 1956a, 167–8). It was located just on the outskirts of the outer cairn, along the southeastern side of the giant platform on top of which Maeshowe was constructed. While being quite irregular in shape, it was approximately rectangular, and rather long. It measured 2.1m x >0.60m and was 0.40m deep. Six stone slabs set on edge acted as its outer lining. These were capped along the middle by a pair of sizeable flagstones. The cist was filled with friable topsoil, and nothing else.

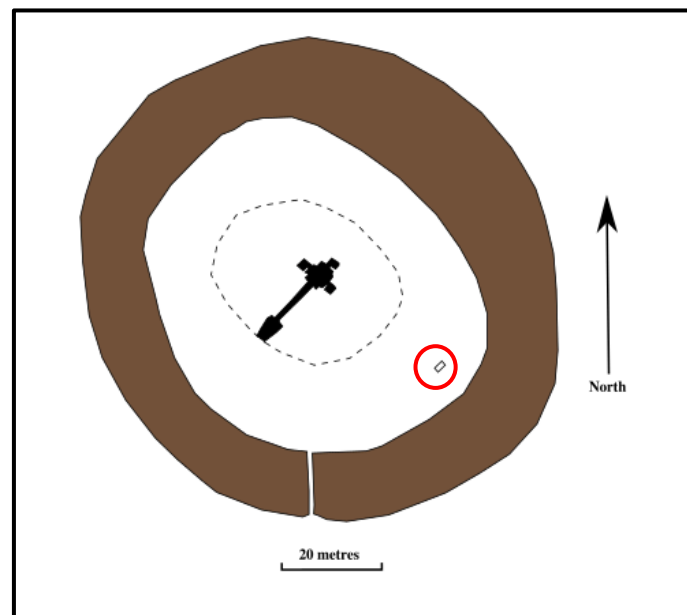


Figure 5.93. Position of cist [182] at Maeshowe (illustration by author, adapted from Childe 1956)

At the settlement of Crossiecrown, both the Red and Grey Houses incorporated within them combinations of dressers and chests (fig. 5.94), and they therefore revolved around a system of storage similar to that of House 7 at Skara Brae. Within the Red House, a pair of roughly circular foundation slots was discovered towards the back wall (Card *et al.* 2016, 177). Due to the high levels of disturbance that these slots had witnessed, their edges had merged together and defining their limits proved problematic. The overall amorphousness exhibited by these slots was almost certainly a result of the later removal of the orthostatic members originally held within them. The total area that they covered measured *c.* 1.13m x 1.33m. It seems likely

that these slots were the remains of a dresser [183] – a suggestion supported by the number of slabs in and around it, which may have once functioned as the dresser’s supporting pillars, stiles or shelves.

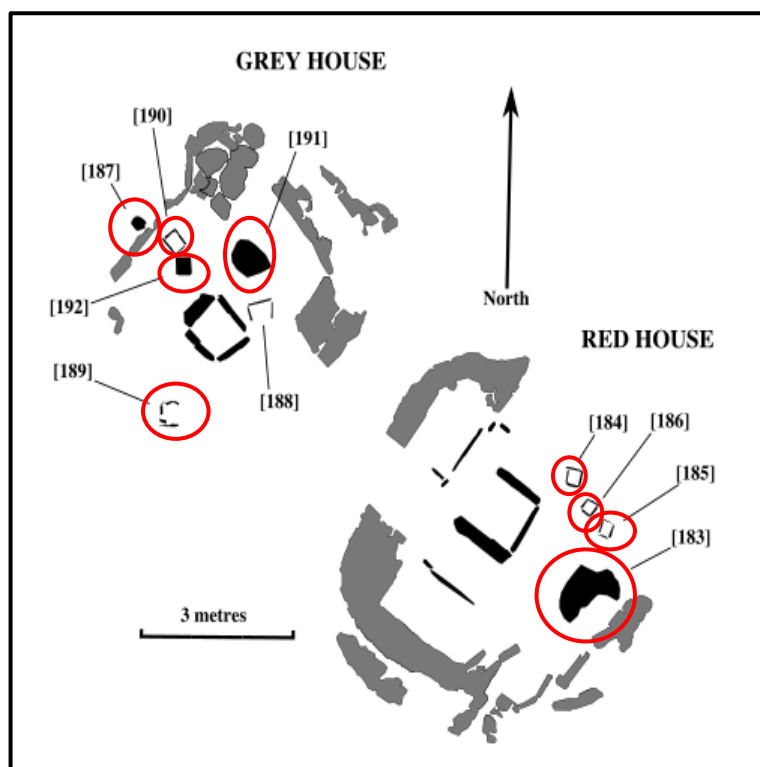


Figure 5.94. Position of storage features within the Grey and Red Houses, Crossiecrown (illustration by author, adapted from Card et al. 2016)

Establishing a precise spatial context for [183] was difficult, as the rear of the Red House was found in a very bad state of preservation. Yet following the trajectory of the inner wall face, it became apparent that it might have occupied a central position within a fully recessed area of the building. Unfortunately, it remains unclear as to which part of the long sequence of refurbishment and demolition that the construction (and removal) of [183] belonged to. The remains of three small chests were also discovered within the Red House (Card *et al.* 2016, 176), which radiated around the central hearth’s northeastern corner. The northernmost is numbered [184], the southernmost is [185], and the one in between is [186]. In respective order, the dimensions of these chests were 0.40m²; 0.73m x 0.93m; and 0.40m². Neither [184] nor [185] contained anything of interest, although [186] did contain small amounts of burnt animal bone. These derived from a single animal of an unidentifiable species. They were scorched white, indicating that they had been heated to a temperature beyond 700°C (Smith and Roberts 2016, 487).

A similar arrangement was observed at the Grey House (Card *et al.* 2016, 188), situated immediately to the northwest of the Red House. Here, an ovular-shaped cut measuring *c.* 0.30m x 0.25m was discovered directly within the masonry of the back wall. This cut was filled with small stones, all placed in upright positions, which seemed to have functioned as packing. The most likely explanation for this cut was that it was once the foundation slot for an orthostatic member relating to a rear dresser [187]. A small scatter of fragmentary stone slabs strewn across the floor immediately to the west may have also related to this dresser, which potentially constituted its shelving. Establishing a precise form for this dresser proved impossible. Yet in considering its position deep within the building's rear wall, it is possible that it was once recessed into the wall itself, before being dismantled entirely. This process also seems to have involved the sealing of its surviving foundation slot behind additional courses of masonry. The interior of the Grey House included several chests. It seemed that the chests of the Grey House were more profuse than those of the Red House and they were almost littered everywhere. Three chests were observed as being intact and *in situ*. The chest to the east of the building's hearth [188] was lined with stone slabs and was 0.55m x 0.45m in plan. The chest to the southwest [189] appeared to occupy a position right in the corner of the building and was near enough identical in shape and dimensions to [188]. Lastly, the chest to the northwest [190] measured *c.* 0.45m x 0.35m, and again had a stone-lined structure. In addition, an approximately ovular pit was discovered to the northeast of the hearth [191], measuring 1m x 0.85m, which may have constituted a robbed-out chest, while a square-shaped foundation slot immediately south of [190], measuring 0.40m x 0.33m, may be interpreted in the same way, which has been numbered [192]. Nothing of interest was discovered inside these chests.

While most of the storage features at Crossiecrown were found to be empty it is important to mention that several stone tools were discovered across the site (Clarke 2016b, 457), and it seems likely that many (if not all) of these were being stored within both buildings. For example, a total of 23 Skail knives and 13 stone discs were discovered within the interior of the Red House, all of which had a fairly even distribution. Moreover, 3 cobble tools (two faceted and one facially pecked) were discovered towards the east of the Grey Houses' central hearth and were possibly associated with chest [191].

The final type of storage unit that will be described in this section is the so-called 'ambry'. Childe first noted these features during his excavations of Skara Brae (1931d, 16), and were

found by him to be situated partway up the inner wall faces of most buildings on site. Within Hut 8, for instance, a pair of ambries was recessed into the southern half of the eastern inner wall face (fig. 5.95).

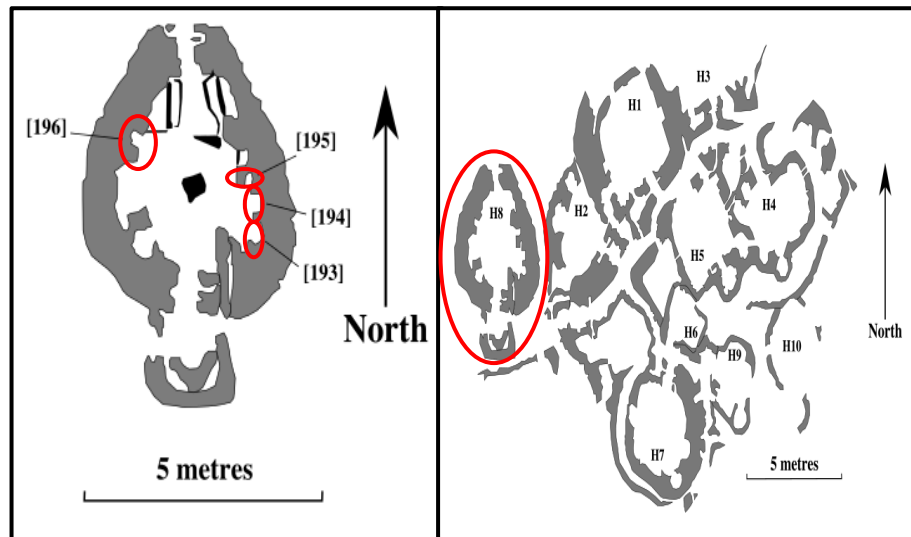


Figure 5.95. Position of ambries within Hut 8, Skara Brae (illustrations by author, adapted from www7)

The first ambry [193] was roughly rectangular in form, and had a sill stone at its base, which was keyed into the wall's masonry. The second [194] was slightly lower down, was topped with a flat lintel, and was approximately square in form. Both were situated just over 1m above floor level and measured 0.27m and 0.28m in width respectively. Recessed into the southern edge of dresser [156] was another ambry [195], which was significantly closer to floor level. This ambry was very small, being a mere 0.08m wide. Along the opposite western wall another ambry [196] was found, situated on the edge of annex [237]. This ambry was again relatively low to the ground, was roughly square in form, had a sill stone at its base, and was *c.* 0.22m wide.

Several ambries were also discovered within the buildings at Knap of Howar (fig. 5.96). This was particularly true with respect to House 2. Along the westernmost wall, situated within bay [336], were two ambries. The ambry closest to entrance [106], referred to here as [197], was rather large (*c.* 0.86m wide), roughly rectangular in form, had a sill stone at its base, and was finished with a backing slab. In terms of its position, [197] was relatively low to the ground. The neighbouring ambry [198] was smaller (*c.* 0.59m wide), but structurally was more or less identical. Beyond [198], situated within bay [337], was a further three ambries. When

considered together, these ambries appeared almost dresser-like in form, as they were effectively separated from one another via a pair of centre stiles. These stiles were rather crudely formed, being composed of un-faced masonry stacked one above the other.

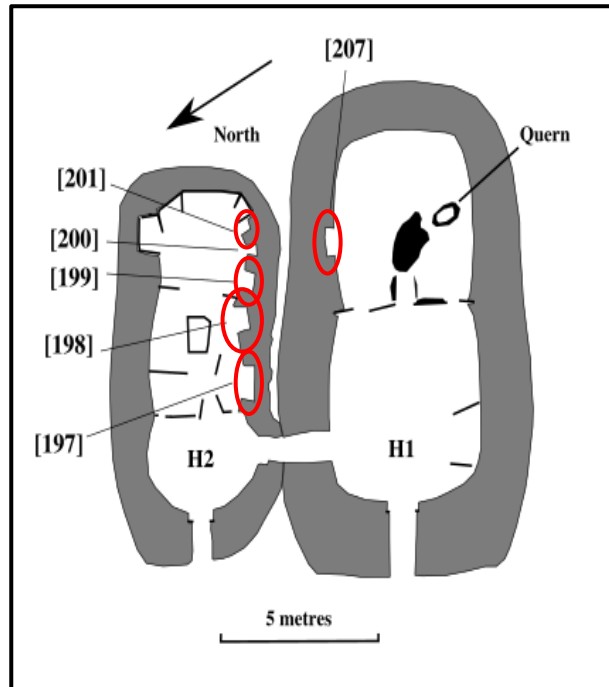


Figure 5.96. Position of ambries at Knap of Howar (illustration by author, adapted from Traill and Kirkness 1937 and Ritchie 1983)



Figure 5.97. Photograph of ambries [199]–[201] within House 2, Knap of Howar (from www13)

From W–E these ambries are referred to here as [199]–[201] (fig. 5.97). In respective order, they measured 0.46m, 0.31m and 0.24m in width. The western edge of [199] constituted a stone block that directly abutted the southernmost pier separating bays [337] and [338]. Above this block was a small packing stone, wedged in place in order to hold a lintel that spanned the tops of both [199] and [200]. The lintel spanning [201] had unfortunately collapsed. Finally, the eastern edge of [201] was formed by the right-hand end panel of cupboard [206].

Along the southeastern edge of House 2 were a series of cupboards, which have been numbered here, from N–S, as [202]–[206] (fig. 5.98). Each was formed of a pair of end panels in combination with a back panel (both comprising laminated slabs), while the bases of [203] and [205] were paved with additional slabs. Much like ambries [199]–[201], these cupboards were structurally interconnected – the right-hand end panel for one doubled as the left-hand end panel for its neighbour, and *vice versa*. All were situated within bay [338]. Cupboards [202] and [206] occupied the corners of this bay and as a result their end panels jutted inwards at an angle of *c.* 45 degrees. In respective order, these cupboards measured 0.95m, 0.66m, 0.94m, 0.69m and 0.37m in width.

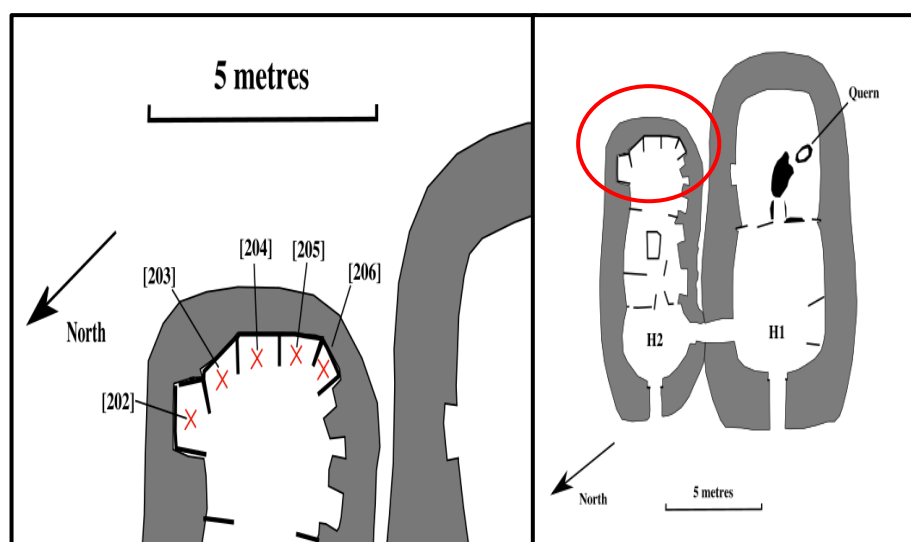


Figure 5.98. Position of cupboards within House 2, Knap of Howar (illustration by author, adapted from Traill and Kirkness 1937 and Ritchie 1983)

Within the context of storage, House 1 at Knap of Howar was markedly different in that it only had a single ambry [207] within (fig. 5.96). This ambry was rectangular in form, was located near the northwestern corner of the building (within bay [335]) and occupied a position relatively high up in the wall. It was also rather deep, and a lintel in conjunction with a sill

defined its top and base. The overall width of [207] was 0.69m. It seems likely that this ambry was drawn into the processing activities being conducted within bay [335] and may have been used to store certain tools implemented in such processing.

5.4.5 Discussion

From the evidence analysed throughout this section we can see that while dressers appeared relatively infrequently throughout Neolithic Orkney, they were nonetheless very important architectural features from the end of the fourth millennium BC onwards. At Barnhouse and Skara Brae, they almost always occupied distinguished positions at the rears of their respective buildings. This meant that the dresser commanded a certain visual prominence, as it would have been one of first features to catch a person's eye when entering the building. This visual prominence was accentuated by the dresser's physical size. Judging the average height of these dressers is of course an extremely difficult task, as very few have survived in sufficiently intact states. This is particularly true when it comes to settlements such as Barnhouse, where only the lower courses of dressers survived. On the other hand, dressers [151] and [152] from Huts 7 and 1 at Skara Brae offer a rare glimpse into their intact form. These dressers were markedly similar in height – the top shelves of both stood at *c.* 1.30m above the floor of the building. Indeed, these dressers were far taller than the entrances leading into their respective buildings, which were both significantly under 1m in height. There is of course no reason to assume that the other dressers at Skara Brae would have been any different. In terms of width, we can see a significant discrepancy in the dressers of both Barnhouse and Skara Brae. At Barnhouse, the surviving dressers ranged between 1.40m in width (e.g. [135]) and 2.03m (e.g. [142]). At Skara Brae the widths of the dressers were just as discordant, ranging from 0.62m ([153]) to 1.08m ([152]). Therefore, while many of the buildings at both sites shared noticeably similar internal arrangements, the dressers that they incorporated were highly variable in terms of the amount of space they occupied. Yet while it is true that larger dressers occupied larger buildings, this pattern could not be scaled in any neat way. Dresser [151] of Skara Brae, for example, took up *c.* 2.80% of Hut 7's interior, while dresser [152] took up *c.* 6.24% of Hut 1's interior. In addition, the notably large [142] covered an almost miniscule 1.36% of Structure 8's inner building at Barnhouse. The overall lack of uniformity in proportion that these dressers exhibited demonstrates two things. Firstly, the construction of dressers did not conform to a

generalised interior plan. Secondly, each dresser was rather unique – a suggestion supported by the variable construction methods that underpinned them as a whole.

Although scant, the available evidence suggests that, at the very least, large Grooved ware vessels would have been stored within dressers. This is evidenced by, for instance, the discovery of Grooved ware sherds on the lower shelf of [151] along with the crushed Grooved ware vessel beneath [135]. Moreover, as a result of analysis conducted by Jones (1999), it seems relatively clear that, at Barnhouse at least, these large Grooved ware vessels were used for storing barley. This was evidenced by the traces of barley discovered in association with the Grooved ware beneath [139]. However, it was also apparent from Jones' analysis that at Barnhouse the precise function of a Grooved ware vessel corresponded directly to its size. It was found that small and large vessels were associated with barley, yet medium-sized ones were not. Furthermore, of those vessels that did yield traces of barley, it seems that the smaller ones were used for serving barley during mealtimes while the larger ones were used for storing barley over long periods (Jones 1999, 63; Jones *et al.* 2005). These periods probably spanned the duration between the end of one harvest and the beginning of the next, which would potentially have been a biannual occurrence, lasting several months at a time. In order to ensure longevity and to avoid spoilage, the best conditions in which to store barley are dry, cool and dark. This is particularly true with regards to small-scale storage (Briggs 1978, 399).). In considering this, the most efficacious part of the dresser to store barley would have been below the lower shelf, in between the bases of the end pillars or panels and the centre stile. Although damp, this space would have offered the coolest and darkest conditions possible, and it is easy to imagine that the rims of Grooved ware vessels were also sealed with lids in order to ensure a sufficiently dry environment within. Indeed, storage pits [139] within House 2 and [146] within Structure 8 at Barnhouse demonstrate the extent that Neolithic inhabitants went to in order to obtain these ideal conditions. This practice of storing Grooved ware vessels within floors was also alluded to at Links of Noltland, as many vessels were discovered on site that were exceedingly large and probably immovable (Sheridan 1999, 123).

Yet the Grooved ware sherds discovered on the lower shelf of [151] indicate that vessels were stored on the dresser's shelves as well. In being situated relatively high up on, these Grooved ware vessels would have been on display, and when considering the significance of barley as a basic resource it becomes obvious why such a spectacle was created around these vessels.

Again, Jones has argued that the consumption of barley at sites such as Barnhouse and Skara Brae was intimately tied to ancestral remembrance, as it was the ancestors during the beginning of the Neolithic who first cultivated this essential foodstuff (2002, 158). In this sense, there was a mnemonic relationship between barley and Grooved ware vessels on the one hand and the ancestral past on the other (see Jones 2007). In addition, the dresser was also caught up in this mnemonic performance as it was through placing these Grooved ware vessels on the dresser's shelves that their significance was heightened.

From a chronological perspective, the only sites in which dressers appear date from the end of the fourth millennium BC onwards, although establishing precisely when dressers began to be constructed is a difficult task. Of those dressers described in this section, the ones from Barnhouse belonged to the most securely (and probably earliest) datable contexts. The earliest dressers here were [135] (House 3) and [150] (House 12), which date to the thirty-second or thirty-first centuries cal BC (Richards 2016d, Table 2). In terms of its structural and stylistic development, it seems as if the dresser evolved from a similar yet far simpler storage unit – the cupboard. As far as is possible to tell, the construction of cupboards within domestic buildings pre-dates the introduction of dressers. The most conspicuous evidence for the use of this feature can be seen within House 2 at Knap of Howar, where no less than five cupboards occupied the rear wall of the building ([202]–[206]). These examples were also the earliest cupboards considered in this section. We can therefore observe that cupboards were being constructed within domestic settings from at least the thirty-fourth century BC (Griffiths 2016, 290). Yet once this evolution had taken place, it does not appear that the dresser simply replaced the cupboard as a prime storage unit, as evidenced at Skara Brae, where both were in use simultaneously. For example, cupboards [154] and [155], which were discovered at the rears of Huts 2 and 5, were in contemporaneous use with all other later buildings on site, which incorporated dresser within them. As a matter of fact, Hut 2, which had a rear cupboard, was built up against and was therefore later than Hut 1, which had a rear dresser. Interestingly, dresser [153] within Hut 4 seems to have been a cross between a dresser and a cupboard, as although it had a centre stile, it was notable simplistic in form, and apparently lacked any evidence of shelving. Indeed, if a centre stile had not been discovered within the vicinity of this dresser, then it would have been assumed here that [153] constituted a cupboard.

It is also important to mention that in his summary of Skara Brae, Childe observed that two types of dresser existed on site. These included:

- i) Type 1: dressers that were built out from the wall;
- ii) Type 2: dressers that were recessed into the wall.

(Childe 1931d, 17)

According to Childe, Type 1 dressers occupied Huts 1 and 7, while Type 2 dressers occupied Huts 2, 4, 5, and perhaps some of the earlier buildings as well. Yet his bipartite typological division of Skara Brae's dressers is far too simplistic, as it fails to see any differentiation between dressers and what has been interpreted here as cupboards.

A key difference between dressers and cupboards lies in the ways in which they facilitated storage. As has already been mentioned, within dressers storage was synonymous with display. Yet within cupboards, storage entailed *concealment*. The idea that cupboards were intended to conceal items is based wholly on the fact that they lacked shelves, and it may be assumed that the items held within were placed on the floor of the cupboard. Moreover, it seems feasible that some form of portable screen was placed in front of them, which rested against the cupboard's end panels. Although not entirely neat in its distribution, it is possible to observe within the context of dresser-like furniture a slow progression from concealment to display. Broadly speaking, this progression is demonstrated at Knap of Howar and Barnhouse, where the former exclusively incorporated cupboards, while the latter exclusively incorporated dressers. In explaining this general shift from concealment to display, I would argue that the dresser develops as a regular fixture within domestic buildings in tandem with the rising ancestral significance of barley and, by inference, Grooved ware. Put differently, the reason that dressers did not appear during the mid-fourth millennium BC was because the pottery in use at that time was Unstan ware, whose function revolved around short-term consumption and not long-term storage (Jones 1999). This pottery type's ancestral significance was therefore far less, and its safekeeping did not require it to be put on display. Accordingly, the cupboard probably offered the prime means of storing Unstan ware vessels. Nevertheless, it is also likely that other items were being stored within them as well. Referring back to Skara Brae, it may be argued that the contiguity of dressers and cupboards serves as an indication that only certain buildings were associated with the display of Grooved ware, while in other buildings vessels were simply stored away and concealed from view.

Yet this fresh emphasis on display had another knock-on effect on how architecture was structured, as it is during this time that greater numbers of stone-lined chests begin to appear within domestic buildings. These chests were of course qualitatively more similar to cupboards than dressers, as their purpose was to conceal the items stored within them. I would argue that, with the introduction of the rear dresser, which almost exclusively revolved around display, a deficit was created in the building with regards to articles of furniture that had the capacity to conceal. This is why chests become more profuse during this period. This is exemplified very well at both Skara Brae and Crossiecrown, where dressers were almost always accompanied by a series of chests. The kinds of items that were stored in chests appear to have been rather personalised in nature, such as the mortar from [177] or the macehead from [178] (both within Hut 3 at Skara Brae). On the other hand, the direct association of these chests with specific artefacts is far too limited at present to draw any meaningful generalisations. On this topic it is worth mentioning Structure 8 at Barnhouse. This building, like many others on site, had a rear dresser ([142]), yet later on in the building's use this dresser was replaced by a large chest ([143]) – an event that may have occurred in tandem with the construction of two other chests ([144] and [145]). In this instance it seems that the progression from concealment to display was reversed, and that during its later life the inner building of Structure 8 functioned as some form of storehouse. Interestingly, in considering the high numbers of hearths constructed within the building's gallery, it may be argued that raw materials were being stored at the centre of Structure 8, which would then be moved towards the periphery for processing.

In terms of chronological progression, the chest was almost certainly inspired by the mortuary cist, which begins to appear within tombs from the beginning of the Neolithic. On the whole, the process of discerning precisely what was being stored within these cists remains difficult. Rarely do these cists contain human remains during the Neolithic (although see cist [181] from Quoyness). In fact, it is not until the Early Bronze Age that these cists are regularly used to store human remains, as seen at sites such as Crantit (Ballin Smith 2014), Gyre Farm (Simpson *et al.* 2007), Mousland (Downes 1994), Sand Fiold (Dalland 1999), and many others. Moreover, cist [182] at Maeshowe, with its elongated form, can be paralleled with some other long cists from the Early Bronze Age, such as the one discovered at Sandside (Hedges 1978). Yet we must also consider the possibility that [182] was also of Bronze Age date. It was discussed in Section 5.2 how the form of the later stone-lined hearth was inspired by the earlier cist and that this inspiration led to the hearth taking on a mortuary association. However, it is also clear that chests, in being inspired in the same way by cists, were also occasionally tied to

mortuary performances. For example, [186] in the Red House at Crossiecrown has been interpreted here as a cist, yet it in considering its domestic setting it could just as easily be regarded as a chest that contained cremated animal bones. This suggests that, within contextually specific cases, the dividing line between chest and cist (and therefore ‘domestic’ and ‘mortuary’) was very much blurred. Nowhere is the connection between domestic and mortuary forms of storage better demonstrated than by sub-mural cist [173] in Hut 7 at Skara Brae.

Although tentative, it may also be suggested that the rise in profusion of ambries comes about during the late fourth millennium BC. Certainly, ambries were being incorporated into walls from near the middle of the fourth millennium – ambries [197]–[201] and [207] at Knap of Howar demonstrate this well. Yet at Skara Brae the profusion of ambries is enormous, and it seems that each building on site incorporated several into its walls. Nevertheless, I will stress again the tentativeness of this suggestion, as only in exceptional cases of high preservation do ambries survive. Our present view of ambries, therefore, is almost certainly a myopic one. Furthermore, the process of determining the kinds of items that were held within ambries is a very difficult one, which only serves in heightening their mystery.

Finally, the contextual and structural similarities between beds and benches also highlight the connections that existed in later buildings between storage and the human body. The appearance of beds within Neolithic Orkney is somewhat of a rarity. There is no evidence for these kinds of features prior to the beginning of the third millennium BC, while some of the largest domestic sites from this period (such as Barnhouse) may have also lacked them entirely. It is only at Skara Brae that beds appear with any degree of abundance. Aside from possible bench [169] within House 2 at Stonehall Knoll, all benches described in this chapter were situated within tombs. Nevertheless, benches do not appear within the tombs of the early–mid third millennium BC. It will be recalled that the human bodies placed on the benches at Midhowe were discovered in ‘sleeping’ positions (Reilly 2003, 137), and in this respect a direct connection can be made between benches and beds, or even the living and the dead. It has previously been hypothesised that prior to being interred within the stalled tombs, the bodies of the deceased were excarnated and their bones disarticulated (Hedges 1984; *cf.* Reilly 2003). The validity of this idea has recently been brought into question (Lawrence 2006; Hutchison *et al.* 2015, 60), while less recently Richards argued that the disarticulated state that many of these bodies were found in was more a result of post-depositional interference (1988, 49; *cf.* Crozier

2012; 2014; Crozier *et al.* 2016). It may therefore be assumed that, in many (if not most) of these tombs, the deceased were placed on the tomb's benches in fully articulated states. In other words, they were being stored and, to some extent, put on display. It is interesting to note that the appearance of mortuary benches precedes that of domestic beds, and not the other way around. Accordingly, beds such as [170] and [171] within Hut 7 at Skara Brae can effectively be seen as 'benches for the living'. Yet these beds, with their boxed-in forms, were intended to conceal the sleeping inhabitant and to keep him or her safe from the often damp and cold conditions of the building. Here we can see an interesting contrast between the living and the dead; whereas the former slept in concealment, the latter slept in such a way as to be on display to any living inhabitants who entered the tomb. Furthermore, there is a noticeable parallel here between Grooved ware and human remains, as both, as a result of their clear ancestral significance, were put on display.

In conclusion, the dresser emerged in Neolithic Orkney as the culmination of a long sequence of evolution. This sequence began right at the beginning of the Neolithic, with the benches and cists of the stalled tombs. These simple storage units then evolved into cupboards; an evolution that took place no later than the thirty-fourth century BC. At the turn of the fourth millennium BC, possibly around the thirty-first or thirty-second centuries, the cupboard then, in some instance at least, became the dresser. This process of becoming revolved around two simple additions to the structure of the cupboard: shelves and a centre stile. Overall, it has been argued here that the prime catalyst in this evolution was the increased emphasis on Grooved ware as a product of ancestral significance.

5.5 The Recess

5.5.1 Defining the Recess

A 'recess' can be defined as an internal architectural space created by virtue of a building's wall being partially set back beyond its expected trajectory. In this respect, recesses aid in dividing the internal space of a building. As was outlined in Section 3.4, the recess was included in Richards' scheme as a key component of the Neolithic house's cosmological representation (e.g. 1996b), as it was the left- and right-hand recesses that bestowed upon the building an internal cruciform layout. As will be seen throughout this section, this interpretation of the Neolithic recess is a rather simplistic one. There are two prime reasons for this. Firstly, there

were different types of recesses in Neolithic Orkney. Secondly, the recess itself features as just one type of internal architectural space. Before embarking upon the descriptive procedure conducted within Sections 5.5.3 and 5.5.4, it is worth outlining precisely what these types of recesses and spaces are.

As far as is possible to discern at present, there were two types of recessed space in Neolithic Orkney. These included:

- i) *Alcoves*: rectangular or square shaped recesses set into the wall of a building;
- ii) *Cells*: small recesses, usually circular or rounded in form, accessed via a narrow breach in the wall.

Overall, the different types of architectural *spaces* found across Neolithic Orkney include:

- i) *Recesses*: described above;
- ii) *Bays*: the main spaces of a building, defined on either side by primary vertical members (e.g. buttresses, piers etc.); the ideal house-type within Richards' scheme is a single-bayed building, yet many buildings throughout Neolithic Orkney were composed of two or more bays;
- iii) *Compartments*: similar to alcoves, although rather than constituting recessed spaces, these generally constituted spaces that were bracketed off from the rest of the building via partition screens alone; although rare, exceedingly large compartments are referred to here as *annexes*;
- iv) *Chambers*: specific to mortuary architecture; the primary architectural space of a tomb;
- v) *Stalls*: again, specific to mortuary architecture; similar to recesses, but are defined on either side by secondary vertical members, usually orthostatic jambs.

It is also worth defining, albeit briefly, the different kinds of architectural members and features that were commonly found in association with the above. Firstly, the stone slabs that were often situated to the fronts of alcoves and compartments are referred to here as 'dividing screens'. Secondly, the singular stone slabs that sometimes protruded from the inner walls of a building, and which encroached only partially into the building's interior, are referred to here as 'dividing panels'. Thirdly, I find it important to define the difference between 'corner buttresses' and

‘piers’, as these are described fairly often within Sections 5.5.3 and 5.5.4. The term ‘buttress’ is normally used today to describe a structural support incorporated onto the exterior of a building. However, the term ‘corner buttress’ is often used within the literature of Neolithic Orkney to denote the point at which a pair of perpendicular walls met to form an inside corner. The return faces of this inside corner were also perpendicular to one another, and as a result this corner was far thicker than the walls it joined up with. In other words, it formed a structural feature that was buttress-like. While these features failed to constitute buttresses in the strictest sense, the term ‘corner buttress’ will be retained here, both for want of a better term and also for purposes of consistency. The way in which the term ‘pier’ is used here is far more in line with modern architectural terminology, and it denotes a vertical orthostat that was keyed into the masonry of a building’s inner wall. Yet it should be noted that, unlike modern piers, these Neolithic examples did not necessarily support the building’s roof, and many of them were not strictly loadbearing.

5.5.2 Preamble

All recesses and architectural spaces discussed throughout this chapter are detailed in Table B 4 of Appendix B. It is important to note here that not all recesses or architectural spaces across Neolithic Orkney were considered, mainly for purposes of concision. As will be seen in the following section, recesses constituted only a small element of architectural spaces, and in order to situate the recess within its wider architectural context, discussions of recesses proper will be, on the whole, relatively minor.

5.5.3 Barnhouse

In its initial form, House 3 comprised a central bay, two alcoves and a cell (fig. 5.99) (Downes and Richards 2005, 62–7). The central bay [208] measured *c.* 5.13m x 1.82m; the western alcove [209] was *c.* 2.30m x 1.20m; the eastern alcove [210] had near identical dimensions to [209]; and the cell within the northeastern corner [211] was *c.* 1.30m x 1.13m. Within [209] were three shallow cuts, two within the centre and one in the northeast corner. The former cuts were broadly circular measuring *c.* 0.35m², and the latter was *c.* 0.44m x 0.39m. It seems likely that a dividing screen was situated along the eastern edge of [209], which was missing almost in its entirety. Two small slabs running N–S were the only features that hinted at its presence.

The separation between the occupation deposits of [209] and [208] also seemed to respect the trajectory set by these slabs. Alcove [210] was devoid of any internal features, but a dividing screen ran along its western edge, which survived only as a small series of fragmentary slabs. However, the separation enforced by this screen between [210] and [208] did not last. A small concentration of six worked flints was discovered within [210], including a finely worked end scraper (Middleton 2005, 307). During House 3's second re-flooring episode both the central bay and eastern alcove were enveloped with a homogenous clay deposit. This episode of re-flooring was also accompanied by the dismantlement of the dividing screen. The floor of cell [211] comprised the same yellow clay flooring deposit that covered the central area of the building. The only notable feature associated with [211] was a narrow drain, cut directly into the underlying glacial till, which exited the building through the northeastern wall. At a later date, this drain was put out of use by the placement of a blocking stone at the rear of the building.

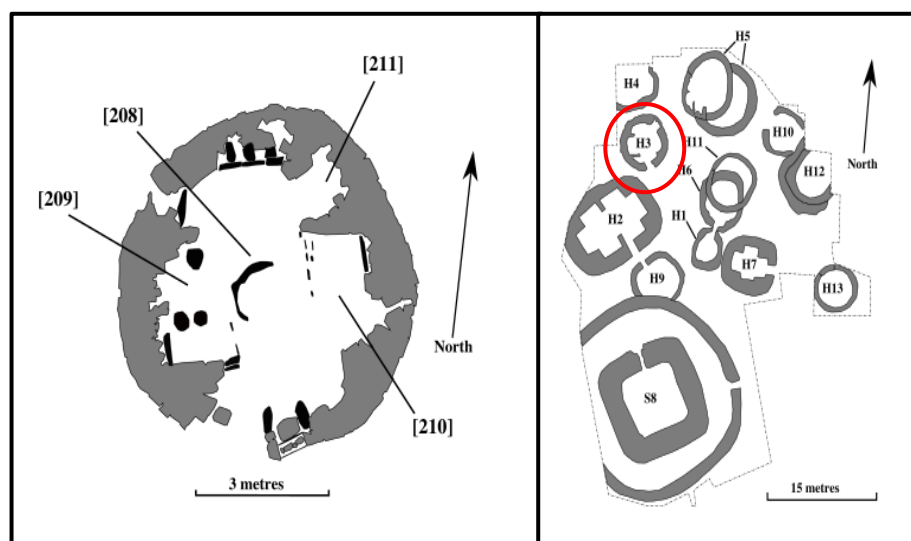


Figure 5.99. Architectural spaces of House 3, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

At a later date in the use of House 3 a compartment [212] was formed in the north of the building (fig. 5.100). Originally, this area comprised the rear of [208] and was occupied by dresser [135], but this dresser was decommissioned when a series of sizeable slabs were set up directly in front of it, effectively blocking it off for good. The formalisation of [212] was made by the construction of a substantial dividing screen 0.95m south of where dresser [135] once stood, which measured 1.18m in width. Upon excavation, this screen was interpreted as an extension of [139], however as has been pointed out in Section 5.2.3, the evidence supporting

this idea was scant. Overall, compartment [212] measured *c.* 1.09m x 2.39m. Furthermore, scoop hearth [002] was dug within the confines of [212].

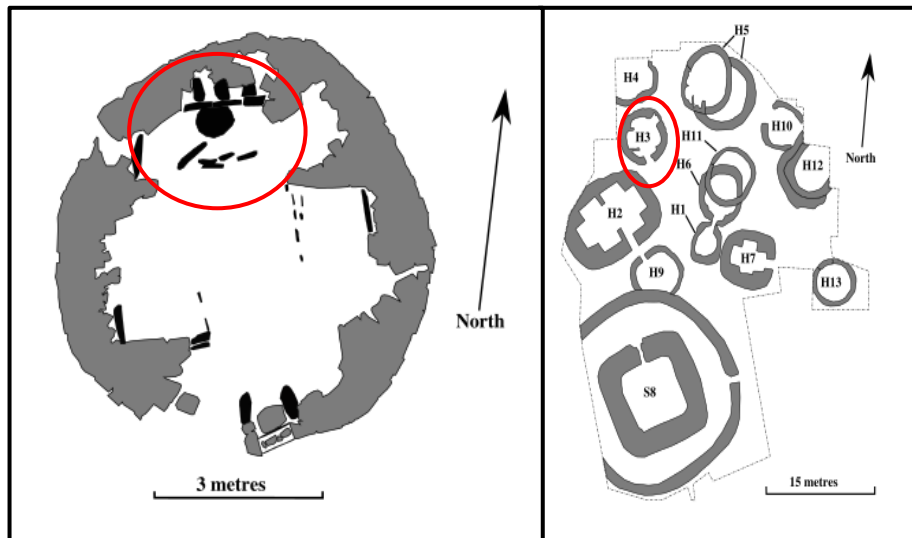


Figure 5.100. Position of compartment [212] within House 3, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

Very little of House 5's inner or outer walls survived (Downes and Richards 2005, 71–8), meaning next to no conclusive evidence could be found indicating either the extent or nature of the building's internal spaces.

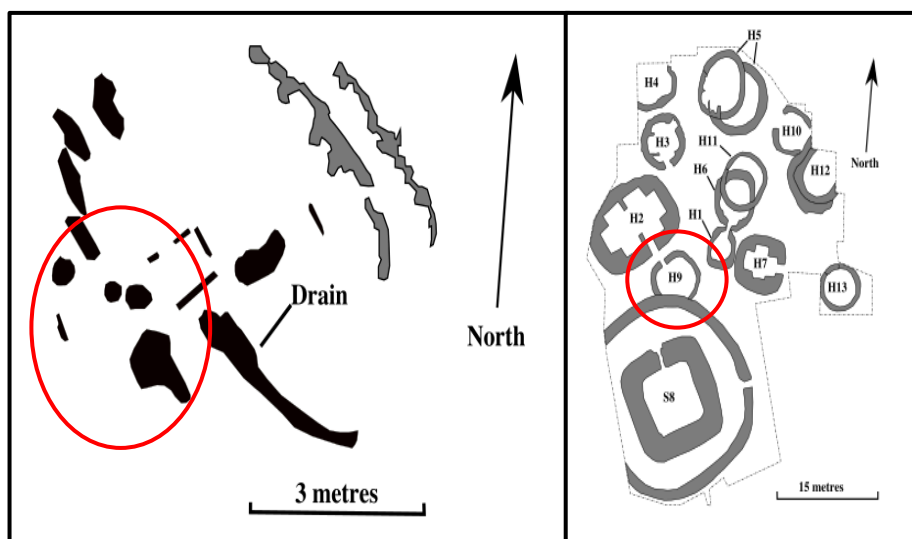


Figure 5.101. Position of alcove/compartment [213] within House 9, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

The same could broadly be said of House 9, where only diminutive stretches of walling surviving *in situ* (Downes and Richards 2005, 82–8). Indeed, the poor condition of the building’s walls gave almost no impression of its internal layout. Having said this, four cuts were discovered towards the southwest of hearth [007]. In considering their position in relation to entrance [083], it seems likely that these cuts would have occupied either a recessed alcove or a compartment on the right-hand side of the building’s interior (fig. 5.101). This alcove/compartment has been numbered [213]. The cut closest to the entrance was roughly ovular in form and measured 1.04m x 0.43m. At the base of this cut were several fragmented slabs. Some of these slabs were pointing slightly upwards, suggesting that an orthostat of timber post was once contained within this cut, which was forcibly removed at a later date. The other three cuts radiated around the southern edge of the first. Two were circular in form, measuring 0.52m² and 0.43m², while the third was ovular and measured 0.70m x 0.52m. The distribution of finds throughout House 9 was rather scant and revealed little about the kinds of activities conducted within the building.

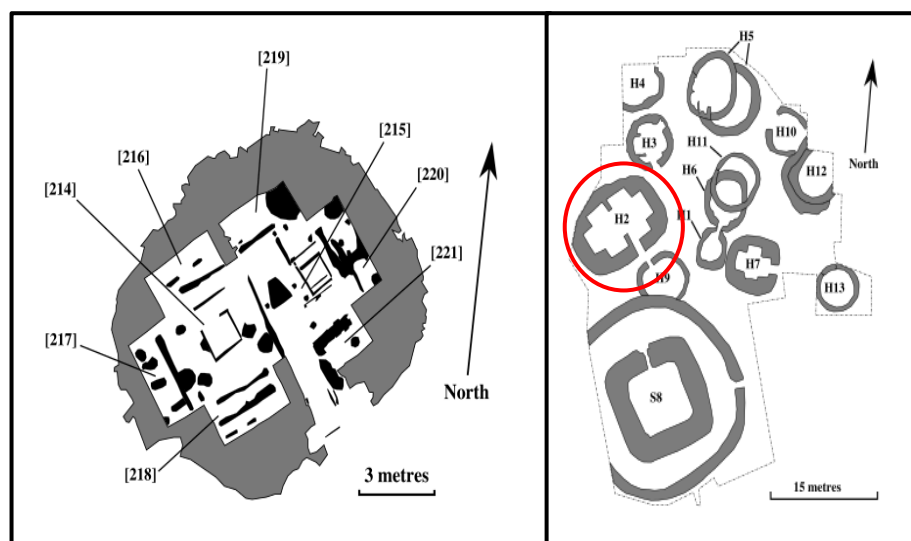


Figure 5.102. Architectural spaces of House 2, Barnhouse (illustrations by author, adapted from Richards 2005c and Bayliss et al. 2017)

The interior of House 2 comprised two bays – one in the westernmost half of the building and another in the easternmost. In addition, a series of six alcoves were incorporated into the building, with three radiating around each bay (fig. 5.102) (Richards 2005c, 138–40, 142). These alcoves were formed via four corner buttresses. The westernmost bay [214] covered an area *c.* 3.72m², while the easternmost bay [215] covered an area *c.* 3.86m x 3.12m. The spatial organisation of these bays revolved around hearths [008] and [010] respectively. As has been

discussed in Section 5.2, both of the activities conducted within these bays revolved around cooking and food processing. Moreover, a *c.* 2m long dividing screen running through the centre of the building separated both bays from one another.

The northern alcove in the western half of House 2 [216] was partly partitioned off by a dividing screen. This screen was evidenced by a linear slot, measuring 1.87m long, which had fragmented slabs set sporadically along its base. An additional screen was also situated across the front of [216], *c.* 0.35m southeast of the primary one. Again, this screen was evidenced by a linear slot, which measured 2.26m long. Abutting the western wall of [216] was a rounded pit, measuring *c.* 0.52m x 0.43m. Near the base of this pit was a lining of slabs, which covered an additional shallow cavity below. This cavity was no more than 0.02m deep, and nothing of interest was found within. Another pit was dug nearby, but further towards the centre of the alcove. This pit was shallow and amorphously shaped, measuring 0.78m x 0.35m. It was filled with an assortment of small stones. In line with this pit, further towards the eastern wall of the alcove, was a short linear cut measuring 0.20m long. At its base were packing stones along with some fragments of stone slabs that were snapped *in situ*. This feature seemed to be the remains of a stone upright. In total [216] measured 3.04m x 1.56m. Towards the rear of [216] was a fragment of quartz-porphyry, probably deriving from a cobble tool (Clarke 2005b, 333).

The western alcove in the western half of House 2 [217] incorporated several features within. An ovular pit measuring 0.52m x 0.35m was situated in the northwestern corner. This pit was filled with charcoal-rich silty clay with tip lines throughout. Towards the southern edge of this pit was another amorphously shaped pit, which probably constituted a pair of cuts whose edges had merged together due to truncation. The eastern cut had steep sides and its base was lined with fragmented slabs, suggesting that it may have been a posthole. The western cut was a shallow void, perhaps suggesting that it was a pit. Together, this posthole and pit covered an area measuring 0.61m x 0.39m. Another oblong cut was discovered further south still, measuring 0.70m x 0.30m. At the base of this cut was a series of small fragmented slabs. Another small cut was found within the southwestern corner of [217], directly abutting the westernmost wall. This cut measured 0.34m x 0.26m, and again its base was lined with slab fragments. The front of [217] was also partially blocked off with a dividing screen, whose foundation slot measured 2.91m long. This screen was positioned towards the inside of the alcove, and its edges were situated very close to the northern and southern corner buttresses.

In addition, a pair of pits truncated this linear slot towards its southern edge. One was roughly circular in form and the other was oblong. The former measured *c.* 0.52m x 0.48m and was lined with fragmentary slabs along its base, while the latter was *c.* 0.30m x 0.50m and had stone chippings on its base. Overall, [217] measured 3.39m x 1.70m.

The southern alcove in the western half of House 2 [218] had the remains of a dividing screen situated in front of it, which came in the form of a linear slot measuring 2.48m long. This slot was empty save for some fragmented slabs along its base and sides, some of which were vertically set. However, a significant number of Grooved ware sherds were also discovered in and around this slot (Richards 2005c, fig.5.27). A similar linear slot was located slightly further south, measuring 2.35m long, yet this slot ran through the middle of the alcove. A further two cuts were situated at the alcove's rear. These were found in the southwest corner and towards the centre of the back wall. These cuts measured 0.50m x 0.26m and 0.34m x 0.23m respectively and were crammed with packing stones and re-deposited glacial till. The dimensions of [218] were 3.04m x 1.63m.

On the eastern side of House 2, the northernmost alcove [219] was partially partitioned off by a dividing screen, the remains of which came in the form of a linear slot measuring 1.79m long. Beginning near the westernmost inner corner, this slot extended only partway across the alcove. The eastern edge of this slot effectively joined up with another linear slot that ran in a NW–SE direction towards the northwestern corner of hearth [010]. Completing the alcove's full partition from the rest of the building was a series of postholes (three in total) situated northeast of the dividing screen. Each posthole was *c.* 0.25m in diameter, and together they were set in a linear formation, extending to the northeastern corner buttress. Situated within the northeastern corner of [219] was a large pit that covered a total area of 1.40m x 1.09m and whose northernmost edges directly abutted the inner walls. This pit cut through both the original flooring of the building and the glacial till underneath. The fill of this pit comprised firm yellowish brown silty clay that seemed identical to a later flooring deposit covering most of the building's interior. A stone-lined drain was also associated with this pit, which ran from the northeastern corner of the alcove and away from the building, passing through the inner and outer wall courses in between. Altogether, [219] covered an area measuring 3.13m x 1.39m.

The eastern alcove within the eastern half of House 2 [220] was partly blocked off by the addition of a dividing screen, which survived as an empty slot. The slot within which this screen was held was 2.09m long. This slot was flanked on its northwestern and southeastern edges by a pair of postholes, each measuring no more than 0.21m in diameter. Two other postholes were discovered towards the easternmost wall face. Both measured c. 0.26m in diameter. Directly abutting the northeastern corner of [220] was a sizable pit measuring 0.83m x 0.74m. The fill of this pit comprised loose dark brown silt along with patches of organic turf material (French 2005, 377). It was therefore naturally infilled, probably during the abandonment of House 2, and would have remained open as some form of container during the building's use. Another circular pit was dug in the southeastern corner, measuring 0.57m x 0.48m. The fill of this pit consisted of charcoal-rich silty clay. Furthermore, a polished siltstone axehead was discovered within [220] (Clarke 2005b, 331), situated underneath the primary floor. Overall, [220] measured 3.52m x 1.57m.

Finally, the southern alcove within the eastern half of House 2 [221] was slightly smaller than the rest, covering an area of 2.21m x 1.57m. This alcove was again partially blocked off at its front by a dividing screen, whose remains consisted of a linear slot measuring roughly 1.21m long. Moreover, as no masonry existed along the western side of [221], another dividing screen was situated here, which extended southeastwards, joining up with the right-hand reveal of entrance [084]. This slot measured 1.08m long but was continued northwestward by the addition of some small slabs set in very shallow bedding. An ovular pit was cut into the southeastern corner of [221], measuring 0.43m x 0.34m, which was filled with light brown silty clay with occasional charcoal flecks throughout. A fragment of worked granite was also found within this pit (Clarke 2005b, 334).

Within House 7 neither the left- nor right-hand sides of the building's interior survived in an intact state (Downes and Richards 2005, 90–1). However, the rear of the building did, which comprised a recessed alcove [222] measuring c. 2.48m x 1.38m (fig. 5.103). A single course of interlocking flagstones survived along the perimeter of this alcove, indicating that its floor was originally paved. These flagstones fit so tightly together that no traces of residual soil were observed in between them. Within the northwestern corner of [222] a small sunken box was discovered measuring c. 0.93m² x 0.34–0.55m deep. The base of this box was paved with flagstones, while its southern side was shored up by a slab set on edge. This meant that a split-

level was formed in this corner of the alcove. A northerly running drainage channel was connected to this sunken box, which exited the building through the northern sidewall of [222]. After exiting House 7, this drain passed the northeastern edge of House 6, before heading towards House 10. The preservation of House 7's central bay was too insufficient to warrant description here.

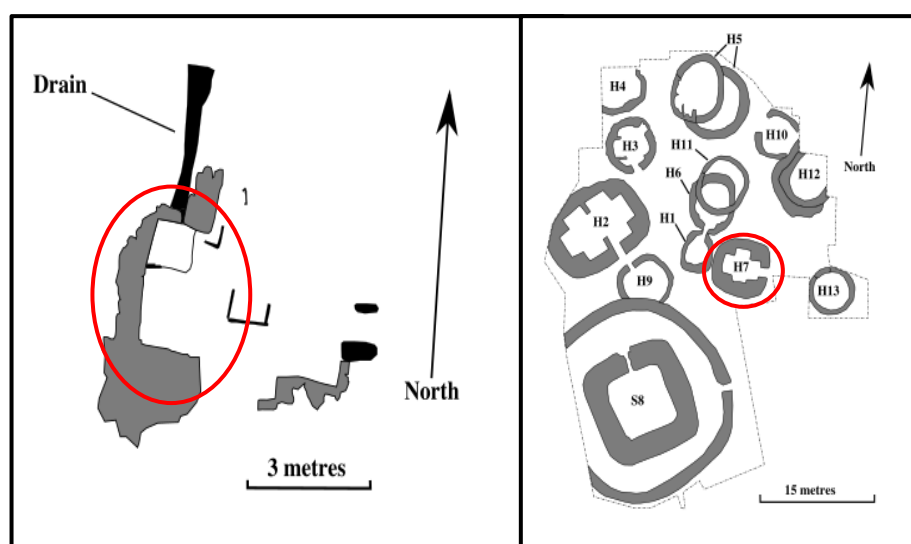


Figure 5.103. Position of alcove [222] within House 7, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

Next to nothing could be said of the spatial arrangements within House 11 due to the extremely poor state of preservation it was discovered in (Downes and Richards 2005, 117–18).

Within House 6, two discrete occupation deposits to the east and west of hearth [014] were discovered (fig. 5.104) (Downes and Richards 2005, 93–7). The masonry surrounding these deposits was highly disturbed, although considering the trajectory of the rubble deposits to the left- and right-hand sides of entrance [086], it appeared that a pair of corner buttresses was originally situated at these points. It is therefore likely that these discrete deposits were once part of two recessed alcoves. The separation between the alcoves' occupation deposits and the primary floor within the centre of the building indicated that a dividing screen once ran along the front of both. The floor of the western alcove [223] measured *c.* 1.02m x 0.98m and comprised brown silty clay. Yet the alcove to which this deposit once belonged must have covered an area far larger than this. The encroachment of the building's primary flooring deposit into [223] suggested that at some point the dividing screen defining this alcove was taken away. The eastern alcove [224] was delineated by a deposit of reddish brown silty clay,

measuring *c.* 2.22m x 1.02m. Its partition screen was noticed as a foundation slot measuring marginally under 2.22m in length. Both [223] and [224] flanked the central bay [225], which was markedly narrow, measuring *c.* 5.65m x 1.27m. Little could be said of the activities conducted within these alcoves, although the significant numbers of pumice fragments within the ash heap outside the building (Clarke 2005a) suggested that the function of House 6 revolved around either the manufacture or use of pumice tools (or both).

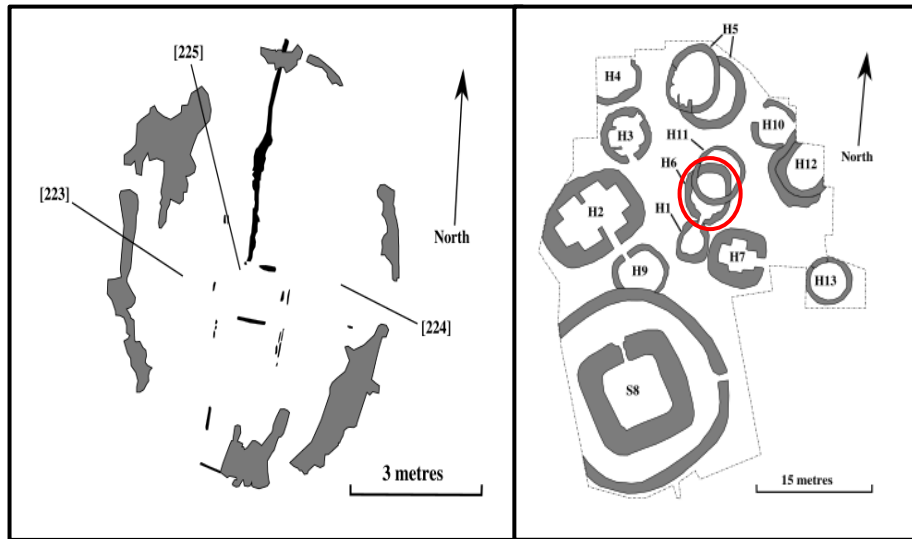


Figure 5.104. Architectural spaces of House 6, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

Due to the dilapidated state of House 1, little could be said of its internal organisation (Downes and Richards 2005, 107–12).

A single recessed alcove [226] was discovered within House 10, which was situated on the southwestern side of the building and was defined on its westernmost edge by the remains of a corner buttress (fig. 5.105) (Downes and Richards 2005, 102–5). The partial remains of a dividing screen were also discovered running across its front edge. In total, this alcove measured 2.39m x 1.39m. It seemed likely that another alcove existed on the opposite side of the building yet save for a rear stretch of walling against which this hypothetical alcove would have been built, nothing notable survived here. House 10's central bay [227] was defined mainly by a discrete occupation deposit surrounding hearth [016]. This deposit comprised orangey brown silty clay with much charcoal flecking throughout. In total, this deposit measured *c.* 2.78m x 2.15m. It may be, however, that the extent [227] was slightly greater than this.

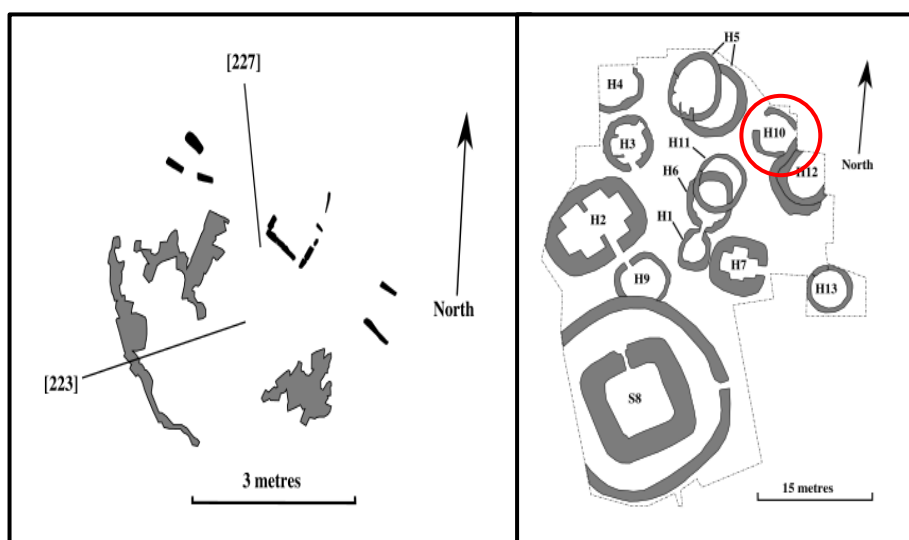


Figure 5.105. Architectural spaces of House 10, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

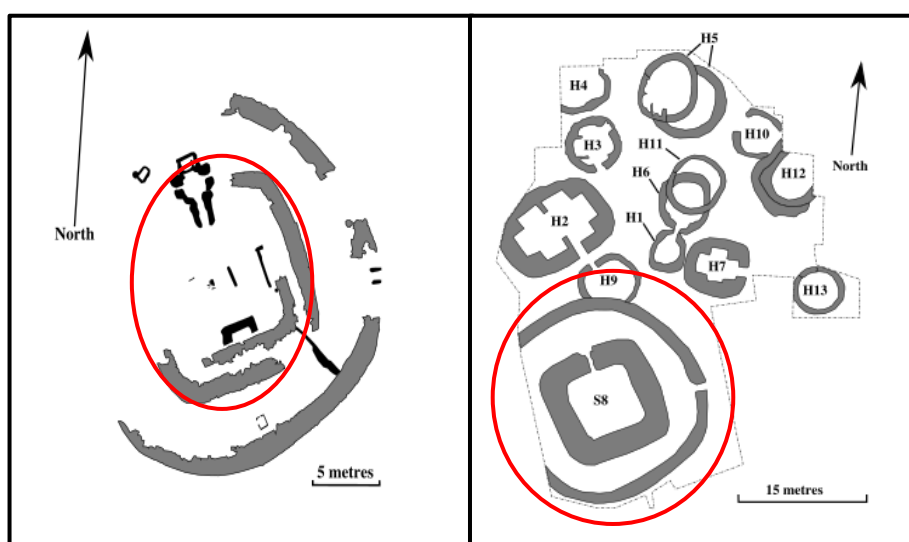


Figure 5.106. Position of bay [228] within Structure 8, Barnhouse, (illustrations by author, adapted from Hill and Richards 2005 and Bayliss et al. 2017)

Aside from being exceedingly large, Structure 8 was anomalous in that its internal space did not seem to exhibit much in the way of partitioning (Hill and Richards 2005). However, both its inner building and surrounding gallery revolved around a central bay [228], located on the inside of the former (fig. 5.106). Although discovered in an incomplete state, this bay likely measured c. 8m x 7.73m. As well as incorporating hearth [017] at its centre, this bay was also used extensively for the purposes of storage, as demonstrated by the inclusion of, for example, dresser [142] and chests [143], [144] and [145]. Much activity was also concentrated within the gallery, as exemplified by the numerous hearths dotted about its confines and also by the

large quantities of Grooved ware sherds discovered along its eastern edge (Hill and Richards 2005, 182).

Very little could be said of the internal arrangement within House 4. It has been noted that a series of displaced slabs in the southern area of the building may have been the remains of a dividing screen (Downes and Richards 2005, 115), however the damage this area sustained, particularly from concentrated rabbit burrowing, was considerable.

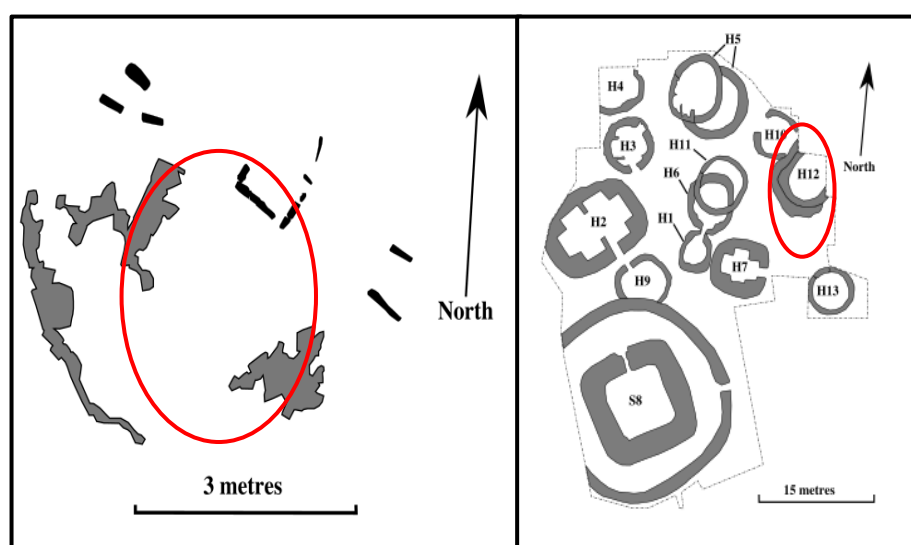


Figure 5.107. Position of alcove [229] within House 12, Barnhouse (illustrations by author, adapted from Downes and Richards 2005 and Bayliss et al. 2017)

Although House 12 was also very ruinous upon discovery, a recessed alcove [229] was nevertheless discovered on the southwest side of the building (fig. 5.107) (Downes and Richards 2005, 119–20). The recessed nature of this area was hinted at by a return in the wall on the right-hand side of entrance [088], which would have formed a corner buttress. This alcove was noticed primarily as a discrete occupation deposit comprising brown silty clay with frequent flecks of charcoal throughout. This deposit covered an area measuring *c.* 2.07m x 0.97m – a figure that likely corresponds to the overall dimensions of [229]. In addition, a small series of dispersed packing stones, running in a NW–SE on the northeastern edge of the alcove, seemed to have been the remains of a dividing screen. Other than several sherds of Grooved ware, nothing notable was discovered within [229]. It was noted that another possible alcove was discovered on the northeastern side of House 12 (Downes and Richards 2005, 120), although the evidence was far too scant to be considered here. The precise form of the central bay was also difficult to ascertain and is therefore not discussed here either.

With regards to House 13, no evidence hinting at the building's interior arrangement was discovered (Downes and Richards 2005, 120–2).

5.5.4 Beyond Barnhouse

At Skara Brae, Hut 9 probably possessed the most similar arrangement to the Barnhouse buildings, as it had a pair of recessed alcoves incorporated into its sidewalls (fig. 5.108). The southernmost alcove [230] measured *c.* 0.95m x 0.50m, while the northernmost [231] was *c.* 0.42m x 0.93m. Both of these alcoves were filled in their entirety by the box-beds of Hut 9. In the southeast of the building a cell was also discovered [232], which was roughly circular in plan, measuring *c.* 0.65m in diameter. The floor of this cell was carefully paved with thin slabs (Childe 1931d, 76). Together, these three recessed spaces revolved around the building's central bay [233], which covered an area *c.* 1.80m x 1.17m.

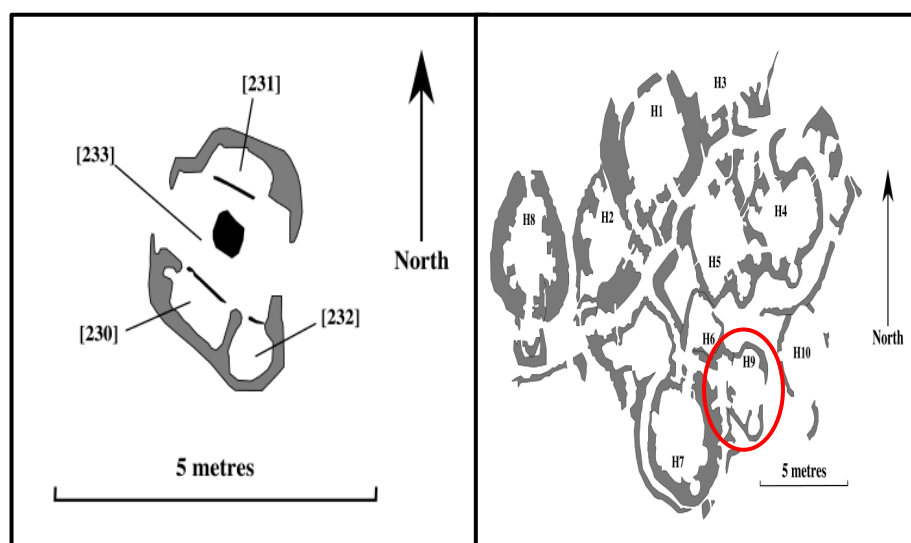


Figure 5.108. Architectural spaces of Hut 9, Skara Brae (illustrations by author, adapted from www7)

Within the later buildings at Skara Brae, the architectural affinities shared with Barnhouse begin to break down, as the incorporation of recessed alcoves goes almost wholly out of fashion. Yet there is an exception: Hut 8 (fig. 5.109). Here, a pair of opposing alcoves was recessed into the sidewalls, one to the west [234] and one to the east [235]. The former was situated just south of ambry [196], and measured *c.* 0.80m x 0.50m. The latter was of similar dimensions, measuring *c.* 0.80m x 0.40m, and was built into the right-hand edge of dresser [156]. It also incorporated ambries [193] and [194] into its eastern rear wall.

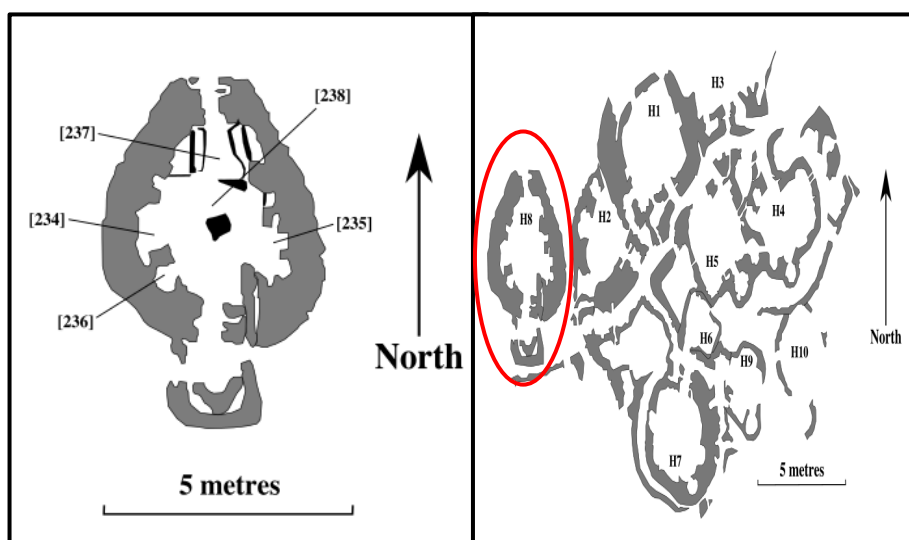


Figure 5.109. Architectural spaces of Hut 8, Skara Brae (illustrations by author, adapted from www7)

A recessed cell [236] was likewise built into the western sidewall of Hut 8. This cell measured *c.* 0.25m x 0.15m and was situated directly south of alcove [234]. The remains of a Grooved ware vessel were found within [236] (Richards 1991, 39). Moreover, a rear annex [237] was formed at the northern end of Hut 8, which was broadly apsidal in form and covered an area measuring *c.* 1.66m x 1m. At the centre of [237] was corn-drying kiln [034], which took up the vast majority of the annex's internal space, while opening [097] breached the northern wall of the annex. Finally, a central bay [238] formed the main crux of Hut 8's spatial arrangement, situated in between alcoves [234] and [235]. In total, [238] measured *c.* 2m x 1.80m and had at its centre hearth [031].

One of the most notable features of Skara Brae is the high number of recessed cells discovered across the site as a whole. This marks yet another divergence from Barnhouse's architecture, which included only one recessed cell ([211]) within House 3). The cells of Skara Brae have been included in Table B 4 of Appendix B and can be seen in Figure 5.110. So too can cells [232] (Hut 9) and [236] (Hut 8), which have already been described above. However, it is worth mentioning a few more of them here in detail. Of the earlier buildings on sites, rear cells were often discovered in association with cupboards. Within Hut 2, for instance, a cell [240] was recessed into the building's rear wall – the same wall within which cupboard [154] was incorporated to the east. This cell measured *c.* 0.84m x 0.62m and was roughly circular in form. The same could also be said of Hut 5. Here, cell [249], measuring 0.88m x 0.72m, was recessed into the rear wall and was situated slightly to the east of cupboard [155] (fig. 5.111).

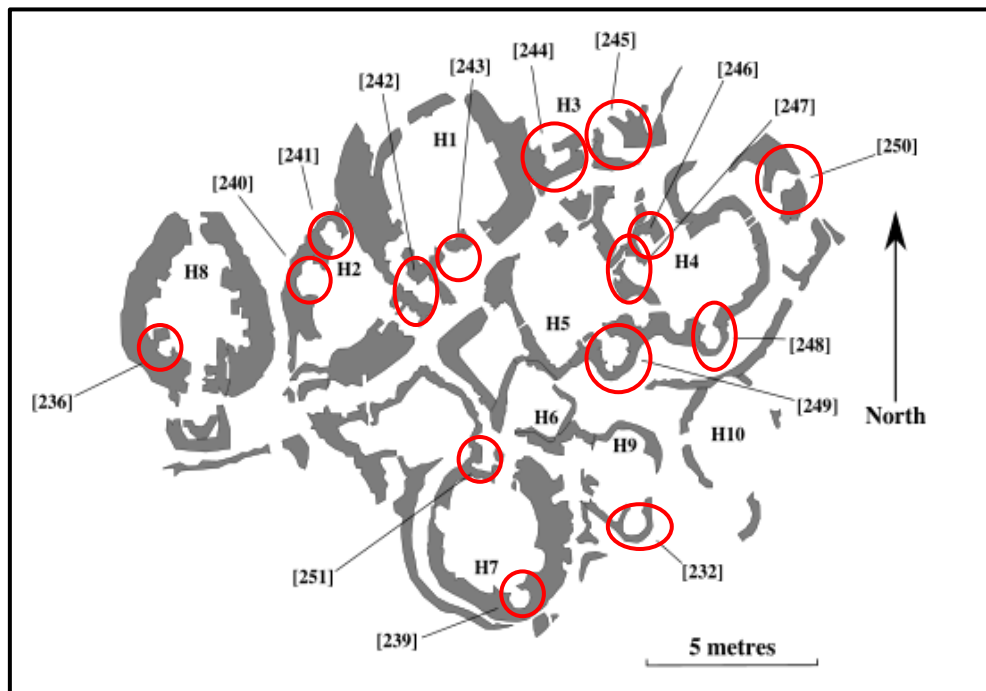


Figure 5.110. The recessed cells of Skara Brae (illustration by author, adapted from www7)



Figure 5.111. Photograph of cell [249] and cupboard [155] at rear of Hut 5, Skara Brae (from Childe 1931d)

We can also see that at Skara Brae many of the buildings incorporated cells from which various locking mechanisms could be operated. This was achieved by sliding a stone bar from within

the cell to cover the front of a given building's entrance (see Section 5.3). Within the northwestern corner of Hut 4's interior, a cell conforming to this description [246] was discovered, which measured *c.* 0.50m x 0.43m. A channel running through the eastern buttress of this cell would then have allowed a stone bar to be slid across the front of entrance [093], before terminating within a shallow groove within its easternmost reveal. The same could also be said of Hut 1, within which cell [243], measuring 1m x 0.50m, was incorporated into the western edge of entrance [090]. Again, a locking channel ran straight through the eastern sidewall of this cell and was in line with a shallow groove incorporated into the easternmost reveal of the aforementioned entrance. Unlike [246], this cell had two points of entry – one to the north, which led directly from the interior of Hut 1, and another to the south. Finally, cell [251] (from which entrance [089] of Hut 7 could be locked) is very interesting because, as mentioned in Section 5.3, it was exclusively accessed from outside the building.

More recently, the buildings at the Ness of Brodgar have shed further light on the varied ways in which architectural spaces were implemented in the Neolithic buildings of Orkney. Despite its anomalous size, Structure 10 had perhaps the most familiar internal layout (fig. 5.112), as much like many of the buildings at Barnhouse it incorporated a pair of recessed alcoves within its sidewalls, one to the north [252] and one to the south [253]. These alcoves contained within them dressers [157] and [159] respectively. In terms of size, [252] measured 3.49m x 1.54m while [253] measured 3.43m x 1.43m. Structure 10 also incorporated an additional recessed alcove at the rear of the building [254], within which dresser [158] was discovered. This alcove was far larger than the other two, measuring 5.15m x 2.58m, although a sizeable buttress did encroach upon this space from the north, reducing its overall interior capacity somewhat. It has been suggested that the northwest corner of this recess was used for the production of paint pigments (Thomas 2016, 140), with three grinding mortars discovered within the confines of this corner perhaps giving credence to this idea. Certainly, the larger size of [253] would suggest that additional activities were being conducted within its confines. All three of the building's alcoves revolved around a central bay [255], measuring *c.* 5.50m x 4m, within which hearth [059] was positioned. Towards the exterior of Structure 10 a further cell [256] was discovered, measuring 1.78m x 1.28m. This cell was incorporated into the northern sidewall of what was either a porch or a forecourt, which was added onto the eastern end of Structure 10 at a later date. Unfortunately, the particular stretch of walling within which [256] was incorporated was the only surviving element of this adjoining feature, yet it seemed likely that several more

recessed cells would have been associated with it. This cell was square to rectangular in form and was accessed from the south via an entrance that was later blocked up with rubble. Moreover, several pieces of incised art were discovered on the masonry of this cell's rear wall (Thomas 2016, 140).

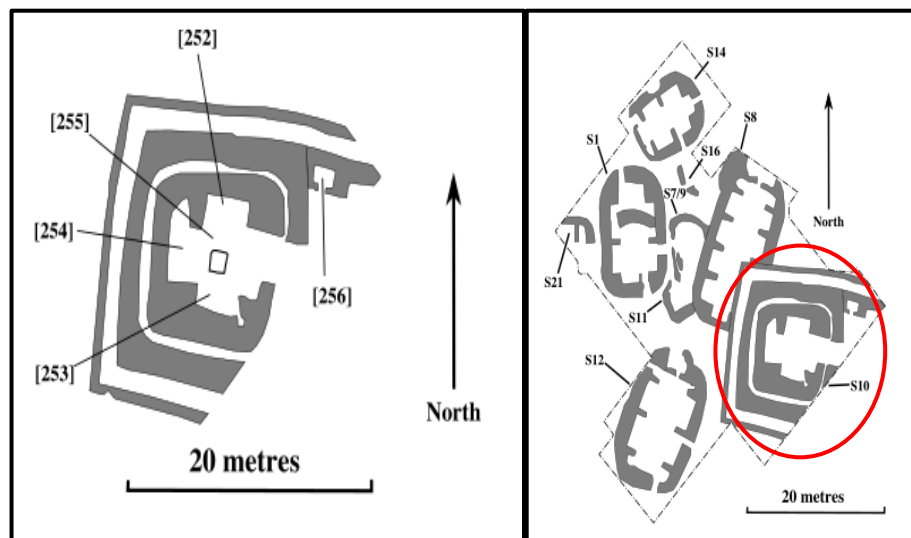


Figure 5.112. Architectural spaces of Structure 10, Ness of Brodgar (illustrations by author, adapted from Card et al. 2018)

Structure 8 at the Ness of Brodgar was markedly different in form as its interior was subdivided into 11 recessed alcoves via the construction of a presumed total of eight piers (fig. 5.113). These were remarkably similar to the stalls of the mid-late fourth millennium BC tombs, yet have been interpreted as alcoves here as primary rather than secondary vertical members separated them. Due to the later truncation caused by Structure 10's northeastern corner, only nine were discovered during excavation, although as their associated piers were all aligned in pairs in seems almost certain that another two were originally located beneath the site of truncation. Each of these piers was composed of coursed masonry and was keyed directly into the sidewalls of the building. From N–S, the alcoves along the western side of the building are numbered [257]–[261], and their dimensions have been included in Table B 4 of Appendix B. All of these alcoves were paved with flagstones. Alcove [257] was perhaps the most unusual in form, which was roughly apsidal. The other alcoves on this side of the building were broadly rectangular in form. From N–S, the surviving alcoves running along the eastern side of the building have been numbered [262]–[264] and again their dimensions can be found in Table B 4 of Appendix B. These alcoves were much the same in terms of structure as those on the opposite side of the building, and all contained evidence that they were at least partially paved

with flagstones. Yet the quality of the paving within [264] was far higher. In addition, [262] was very different in appearance to its western counterpart [257], as it was roughly square in form rather than apsidal. Furthermore, towards the rear of Structure 8 was another rectangular alcove [265], which appeared to occupy a position roughly in line with the building's principal entrance. Apart from [257] and [262], all alcoves within Structure 8 had the remains (or at least partial remains) of partition screens in front of them.

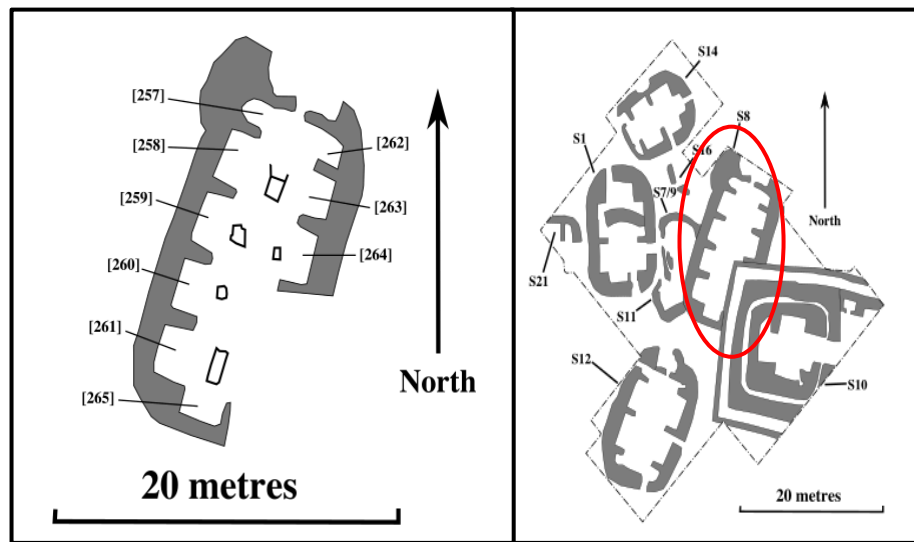


Figure 5.113. Alcoves of Structure 8, Ness of Brodgar (illustrations by author, adapted from Card et al. 2018)

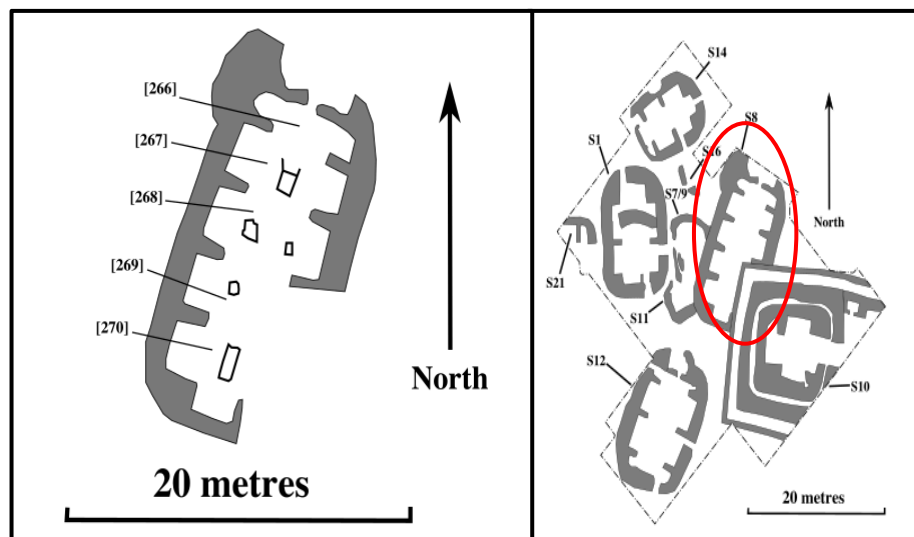


Figure 5.114. Bays of Structure 8, Ness of Brodgar (illustrations by author, adapted from Card et al. 2018)

From an overall perspective it seems that the alcoves of Structure 8 were intimately connected to the hearths situated towards the centre of the building. For instance, hearth [050] straddled the space between [258] and [263]; hearths [051] and [052] were situated just outside [259] and [264]; hearth [053] had a clear association with [260]; and hearth [054] was situated in between [261] and the corner alcove destroyed by the addition of Structure 10. Moreover, we can see how the incorporation of these alcoves and their supporting piers created a linear spatial sequence through Structure 8. This effectively divided the building further into five interlocking bays (fig. 5.114), which have been numbered here, from N–S, as [266]–[270]. These have all been included in Table B 4 of Appendix B.



Figure 5.115. Aerial photograph of Structure 8, Ness of Brodgar (www14)

As has already been mentioned, Structure 8's linear pierced arrangement was a clear reference to the earlier stalled tombs of Orkney, whose central chambers were constructed with a series of jambs running along their lengths. Yet the lateral spaces in between these jambs – the 'stalls' – also accentuated the linearity of these tombs. Tombs such as Midhowe and Blackhammer, whose linear spatial arrangements were described in Section 5.3, exemplify this perfectly. At Midhowe a total of 12 stalls defined the main chamber, which, running anticlockwise from S–N, are numbered here as [271]–[292] (fig. 5.116), whilst within Blackhammer's main chamber there were seven stalls ([293]–[305]) (fig. 5.117) (see Table B 4 Appendix B for dimensions).

The rearmost space of Midhowe is best seen as comprising a rear compartment, which has been numbered [306]. Almost the entirety [306] was taken up by bench [168].

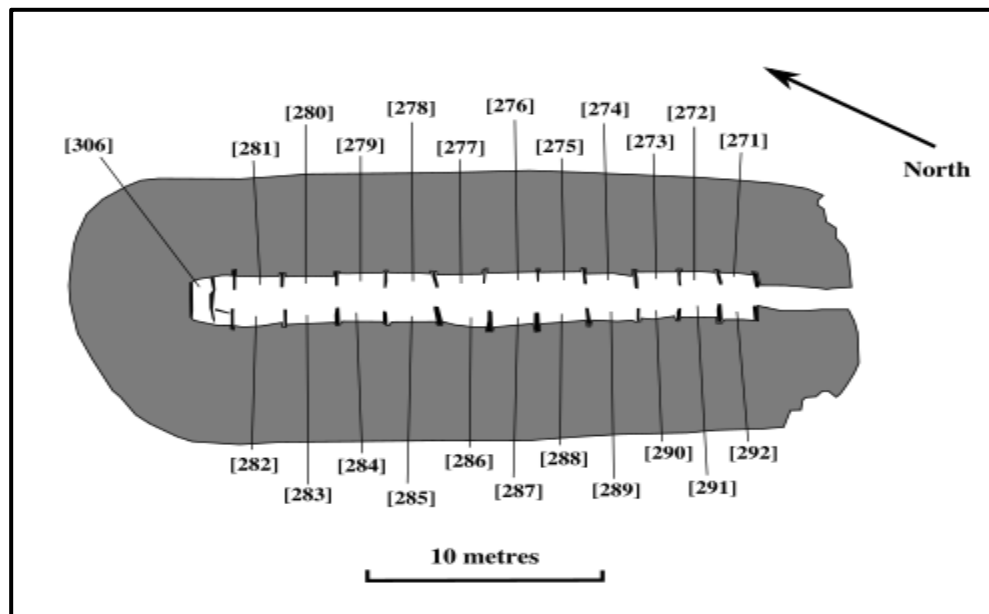


Figure 5.116. Architectural spaces of Midhowe (illustration by author, adapted from Callander and Grant 1934)

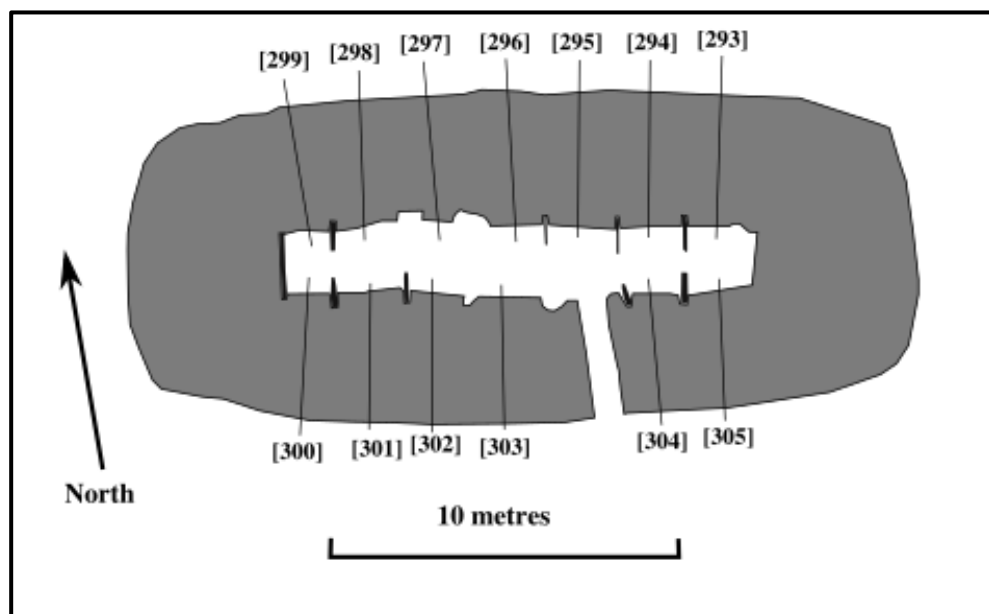


Figure 5.117. Stalls of Blackhammer (illustration by author, adapted from Callander and Grant 1937)

By the beginning of the third millennium BC the practice of incorporating stalls into mortuary architecture had ceased, and instead tombs were often constructed with central chambers that

had recessed cells branching off them. By way of example, the interior of Maeshowe comprised a central chamber [307] with three recessed cells connected to it, one to the northwest [308], one to the northeast [309] and one to the southeast [310] (fig. 5.118). In respective order these cells measured 1.70m x 1.40m; 1.82m x 1.30m; and 2.05m x 1.42m.

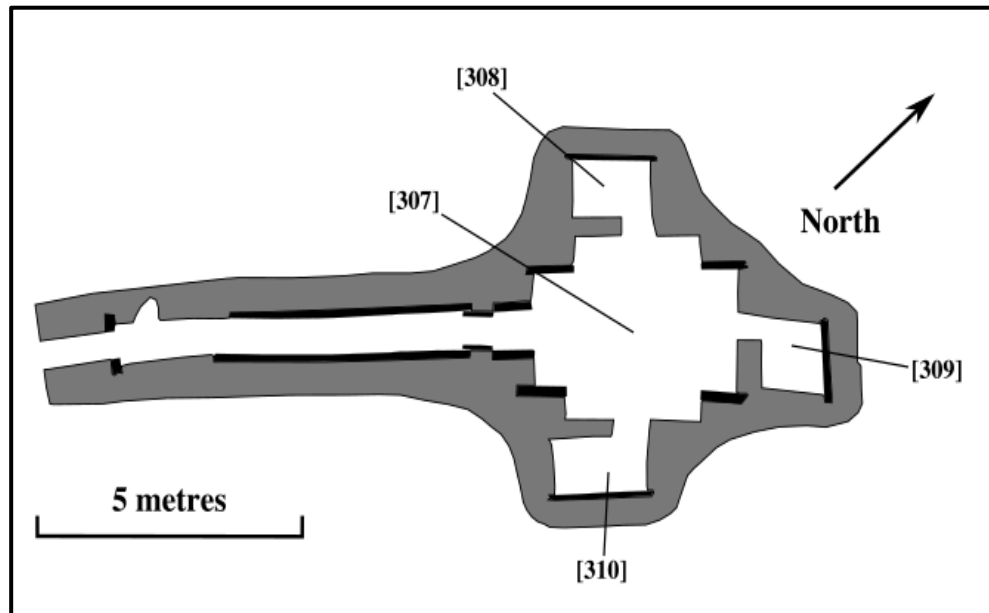


Figure 5.118. Architectural spaces of Maeshowe (illustration by author, adapted from RCAHMS 1946 and Stuart 1865)

Within each of these cells, the walls, floor and ceiling comprised single stone slabs, while it appeared that additional slabs may have been used to block them up, which were discovered by Stuart on the floor of [307] (1864, 250). By virtue of the placement of four corner buttresses, which protruded slightly into the centre of the central chamber, the dimensions of [307] were reduced to *c.* 18.60m². Over the course of the past couple of centuries it has been noted that a significant proportion of [307] is covered in artistic engravings (e.g. Ashmore 1986; Bradley *et al.* 2000; Thomas 2016). While many of these engravings are Norse in origin, it has been recently estimated by Thomas that at least 19 are Neolithic. These were applied to all elevations within [307], and consist mainly of banded motifs (Thomas 2016, 51–84). Furthermore, several of these motifs find direct parallels at Skara Brae, particularly with those angular motifs on its buildings' inner walls (Bradley 1998a, 387).

The tomb of Holm of Papa Westray South is also of interest to this discussion, as although its central chamber had many recessed cells branching off it, this chamber was elongated and

linear (fig. 5.119). In this sense, Holm of Papa Westray South incorporated elements of both the earlier and later tombs of the Neolithic. It should be mentioned that the central chamber was not subdivided into stalls and did not incorporate any cased openings along its length. However, a pair of piers did project into the central chamber, one situated towards the northwestern end, which projected *c.* 0.50m, and another towards the opposite end, which projected *c.* 0.90m. Together, these piers corresponding to around 75% of the chamber's width.

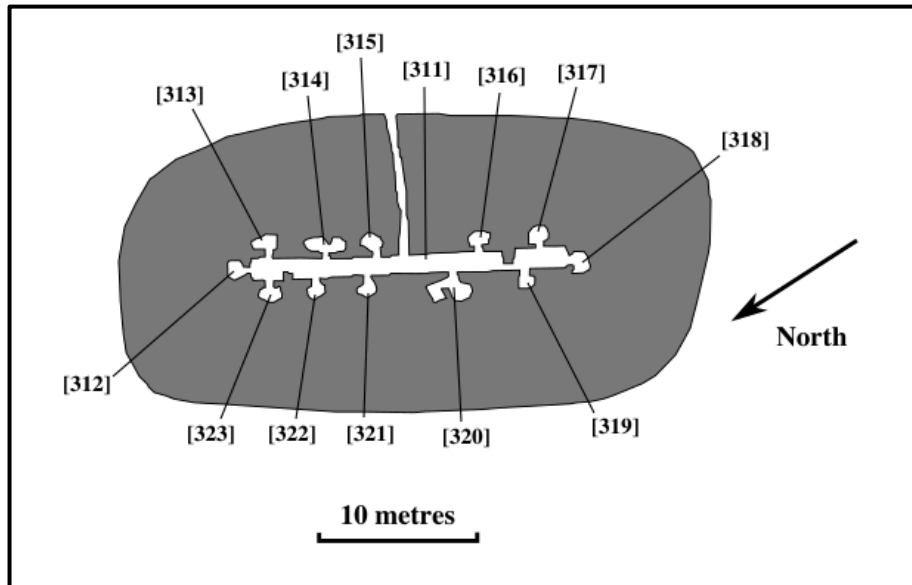


Figure 5.119. Architectural spaces of Holm of Papa Westray South (illustration by author, adapted from Henshall 1963)



Figure 5.120. Recessed cells [318] (right) and [317] (left) at Holm of Papa Westray South (from www15)

The central chamber [311] measured an enormous 20.22m long but was only c. 1.20m wide. In total, 12 recessed cells radiated around this central chamber, which were accessed via short and narrow breaches in the chamber's walls. Beginning with the one leading from the northwestern rear end of the chamber, and progressing clockwise along the chamber's extent, these cells have been numbered [312]–[323] (see Table B 4 of Appendix B). Other than some intrusive animal bones, no finds were associated with this tomb (Wilson 1863, 115). Yet much like [307] at Maeshowe, the central chamber of Holm of Papa Westray South is famous for the amount of engraved art found within, where 11 geometric motifs have been discovered (Shee Twohig 1981, 227–8; 1997, 383–5; Thomas 2019, 145).

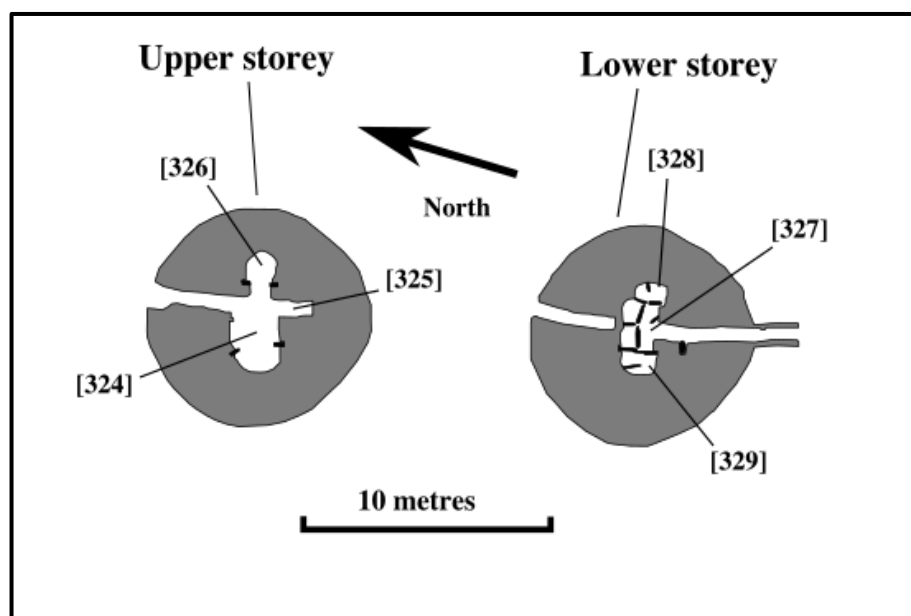


Figure 5.121. Architectural spaces of Taversoe Tuick (illustration by author, adapter from Grant 1938 and Henshall 1963)

In some very rare instances tombs were divided vertically as well as horizontally, and this division was achieved through incorporating multiple storeys. Taversoe Tuick was one such tomb in which two storeys were observed. As a result, the main structure of Taversoe Tuick was divided into an upper and lower chamber (fig. 5.121 and 5.122). These chambers were entirely separate, and each had its own entrance and passageway leading. The upper chamber [324] was roughly ovular in plan, measuring c. 3.03m long and was 1.98m at its widest point. Three vertical slabs were keyed into the inner walls of [324], two in the northern wall and one in the southern. These slabs were out of alignment with one another and barely protruded into the chamber's central area; they resultantly failed to partition [324] in any way. The purpose

of these slabs, therefore, remains uncertain. Two recessed cells were incorporated into this upper chamber. The cell on its southern end [325] was rectangular in form, measuring 1.50m x 1.55m, while the cell to the east [326] was apsidal, and measured 1.82m x 1.17m.

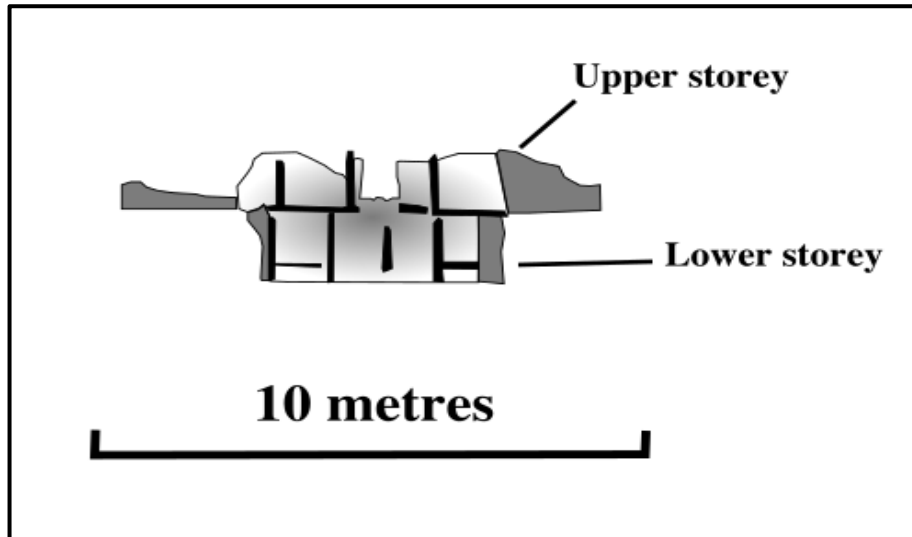


Figure 5.122. South facing section through middle of Taversoe Tuick (illustration by author, adapted from Grant 1938)



Figure 5.123. View into lower chamber [327] from upper chamber [324] at Taversoe Tuick (photograph by Nela Scholma-Mason)

Upon excavation, a thick deposit of soil was seen to cover the floor of the tomb's upper chamber, and resting directly above this deposit were three cists, each containing cremated

human remains (no illustration available) (Turner 1902; Reynolds 1985). These cists dated to the Bronze Age, yet the thick deposit of soil in between them and the tomb's floor indicated that they were probably not contemporary with the primary use of the tomb.

The lower chamber [327] was notably different in form. This chamber measured *c.* 2m x 1.40m, yet a pair of benches, formed of coursed masonry, protruded around halfway into the middle of the chamber from its northern sidewall. Moreover, a pair of cells was formed on the eastern and western edges of [327]. Both cells had storage spaces situated beneath their floors, which could be accessed from within the lower chamber. The eastern cell [328] measured 1.19m x 0.77m, while its western counterpart [329] was 1.37m x 0.82m.

The linear spatial arrangements displayed by the stalled tombs were also replicated within the domestic buildings from the mid-fourth millennium BC. This is particularly true with regards to those buildings that exhibited 'pinched' walling. In effect, pinched walls were those that had a series of curves incorporated into their inner faces, which were then separated by small point-like returns (or 'pinches') at fairly regular intervals. House 3 at Stonehall Knoll exemplified this arrangement perfectly (fig. 5.124). Here, the building's linear interior space was subdivided by three pairs of opposing pinches into a total of four interconnected bays (Richards *et al.* 2016b, 103–9).

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measured 1.94m x 3.63m. The right-hand pinch separating these two bays was abutted by a pier-like member (formed of two slabs), which protruded marginally into the interior. The final bay [333] was the smallest, measuring 1.55m x 2.51m. A dividing panel defined its right-hand pinch upon entry. In terms of function, bay [332] was a focal point for House 3 as it contained the building's only hearth. Yet attempting to discern the precise activities conducted within the other bays proved difficult. Very few worked flint and pottery sherds were discovered within House 3, although several cobble tools were found, including a grinding stone in [330], a burnishing stone in [331] and a hammerstone and faceted cobble in [332].

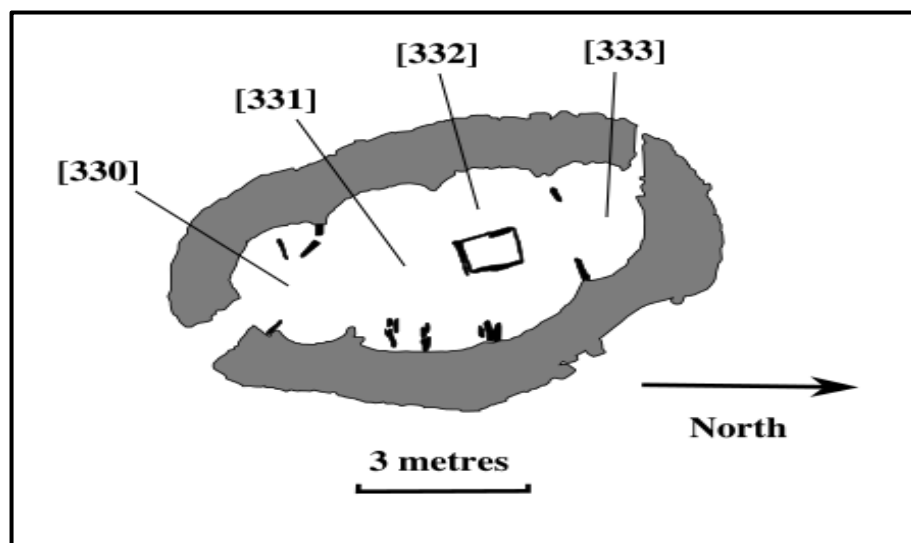


Figure 5.124. Architectural spaces of House 3, Stonehall Knoll (illustration by author, adapted from Richards et al. 2016b)

Although less pronounced, both Houses 1 and 2 at the Knap of Howar were also subdivided via the use of pinched walling (fig. 5.125). The subdivision of House 1 was subtle, as the pinching of its inner wall faces had only a marginal effect on its interior space. Nevertheless, this pinching did split the building into a pair of bays – a division that was further reinforced by the placement of a tall partition screen, which spanned the distance between the pinches. The first bay upon entering [334] measured 5.37m x 4.99m, while the rear bay [335] was 4.68m x 4.47m. Functionally, both bays within House 1 were markedly different from one another. Within [335] was scoop hearth [046], and within the immediate vicinity of this hearth was a sizable trough quern. Within [334] a large number of artefacts was discovered in association with its primary flooring deposit, including a Skail knife and a significant number of bone awls (Ritchie 1983, 46).

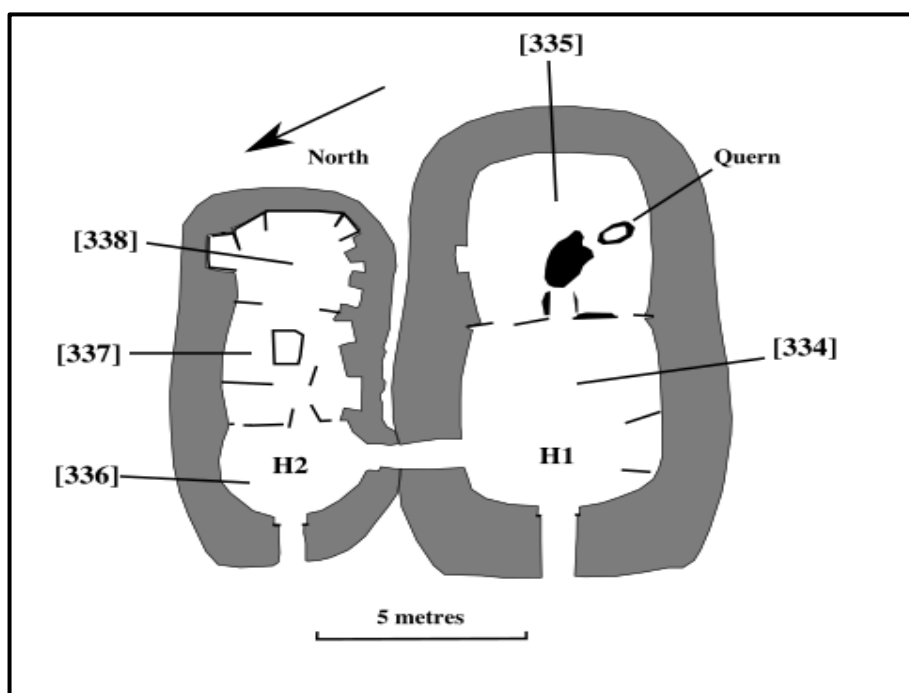


Figure 5.125. Architectural spaces of Knap of Howar (illustration by author, adapted from Traill and Kirkness 1937 and Ritchie 1983)

Much the same situation was observed within House 2, although in this building three bays were present. Moreover, the pinching of House 2's inner walls was slightly more pronounced. The first bay encountered upon entry [336] measured 2.40m x 3.75m and was demarcated on its eastern side by a pair of dividing panels. These panels were set within shallow foundation slots, with a gap of *c.* 1m between them that allowed access into the bays beyond. The southernmost panel was nestled in between a straight joint formed in the wall courses, which was itself a result of the wall being deliberately pinched. The next bay [337] measured 3.25m x 3.20m and was again demarcated on its eastern side by a pair of dividing panels. Yet these panels were completely different in form, as not only were they exceedingly tall but they also abutted a corresponding pair of piers, which were keyed directly into the pinched section of the wall. These dividing panels were separated by a gap of *c.* 1.15m. Hearth [045] was situated within this bay, which commanded a prominent position at its centre. The final bay [338] within House 2 measured *c.* 2.53m x 2.64m. This bay was effectively a storeroom, as evidenced by the incorporation within it of ambries [199]–[201], along with cupboards [202]–[206].

Finally, it is worth mentioning that the deliberate subdivision of space has also been witnessed within Neolithic Orkney on an extramural or non-architectural basis. An excellent illustration of this could be seen at the butchery site discovered along Skaill Bay, directly on the outskirts

of Skara Brae (no illustration available). Although investigations into this site consisted of a rather small-scale excavation, it was nonetheless clear that significant amounts of butchery and animal processing were being practiced here. In sum, the excavation uncovered a large deposit of faunal remains and Skaill knives underlying a thick layer of rather loose aeolian sand (Richards *et al.* 2015) – the same kind of deposit that overlay the buildings of Skara Brae nearby. The faunal remains primarily consisted of both articulated and disarticulated red deer bones, however a few cattle bones were found within the same deposit, along with those of either sheep or goat. In addition, a single whale mandible and the humerus of a wader were discovered in close association with these bones. In total, the faunal deposit comprised 735 bone fragments (Ingram and Mulville in Richards *et al.* 2015, 108). Of these, 27% (around 198 fragments) could be positively identified as belonging to a certain species of animal, and a total of 88% of the individual animals identified (or 175 individuals) were red deer. The Skaill knives discovered at this location were fairly typical when compared to others discovered across Orkney (*cf.* Saville 1994), as they were rounded in form and exhibited a thick proximal end (Clarke in Richards *et al.* 2015, 103–4). These Skaill knives, along with others across Orkney, were rather makeshift in manufacture, and largely disposable (Clarke 2006, 21). In this instance, they were all manufactured from local beach cobbles, and were used for butchery (see Clarke 1989; 2016b, 462).



Figure 5.126. Disarticulated animal bones in compartment [339] (left) and articulated red deer bones in [340] (right) (from Richards *et al.* 2015)

The wall discovered on site is of most importance to this discussion, as it served to divide the site into two different spaces, with each space constituting a distinct zone of activity. This wall

was constructed from drystone masonry, primarily in the form of flat sandstone slabs. It probably ran well beyond the limit of excavation, underneath the sand dunes immediately to the south of the site but terminating before hitting the sandstone outcrops to the north. This wall was constructed with a roughly NE–SW alignment and ran approximately through the middle of the site. The exposed stretch of this walling was 1.75m long and was *c.* 0.30m wide. The wall created two compartments – a western compartment [339] and an eastern one [340]. The dimensions of these compartments could not be ascertained, yet it was clear that both extended beyond the excavation area. The Skaill knives found in [339] exhibited a different pattern of deposition to those in [340], as rather than lying flat on top of the underlying soil they were found lying in a variety of different positions. Many of them had been deposited in an angular fashion, while some seemed to jut out in an upward direction. This erratic pattern of deposition was almost certainly due to the underlying clay having been very wet while the site was in use, which would have caused many of the Skaill knives to sink into the ground at different angles. The situation within [340] was notably different, as the underlying soil had a far sandier and far drier composition. Animal bones were discovered on both sides of the wall. However, with reference to the red deer remains an observable pattern emerged in which [339] contained far more disarticulated bones than [340], while [340] contained far more articulated bones than [339] (fig. 5.126). In considering this pattern, it seems as if [340] was used for cutting carcasses into manageable portions, which were then transported to [339] where more intricate butchery practices could be performed. It is also possible that [340] was used for skinning the carcasses as well.

5.5.5 Discussion

Within settlements dating to the end of the fourth millennium BC onwards, such as Barnhouse and Skara Brae, the subdivision of architectural space was achieved in order to equate specific areas of a building with specific activities. At Barnhouse, this was most often achieved by constructing a pair of recessed alcoves on either side of a central bay. These alcoves almost always incorporated dividing panels in order to segregate the activities conducted within them. In only one instance (alcove [222] at House 7) was an alcove discovered to occupy the rear of a building. Of the central bays at Barnhouse, all had hearths incorporated within them, meaning that the activities conducted within the building revolved around the use of the hearth. Yet discerning the precise function of many of the recessed alcoves proved difficult. Certainly,

alcove [222] at the rear of House 7, which incorporated a pit and an associated drain, was used for washing activities or the disposal of liquids, while alcove/compartment [213] within House 9 was probably used for storage, as indicated by the series of pits discovered within its confines. The small concentration of worked flints within alcove [210] at House 3 may be significant. Yet the frequency at which flint tools are discovered across almost all domestic contexts in Orkney would suggest that they were used in numerous activities within a range of different settings (Middleton 2005; Anderson-Whymark *et al.* 2016). Moreover, although little could be said of the activities conducted within alcoves [223] and [224] at House 6, it may be argued that these spaces were reserved for the manufacture or maintenance of bone or wooden implements. This interpretation is based on the fact that the ash heap outside House 6 contained significant numbers of pumice (Clarke 2005a) – a material that was likely used for smoothing pointed tools or hafts (Clarke 2016a). On the other hand, Barrowman (2000) has suggested that pumice was also used for burnishing and smoothing pottery. The alcoves of House 2 were exceptional in this regard, as they painted a much clearer picture of the kinds of activities that were being conducted throughout the building as a whole. Clearly, some of these alcoves were used for storage, as evidenced by the pits within [216], [220] and possibly by the axehead beneath the floor of [220]. Likewise, the pit and drain in [219] were almost certainly related to the cooking and food processing activities conducted throughout the entire building, which was probably implemented in the disposal of waste cooking liquids.

Although broadly similar in their shared cruciform layouts, the buildings of Barnhouse and Skara Brae differed fairly significantly in their use of architectural space. Only Hut 9 at Skara Brae incorporated recessed alcoves comparable to those at Barnhouse, which came in the form of [230] and [231]. This building, incidentally, was one of the earliest on site. Crucially, of the later buildings on site, Hut 8 was the only one that had recessed alcoves ([234] and [235]). Furthermore, while recessed cells dominated the buildings of Skara Brae, only a single example was discovered at Barnhouse ([211] at House 3). While most of these cells were probably used for storage, particularly those associated with cupboards, it was also clear that recessed cells were drawn into the practice of locking doorways. Again, this was something that was not seen at all within Barnhouse, or for that matter any other domestic site in Orkney. Attempting to determine a precise chronology for the emergence of recessed cells proves extremely difficult at present, although the earliest cell described in this section pertained to House 3 at Barnhouse, which was constructed during the thirty-second or thirty-first centuries BC (Richards *et al.*

2016d, Table 2). However, it must also be acknowledged that the cells of some later tombs (e.g. Holm of Papa Westray South and Taversoe Tuick) were potentially earlier. This opens up the possibility that the tradition of incorporating recessed cells into buildings began within mortuary architecture. In terms of function, there are clear parallels between the cells of domestic buildings and tombs, as both were used for storage. Where the former were used for storing goods, the latter were probably used for storing human bodies. In addition, it may be argued that alcoves begin appearing at roughly the same time as recessed cells, although unlike recessed cells, alcoves were characteristic of domestic buildings alone – they did not cross over into mortuary architecture in any meaningful way. With regards to central bays, these did find echoes within mortuary architecture in the form of central chambers. Determining which came first is of course problematic, as the construction of very few chambered tombs have been firmly dated.

The incorporation of alcoves and cells within buildings marks a major turning point in the ways in which architecture was built between the middle and end of the fourth millennium BC. Within both the domestic and mortuary buildings of the mid-fourth millennium BC, internal space was generally elongated and linear, where the former incorporated multiple centrally aligned bays and the latter incorporated multiple latitudinally positioned stalls. In addition, whereas the stalls within earlier tombs had a broadly homogenous function, in that they were used to contain benches and human bodies, the bays within domestic buildings were multifunctional. This is not to say that specific tasks failed to dominate certain bays; some bays were strongly associated with hearths (e.g. [333], [335] and [337]), while [338] at Knap of Howar had an exclusive association with storage. However, the open plan that many of these bays exhibited serves as an indication that a wide range of activities were facilitated within them. Bay [335] at the rear of House 1 at Knap of Howar illustrates this well, where cooking, grain processing and storage occurred, yet if we look beyond those bays described in this section we can observe many other instances of multifunctionality. Within Section 5.2, for instance, it was discussed how a complex system of manufacture was observed throughout Smerquoy Hoose, which revolved around the use of a hearth, a drainage system and a series of pits (Gee *et al.* 2016). While the operations constitutive of this system were concentrated primarily in the building's northernmost bay, it could nonetheless be seen that it encroached into its southernmost bay as well. In this sense, the subdivision of the building was, functionally speaking, an extremely fluid one. Such fluidity is also demonstrated extremely well by the

architectural arrangement of House 3 at Stonehall Knoll, where the openness of its interior meant that its bays were qualitatively very similar to one another. Interestingly, this staggered experience of space is mirrored by the linear journey through the cased openings of the stalled tombs (see Section 5.3). Here we can see a significant contrast with the architectural spaces of later domestic buildings, which were generally qualitatively different from one another. Furthermore, the architectural spaces of later domestic buildings were, on the whole, significantly smaller. For example, excluding [228] within Structure 8, the average size of the surviving central bays at Barnhouse was *c.* 7.65m², while the average size of the surviving alcoves was *c.* 3.76m². On the other hand, the average size of the mid-fourth millennium BC bays considered in this chapter was *c.* 10.77m². This further highlights a general trend in which domestic architecture becomes more restrictive and more specialised as the Neolithic progresses. In many ways, annex [237] at the rear of Hut 8 at Skara Brae typifies this trend more than any other architectural space, within which a singular and highly specialised activity took place (in the form of grain drying). Moreover, although extramural in nature, compartments [339] and [340] also deserved to be mentioned here, which were again highly specialised spaces, being associated exclusively with butchery and animal processing more broadly.

In relation to mortuary architecture, however, it seems as if this trend was reversed. The architectural spaces constitutive of stalled tombs (the stalls) were always diminutive in size, being large enough to accommodate a bench, a human body, and nothing more. Of those stalls considered here, their average internal area was *c.* 1.03m². Moreover, while the main chambers of these tombs were often exceedingly long, they were nonetheless very narrow and restrictive. The arrangements of later chambered tombs, on the other hand, were completely different, where far more open central chambers branched off into smaller side cells. Although these side cells were also highly restrictive, they were nonetheless larger than the earlier stalls. This pattern is expressed rather well by the cells of Maeshowe, which had an average internal area of *c.* 2.55m².

Importantly, there was one site within Neolithic Orkney where the line between earlier and later architectural traditions melded together almost completely – the Ness of Brodgar. Here, it seems as if the boundaries of architectural traditions were being contested in extremely creative ways. Structure 8 excellently typifies this creativity, where *both* alcoves ([257]–[265])

and linear bays ([266]–[270]) were incorporated in tandem. In this respect, the spatial arrangements of Structure 8 were simultaneously fluid *and* restrictive. This particular building was constructed between the thirty-first and thirtieth centuries BC (Card *et al.* 2018, 229), and therefore dates to a period where concentric spatial arrangements were already around a hundred years old. On the other hand, Structure 10 nearby demonstrates that more familiar architectural arrangements were being implemented as well. Although enormous in scale, Structure 10, with its central bay and adjoining alcoves, was directly analogous to the buildings of Barnhouse in particular. However, much like Structure 8, the spatial arrangements of many of the other buildings on site also revolved around alcoves in conjunction with multiple linear bays, including (at the very least) Structures 1, 12, 14 and 21. This particular combination of alcoves and sequential bays was, it seems, quite unique to the Ness of Brodgar. It should also be mentioned that the tomb of Holm of Papa Westray South was also a highly contested architectural space, where an elongated main chamber branched off into multiple recessed cells. So too was Taversoe Tuick. Although this tomb incorporated within it several familiar features (e.g. chambers and cells), with its double-storeyed structure it was unlike anything seen in previous periods. Again, this pattern of creative architectural reworking can be contrasted with previous traditions, in which the construction of buildings was generally a rather conservative process, which revolved around the same key features each time (namely stalls, sequential bays and, on the whole, little else).

Throughout this section it has been demonstrated that Richards' view of the recess as a fundamental component of Late Neolithic cosmology is misguided. This is because the recess was but one type of architectural space constructed within Neolithic Orkney. Indeed, in order to fully understand the recess, it is vital that it is properly contextualised, and this can be achieved by situating it alongside other concomitant spaces and by tracing their temporal development. Although fairly limited in its scope, this is what has been achieved within this section. As a result, a fresh outlook has been established, not only of recesses but also of architectural spaces in general. In particular, it has been hypothesised that a broad architectural development occurred between the middle and end of the fourth millennium BC. Within domestic architecture, this development corresponded to a shift from the construction of open and heterogeneous space to that of restrictive and homogenous space. On the other hand, within mortuary architecture this process of development was reversed. Moreover, it has also been argued that, by virtue of sites such as the Ness of Brodgar, the construction of architecture

became a more creative and contentious process as the Neolithic progressed, where both old and new architectural traditions were being questioned and reworked.

6 Conclusion

6.1 A Timeline for Neolithic Architecture

As a result of the non-representational methodology employed throughout this thesis, where small-scale descriptions were prioritised in the formation of an overarching hypothesis, two key themes have emerged that underpinned the development of architecture within Neolithic Orkney between the early fourth and the mid third-millennia BC. These themes are as follows:

- i) *The earlier stalled tomb served as a template for future architectural structures*

This is an idea that was hinted at by Richards when he hypothesised that the architectural vocabulary of the mid-fourth millennium BC house was inextricably tied to that of the stalled tomb (Richards and R. Jones 2016, 4). However, the findings within this thesis go far further than this basic assumption, as it seems that the architectural repertoire of the stalled tomb was reiterated, to varying degrees of exactitude, within almost all other Neolithic buildings. According to Griffiths' Bayesian modelling, the first stalled tombs appear in Orkney between the mid-thirty-seventh and mid-thirty-fifth centuries cal BC (2016, 292). This means that the construction of the first tombs in Orkney occurs roughly a century after that of its earliest known Neolithic site, the burnt mound at Varne Dale (Richards *et al.* 2016c, 230–2), dating to the middle of the thirty-eighth century cal BC (Griffiths 2016, 296–7). The emergence of stalled tombs within Orkney must have been an immense occurrence, as they were like no other structures previously seen on these islands. Certainly, the construction of domestic structures likely pre-dates that of the stalled tombs, although these structures were incredibly simple dwellings, consisting of timber posts that were probably filled out with some form of wattle and daub walling. Timber Structures 1, 2 and 3 at Wideford Hill serve as key examples, yet these early dwellings are extremely rare, and due to their ephemerality are almost certainly overlooked within the archaeological record. Although mostly contemporary, the earliest dwellings and tombs in Orkney were structurally very different to one another. Where the former were often small, constructed from wood and were single-bayed, the latter were often very large, constructed from stone and revolved around a series of stalls and benches.

The first stone-built domestic buildings in Orkney, in essence, resulted from the merging together of these aforementioned forms of architecture. Structurally speaking, these buildings shared far more in common with stalled tombs than with the earliest timber dwellings. Obtaining a precise start date for these buildings is difficult, and at present they are best understood as having been introduced to Orkney between the thirty-sixth and thirty-third centuries cal BC (Griffiths 2016, 287).

Key features of earliest stone-built domestic buildings	Shared with earliest tombs?	Shared with earliest dwellings?
Scoop hearths	x	✓
Jambs	✓	x
Threshold	✓	x
Internal bays	x	✓
Sequential arrangement of space	✓	x
Drystone masonry	✓	x

Table 6.1. Key features of earliest stone-built domestic buildings in Orkney, as compared with those of the earliest tombs and timber dwellings

As can be seen within Table 6.1 above, most of the key architectural features included within the earliest stone-built domestic buildings were originally developed within the stalled tombs. The contribution of the timber dwellings to these buildings is of course significant as well, yet there are caveats. Firstly, while scoop hearths featured fairly prominently within these buildings, they no longer enjoyed a central architectural position. Secondly, the use of internal bays was completely transformed, as rather than being single-bayed structures, these buildings incorporated multiple bays that were sequentially aligned. It should also be mentioned that neither stalls nor cased openings were incorporated into these buildings. These were features that, for whatever reason, failed to possess any architectural significance beyond the confines of the earliest tombs. However, the incorporation of dividing panels within stone-built domestic buildings does faintly echo the cased openings of the stalled tombs. Moreover, the practice of constructing pinched walling finds parallels in neither the earliest tombs nor the earliest dwellings, although these pinches, in conjunction with dividing panels, can be seen as demarcating the sequentially aligned bays that were so characteristic of these buildings. Also, by at least the beginning of the thirty-second century BC storage features, in the form of cupboards and ambries, begin appearing within these buildings, while stone-lined hearths are

likewise firmly established as architectural fixtures. It was argued in Section 5.2 that the stone-lined hearth stemmed from the coming together of the scoop hearth and stone-lined cist. Consequently, the hearth transformed from being a simple functional feature to being a feature imbued with important mortuary connotations. In this instance we can observe yet another element of stalled tomb architecture making its way into domestic buildings. Naturally, the list of key features outlined in Table 6.1 is not an exhaustive one, yet it serves in delineating a broad pattern in which domestic architecture becomes more tomb-like.

By the thirty-first or thirtieth centuries BC, domestic buildings begin to alter quite drastically. Broadly speaking, the domestic building loses its multi-bayed form and takes on a more concentric arrangement of space revolving around a single central bay. In this respect, the footprints of these later domestic buildings harken all the way back to the timber dwellings of the early and mid-fourth millennium BC. Moreover, the central position of the hearth within these buildings was also grounded in the earliest timber dwellings. Needless to say, some key elements of the earliest stone-built domestic buildings were also retained within their later Neolithic successors. Primarily, these included the entrances, which incorporated jambs, thresholds and lintels, along with stone-lined hearths. Furthermore, the practice of partitioning architectural space via the use of dividing panels was retained. Yet by this later period the dividing panel had transformed into the dividing screen, which was generally used to partition the alcoves surrounding the central bay from the rest of the building. These screens, in combination with their associated alcoves, developed as a result of more specialised activities being introduced to the Neolithic domestic space, as argued in Section 5.5. One of the key divergences inherent within the later domestic building, however, was to do with storage, as it is during this time that the dresser and the recessed cell emerge. While the latter can be seen as a relatively novel innovation, the former was not, as its form was inspired by the cupboard. Moreover, its function, which revolved around both storage *and* display, drew on the benches of the stalled tombs, on top of which the bodies of the deceased were simultaneously stored and displayed. In many ways, this process of the mortuary bench becoming domestic finds its ultimate expression in the box-bed, which begins emerging in domestic buildings by at least the thirtieth century BC. In conjunction with these developments was the rising use of chests, which were often found sunken into the floors of domestic buildings. The introduction of chests can probably be dated to the same period in which dressers developed, and as has been argued in Section 5.4, their appearance within domestic buildings signified the Neolithic inhabitant's

need to conceal and thus safeguard important items; items that were likely of a personalised nature. Again, the construction of chests clearly referenced (and therefore developed from) the cists of the early and mid-fourth millennium BC, which were often found in stalled tombs. Finally, while the entrances of later domestic buildings were broadly the same as their earlier architectural forebears, it is during the thirtieth century BC that we begin to see an upsurge in the construction of entrances with Type 2 jambs (i.e. jambs that were perpendicular to the entrance's reveals). Interestingly, these types of entrances find little expression in the domestic buildings prior to this period and are almost exclusively associated with stalled tombs. This is yet another instance in which Neolithic inhabitants from the end of the fourth millennium BC onwards are drawing on the architecture of stalled tombs in the construction of their domestic buildings.

The Knap of Howar is central to this architectural evolution, as here we can observe the earlier stone-built domestic building *becoming* the later stone-built domestic building. In dating to at least the thirty-third century BC (Griffiths 2016, 290), this site is situated almost perfectly between earlier and later architectural traditions. On first glance, both Houses 1 and 2 on site appear to be tied fairly firmly to the linear arrangements of the mid-fourth millennium BC, as both incorporated multiple bays and pinched walling at their junctures. Nevertheless, it is clear that the physical separation between these bays is becoming more defined at Knap of Howar – a separation enforced by the incorporation of dividing screens. Indeed, it is at Knap of Howar that the first instances of dividing screens occur within a domestic setting. The most prominent dividing screen discovered on site belonged to House 1, which enforced quite a rigid separation between the front and rear bays of the building. This separation was enforced to demarcate areas that, in terms of their utility, were qualitatively different from one another. Although determining the precise function of the front bay remains difficult, it is fairly clear that the rear bay had its own distinct character as a grain processing area. Furthermore, an additional dividing screen separated the front bay of House 2 from both the central and rear bays of the building. Again, this separation was enforced along functional lines, where the front of the building was separated from a central area in which additional food processing was likely conducted as well as a rear area that functional as a storeroom. This division of domestic buildings into qualitatively different spaces is, on the whole, uncharacteristic of the multi-bayed architectural tradition that Knap of Howar ostensibly belongs to. In addition, it is through studying the spatial arrangements at Knap of Howar that we begin to see why the domestic

building took on a more concentric footprint throughout the following centuries. Within both Houses 1 and 2, two main activities were being conducted – storage and processing. These activities were inherently linked, yet the linear arrangements of Houses 1 and 2 failed to allow smooth transitions between these activities. On the other hand, the later concentric buildings did, as movement from one area of the building to the next was made far simpler, as each area revolved around a central bay.

ii) *As the Neolithic period progressed, the more diverse architecture became*

Above, neither the buildings of the Ness of Brodgar nor the third millennium BC chambered tombs were mentioned. This omission was deliberate, as it is through the discussion of these architectural structures that the second theme is properly realised – that architecture becomes more diverse as time goes on. During most of the fourth millennium BC, the construction of architecture was tied quite firmly to tradition. In other words, all three major forms of architecture – the timber- and stone-built dwellings, along with the stalled tombs – incorporated within them a similar range of key features. There are of course some rare exceptions, such as Timber Structure 3 at Wideford Hill, which was effectively converted into an elongated timber hall. Nevertheless, the findings from this thesis outline a broad pattern of architectural conservatism during this period. By the beginning of the third millennium BC, this pattern had shifted entirely. While buildings such as House 2 and Structure 8 at Barnhouse or Hut 8 at Skara Brae demonstrate that intra-site variation existed throughout all major domestic sites during this period, it is at the Ness of Brodgar that this variation is observed most thoroughly. For example, although the tradition of building linear multi-bayed buildings had gone out of fashion by the beginning of the third millennium BC, several of the buildings at the Ness of Brodgar incorporated this type of arrangement. Yet as has been discussed in Section 5.5, this arrangement was always accompanied by a series of alcoves, which were more characteristic of later domestic buildings. As it currently stands, the Ness of Brodgar was the only domestic site in Neolithic Orkney in which this kind of architectural hybridisation was practiced *en masse*. This hybridisation demonstrates one thing in particular – that the Neolithic inhabitants of this site were attempting to forge clear-cut architectural links with the ancestral past. While it is true that the more traditional concentric buildings from this period also drew heavily on stalled tomb architecture, the connection between the buildings at the Ness of Brodgar and these tombs was significantly more direct. In this respect, most of the buildings here were both

mortuary and domestic, and it may even be argued that they constituted spaces in which the living and the ancestral dead stood alongside one another as cohabitants. This is also supported by the lengths the inhabitants went in order to purify the interior of Structure 1 in particular, through the incorporation of a hearth into its eastern entrance.

From this perspective, it seems as if the inhabitants of the Ness of Brodgar were attempting to forge a new community identity that was rather distinct from others across Orkney. However, this was not a novel practice during this period. Each domestic site from the end of the fourth millennium BC onwards incorporated within it features that were rather unique to those sites, such as the box-beds and Type 2 jambs of Skara Brae, or the open-plan monumental architecture of Barnhouse. Therefore, architectural experimentation appears to have been a thread running through all domestic sites during this later period. Yet the Ness of Brodgar was a site of architectural experimentation *par excellence*, as it incorporated degrees of architectural hybridisation that simply did not take off across the remainder of Orkney.

In addition, the chambered tombs of the third millennium BC exhibited an equally diverse range of spatial and stylistic combinations. It has long been noted that the typical tomb from this period, or the ‘Maeshowe-type’, comprised a central chamber, accessed via a long passageway, with a series of side cells branching off it (Henshall 1963; Davidson and Henshall 1989). Yet this view is misleading, as the so-called Maeshowe-type tomb, which includes Maeshowe, Quanterness, Quoyness, Wideford Hill, Cuween Hill and others, accounted for only a partial proportion of all third millennium BC tombs in Orkney. For example, Taversoe Tuick (discussed in Section 5.5) and Huntersquoy, which likely date to the third millennium BC, were both double-storeyed tombs – a form that finds next to no parallel within the Maeshowe-type. The tomb of Bookan was also architecturally divergent, as it comprised a central chamber partitioned into several compartments that were notably cist-like (see Petrie 1863, 35–6). Due to its association with Grooved ware pottery (Henshall 1985, 108; Card 2005, 165), this tomb probably dates to the third millennium BC as well. Furthermore, tombs such as Holm of Papa Westray South (discussed in Section 5.5) and the Dwarfie Stane (discussed in Section 5.3) also find no direct typological parallels. The construction of the former, in many ways, mirrored the kinds of architectural experimentation that occurred at the Ness of Brodgar, as its internal arrangement seems to be a hybrid of earlier and later architectural traditions. The latter, however, was utterly unique, and I would argue that attempting to typologically classify

this tomb would constitute an impossible task. Neither of these tombs has been radiocarbon dated; yet both were likely contemporary with the major domestic sites of the third millennium BC. Although not discussed within this thesis, horned tombs such as Burray, Faray and the one discovered at Vestra Fiold, also deserve to be mentioned here. These tombs were probably built at the same time as Orkney's great henges (Richards *et al.* 2013b), and embodied yet another novel form of third millennium BC architecture.

Finally, the henge monuments of the Ring of Brodgar and the Stones of Stenness, along with the lesser-known Ring of Bookan nearby, further accentuate the architectural variation of the third millennium BC. Yet again, these sites find no direct parallels in the previous millennium. Their lack of wall courses and roofs also highlight their novel architectural identities. However, their incorporation of entrances, orthostatic members, along with other features (such as the central hearth at the Stones of Stenness) show that they were inseparably tied to the same architectural history that bound all other buildings in Neolithic Orkney.

6.2 A Final Note on Representationalism

Within traditional representational thought, it is important that one's analysis transcends the physical and the typological aspects of the prehistoric past and to focus on the social practices (and therefore social structures) of its inhabitants (Jones and Richards 2000, 101). According to such thought, attempting to elucidate higher social structures is a very difficult task and requires much interpretation and ethnographic analogy. This is something that has been recognised since at least the time of Hawkes, who famously questioned whether the social structures of the deep past could be attained at all (1954). Within the context of this thesis, this process constituted an impossible task, as it focused almost exclusively on a single aspect of Neolithic Orkney – its architecture. Of course, it was not my intention within this thesis to formulate an all-encompassing narrative explaining all aspects of Neolithic society in Orkney. These kinds of narratives have been attempted elsewhere (e.g. Fraser 1983; Edmonds 2019) and were made possible precisely because a far wider range of evidence was considered beyond architecture alone. However, this thesis has demonstrated that, contrary to Hawke's contentions, the process of determining past social practices is a non-hierarchical one, as what we refer to as 'social structures' are inherent within the archaeological evidence. In this sense, a sufficiently detailed description of this archaeology is in itself a description of social

structure. Indeed, the findings detailed in Section 6.1 were made possible because such a descriptive procedure was implemented. In the words of Brennan, this procedure – this non-representational procedure – “works *through* things rather than impos[ing] itself upon them from outside or above” (1993, 86, my emphasis).

It should also be stated here that the methodology underpinning this thesis, which is based on the theory of fragmentation, offers a means by which archaeological theory can branch out beyond the confines of its disciplinary limits and influence other fields. In particular, fragmentation would work well within the field of architectural history, which concerns itself almost exclusively with styles and typologies, meaning that the histories of individual buildings are mostly overlooked. However, the basic tenets of fragmentation could also be implemented within any field in which material things are treated as being subordinate to representations.

6.3 Where Next?

While this thesis has provided some major insights into the architecture of Neolithic Orkney, it is nonetheless, by dint of being a heavily specialised text, incomplete. In order to create a more rounded picture of the Neolithic architecture of Orkney it would of course be necessary to push this research even further, to geographic locations beyond the archipelago itself. These areas include, in particular, Shetland to the north and Caithness to the south – locations that contain Neolithic architecture similar to that found in Orkney, such as the Scord of Brouster at the former (Whittle 1986) and the Orkney-Cromarty tombs of the latter (Davidson and Henshall 1991). As has been argued by Mercer (1992), a full analysis of Neolithic Orkney must, by necessity, be tied into these nearby locations. It would also be necessary to push this research into newer temporal as well as geographic domains. After all, the Neolithic architecture of Orkney did not simply disappear at the dawn of the Bronze Age but continued to develop further. This continuity is evidenced perhaps most profoundly by the Iron Age brochs of Orkney, whose interiors often utilised spatial arrangements of notable similarity to their architectural forebears in the Neolithic. In addition, settlement sites such as Jarlshof in Shetland, occupied during the Bronze and Iron Ages, further accentuates this continuity, whose systems of hearths, alcoves and ambries also owed themselves to the buildings Neolithic Orkney (Childe 1938a; Hamilton 1956).

Beyond this, further excavation is required, particularly in order to ascertain the truest extent possible of dwelling patterns across Neolithic Orkney as well as those associated with mortuary activity. Previously, Barber (2000) drew attention to the undeniable fact that the tombs of Orkney were significantly too few to account for all the Neolithic period's dead. This serves as a clear indication that the vast majority of human burials were situated beyond the confines of tombs and elucidating these wider mortuary practices is vital in order to arrive at a fuller understanding of mortuary architecture. Yet the same can be argued for domestic architecture as well. Again, it is almost inconceivable that the domestic buildings discovered so far could account for the entire population of Neolithic Orkney. The most likely explanation for this discrepancy is that throughout the majority of this period, Orkney's inhabitants lived a fairly mobile existence whose dwellings were extremely ephemeral (*cf.* Thomas 2013, 401). Indeed, throughout the past couple of decades the extent to which full-scale sedentism was practiced throughout Neolithic Britain and Ireland has been questioned by several authors (e.g. Barrett 1994; Darvill 1996; Rowley-Conwy 2004; Thomas 1991, 28; 2007; Whittle 1997 etc. *cf.* Smyth 2014, 51–2). Is it possible that the few domestic buildings and sites known of at present were reserved for inhabitants with some form of special status, while everyone else lived in temporary settings? Or are there many other permanent settlement sites out there yet to be discovered? Only further archaeological investigation in the field can begin to answer these questions.

6.4 Closing Statement

Within this thesis I have attempted to analyse the architecture of Neolithic Orkney from a non-representational perspective. As a result, I have devised a grand narrative explaining the evolution of this architecture throughout the Neolithic period, while simultaneously retaining sufficient degrees of contextual sensitivity. The timeline outlined in Section 6.1 is of course a very broad one, yet it goes some way in revealing the deep historical roots that all forms of Neolithic architecture in Orkney had. Moreover, this timeline demonstrates the fallibility of representational thought, as inherent within Richards' cosmological model of Late Neolithic Orkney (e.g. 1996b), which is fundamentally static and ahistorical. To understand the Neolithic architecture of Orkney is to understand where it came from and how it developed. To ignore this factor is to assume that this same architecture was a perfect representation of a higher social structure, which appeared out of nowhere and which had no need to change or develop further.

In addition, it is through this kind of thinking that the archaeological evidence becomes subsumed under a pre-packed theoretical model, or a representational whole whose workings are already known before any analysis has taken place. Hopefully, this thesis has demonstrated the power of prioritising fragments over wholes, of emphasising basic description over abstract rumination, and perhaps most importantly, of allowing ourselves to be swept away on a journey into the deep past that is guided by the archaeological evidence itself.

Appendix A: Skara Brae and the Blackhouses

It was stated in Section 3.2 of the main thesis that one of the key elements of Childe's work that has lived on in modern studies of Neolithic Orkney is the spatial terminology he used to describe the interiors of Neolithic houses. Childe based this terminology largely on his observations of the Scottish blackhouses – traditional drystone dwellings that up until the end of the Victorian period could be found across the Highlands and the Hebrides. Blackhouses were exclusively inhabited by peasant families and were generally small in size and sparsely furnished on the inside by simple articles of furniture. Moreover, blackhouses often incorporated a byre at one end of the building in which livestock was kept. However, blackhouses were tied to a far wider tradition of vernacular architecture in Scotland (and indeed northern Europe more broadly). This architectural tradition includes other similar buildings, such as shielings (seasonal dwelling used during transhumance) or crofter's cottages (similar to blackhouses, but without connected byres), some of which are still inhabited today. It should also be mentioned that not all blackhouses incorporated byres (Dalglish 2003, 101), meaning that significant architectural overlaps often exist between blackhouses and crofter's cottages.

Childe suggested that within each hut at Skara Brae the females occupied the left side, and the males occupied the right (Childe 1931d, 15). This idea was based partly on the archaeological evidence, as Childe observed that the left-hand bed of most huts was generally smaller than the right. However, an identical gender divide could also be observed within traditional blackhouses, in which the occupying household's women would always huddle to the left of the hearth and the men to the right (Mitchell 1880, 52). Childe also hypothesised that Skara Brae's huts may have been topped with whalebone rafters (Childe 1931c, 48). Again, parallels can be seen here with the Hebridean blackhouses, where whalebones were often incorporated into their roof trusses (Walker and McGregor 1996). In addition, anybody who has ever visited the sixteenth century Kirbuster Firehouse in Orkney will also be familiar with the use of whalebone in the construction of key architectural members, as the process of approaching this house involves passing under a whalebone arch. Although this arch is a fairly recent addition, it nonetheless highlights the deep connection that Scottish vernacular architecture has to its surrounding natural environment. This connection is further accentuated when we consider that blackhouses were always constructed from materials that were ready to hand within the local environment, such as wood from shipwrecks (Walker and McGregor 1996) or stones and peat

gathered from local moors by the inhabitants themselves (Thompson 1992, 13). They were the most vernacular of vernacular architecture, and because of this the blackhouses were reminiscent of a bygone prehistoric era. Indeed, Childe was not the only archaeologist of his time to draw on them as direct analogies for prehistoric architecture (see Piggott 1966). As Poller nicely sums up, “archaeologists saw blackhouses as ‘living’ examples of ‘primitive’ architecture still in use in their contemporary world” (2012, 39). Interestingly, at settlements such as Allt Chrisal on Barra there exists definitive evidence that blackhouses were constructed directly above former Neolithic sites (Foster 1995), which provides us with another interesting parallel between these buildings and the prehistoric past.



Figure A 1. Foundation of either a box-bed or dresser within blackhouse at Allt Chrisal, Barra, Outer Hebrides (from Branigan and Merrony 2000)

Within the context of how he viewed each hut's interior, it could be argued that Childe's way of describing the arrangements of furniture and storage space was also based largely on his understanding of blackhouses. To the aforementioned beds to the right and left of the central hearth he ascribed the term 'box-beds' (e.g. Childe 1931b; 1931c; 1931d); precisely the same description given to the beds within blackhouses. For instance, at the township of Arnol on the Isle of Lewis – a former hub of blackhouse construction – what were known as 'wooden box-beds' came into fashion during the late nineteenth century (Fenton 1985, 77). The boxed-in

nature of these sleeping places would have protected the inhabitants from the damp conditions of their dwellings, and in fairness to Childe it seems very likely that the same rationale would have been applied at Skara Brae. Occasionally, the beds of the Blackhouses came in the form of *crubs* or ‘wall-beds’, which were recessed into the inner wall faces of the building (Holden 2004, 31), demonstrating another point of similarity between blackhouses and the huts of Skara Brae. Furthermore, Childe’s descriptions of the ‘hearths’ and ‘dressers’ at Skara Brae also seem heavily influenced by the ways in which Scottish peasants inhabited their blackhouses. These terms were probably deliberately chosen by Childe to invoke an image of nucleated families living cozy lives in their homely abodes, thus creating yet another link with blackhouse life.



Figure A 2. Interior of no. 42, Arnol (from www16)

In a number of respects, Childe’s description of many of the buildings at Skara Brae could have equally applied to, for example, no. 42 at Arnol, where an arrangement of ‘dressers’ and ‘box-beds’ surrounded a central ‘hearth’ around which the family could also gather for warmth (Fenton 1978, 19) (fig. A 2). Richards has argued that, on the whole, Childe’s view of Neolithic Orkney was grounded in his experience of a “highly parochial Scotland” (1995, 122), and this is something I would undoubtedly agree with. As a result of this perception, Childe regarded the buildings of Skara Brae as conforming almost wholly to peasant architecture, without considering the possibility that their inhabitants were not peasants in the strict modern or Victorian sense.

Appendix B: List of Features

This appendix includes a list of the architectural features described in Chapter 5 of the main thesis, which have all been given a distinct context number.

Context number	Type	Physical appearance	Site	Building	Dimensions	Date	Date reference
001	Hearth	Stone-lined, square	Barnhouse	H3	1m ²	c. 3145–3080 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
002	Hearth	Scoop	Barnhouse	H3	0.64m x 1m	c. 3145–2880 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
003	Hearth	Stone-lined, rectangular	Barnhouse	H5	0.98m x 0.30m	c. 3125–2955 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
004	Hearth	Stone-lined, rectangular	Barnhouse	H5	0.74m x 0.63m	c. 3125–2920 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
005	Hearth	Stone-lined	Barnhouse	H5	Unknown	c. 3125–2920 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
006	Hearth	Stone-lined, rectangular	Barnhouse	H5	0.70m x 0.63m	c. 3125–2920 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
007	Hearth	Stone-lined, rectangular	Barnhouse	H9	1.10m x 1m	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
008	Hearth	Stone-lined, rectangular	Barnhouse	H2	1.35m x 1.20m	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
009	Oven	Clay-lined, domed	Barnhouse	H2	0.55m ²	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018

Context number	Type	Physical appearance	Site	Building	Dimensions	Date	Date reference
010	Hearth	Stone-lined, square	Barnhouse	H2	0.92m ²	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
011	Hearth	Stone-lined, square	Barnhouse	H7	0.90m ²	c. 3130–3025 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
012	Hearth	Stone-lined, square	Barnhouse	H7	Unknown	Late Neolithic	Richards <i>et al.</i> 2016d; Whittle 2018
013	Hearth	Stone-lined, rectangular	Barnhouse	H11	0.80m x 0.90m	c. 3000–2920 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
014	Hearth	Stone-lined, rectangular	Barnhouse	H6	0.52m x 0.41m	c. 3130–3000 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
015	Hearth	Stone-lined, square	Barnhouse	H1	0.75m ²	TPQ c. 3000 cal BC?	Richards <i>et al.</i> 2016d; Whittle 2018
016	Hearth	Stone-lined, rectangular	Barnhouse	H10	0.80m x 0.64m	Late Neolithic	Richards <i>et al.</i> 2016d; Whittle 2018
017	Hearth	Stone-lined, rectangular	Barnhouse	S8	2.15m x 0.90m/0.70m x 0.80m	TAQ c. 3010–2995 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
018	Hearth	Stone-lined, rectangular	Barnhouse	S8	1.10m x 0.39m	c. 3010–2870 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
019	Hearth/series of hearths	Rectangular?	Barnhouse	S8	2.39m x 0.77m	c. 3010–2870 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
020	Hearth/ series of hearths	Rectangular?	Barnhouse	S8	1.62m x 0.77m	c. 3010–2870 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
021	Oven	Clay-lined, domed	Barnhouse	S8	0.30m ²	c. 3010–2870 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
022	Hearth	Stone-lined, square	Barnhouse	S8	0.62m ²	c. 3010–2870 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018

Context number	Type	Physical appearance	Site	Building	Dimensions	Date	Date reference
023	Hearth	Stone-lined, rectangular	Barnhouse	S8	0.75m x 0.32m	c. 3010–2870 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
024	Hearth	Stone-lined, rectangular	Barnhouse	S8	1m x 0.79m	c. 3010–2870 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
025	Hearth	Stone-lined	Barnhouse	H4	Unknown	TPQ c. 3000–2990 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
026	Hearth	Stone-lined	Barnhouse	H12	Unknown	c. 3130–3025 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
027	Hearth	Stone-lined, square	Skara Brae	H1	0.65m ²	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
028	Hearth	Stone-lined, square	Skara Brae	H2	0.50m ²	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
029	Hearth	Stone-lined, rectangular?	Skara Brae	H5	0.50m x >0.50m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
030	Hearth	Stone-lined, square	Skara Brae	H7	0.50m ²	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
031	Hearth	Stone-lined, rectangular	Skara Brae	H8	0.43m x 0.32m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
032	Hearth	Stone-lined, rectangular	Skara Brae	H6	0.45m x 0.32m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
033	Hearth	Stone-lined, rectangular	Skara Brae	H9	0.42m x 0.39m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
034	Kiln	Stone-lined, rectangular	Skara Brae	H8	1.04m x 0.91m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
035	Hearth	Stone-lined, rectangular	Rinyo	DA	0.60m x 0.52m	Late Neolithic, 3 rd millennium	n/a

Context number	Type	Physical appearance	Site	Building	Dimensions	Date	Date reference
036	Hearth	Stone-lined, rectangular	Rinyo	DD	0.78m x 0.48m	Late Neolithic, 3 rd millennium	n/a
037	Hearth	Stone-lined, rectangular	Rinyo	DG	1.07m x 0.96m	Late Neolithic, 3 rd millennium	n/a
038	Hearth	Stone-lined, rectangular	Rinyo	DB	0.58m x 0.51m	Late Neolithic, 3 rd millennium	n/a
039	Hearth	Stone-lined, rectangular	Rinyo	DE	0.79m x 0.70m	Late Neolithic, 3 rd millennium	n/a
040	Hearth	Stone-lined, rectangular	Rinyo	DF	0.76m x 0.65m	Late Neolithic, 3 rd millennium	n/a
041	Hearth	Stone-lined, rectangular?	Rinyo	DK	1.40m x >0.52m	Late Neolithic, 3 rd millennium	n/a
042	Hearth	Stone-lined, rectangular	Rinyo	DC	1.20m ²	Late Neolithic, 3 rd millennium	n/a
043	Oven	Clay-lined, domed	Rinyo	DC	0.70m x 0.26m	Late Neolithic, 3 rd millennium	n/a
044	Oven	Clay-lined, domed	Rinyo	DC	Unknown	Late Neolithic, 3 rd millennium	n/a
045	Hearth	Stone-lined, rectangular	Knap of Howar	H2	0.80m x 0.66m	c. 3300 cal BC	Griffiths 2016
046	Hearth	Scoop	Knap of Howar	H1	1.30m x 1.20m	c. 3300 cal BC	Griffiths 2016
047	Hearth	Stone-lined, square	Ness of Brodgar	S1	1m ²	c. 2770–2570 cal BC or c. 2865–2695 cal BC	Card <i>et al.</i> 2018; Whittle 2018
048	Hearth	Stone-lined, rectangular	Ness of Brodgar	S1	1.09m x 0.73m	c. 2770–2570 cal BC or c. 2865–2695 cal BC	Card <i>et al.</i> 2018; Whittle 2018
049	Hearth	Stone-lined, square	Ness of Brodgar	S1	0.80m ²	c. 2770–2570 cal BC or c. 2865–2695 cal BC	Card <i>et al.</i> 2018; Whittle 2018
050	Hearth	Stone-lined, rectangular?	Ness of Brodgar	S8	>0.80m x >0.65m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
051	Hearth	Stone-lined, square- rectangular	Ness of Brodgar	S8	0.70m x 0.65m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
052	Hearth	Stone-lined, square- rectangular	Ness of Brodgar	S8	0.44m x 0.38m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
053	Hearth	Stone-lined, square- rectangular	Ness of Brodgar	S8	0.46m x 0.41m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
054	Hearth	Stone-lined, rectangular	Ness of Brodgar	S8	1.50m x 0.60m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018

Context number	Type	Physical appearance	Site	Building	Dimensions	Date	Date reference
055	Hearth	Stone-lined, square-rectangular	Ness of Brodgar	S12	1.15m x 1.10m	TAQ <i>c.</i> 2880–2620 cal BC or <i>c.</i> 2885–2730 cal BC	Card <i>et al.</i> 2018; Whittle 2018
056	Hearth	Stone-lined, square-rectangular	Ness of Brodgar	S12	1.10m x 1.05m	TAQ <i>c.</i> 2880–2620 cal BC or <i>c.</i> 2885–2730 cal BC	Card <i>et al.</i> 2018; Whittle 2018
057	Hearth	Stone-lined, rectangular	Ness of Brodgar	S14	1m x 0.70m	TAQ <i>c.</i> 2995–2905 cal BC or <i>c.</i> 2970–2900 cal BC	Card <i>et al.</i> 2018; Whittle 2018
058	Hearth	Stone-lined, rectangular	Ness of Brodgar	S14	0.80m x 0.65m	TAQ <i>c.</i> 2995–2905 cal BC or <i>c.</i> 2970–2900 cal BC	Card <i>et al.</i> 2018; Whittle 2018
059	Hearth	Stone-lined, square	Ness of Brodgar	S10	1.10m ²	TAQ <i>c.</i> 2990–2895 cal BC or <i>c.</i> 2965–2895 cal BC	Card <i>et al.</i> 2018; Whittle 2018
060	Hearth	Stone-lined, rectangular	Stones of Stenness	n/a	2.1m x 1.9m	TPQ <i>c.</i> 3060–2880 cal BC, TAQ <i>c.</i> 2900–2660 cal BC	Griffiths and Richards 2013
061	Hearth	Square, timber-lined?	Stones of Stenness	n/a	1m ²	TPQ <i>c.</i> 3060–2880 cal BC, TAQ <i>c.</i> 2900–2660 cal BC	Griffiths and Richards 2013
062	Hearth	Scoop	Smerquoy Hoose	n/a	0.60m x 0.68m	TPQ <i>c.</i> 3460–3120 cal BC	Griffiths 2016
063	Hearth	Stone-lined, rectangular	Smerquoy Hoose	n/a	1.16m x 0.67m	TPQ <i>c.</i> 3460–3120 cal BC	Griffiths 2016
064	Hearth	Scoop	Knowes of Trotty	n/a	0.93m x 0.79m	<i>c.</i> 3280–3110 cal BC	Griffiths 2016
065	Hearth	Scoop	Knowes of Trotty	n/a	0.57m x 0.43m	<i>c.</i> 3280–3110 cal BC	Griffiths 2016
066	Hearth	Stone-lined, rectangular	Knowes of Trotty	n/a	1.29m x 0.68m	<i>c.</i> 3280–3110 cal BC	Griffiths 2016
067	Hearth	Scoop	Wideford Hill	TS1	0.62m x 0.59m	<i>c.</i> 3590–3310 cal BC	Griffiths 2016
068	Hearth	Scoop	Wideford Hill	TS2	0.48m x 0.45m	<i>c.</i> 3590–3310 cal BC	Griffiths 2016
069	Hearth	Scoop	Wideford Hill	TS3	0.80m x 0.60m	<i>c.</i> 3590–3310 cal BC	Griffiths 2016
070	Hearth	Scoop	Barnhouse Odin	n/a	1.05m x 0.95m	Late Neolithic	n/a
071	Hearth	Unknown	Stonehall Farm	S1	<0.95m x <0.90m	<i>c.</i> 3310–2880 cal BC	Griffiths 2016
072	Cist	Stone-lined, square	Stonehall Farm	S1	0.58m x 0.56m	<i>c.</i> 3310–2880 cal BC	Griffiths 2016
073	Oven	Clay-lined, domed	Stonehall Farm	S1	0.99m x 0.64m	<i>c.</i> 3310–2880 cal BC	Griffiths 2016
074	Cist	Stone-lined, rectangular	Howe of Howe	Domestic building	1.20m x 0.70m	Early Neolithic?	n/a

Context number	Type	Physical appearance	Site	Building	Dimensions	Date	Date reference
				underling tomb			
075	Hearth	Scoop	Huntersquoy	n/a	0.76m x 0.46m	Neolithic	n/a
076	Hearth	Scoop	Bookan	n/a	0.20m ²	Neolithic	n/a
077	Hearth	Scoop	Bookan	n/a	0.20m ²	Neolithic	n/a
078	Hearth	Scoop	Bigland Round	n/a	0.50m x 0.40m	Neolithic	n/a
079	Hearth	Scoop	Knowe of Craie	n/a	0.45m ²	Neolithic	n/a
080	Bonfire	Clamped	Knowes of Trotty	n/a	Unknown	Early Neolithic	n/a
341	Hearth	Scoop	Knap of Howar	H2	0.90m ²	c. 3300 cal BC	Griffiths 2016

Table B 1. List of hearths and hearth-like features described in Section 5.2

Context number	Type	Site	Building	Jambs	Alignment of jambs to reveal/side wall	Threshold	Other	Orientation	Dimensions	Date	Date reference
081	Doorway, principal	Barnhouse	H3	✓	Parallel	✓	n/a	NNE–SSW	0.60m wide x 1.53m long	c. 3145–3080 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
082	Doorway, principal	Barnhouse	H5	?	?	?	n/a	E–W	0.42m wide	c. 3125–2920 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
083	Doorway, principal	Barnhouse	H9	✓	Parallel	?	Passageway	NW–SE	0.42m wide	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
084	Doorway, principal	Barnhouse	H2	✕	n/a	✓	Passageway	NW–SE	1.20m wide x 2.80m long	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
085	Doorway, principal	Barnhouse	H7	✓	Parallel	?	n/a	NNW–SSE	0.57m wide	c. 3130–3025 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
086	Doorway, principal	Barnhouse	H1, H6	✓	Parallel	✓	n/a	NNE–SSW	0.50–0.58m wide x 1.33m long x c. 1.50m high	TPQ c. 3000 cal BC?	Richards <i>et al.</i> 2016d; Whittle 2018
087	Doorway?	Barnhouse	S8	✓	n/a	✓	Hearth, vestibule, pillars	NNE–SSW	1.80m wide x 5.30m long	c. 3010–2955 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
088	Doorway, principal	Barnhouse	H12	✓	Parallel	?	n/a	NW–SE	0.52m wide	c. 3130–3025 cal BC	Richards <i>et al.</i>

Context number	Type	Site	Building	Jambs	Alignment of jambs to reveal/side wall	Threshold	Other	Orientation	Dimensions	Date	Date reference
											2016d; Whittle 2018
089	Doorway, principal	Skara Brae	H7	✓	Parallel	✓	Lintel, locking channels	NNE-SSW	0.61m wide x 0.73 long x 0.91m high	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
090	Doorway, principal	Skara Brae	H1	✓	Parallel	✓	Lintel, locking channels	NW-SE	0.45m wide x 0.88m long	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
091	Doorway, principal	Skara Brae	H2	✓	Perpendicular	✓	Lintel, locking channels	NW-SE	0.42m wide x 1.12m long	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
092	Doorway, principal	Skara Brae	H3	✓	Perpendicular	?	Locking channels	N-S	c. 0.23–0.35m wide x 0.88m long	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
093	Doorway, principal	Skara Brae	H4	✓	Perpendicular, parallel	✓	Lintel, locking channels, door checks?	NW-SE	0.46m wide x 0.58m long	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
094	Doorway, principal	Skara Brae	H8	✓	Perpendicular	✓	Lintel, locking channels, porch	N-S	0.40m wide x 0.65m long x 0.69m high?	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
095	Doorway?	Skara Brae	H8	✗	n/a	✗	Porch	E-W	0.30m wide x 0.22m long x 1.17m high	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
096	Doorway	Skara Brae	H8	✓	n/a	✗	Locking channel, porch	E-W	0.30m wide x 0.33m long	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018

Context number	Type	Site	Building	Jambs	Alignment of jambs to reveal/side wall	Threshold	Other	Orientation	Dimensions	Date	Date reference
097	Opening	Skara Brae	H8	✗	n/a	✗	Locking channels	N-S	0.30m wide	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
098	Doorway	Skara Brae	Corridor	✓	Perpendicular	✓	Lintel, locking channels	E-W	0.53m wide x 1.04m high	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
099	Cased opening?	Skara Brae	Corridor	✓	n/a	✗	Lintel	E-W	0.53m wide x 0.99m high	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
100	Cased opening, principal	Maeshowe	n/a	✓	Perpendicular	✓	Lintel, blocking stone	NE-SW	0.68m wide x 1.10m high	c. 2700 BC?	Davidson and Henshall 1989
101	Cased opening	Maeshowe	n/a	✓	Parallel	✓	Lintel, blocking stone	NE-SW	0.68m wide x 1.30m high	c. 2700 BC?	Davidson and Henshall 1989
102	Cased opening, principal	Dwarfie Stane	n/a	✗	n/a	✗	Blocking stone	NNW-SSE	1.12m wide x 0.70m long x 1m high	Neolithic	n/a
103	Doorway, principal	Knap of Howar	H1	✓	Parallel	✓	Lintel, door checks	NNW-SSE	0.80m wide x 1.80m long x 1.30m high	c. 3300 cal BC	Griffiths 2016
104	Doorway, principal	Knap of Howar	H2	✓	Parallel	✓	Lintel, door checks, blocking stone, vestibule?	NNW-SSE	0.60–70m wide x 1.60m long x >1m high	c. 3300 cal BC	Griffiths 2016
105	Doorway	Knap of Howar	H1	✓	Parallel	✗	Lintel, passageway	NE-SW	0.63m wide	c. 3300 cal BC	Griffiths 2016
106	Doorway	Knap of Howar	H2	✓	Parallel	✓	Lintel, blocking stone, door	NE-SW	0.80m wide	c. 3300 cal BC	Griffiths 2016

Context number	Type	Site	Building	Jambs	Alignment of jambs to reveal/side wall	Threshold	Other	Orientation	Dimensions	Date	Date reference
							checks, passageway				
107	Cased opening	Ness of Brodgar	S1	✗	n/a	✗	Hearth	E-W	1.10m wide x 0.28m long	c. 2770–2570 cal BC or c. 2865–2695 cal BC	Card <i>et al.</i> 2018; Whittle 2018
108	Doorway	Ness of Brodgar	S1	✗	n/a	✓	Decoration		1.40m wide x 0.51m long	c. 2770–2570 cal BC or c. 2865–2695 cal BC	Card <i>et al.</i> 2018; Whittle 2018
109	Doorway	Ness of Brodgar	S1	✗	n/a	✓	Drain		0.84m wide x 1.75m long	c. 2770–2570 cal BC or c. 2865–2695 cal BC	Card <i>et al.</i> 2018; Whittle 2018
110	Doorway, principal	Knowes of Trotty	n/a	?	n/a	✓	n/a	N-S?	0.93m wide	c. 3280–3110 cal BC	Griffiths 2016
111	Doorway?	Knowes of Trotty	n/a	✓	Parallel	✓	Passageway	E-W	1.07m wide	c. 3280–3110 cal BC	Griffiths 2016
112	Doorway	Knowes of Trotty	n/a	✗	n/a	✗	Locking channel	NNW-SSE	0.79m wide x 0.89m long	c. 3280–3110 cal BC	Griffiths 2016
113	Cased opening, principal	Midhowe	n/a	✓	Perpendicular	✗	Passageway, blocking stone	NW-SE	0.80m wide	Early Neolithic	n/a
114	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls	NW-SE	0.90m wide x >1.49m high	Early Neolithic	n/a
115	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls, lintel	NW-SE	0.92m wide x 1.54 high	Early Neolithic	n/a
116	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls	NW-SE	0.90m wide x >1.65m high	Early Neolithic	n/a
117	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls	NW-SE	0.95m wide x 1.69m high	Early Neolithic	n/a
118	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls, lintel	NW-SE	1.25m wide x 2.13m high	Early Neolithic	n/a
119	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls	NW-SE	0.89m wide x >2.38m high	Early Neolithic	n/a

Context number	Type	Site	Building	Jambs	Alignment of jambs to reveal/side wall	Threshold	Other	Orientation	Dimensions	Date	Date reference
120	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls	NW–SE	1.03m wide x >1.94m high	Early Neolithic	n/a
121	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls, lintel	NW–SE	0.94m wide x 1.96m high	Early Neolithic	n/a
122	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls	NW–SE	0.98m wide x >1.30m high	Early Neolithic	n/a
123	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls	NW–SE	0.94m wide x >1.50m high	Early Neolithic	n/a
124	Cased opening	Midhowe	n/a	✓	Perpendicular	✗	Stalls, lintel	NW–SE	1.04m wide x 1.33m high	Early Neolithic	n/a
125	Cased opening, principal	Blackhammer	n/a	✗	n/a	✗	Blocking stone	N–S	0.72m wide x c. 3.10m long	Early Neolithic	n/a
126	Cased opening	Blackhammer	n/a	✓	Perpendicular	✗	Stalls	E–W	0.45m wide x c. 1.57m high	Early Neolithic	n/a
127	Cased opening	Blackhammer	n/a	✓	Perpendicular	✗	Stalls	E–W	0.74m wide x >0.89m high	Early Neolithic	n/a
128	Cased opening	Blackhammer	n/a	✓	Perpendicular	✗	Stalls	E–W	0.95m high	Early Neolithic	n/a
129	Cased opening	Blackhammer	n/a	✓	Perpendicular	✗	Stalls	E–W	Unknown	Early Neolithic	n/a
130	Cased opening	Blackhammer	n/a	✓	Perpendicular	✗	Stalls	E–W	Unknown	Early Neolithic	n/a
131	Cased opening	Blackhammer	n/a	✓	Perpendicular	✗	Stalls	E–W	0.61m wide x c. 1.63m high	Early Neolithic	n/a
132	Causeway	Ring of Brodgar	n/a	✗	n/a	✗	n/a	NW–SE	3.05m wide x 12m long	Late Neolithic	n/a
133	Causeway	Ring of Brodgar	n/a	✗	n/a	✗	n/a	NW–SE	1.18m wide x 9.50m long	Late Neolithic	n/a
342	Doorway	Barnhouse	S8	✓	Parallel	✗	n/a	E–W	0.70m wide x > 0.85m long	c. 3010–2870 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018

Context number	Type	Site	Building	Jambs	Alignment of jambs to reveal/side wall	Threshold	Other	Orientation	Dimensions	Date	Date reference
343	Cased opening	Deepdale	n/a	✓	Perpendicular (if walls are imagined)	✗	n/a	NW–SE	36.60m wide	Neolithic	n/a

Table B 2. List of entrances and entrance-like features described in Section 5.3

Context number	Type	Site	Building	Architectural setting	Placement in building	Number of storage spaces	Dimensions	Date	Date reference
135	Dresser	Barnhouse	H3	Keyed into wall	Rear	>2	1.40m wide x >0.40m high	c. 3145–3080 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
136	Cist	Barnhouse	H2	Dug into floor	Eastern half	1	0.86m x 0.78m	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
137	Chest	Barnhouse	H2	Sunk into floor	Western half, central	1	0.70m x 0.69m x 0.50m deep	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
138	Pit	Barnhouse	H2	Dug into floor	Western half, central	1	0.60m diameter	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
139	Pit	Barnhouse	H2	Dug into floor	Western half, central	1	0.40m diameter	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
140	Chest	Barnhouse	n/a	Sunk into floor	n/a	1	Unknown	Late Neolithic	Richards <i>et al.</i> 2016d; Whittle 2018
141	Dresser?	Barnhouse	H10	Unknown	Rear?	Unknown	Unknown	Late Neolithic	Richards <i>et al.</i> 2016d; Whittle 2018
142	Dresser	Barnhouse	S8	Unknown	Rear	>3	2.03m wide	TAQ c. 3010–2995 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
143	Chest	Barnhouse	S8	Sunk into floor	Rear	1	2.15m long x 0.75m wide	TAQ c. 3010–2995 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018

Context number	Type	Site	Building	Architectural setting	Placement in building	Number of storage spaces	Dimensions	Date	Date reference
144	Chest	Barnhouse	S8	Sunk into floor	Side	1	2.22m long	TAQ c. 3010–2995 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
145	Chest	Barnhouse	S8	Sunk into floor	Side	1	2.89m long	TAQ c. 3010–2995 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
146	Pit	Barnhouse	S8	Dug into floor	Corner	1	Unknown	TAQ c. 3010–2995 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
147	Pit	Barnhouse	S8	Dug into floor	Corner	1	Unknown	TAQ c. 3010–2995 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
148	Chest	Barnhouse	S8	Sunk into floor	Corner	1	0.34m x 0.16m x 0.12m deep	c. 3010–2870 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
149	Pit	Barnhouse	S8	Dug into floor	Corner	1	0.40m ² x 0.15m deep	c. 3010–2870 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
150	Dresser	Barnhouse	H12	Unknown	Rear	>2	>0.27m wide	c. 3130–3025 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
151	Dresser	Skara Brae	H7	Keyed into wall	Rear	5	0.80m wide x 1.32m high	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
152	Dresser	Skara Brae	H1	Keyed into wall	Rear	5	1.08m wide x 1.30m high	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018

Context number	Type	Site	Building	Architectural setting	Placement in building	Number of storage spaces	Dimensions	Date	Date reference
153	Dresser	Skara Brae	H4	Recessed into wall	Rear	>2	0.62m wide	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
154	Cupboard	Skara Brae	H2	Keyed into wall	Rear	1	0.27m wide	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
155	Cupboard	Skara Brae	H5	Keyed into wall	Rear	1	0.33m wide	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
156	Dresser	Skara Brae	H8	Recessed into wall	Side	2	0.23m wide	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
157	Dresser	Ness of Brodgar	S10	Freestanding	Side	>2	>1.50m wide	TAQ c. 2990–2895 cal BC or c. 2965–2895 cal BC	Card <i>et al.</i> 2018; Whittle 2018
158	Dresser	Ness of Brodgar	S10	Free-standing	Rear	>2	2.10m wide	TAQ c. 2990–2895 cal BC or c. 2965–2895 cal BC	Card <i>et al.</i> 2018; Whittle 2018
159	Dresser	Ness of Brodgar	S10	Freestanding	Side	>2	>1.77m wide	TAQ c. 2990–2895 cal BC or c. 2965–2895 cal BC	Card <i>et al.</i> 2018; Whittle 2018
160	Dresser	Ness of Brodgar	S10	Freestanding	Front	>2	Unknown	TAQ c. 2990–2895 cal BC or c. 2965–2895 cal BC	Card <i>et al.</i> 2018; Whittle 2018
161	Bench	Midhowe	n/a	Keyed into wall	Side	2	1.87m wide	Early Neolithic	n/a

Context number	Type	Site	Building	Architectural setting	Placement in building	Number of storage spaces	Dimensions	Date	Date reference
162	Bench	Midhowe	n/a	Keyed into wall	Side	2	2.17m wide	Early Neolithic	n/a
163	Bench	Midhowe	n/a	Keyed into wall	Side	2	1.98m wide	Early Neolithic	n/a
164	Bench	Midhowe	n/a	Keyed into wall	Side	2	1.86m wide	Early Neolithic	n/a
165	Bench	Midhowe	n/a	Keyed into wall	Side	2	1.96m wide	Early Neolithic	n/a
166	Bench	Midhowe	n/a	Keyed into wall	Side	2	2.15m wide	Early Neolithic	n/a
167	Bench	Midhowe	n/a	Keyed into wall	Side	2	1.87m wide	Early Neolithic	n/a
168	Bench	Midhowe	n/a	Keyed into wall	Rear	2	2.20m wide	Early Neolithic	n/a
169	Bench	Stonehall Knoll	H2	Unknown	Side	Unknown	Unknown	Late 4 th millennium BC	Griffits 2016
170	Bed	Skara Brae	H7	Abutted the wall	Side	2	0.97m long x 0.48m wide x 0.91m high (max)	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
171	Bed	Skara Brae	H7	Abutted the wall	Side	2	0.69m long x 0.47m wide x 1.22m high	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
172	Bed?	Skara Brae	H7	Abutted wall	Corner	1	0.57m x 0.62m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
173	Cist	Skara Brae	H7	Beneath wall	Side	1	1.10m long x 0.81m wide x 0.36m deep	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018

Context number	Type	Site	Building	Architectural setting	Placement in building	Number of storage spaces	Dimensions	Date	Date reference
174	Chest	Skara Brae	H7	Sunk into floor	Corner	1	0.16m x 0.09m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
175	Chest	Skara Brae	H7	Sunk into floor	Corner	1	0.15m x 0.13m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
176	Chest	Skara Brae	H7	Sunk into floor	Corner	1	0.17m ²	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
177	Chest	Skara Brae	H3	Sunk into floor	Rear	1	Unknown	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
178	Chest	Skara Brae	H3	Sunk into floor	Rear	1	Unknown	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
179	Cist	Point of Cott	n/a	Freestanding	Side	1	0.63m x 1.68m x 0.43m deep	c. 3630–3360 cal BC	Griffiths 2016
180	Cist	Point of Cott	n/a	Freestanding	Side	1	0.50m x 1.55m x 0.43m deep	c. 3630–3360 cal BC	Griffiths 2016
181	Cist	Quoyness	n/a	Sunk into floor	Corner	1	0.84m diameter x 0.20m deep	c. 3340–3090 cal BC	Griffiths 2016
182	Cist	Maeshowe	n/a	Freestanding	Extramural	1	2.1m x >0.60m, and was 0.40m deep	c. 2700 BC?	Davidson and Henshall 1989
183	Dresser	Crossiecown	RH	Keyed in wall?	Rear	Unknown	1.33, wide	Early 3 rd millennium BC?	Griffiths 2016

Context number	Type	Site	Building	Architectural setting	Placement in building	Number of storage spaces	Dimensions	Date	Date reference
184	Chest	Crossiecown	RH	Freestanding	Corner	1	0.40m ²	Early 3 rd millennium BC?	Griffiths 2016
185	Chest	Crossiecown	RH	Freestanding	Corner	1	0.73m x 0.93m	Early 3 rd millennium BC?	Griffiths 2016
186	Chest	Crossiecown	RH	Freestanding	Corner	1	0.40m ²	Early 3 rd millennium BC?	Griffiths 2016
187	Dresser?	Crossiecown	GH	Keyed into wall	Rear	Unknown	Unknown	Early 3 rd millennium BC?	Griffiths 2016
188	Chest	Crossiecown	GH	Freestanding	Centre	1	0.55m x 0.45m	Early 3 rd millennium BC?	Griffiths 2016
189	Chest	Crossiecown	GH	Freestanding	Corner	1	c. 0.55m x 0.45m	Early 3 rd millennium BC?	Griffiths 2016
190	Chest	Crossiecrown	GH	Freestanding	Central	1	0.45m x 0.35m	Early 3 rd millennium BC?	Griffiths 2016
191	Chest?	Crossiecrown	GH	Unknown	Central	1	c. 1m x 0.85m	Early 3 rd millennium BC?	Griffiths 2016
192	Chest?	Crossiecrown	GH	Unknown	Central	1	c. 0.40m x 0.33m	Early 3 rd millennium BC?	Griffiths 2016

Context number	Type	Site	Building	Architectural setting	Placement in building	Number of storage spaces	Dimensions	Date	Date reference
193	Ambry	Skara Brae	H8	Built into wall	Side	1	0.27m wide	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
194	Ambry	Skara Brae	H8	Built into wall	Side	1	0.28m wide	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
195	Ambry	Skara Brae	H8	Built into wall	Side	1	0.08m wide	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
196	Ambry	Skara Brae	H8	Built into wall	Side	1	0.22m wide	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
191	Ambry	Knap of Howar	H2	Built into wall	Side	1	0.86m wide	c. 3300 cal BC	Griffiths 2016
192	Ambry	Knap of Howar	H2	Built into wall	Side	1	0.59m wide	c. 3300 cal BC	Griffiths 2016
193	Ambry	Knap of Howar	H2	Built into wall	Side	1	0.46m wide	c. 3300 cal BC	Griffiths 2016
194	Ambry	Knap of Howar	H2	Built into wall	Side	1	0.31m wide	c. 3300 cal BC	Griffiths 2016

Table B 3. List of dressers and dresser-like features described in Section 5.4

Context number	Type	Site	Building	Key features	Placement in building	Dimensions	Date	Date reference
208	Bay	Barnhouse	H3	Hearth	Central	5.13m x 1.82m	c. 3145–3080 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
209	Alcove	Barnhouse	H3	Dividing screen, Postholes?	Side	2.30m x 1.20m	c. 3145–3080 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
210	Alcove	Barnhouse	H3	Dividing screen	Side	2.30m x 1.20m	c. 3145–3080 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
211	Cell	Barnhouse	H3	Drain	Corner	1.30m x 1.13m	c. 3145–3080 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
212	Compartment	Barnhouse	H3	Hearth, dividing screen	Rear	1.09m x 2.39m	c. 3145–2880 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
213	Alcove/compartment	Barnhouse	H9	Postholes?	Side	Unknown	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
214	Bay	Barnhouse	H2	Dividing screen, hearth, oven, storage pit	Centre, west	3.72m ²	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
215	Bay	Barnhouse	H2	Dividing screen, hearth, spit/pot hanger, cist	Centre, east	3.86m x 3.12m	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
216	Alcove	Barnhouse	H2	Dividing screen, pits, stone uprights	Rear, west	3.04m x 1.56m	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
217	Alcove	Barnhouse	H2	Dividing screen, postholes, rubbish pits	Side, west	3.39m x 1.70m	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
218	Alcove	Barnhouse	H2	Dividing screen, postholes	Front, west	3.04m x 1.63m	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
219	Alcove	Barnhouse	H2	Dividing screen, postholes, pit, drain	Rear, east	3.13m x 1.39m	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018

Context number	Type	Site	Building	Key features	Placement in building	Dimensions	Date	Date reference
220	Alcove	Barnhouse	H2	Dividing screen, postholes, storage pit, rubbish pit	Side, east	3.52m x 1.57m	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
221	Alcove	Barnhouse	H2	Dividing screens, pit	Front, east	2.21m x 1.57m	c. 3140–3035 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
222	Alcove	Barnhouse	H7	Sunken box, drain	Rear	2.48m x 1.38m	c. 3130–3025 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
223	Alcove	Barnhouse	H6	Dividing screen	Side	1.02m x 0.98m	c. 3130–3000 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
224	Alcove	Barnhouse	H6	Dividing screen	Side	2.22m x 1.02m	c. 3130–3000 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
225	Bay	Barnhouse	H6	Hearth, drain	Centre	5.65m x 1.27m	c. 3130–3000 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
226	Alcove	Barnhouse	H10	Dividing screen	Side	2.39m x 1.39m	Late Neolithic	Richards <i>et al.</i> 2016d; Whittle 2018
227	Bay	Barnhouse	H10	Hearth	Centre	>2.78m x 2.15m	Late Neolithic	Richards <i>et al.</i> 2016d; Whittle 2018
228	Bay	Barnhouse	S8	Hearth, dressers, chests, storage pits	Centre	8m x 7.73m	TAQ c. 3010–2995 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
229	Alcove	Barnhouse	H12	Dividing screen	Side	2.07m x 0.97m	c. 3130–3025 cal BC	Richards <i>et al.</i> 2016d; Whittle 2018
230	Alcove	Skara Brae	H9	Bed	Side	0.95m x 0.50m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
231	Alcove	Skara Brae	H9	Bed	Side	0.42m x 0.93m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018

Context number	Type	Site	Building	Key features	Placement in building	Dimensions	Date	Date reference
232	Cell	Skara Brae	H9	?	Corner	0.65m ²	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
233	Bay	Skara Brae	H9	Hearth	Centre	1.80m x 1.17m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
234	Alcove	Skara Brae	H8	?	Side	0.80m x 0.50m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
235	Alcove	Skara Brae	H8	Ambries	Side	0.80m x 0.40m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
236	Cell	Skara Brae	H8	Vessel	Corner	0.25m x 0.15m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
237	Annex	Skara Brae	H8	Kiln	Rear	1.66m x 1m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
238	Bay	Skara Brae	H8	Hearth	Centre	2m x 1.80m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
239	Cell	Skara Brae	H7	?	Corner	0.56m x 0.47m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
240	Cell	Skara Brae	H2	?	Rear	0.84m x 0.62m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
241	Cell	Skara Brae	H2	?	Corner	0.62m x 0.53m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
242	Cell	Skara Brae	H1/2	?	Front	0.84m x 0.58m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
243	Cell	Skara Brae	H1	Locking mechanism	Corner	1m x 0.50m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018

Context number	Type	Site	Building	Key features	Placement in building	Dimensions	Date	Date reference
244	Cell	Skara Brae	H3	Locking mechanism	Corner	0.79m x 0.36m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
245	Cell	Skara Brae	H3	?	Corner?	0.77m x 0.66m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
246	Cell	Skara Brae	H4	Locking mechanism	Corner/front	0.50m x 0.43m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
247	Cell	Skara Brae	H4	?	Corner	0.54m x 0.50m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
248	Cell	Skara Brae	H4	?	Rear	0.63m x 0.53m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
249	Cell	Skara Brae	H5	?	Rear	0.88m x 0.72m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
250	Cell	Skara Brae	?	?	?	0.63m x 0.47m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
251	Cell	Skara Brae	H7	Locking mechanism	Front	0.66m x 0.62m	c. 2900 cal BC	Bayliss <i>et al.</i> 2017; Whittle 2018
252	Alcove	Ness of Brodgar	S10	Dresser	Side	3.49m x 1.54m	TAQ c. 2990–2895 cal BC or c. 2965–2895 cal BC	Card <i>et al.</i> 2018; Whittle 2018
253	Alcove	Ness of Brodgar	S10	Dresser	Side	3.43m x 1.43m	TAQ c. 2990–2895 cal BC or c. 2965–2895 cal BC	Card <i>et al.</i> 2018; Whittle 2018
254	Alcove	Ness of Brodgar	S10	Dresser, paint production?	Rear	5.15m x 2.58m	TAQ c. 2990–2895 cal BC or c. 2965–2895 cal BC	Card <i>et al.</i> 2018; Whittle 2018
255	Bay	Ness of Brodgar	S10	Hearth	Centre	5.50m x 4m	TAQ c. 2990–2895 cal BC or c.	Card <i>et al.</i> 2018; Whittle 2018

Context number	Type	Site	Building	Key features	Placement in building	Dimensions	Date	Date reference
							2965–2895 cal BC	
256	Cell	Ness of Brodgar	S10	?	Porch/forecourt	1.78m x 1.28m	TAQ c. 2990–2895 cal BC or c. 2965–2895 cal BC	Card <i>et al.</i> 2018; Whittle 2018
257	Alcove	Ness of Brodgar	S8	?	Side	1.57m x 1.27m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
258	Alcove	Ness of Brodgar	S8	Partition screen	Side	2.62m x 1.57m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
259	Alcove	Ness of Brodgar	S8	Partition screen	Side	2.70m x 1.53m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
260	Alcove	Ness of Brodgar	S8	Partition screen	Side	2.55m x 1.55m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
261	Alcove	Ness of Brodgar	S8	Partition screen	Side	2.60m x 1.96m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
262	Alcove	Ness of Brodgar	S8	?	Side	1.49m x 1.28m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
263	Alcove	Ness of Brodgar	S8	Partition screen	Side	2.22m x 1.48m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
264	Alcove	Ness of Brodgar	S8	Partition screen	Side	2.70m x 1.49m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
265	Alcove	Ness of Brodgar	S8	Partition screen	Rear	2.50m x 1.30m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
266	Bay	Ness of Brodgar	S8	?	Front	3.41m x 1.56m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018

Context number	Type	Site	Building	Key features	Placement in building	Dimensions	Date	Date reference
267	Bay	Ness of Brodgar	S8	Hearth	Centre	3.71m x 3.15m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
268	Bay	Ness of Brodgar	S8	Hearths	Centre	4m x 3.40m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
269	Bay	Ness of Brodgar	S8	Hearth	Centre	3.80m x 3.30m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
270	Bay	Ness of Brodgar	S8	Hearth	Rear	3.18m x 2.89m	c. 3015–2930 cal BC or c. 3005–2910 cal BC	Card <i>et al.</i> 2018; Whittle 2018
272	Stall	Midhowe	n/a	?	Side	1.31m x 0.40m	Early Neolithic	n/a
273	Stall	Midhowe	n/a	?	Side	1.56m x 0.67m	Early Neolithic	n/a
274	Stall	Midhowe	n/a	?	Side	1.68m x 0.67m	Early Neolithic	n/a
275	Stall	Midhowe	n/a	Bench, human remains	Side	2m x 0.55m	Early Neolithic	n/a
276	Stall	Midhowe	n/a	Bench, human remains	Side	1.89m x 0.69m	Early Neolithic	n/a
277	Stall	Midhowe	n/a	Bench, human remains	Side	2.13m x 0.50m	Early Neolithic	n/a
278	Stall	Midhowe	n/a	Bench, human remains	Side	1.94m x 0.45m	Early Neolithic	n/a
279	Stall	Midhowe	n/a	Bench, human remains	Side	1.90m x 0.65m	Early Neolithic	n/a
280	Stall	Midhowe	n/a	Bench, human remains	Side	1.98m x 0.60m	Early Neolithic	n/a
281	Stall	Midhowe	n/a	Bench	Side	2.20m x 0.46m	Early Neolithic	n/a
282	Stall	Midhowe	n/a	?	Side	1.90m x 0.50m	Early Neolithic	n/a
283	Stall	Midhowe	n/a	?	Side	2.11m x 0.78m	Early Neolithic	n/a
284	Stall	Midhowe	n/a	?	Side	2.09m x 0.67m	Early Neolithic	n/a
285	Stall	Midhowe	n/a	Human remains	Side	1.89m x 0.56m	Early Neolithic	n/a
286	Stall	Midhowe	n/a	?	Side	2.03m x 0.53m	Early Neolithic	n/a
287	Stall	Midhowe	n/a	?	Side	1.95m x 0.78m	Early Neolithic	n/a
288	Stall	Midhowe	n/a	?	Side	1.82m x 0.51m	Early Neolithic	n/a
289	Stall	Midhowe	n/a	?	Side	2m x 0.54m	Early Neolithic	n/a

Context number	Type	Site	Building	Key features	Placement in building	Dimensions	Date	Date reference
290	Stall	Midhowe	n/a	?	Side	1.62m x 0.52m	Early Neolithic	n/a
291	Stall	Midhowe	n/a	?	Side	1.56m x 0.50m	Early Neolithic	n/a
292	Stall	Midhowe	n/a	?	Side	1.32m x 0.62m	Early Neolithic	n/a
293	Stall	Blackhammer	n/a	?	Side	1.83m x 0.54m	Early Neolithic	n/a
294	Stall	Blackhammer	n/a	?	Side	1.80m x 0.60m	Early Neolithic	n/a
295	Stall	Blackhammer	n/a	?	Side	1.91m x 0.50m	Early Neolithic	n/a
296	Stall	Blackhammer	n/a	?	Side	1.83m x 0.45m	Early Neolithic	n/a
297	Stall	Blackhammer	n/a	?	Side	Unknown	Early Neolithic	n/a
298	Stall	Blackhammer	n/a	?	Side	1.98m x 0.54m	Early Neolithic	n/a
299	Stall	Blackhammer	n/a	?	Side	1.26m x 0.53m	Early Neolithic	n/a
300	Stall	Blackhammer	n/a	?	Side	1.19m x 0.35m	Early Neolithic	n/a
301	Stall	Blackhammer	n/a	?	Side	1.92m x 0.39m	Early Neolithic	n/a
302	Stall	Blackhammer	n/a	?	Side	1.69m x 0.45m	Early Neolithic	n/a
303	Stall	Blackhammer	n/a	?	Side	Unknown	Early Neolithic	n/a
304	Stall	Blackhammer	n/a	?	Side	1.55m x 0.45m	Early Neolithic	n/a
305	Stall	Blackhammer	n/a	?	Side	1.67m x 0.48m	Early Neolithic	n/a
306	Compartment	Midhowe	n/a	Bench, human remains	Rear	2.23m x 1.74m	Early Neolithic	n/a
307	Chamber	Maeshowe	n/a	?	Centre	18.60m ²	c. 2700 BC?	Davidson and Henshall 1989
308	Cell	Maeshowe	n/a	?	Side	1.70m x 1.40m	c. 2700 BC?	Davidson and Henshall 1989
309	Cell	Maeshowe	n/a	?	Rear	1.82m x 1.30m	c. 2700 BC?	Davidson and Henshall 1989
310	Cell	Maeshowe	n/a	?	Side	2.05m x 1.42m	c. 2700 BC?	Davidson and Henshall 1989
311	Chamber	Holm of Papa Westray South	n/a	?	Centre	20.22m x 1.20m	Late Neolithic?	n/a
312	Cell	Holm of Papa Westray South	n/a	?	Side	1.23m x 1.09m	Late Neolithic?	n/a
313	Cell	Holm of Papa Westray South	n/a	?	Side	1.58m x 0.87m	Late Neolithic?	n/a
314	Cell	Holm of Papa Westray South	n/a	?	Side	1.42m x 0.73m + 0.97m x 0.90m	Late Neolithic?	n/a

Context number	Type	Site	Building	Key features	Placement in building	Dimensions	Date	Date reference
315	Cell	Holm of Papa Westray South	n/a	?	Side	1.30m x 1.04m	Late Neolithic?	n/a
316	Cell	Holm of Papa Westray South	n/a	?	Side	1.21m x 0.85m	Late Neolithic?	n/a
317	Cell	Holm of Papa Westray South	n/a	?	Side	1.22m x 1.09m	Late Neolithic?	n/a
318	Cell	Holm of Papa Westray South	n/a	?	Side	1.32m x 1.14m	Late Neolithic?	n/a
319	Cell	Holm of Papa Westray South	n/a	?	Side	0.99m x 0.83m	Late Neolithic?	n/a
320	Cell	Holm of Papa Westray South	n/a	?	Side	1.37m x 1.13m + 1.21m x 0.92m	Late Neolithic?	n/a
321	Cell	Holm of Papa Westray South	n/a	?	Side	1.23m x 1.04m	Late Neolithic?	n/a
322	Cell	Holm of Papa Westray South	n/a	?	Side	1.15m x 0.92m	Late Neolithic?	n/a
323	Cell	Holm of Papa Westray South	n/a	?	Side	1.37m x 0.93m	Late Neolithic?	n/a
324	Chamber	Taversoe Tuick	n/a	Cists (Bronze Age)	Centre, upper storey	3.03m x 1.98m	Late Neolithic?	n/a
325	Cell	Taversoe Tuick	n/a	?	Side, upper storey	1.50m x 1.55m	Late Neolithic?	n/a
326	Cell	Taversoe Tuick	n/a	?	Side, upper storey	1.82m x 1.17m	Late Neolithic?	n/a
327	Chamber	Taversoe Tuick	n/a	?	Centre, lower storey	2m x 1.40m	Late Neolithic?	n/a
328	Cell	Taversoe Tuick	n/a	?	Side, lower storey	1.19m x 0.77m	Late Neolithic?	n/a
329	Cell	Taversoe Tuick	n/a	?	Side, lower storey	1.37m x 0.82m	Late Neolithic?	n/a
330	Bay	Stonehall Knoll	H3	?	Front	1.74m x 2.51m	c. 3370–3020 cal BC	Griffiths 2016
331	Bay	Stonehall Knoll	H3	?	Centre	2.22m x 3.72m	c. 3370–3020 cal BC	Griffiths 2016
332	Bay	Stonehall Knoll	H3	Hearth	Centre	1.94m x 3.63m	c. 3370–3020 cal BC	Griffiths 2016
333	Bay	Stonehall Knoll	H3	?	Rear	1.55m x 2.51m	c. 3370–3020 cal BC	Griffiths 2016
334	Bay	Knap of Howar	H1	?	Front	5.37m x 4.99m	c. 3300 cal BC	Griffiths 2016

Context number	Type	Site	Building	Key features	Placement in building	Dimensions	Date	Date reference
335	Bay	Knap of Howar	H1	Hearth, quern, ambry	Rear	4.68m x 4.47m	c. 3300 cal BC	Griffiths 2016
336	Bay	Knap of Howar	H2	?	Front	2.40m x 3.75m	c. 3300 cal BC	Griffiths 2016
337	Bay	Knap of Howar	H2	Hearth, ambries	Centre	3.20m x 3.25m	c. 3300 cal BC	Griffiths 2016
338	Bay	Knap of Howar	H2	Cupboards, ambries	Rear	2.53m x 2.64m	c. 3300 cal BC	Griffiths 2016
339	Compartment	Skaill Bay	n/a	Skaill knives, animal remains	n/a	Unknown	c. 2460–2120 cal BC	Richards <i>et al.</i> 2015
340	Compartment	Skaill Bay	n/a	Skaill knives, animal remains	n/a	Unknown	c. 2460–2120 cal BC	Richards <i>et al.</i> 2015

Table B 4. List of architectural spaces described in Section 5.5

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