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<td><strong>Publication Date</strong></td>
<td>2014-12-03</td>
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Ritual Aspects of Irish Portal Tombs.

Phyllis Mercer.

Thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy.

August 2014.

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Supervisor: Dr. Carleton Jones.
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Small passage tomb at Carrowmore

Legannany Co. Down

Orientation of portal tombs

Site

OS 1

Portal tomb viewed from the west

View of portal tomb from the passage tomb

Portal tomb viewed from the west

OS 1st edition map

Site – normal weather conditions

Site – flood conditions

Orientation of portal tombs

Half-buried sillstone

Legannany Co. Down

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Abstract.

Portal tombs, of which there are approximately 180 in Ireland, are the least studied of the great megaliths of Neolithic Ireland. Although they have all been recorded and described, this study is the first to be entirely concerned with ritual aspects of these enigmatic monuments. Portal tombs may have been constructed early in the Neolithic, and are possibly earlier than any other monumental type, in a period when lifestyle and beliefs were undergoing major changes, probably due to the arrival of settlers from overseas. Varying theoretical approaches, as well as previous and current understandings of the period, are examined, with particular emphasis on the nature of the Neolithic evidence, Neolithic monuments and Neolithic society, ritual practices, beliefs and use and understanding of the landscape. Three aspects are specifically focussed on in the present study: landscape siting of the portal tombs, portal tomb morphology, and evidence for ritual of construction and use of portal tombs.

It is argued that portal tombs displayed a repetitive selection of preferred sites in the landscape. Location beside certain water features, and an avoidance of others, a preference for inconspicuous locations and avoidance of high ground are noted, and interpretations of these field observations are suggested. It is also argued that portal tombs were firmly connected with farming, and were constructed on the boundary between potentially suitable agricultural land and areas more difficult to work, perhaps at the limit of initial forest clearance. Portal tombs might have been raised as an expression of celebration, or triumph, as the laborious tree felling was completed, and thus the ritual of construction is suggested as the primary intention, with later, unintended, reuse resulting from changes in ritual practice and beliefs.

Examination of the morphology of the tombs reveals a universal similarity in the main parts of the structure, with differences emerging in less important aspects. This may have resulted from the presentation of an overarching belief system, perhaps of a three-fold cosmology, with freedom to display localised concerns. Additionally, it is suggested that the morphology of portal tombs may also be a reference to the shape of a bull – a powerful symbol of the agrarian lifestyle and a celebration of an animal previously unknown in Ireland. The architecture of the portal tombs does not encourage later ritual performances, and this, together with preferred aspects of siting, strengthens the impression that the ritual of construction was the initial intended rite.

In terms of evidence for rituals of construction and of use, excavation evidence suggests that the construction of portal tombs may have proceeded in a sequence of stages, and some portal tombs may have been built on sites already ritualised by deposits. The small amount of surviving burial evidence suggests that the interment of unburnt bodies, in a communal, unsorted manner, was the norm. Later depositions of human remains and a small number of domestic-type items occurred in at least some portal tombs, demonstrating that ritual practices had changed; it is suggested that these changes may have involved a developing attitude towards ancestral veneration.
Acknowledgements.

The four years which I spent working on this thesis were greatly enhanced by the assistance and encouragement so willingly given from many individuals, and without which my studies would have been less productive and much less enjoyable. In particular I appreciate the interest and local knowledge supplied by those lucky enough to live in the vicinity of a portal tomb, who greatly enhanced my field visits by their enthusiasm for ‘their’ monuments, and gave me tea and scones, rides on tractors and snippets of local history and mythology.

My family encouraged me throughout, albeit with some bemusement. My husband John accompanied me on some fieldwork, and, with his mission ‘to boldly drive where no car had driven before’, saved me an amount of walking and exercised my nervous system. Brian assisted all the way from New Zealand, and I should like to thank Sandra, who insisted that she enjoyed proofreading while on holiday. Others came with me to visit portal tombs and offered me hospitality.

My colleagues in the Archaeology Department, NUI, Galway, were constantly helpful and willingly shared their knowledge. I will miss their company. Ros Ó Maoldúin made some particularly helpful suggestions. The staff in the Department were unfailingly encouraging and eager to assist.

Dr. Ann Lynch of the National Monuments Service allowed me to handle all the artefacts from Poulnabrone and patiently answered all my questions. She gave me prepublication access to the contents of her wonderful Monograph on Poulnabrone, published in July 2014. Michael Gibbons of Connemara Walks in Clifden shared his encyclopaedic knowledge of Connemara and was most generous with his time.

My supervisor, Dr. Carleton Jones, was a constant support and source of inspiration. His courtesy and assistance never failed, in spite of some really strange pieces of writing on my part. Thank you Carleton for giving me the opportunity to undertake this study and for all your help.

Any mistakes are my own alone.
Chapter 1. Introduction.

1.1 Why this study?

To the general public portal tombs are amongst the most widely recognisable of the archaeological remains in Ireland. Together with round towers, illuminated manuscripts, golden torcs and the Claddagh ring they are regarded with patriotic pride as ‘part of our national heritage’, unique and somehow superior to whatever other countries can claim. They are lavishly depicted on items sold to tourists, and form an important part of the catalogue of the ‘Celtic past’, illustrating volumes of Irish mythology and legend. They appear beside wolfhounds and giant elks, bejewelled warriors and comely harpists, and all the shimmering paraphernalia of a mythical past.

![Fig. 1. Portal tombs enliven ‘Celtic’ mythology. ©Jim Fitzpatrick.](www.jimfitzpatrick.com/celtic-irish-fantasy-art/)

In fact, many Irish people would be hard pressed to name even one of these ‘dolmens’, and believe that they all look like Poulnabrone. Those who have the good fortune to live in the vicinity of a portal tomb may celebrate their own local monument and wish to know more about it, but, conversely, may ignore or even seek to demolish it. Artists and writers are amongst the few who have been inspired to devote their time and talents to these enigmatic structures, but even they do not usually differentiate between portal tombs and other monuments.
Amongst archaeologists there is, of course, a much greater awareness of the proper place of portal tombs. That they are one of the great megalithic monument types, dating from the Neolithic, is a truth universally acknowledged, but, compared with the other monuments, they have been virtually ignored and seem to be regarded as less interesting and less significant. This may be due in part to their comparatively simple architecture, but also to their accessibility and frequent plundering in the past. Very few sites have been properly excavated.

This study has been undertaken, in part at least, due to an instinctive fascination and empathy with these enigmatic and beautiful structures, a reaction described by Evans (1938a, 7) as ‘the mystery and wonder’, and a resultant curiosity as to their meanings and the intentions of their builders. There is also a desire to restore them to their rightful place in the archaeological record, worthy of study in their own right and as indicators of the lives and beliefs of those who built and used them. The question of dating is discussed in the study (2.3.2); briefly, it is believed that they may have been the earliest of the great monuments, constructed early in the Neolithic, in a narrow chronological period which is emerging as greatly significant, with a sense of ‘dynamic change’ (Whittle et al. 2011, 876) in lifestyle, economy, beliefs and ritual practices.

1.2 Portal tombs – what and where and when? Definitions and distribution.

Portal tombs, then called portal dolmens, were distinguished as a separate monument class by de Valera and Ó Nualláin in the first volume of the Megalithic Survey, covering Co. Clare (de Valera & Ó Nualláin 1961, xiii). The writers recognised the necessity of clarifying and ordering the megaliths as part of their intended survey of Irish monuments, and they divided the sites into four separate types based on morphological differences, which, they were encouraged to note, were supported by the distinctive grave goods found for each class (Ibid. xii). The writers recognised that this classification was not new, but felt that there was a degree of uncertainty and confusion which needed to be addressed, and gave detailed definitions of each class which are still accepted.
The monuments were renamed as in 1985 when the four Irish Neolithic megaliths were ascribed with the title ‘tomb’. This nomenclature stressed their interrelationship and, by avoiding the term ‘grave’, indicated that they were more than simple burial places and were, in the main, overground structures. ApSimon summarised the then state of knowledge and gave a suggested chronology in 1985/86, claiming that portal tombs were constructed early in the series, ‘before regional differentiation of ceramic styles was apparent’ (Ibid. 6), reflecting recognised similarities to court tombs which had better dating evidence. Although there were then no radiocarbon dates from portal tombs the writer nevertheless had a ‘hunch’ that they appeared before 3780 cal BC and that none was constructed later than 3630 cal BC (Ibid.). This monumental classification has remained in use until the present and, although there are structures which cannot be neatly fitted into the scheme, it has considerable merit. ApSimon’s hunch appears to be remarkably accurate, although the influential ‘Gathering Time’ (Whittle et al. 2011) still prefers a late date of 3165-2830 cal BC for the construction of Poulnabrone. In this study an early date for portal tombs is accepted, and the suggestion that they pre-date court tombs, constructed during a narrow period 3700-3570 cal BC (Schulting et al. 2012), is supported by the latest Bayesian study of Early Neolithic agriculture in Ireland which refers to the ‘emerging consensus’ that they were early in the Neolithic (Whitehouse et al. 2014). New dating from Poulnabrone repeats the early dates from 1990 (Hedges et al. 1990, 106) and adds others; the earliest bone from Poulnabrone dates the likely construction at around 3800 cal BC (Schulting 2014, 108). A full discussion of the dates for Poulnabrone appears in Chapters 2.3.2 and 6.4.4 of this thesis, but it can be said, with a degree of certainty, that Poulnabrone is ‘one of the earliest megalithic monuments in Ireland’ (Lynch 2014, 194).

Portal tombs were not always recognised as a separate monumental class. Strenuous efforts were made in the earlier 20th century to classify them as merely stand-alone versions of court tomb side chambers. Estyn Evans, summarising the knowledge of Irish megaliths in 1938, believed that portal tombs ‘would bear the kind of relationship to the large chambered tombs that a rural church bears to a great cathedral’ (Evans 1938, 9) and that, by ‘applying the theory of degeneration’ (Ibid. 14) they were clearly derived (degenerated?) from the horned cairns (court tombs). Writing in 1942 Seán O’Riordáin declared ‘from among the court tombs the portal tombs developed’ and de Valera and Ó Nualláin (1961, 115) still believed that ‘the portal dolmen is akin to and
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probably derivative from the court cairn’. O’Kelly (1981, 117) details the then current assumptions that ‘portal-tombs ... evolved in Ireland (central Ulster) from the court-tombs’, but he states that there is ‘no real evidence for the derivation of one from the other’ (Ibid. 122). Attempts at ‘declassifying’ portal tombs are not all in the past. Recent studies by some British writers have suggested that they are merely part of an amorphous monumental group distinguished only by the presence of a large capstone (Cummings 2007, Richards 2004a, b, Whittle 2004). This study does not support the theory that portal tombs were derived from court tombs, nor that they are indistinguishable from other Neolithic monuments. Portal tombs display a distinctive morphology, consistent deposition and definitive landscape siting which together distinguish them from any other monument type, and they appear to predate court tombs.

De Valera and Ó Nualláin’s definition from 1961 is still relevant and has not been bettered.

The principal characteristics of portal tombs are, a single chamber of rectilinear design, usually narrowing towards the rear, having an entry between two tall portal stones set inside the line of the sidestones and covered by a capstone often of enormous size, poised high above the entrance and sloping down towards the rear of the chamber. The capstone is frequently raised clear of the sidestones and rests on the portal stones and backstone. Usually each side and the back are formed of single slabs. Frequently beneath the great capstone is a smaller cover resting on the sides and backstone and in this case the rear end of the principal capstone rests on the second cover rather than on the backstone. Between the portals a slab closing the entrance is present at many sites, often reaching full height, but sometimes only three-quarters of half the height of the portal jambs. Occasionally, in place of the high slab a sill is found, while in many instances no evidence of closure, partial or full, appears. In a few examples high stones flanking the entrance are present. A bias towards placing the entrance eastwards is present in portal tombs. The mound shape is rarely clearly defined but both long and round forms are attested.

A much briefer description might simply list the presence of two upright orthostats of similar height standing side by side, a lower stone behind these, and a large stone lying on top of these three stones, slanting from the front down to the back. These elements are essential to the classification but other features are frequently present.
The occasional presence of a full doorstone between the portals is a feature found in no other monument type.

Portal tombs have attracted the attention of the curious for centuries. Their distinctive architecture and accessible siting have led to continuous attempts to interpret the features of the monument. The earliest explanations were influenced by a perceived ritual significance and the still-surviving local names often reveal the suggested interpretation.

There is a well recorded body of mythology in Ireland, with the same archetypal themes and characters found in other mythologies. The Doomed Lovers, Diarmuid and Gráinne, who fled from the wrath of Warrior King Fionn Mac Cumhal and wandered over the countryside, are particularly linked with portal tombs in the northern half of the country. Many have the folk name of ‘Diarmuid and Gráinne’s Bed’, or, more commonly ‘Leaba Diarmuid agus Gráinne’. The Irish version is frequently shortened to ‘the leaba’ (the bed) or even Labby, as in Carrickglass Co Sligo. The great mythological battle between the Fir Bolg and the Tuatha Dé Danaan is remembered in the name ‘Giant’s Graves’, scattered in a broad band from Sligo to Cavan, mainly in the major drumlin belt of north central Ireland. During the course of this study several local people described ‘their’ portal tomb as the grave of a Fear Bolg hero, fleeing from the pursuing victors, and buried with his armour and treasure. Other mythological figures commemorated by portal tombs include Aideen’s Grave (Howth), Dergmore’s Grave (Drumderg), and Finn Mac Cumhal’s Fingerstones (Goward Co. Down).
Later mythology, in the person of the popular druids, also became associated with portal tombs. They were deemed to be altars and the tilt of the capstone was explained ‘...to allow the blood of the victims slain upon them to run off freely’ (Gray 1884, 354). The name ‘Druid’s Altar’ is found in all parts of the country, from Antrim to Waterford. Attempts to remove these suggestions and place megalithic monuments in a more scientifically-based chronology were made by Wood-Martin in 1888 when he claimed that their construction date lay within the newly recognised Neolithic period (Waddell 2005, 141). General acceptance did not automatically follow; in 1938 Estyn Evans still had to plead that ‘we must nowadays cease to drag in mythical builders’ at a period when archaeologists in Ireland were still trying to distance themselves from antiquarianism.

An interesting local name is used in some northern counties, Donegal, Tyrone, Down and Derry. This is a version of the Irish term ‘Clogh Togáil’ meaning ‘Stone Lifted Up’, and is variously spelt ‘Cloghtoggle’, ‘Cloghtogle’, or ‘Cloghogle’. The commonest local name throughout the island is Dolmen, a term believed to be of Breton origin, meaning stone table, used as a generic term for any megalith in the Irish countryside. Many portal tombs are termed cromlech, a name which is probably Welsh in origin and means stone altar. Individual portal tombs are now known by the name of the townlands in which they are located.

There are approximately 180 portal tombs throughout Ireland, with a rather strange distribution. They are most frequent in the northern half of the country and in Co. Clare where they overlap with court tombs, but are present in the south-east where there are no court tombs. Many sites are coastal, but they are absent from long stretches of the coast, in particular in Cos. Clare and Limerick, most of Co. Cork, and
between south Dublin and northern Co. Louth. The most striking area in which they are absent is the central midland zone and in most of Cos. Cork and Limerick.

This thesis is confined to the study of portal tombs in Ireland; a study of the similar monuments in Wales (dolmens, approximately 22 examples) and in Cornwall (quoits, eight possible examples), was not undertaken as it was considered that the information available from Ireland would make a more coherent thesis if considered in the context of the Irish Neolithic, in particular with the likelihood of early dating (Lynch 2014, Whitehouse et al. 2014). Inclusion of the British examples would have resulted in a longer, more complicated study, beyond the prescribed limits for the present thesis and necessitating a conjectural discussion of the relationship between Ireland and Britain in the early Neolithic. An examination of the likely links with the British structures would make a very interesting separate study, as would a wider comparison with the early megaliths throughout Western Europe.

Fig. 6. Portal tomb distribution. (Ó Nualláin 1989 with additions.)
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1.3 Ritual aspects – definitions.

‘Ritual can be both sacred and secular in intent .... the term is often used to
describe anything which is not fully understood.’

Insoll 2005, 46.

Studies of the ritual aspects of past life, as revealed through the material record, have become increasingly frequent in recent years. While the antiquarians were happy to ascribe ritual meanings to the remains of the past, many 20th century archaeologists directed attention firmly away from what Hawkes (1954, 56) described as ‘the hardest inference of all’ – the deductions from material remains to spiritual life. Later in the 20th century archaeologists claimed that ritual was visible in the archaeological record, and that it could reveal aspects of the religion and ideology of past societies, to such an extent that the concept may have become overused (Bell 1992), as a synonym for anything which is ‘odd’ or ‘unexplainable’ (Insoll 2005, 46). Garwood et al. (1991) point out that some have come to believe that there is a ritual element in all behaviour and thus the concept of ritual should be disregarded. In this thesis it is hoped that an identification of ritual evidence can suggest aspects of religions and ideology.

A precise and concise definition of the term ‘ritual’ is difficult. Dictionary definitions stress the repetitive nature of the concept, and include terms suggesting performance or ceremony. Bell’s entire 1992 volume Ritual Theory, Ritual Practice could be seen as an extended attempt to define the term, and she stresses the importance of distinguishing between ritual, which is action, and the mental concepts which it defines. Insoll (2004a) believes that ritual is both action and mental activity combined, and suggests that it might be seen as a ‘focussing lens’ to examine aspects of both the sacred and the profane. Renfrew (1994a) defines the term by listing the archaeological evidence which indicates that ritual took place. Anthropological studies found that ritual activity was so common in other societies that Rappaport (1999) could declare ‘I take ritual to be the basic social act,’ and ethnographic descriptions of ritual activities in far-flung societies are used as analogies for what may be sought in the archaeological record of the past.

Ritual is associated with both the secular and the sacred. Today, these two aspects of life are normally separate, with ritual forming part of religious practice and also of secular celebrations like weddings or graduations. Archaeologists stress that
in the past, particularly in the distant past, there was no such division; activities which would today be considered thoroughly secular, like stoneworking or pottery-making, were in the past just as likely to have had important rituals as were celebrations of supernatural belief or mortuary memorials (for example Bradley 2000a, 2005, Cooney 1998, 2000, 2009, Barrett 1991, 1994, Gibson 2003, Insoll 2004a, Barnatt 1998, Kinnes 1998, Brück 1999).

Ritual, and its significance with regard to portal tombs, is discussed throughout the thesis, in particular in Chapter 3. An understanding of ritual in the Early Neolithic is sought as a guide to the lifestyle, ideology and beliefs of the monument builders and users, as described below in ‘Aims and Objectives’ (1.5).

1.4 Previous studies – catalogues, reports and descriptive works.

The material aspects of portal tombs have been well recorded and catalogued, for example by Herity (1964), Ó Nualláin (1983) and Kytmannow (2008), and they are listed in the county inventories. The various volumes of the Megalithic Surveys of Ireland (de Valera & Ó Nualláin 1961, 1964, 1972, 1982, Ó Nualláin 1989, Cody 2002) include site maps, drawings and photographs of most, but a consideration of their ritual aspects has not been undertaken except as an afterthought or brief inclusion in studies of other monument types (for example Powell 2005, Kytmannow 2008, Hensey 2010). In this study the term ritual is regarded as encompassing actions involving both the supernatural and the mundane, and indications of ritual practice are sought in the morphology, landscape siting and sequential construction and use of the portal tombs. An understanding of the ritual of portal tombs may increase our understanding of the lives and beliefs of those who built and used them.

Seán Ó Nualláin’s 1983 paper entitled ‘Irish Portal tombs: Topography, Siting and Distribution’ was the first serious work devoted entirely to portal tombs. His study of the topography of sites attempts to identify patterning in the preferred locations, and he suggests a division into eight separate regions, discussed in Chapter 4.2. His belief that the morphology shows a link with court tombs (Ibid.89) is a late reiteration of the opinions held earlier in the 20th century by, for example, Evans
(1938) and de Valera (1965) that portal tombs were derived from court tombs. Although these two archaeologists disagreed on many matters they were united in this. ‘Evan’s suggestion that the portal dolmen derives from the court cairns can now be very strongly supported’ wrote de Valera in 1965, 26.

The contents of portal tombs were described and drawn by Herity in 1964. He noted the similarities with finds from court tombs and attempted to gain ‘some idea of the material culture and economy of the tomb-builders’ (Ibid. 125). Excavations since 1964 at Poulnabrone, Lynch (1988b, 2014), Melkagh (Cooney 1997) and Tirnony (McSparron 2011) and some stray finds have added to the known depositions. Details of finds made during excavations carried out at Taylorsgrange in Dublin by V. Keeley and Associates during the period 1980-1987 are not available.

Portal Tombs in the Landscape by Tatjana Kytmannow was published in 2008. This contains the results of her Ph.D. thesis, awarded by QUB, which aimed ‘...to present a critical synthesis of the previous work on portal tombs and to investigate the chronology, morphology and landscape setting ... in Ireland, Wales and Cornwall.’ (Kytmannow 2008, 1). This has been an invaluable handbook for the present study and has been used extensively. Although the writer does not specifically mention interpretation of ritual aspects as one of her aims she discusses some relevant literature and suggests that the landscape siting of portal tombs ‘is most likely an integral part of the belief system’ (Ibid. 193). She expresses the desire that her work will be used by other researchers ‘...this study should be the start of a new discussion of portal tombs, and not the end of it.’ (Ibid. 195). In the present study the emphasis is turned towards the ritual aspects of the monuments. Information on landscape siting, deposition and morphology listed by Kytmannow and others is used in an attempt to decipher the intentions and beliefs of those who built and used them.

Gathering Time: Dating the Early Neolithic Enclosures of Southern Britain and Ireland, (Whittle et al. 2011) is an important addition to the dating and chronology of many aspects of the Neolithic in Britain and Ireland. While the work is not focussed on interpreting ritual, a knowledge of the dating and chronology of a monument is basic to understanding its significance. As Whittle himself stresses ‘Chronology is not an optional extra nor should it be seen as the preserve of myopic specialists in either scientific or material culture fields. It lies at the heart of better understanding of agency, of locating
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what people in the past did at particular times and places.’ (Whittle et al. 2007). This work is discussed in Chapter 2.1.

Excavation reports are accessible for 13 portal tombs and stray finds are described in Kytmannow (2008, 88). The excavation reports are very varied in detail and accuracy, and some are frustratingly vague. ‘We dug outside the second cromlech’ wrote Lady Alexandra Hamilton enthusiastically in 1907, reporting her excavation at Ballyrenan Co. Tyrone, ‘about 2 feet in depth … we got altogether seven large beads … there were bits of burnt pottery which crumbled when handled.’ (Cochrane 1907, 400). Reports from excavations at Taylorsgrange and Tirnony have not yet been published in full, so, although the finds have been listed their context is not detailed, and it is not known, for example, exactly where each item was located.

Interpretative works on portal tombs, Neolithic monuments and the period in general are discussed in chapter 3.

1.5 Aims and objectives.

As stated above, this study was undertaken, in part, by an attraction to these enigmatic structures and a desire to ‘raise their profile’ amongst the otherwise well-researched monuments of the Irish Neolithic. The structures are worthy of study in their own right but it is hoped that a greater understanding of their meaning and significance will also increase understanding of a period described by Whittle (2003, 150) as ‘stubbornly and frustratingly unclear.’ There are indications that the Early Neolithic period in Ireland may have been distinctive and not simply a copy or repetition of what happened elsewhere (Cooney 2000, Cooney et al. 2011, Whitehouse et al. 2014), and it is felt by the present writer that portal tombs, with their island-wide distribution and distinctive morphology, are particularly suited to add to the knowledge of this period. It is thus the aim of this study to examine the evidence for the ritual practices associated with portal tombs and to use that evidence in an attempt to learn more about the lives and beliefs of those who built and used them.

This guiding aim is pursued through three main objectives. Firstly, portal tomb ritual is approached through a study of landscape settings (Chapter 4). A
detailed examination of the intimate location of most of the known portal tombs was carried out in an effort to find a repetitive choice of location, if such existed. These locations were examined with a view to identifying the possible ritual reasons for their selection, and for indications of the ritual practices for which they were intended.

Secondly, portal tomb ritual is examined through a study of the distinctive morphology of the monuments (Chapter 5). The main elements present in all tombs, the supporting portals and backstone and the large, tilted capstone, were studied with the objective of discerning any ritual intention which might have influenced their morphology. The architecture was examined in an effort to ascertain the ritual practices which might have been enabled or constrained within and around the structure, and consideration was given to the act of construction. These practices might reveal or suggest aspects of the ideologies and beliefs of those who built and used them.

The third objective of the study is an exploration of the ritual revealed or suggested by the sequence of construction and usage, including depositions (Chapter 6). It is likely that human burial was one function of the portal tombs, but they were not merely graves. The deliberate, structured treatment of human remains is a ritual matter, and the occasion of their deposit would have been a ritual occasion. In addition, a typical and repetitive suite of other objects in the tomb also indicates deliberate choices, most likely of a ritual nature.

An investigation into the meaning and significance of a ritual structure of the 21st century would be unlikely to consider that such matters as agriculture, craftwork or diet were relevant, but in the early Neolithic it is generally accepted that ritual infiltrated all aspects of life, the mundane as well as the sacred, (for example Barrett 1988, Bradley 2005, Whittle 2003), and so this study examines these aspects of past life as part of the wider context within which ritual of portal tombs should be considered. In particular this study suggests that the adoption and spread of agriculture may have resulted in such a significant change in lifestyles that it would have been reflected in belief systems and demonstrated by the ritual practices of the period.
1.6 Methodology.

The three aspects of portal tombs outlined above were examined through study of the literature, maps, satellite images and evidence of the environment at the time. It was found, however, that site visits provided the most important tool in the study, and therefore most of the portal tombs (more than 130) were visited and assessed in person.

During the course of the present research the landscape setting of the portal tombs became the most fruitful area of study. The siting of the monuments was assessed at different levels. Initially, distribution was studied from maps and aerial photographs, and the underlying geology and soil type noted. Older maps, in particular the Ordnance Survey of Ireland 6 inch maps, 1st and 3rd editions, were invaluable in assessing landscape features, like wells and springs, which are no longer visible, and in indicating many monumental structures which have vanished. On a smaller scale features like altitude, topography, glacial landforms, major water features and the presence or absence of contemporary archaeological features may provide clues to the intentions of the builders and users. On field visits the purely local, intimate setting of the monument was assessed. Attention was paid to small-scale water features like waterfalls and any audible sounds of water. Local rock intrusions and glacial erratics were noted. The presence of the monument in its landscape, dominant or discreet, visible or concealed, was a possible significant factor and was therefore assessed. Present-day agricultural use may give some clues to ancient land use and information provided by local residents proved valuable; they are aware of features which may be evident only at certain times of the year, and have a feel for the spirit of a landscape which may not be experienced by a visitor. Surveys, inventories, catalogues and excavation reports, essential tools in a study of this nature, have been discussed above (1.4). In addition, maps, satellite images and site plans, the ‘dehumanised perspectives’ discussed by Thomas (1990, 169) have been employed as tools in this study, particularly in assessing the nature of the site selected within the wider landscape.

The morphology of each portal tomb was also studied at a purely physical level, through examination of reports, photographs and drawings, from writers past and present, and, most significantly, by field visits. The human body was used as a measuring device to ascertain whether the chamber was accessible or not, and
whether post-construction ritual activity was rendered possible, probable or impossible by the architecture. Consideration was given to possible bodily postures like standing, kneeling, prostration, and the view of activity inside the chamber which might have been visible from outside was assessed. Variations in tomb morphology were noted in an effort to see whether they resulted from different practices at different periods or were the result of the local geology. Antiquarian reports and drawings were particularly useful in gaining information about the many portal tombs which have been demolished or damaged, and the skill and attention to detail shown by an artist like Du Noyer (1866) (Fig. 7) or Beranger (Harbison 2004) can often reveal the true nature of a monument in a way that a camera misses. The type of stone used, and, if possible, its origin in the landscape can suggest whether it was local, or whether it was selected from a distance, whether it was quarried or an erratic boulder. Portal tombs frequently exhibited a striking contrast in appearance from different angles, so that, for example, a structure with a closed, forbidding aspect from the front might display impressions of openness from the side (Fig. 8).

With regard to study of the rituals of construction and use the main source of information was the excavation reports. Tirnony portal tomb Co. Derry was excavated during the course of study and the excavation site was visited in 2010. The finds from Tirnony, Poul Nabrone and Ballycasheen were examined and photographed and a consideration of the context of all finds was undertaken, where such detail was available. The deposited contents, found during excavation and in stray finds, were
meagre and, in many cases badly recorded with no contextual detail. Nevertheless they were particularly important for their chronological evidence and for the indications of societal lifestyle. The context of a piece of pottery or bone is important in assessing its significance, and the presence of a particular artefact as part of a ‘suite’ of objects can be revealing. They also provided some clues as to the possible sequence of construction and activity in the monuments, and indicated a similar choice of deposits throughout the excavated sites.

1.7 Structure of this thesis.

The first part of this thesis, chapters 2 and 3, presents the background to the subject. Attention is given to previous and current understandings of the Neolithic period, particularly in Ireland, and to the Mesolithic/Neolithic transition. The construction and use of monuments is seen as one of the signifiers of the Neolithic in Ireland and an examination of the origins, chronology and inter-relationship of portal, court and passage tombs is undertaken. Other aspects of the Neolithic, the adoption of agriculture, sedentism, new forms of lithics, and the introduction of pottery are discussed, particularly in their relationship with portal tombs. A consideration of the significance of stone, both material and conceptual, leads to a discussion of the likely structure and lifestyle of the society who built and used the portal tombs.
1. Introduction.

A review of the literature includes interpretations of the organisation of society, lineage and the ancestors, possible ritual practices, early religions and the possible belief systems of Early Neolithic Ireland. Suggestions that the portal tombs signified territorial marking or indications of routeways are assessed, and the very large literature on relevant landscape archaeology is reviewed. A discussion of the varied theoretical approaches which have been applied to the subject is included, with details of the methodology and interpretive approach followed in this study.

Chapters 4 to 6 detail the evidence in the three main areas of landscape, morphology and the sequences of construction and usage, with discussions of their possible significance. Each of these chapters includes a case study of a particular portal tomb which illustrates the concepts under discussion. The relevance of a possible patterning in relation to landscape siting is discussed, with reference to a perceived preference for particular water features, altitude, geology, geomorphology and soil bands. The association with other tomb types and settlement evidence is assessed and the relationship between early agriculture and the tombs is considered. The architecture of the tombs is examined and attention is paid to those elements of the structure which are essential and those which may be optional. The likely sequence of construction and use is studied in the main through excavation reports and depositions. With regard to the contents there are difficulties as the evidence is very skewed towards one site, Poulnabrone, and the context of the various other depositions is often unknown. Preservation of bone is poor over most of the island which leads to a problem with exact dating. The evidence which exists is examined for signs of a significant patterning, and for indications of possible ritual importance. The existing evidence of human remains is contrasted with evidence in contemporary tomb types.

Chapter 7 concludes with an overall discussion and an attempt at interpretation.

During the course of the study it became obvious that pictorial appendices were needed to illustrate some of the suggestions and conclusions. Appendix 1 provides maps of the soil classification of Ireland with the location of each portal tomb superimposed, while Appendix 2 lists those portal tombs which appear to demonstrate a site selected on the boundary between cleared land suitable for early farming and unfelled forest or unsuitable terrain.
Chapter 2. The time of the Portal Tombs – the Early Neolithic.

2.1 What was the Neolithic?

Mesolithic societies participated in the natural world; Neolithic communities acted upon it.


The different interpretations of the Neolithic in Britain and Ireland can be summed up by considering three papers by widely respected archaeologists, written at approximately 15-year intervals. In 1969 Humphrey Case published his influential ‘Neolithic Explanations’ which not only stated the accepted interpretation of the time but also directed the research of the future. His intentions were ‘to retrieve certain conditions of the Neolithic … and deduce some conceptions which may prove useful in limiting the range of explanation in some directions and clearing new ways in others’ (Case 1969, 176). He concentrated on the introduction of agriculture as the defining feature of the Neolithic and discussed how and when (but not whether) pioneering colonists arrived in Britain, bringing not only new knowledge, technologies and domesticates but also ‘a genetic windfall to isolated and closely-bred societies’ (Ibid.). His study of sea routes, winds and tides and probable boat type (he believed that a hide-covered craft like the umiak of the Inuit or the traditional Irish curragh was the most likely) are still valuable today, and his consideration of the difficulties of transporting cattle in small open boats should not be ignored. He suggested that the time and energies of the colonisers would have been concentrated initially on agriculture so that ‘household luxuries’ (pottery) and ‘large ritual works’ (monuments) were not the products of the earliest Neolithic (Ibid. 181). This, he felt, explained the different evidence between pottery and monuments in Britain and those in Brittany, northern France and Belgium, whence the colonists came. While Case’s pottery sequences and radiocarbon dates are outdated, his ideas include concepts which have been re-examined and found to have merit many years later.

In 1988 Julian Thomas considered Case’s conclusions in a paper entitled ‘Neolithic Explanations Revisited’. He distanced himself from the ‘palaeoeconomic orthodoxy’ of the pervading view and suggested an interpretation based firmly on the Neolithic as a change in conceptual worldview of the indigenous British population,
who adopted certain aspects of Neolithic culture over a long period as they saw fit. His conclusions were mainly based on evidence from the south of England, the ‘Wessex’ area, and placed monumentality, with its emphasis on ideology, at the centre of Neolithisation. He saw no evidence of, or need for, pioneering or colonising farmers, and believed that the Mesolithic way of life in regards to nomadism, hunting and gathering, persisted for much of the Neolithic. This interpretation has been very influential, and was extended to cover the whole of Britain, and, almost without consideration, to Ireland.

Richard Bradley’s chapter ‘Neolithic Expectations’ (Armit et al. 2003) was expanded in 2008 with ‘The end of the beginning; changing configurations in the British and Irish Neolithic’. He regretted the fact that Case’s model has become so unfashionable, and pointed out that there is a danger that Thomas’s ideas had become the ‘new orthodoxy’ (Bradley 2008, 47) throwing out the baby with the bathwater, as David Anthony (1990) puts it. He stressed the regional variation shown in, for example, Ireland, and is unsurprised at Neolithic diversity, pointing out that influences may have reached these islands from many different parts of Europe with their different Neolithic traditions. He presented a balanced view of the evidence; new dating and statistical analysis and new archaeological discoveries have thrown into question some of Thomas’s assertions and indicate that the Neolithic was experienced as a sudden, sharp change with the adoption of the whole ‘package’. Bradley (2008) characterised the start of the Neolithic with the appearance of timber buildings, the growing of crops, accumulation of substantial middens, forest clearance, large-scale production of axes, reduction of fishing with a change to the consumption of terrestrial protein, and the production of a uniform style of pottery (2008, 45) and he agrees with Rowley-Conwy (2004) that there was ‘little to suggest a prolonged period of acculturation of the native population’ but does, however, feel that this initial, energetic adoption of Neolithic practices lasted only for about 300 years (Bradley 2008, 46). Possible climatic change, disease, soil erosion, land exhaustion (Ibid. 46) may all have contributed to the reduction in agricultural evidence as noted in Ireland by O’Connell & Molloy (2001), but conflicts over territory could have existed: evidence of violent injuries is found at some monumental sites (Ibid. 47).

Advances in archaeological investigation, more defined AMS radiocarbon dating and the use of Bayesian statistical modelling have clarified the material record
of the Early Neolithic. *Gathering Time* (Whittle *et al.* 2011) is a multi-authored examination of the probable origin and dating of the various Neolithic indicators in Britain and Ireland; this study suggests that the Neolithic lifestyle most likely arrived in Ireland (east coast) from Britain at between 3800 and 3740 cal BC. These dates (Fig. 9) are calculated by excluding the suggested construction date of c. 4000 cal BC for Mageraboy (Danaher 2007, 112) and the very early cattle bones at Ferriter’s Cove (Woodman *et al.* 1999) and by accepting the original interpretation of the dating at Poulnabrone which placed the construction date in or after 3165-2830 cal BC (Cooney *et al.* 2011, 604). If the Poulnabrone dates are readjusted to 3875-3725 cal BC, (Schulting 2014, 108), and if Danaher’s Magheraboy dates are included then the suggested ‘arrival’ of the Neolithic in Ireland must be substantially earlier than portrayed in Fig. 9. Lynch (2014, 175) suggests a Neolithic presence in the Burren, Co. Clare by 3900 cal BC, or shortly later, and discusses the possibility that the Neolithic
2. The Early Neolithic.

was adopted earlier in western Ireland than suggested by Whittle et al. (2011). She describes a general ‘impression of earliness’ for Neolithic indications beginning to emerge along the west coast of Ireland (Lynch 2014, 194). There is the now well-authenticated date for Poulnabrone, the late 5th millennium date for Magheraboy causewayed enclosure (Danaher 2007), the early passage tombs at Carrowmore (Bergh & Hensey 2013) and possibly the very early cattle bones at Ferriter’s Cove (Woodman et al. 1999). If these are taken into consideration Lynch suggests that the beginning of the Neolithic in the west of Ireland might be closer to 4000 or 3900 cal BC than to 3815-3760 cal BC as suggested by Whittle et al. (2011, 663). This would have some implications for the origin of the Neolithic pioneers; Brittany might seem a more likely source of the first colonists than Britain.

A recent study by Rowley-Conwy (2011) supports the belief that in Britain and Ireland the Neolithic was introduced by colonising farmers from northern Europe. He finds no evidence to support the model of gradual adoption of aspects of farming by a preponderantly mobile indigenous population, and discusses evidence to support the abrupt arrival of incomers who introduced the Neolithic way of life in a ‘series of disparate and local “lurches of advance”’ (Ibid. 443). He also considers the ‘surprising possibility’ that farming might have arrived in Ireland before Britain (Ibid.).

Differences about the nature of the Neolithic, and the diffusion/migration arguments continue to divide the archaeological community, particularly in Britain, but the differences are often more perceived than real, and elements of both points of view are probably relevant. The Neolithic was not a monolithic, unvarying concept, and took different forms in different areas. Attempts have been made to combine the two possible scenarios for the introduction of the Neolithic, i.e. that some people moved from continental Europe into Britain and Ireland, bringing their material culture and concepts, and that, at the same time, some indigenous inhabitants adopted new practices directly from Neolithic populations elsewhere, and that the two populations intermixed and combined to produce a Neolithic that was initially cohesive and derivative (for example by Garrow & Sturt 2011, Cummings & Harris 2011), but these attempts are not always welcome. Bradley’s view is that ‘only one of them can be right’ (Bradley 2008, 47). Whittle (2007a) writes about seeking ‘compromises between these entrenched positions’ and suggests different methods of change in southern Britain, with most colonisation in the east and more indigenous
contribution in the west, but advocates the abandonment of the debate. He believes that there are too many variables in the record to support one or other side of the argument, and prefers to investigate diversity, convergence and enablement.

Gabriel Cooney has also attempted to move the debate, which he characterises as ‘anachronistic and unhelpful’ (Cooney 2007, 544), away from argument and confrontation, particularly with regard to Ireland. A consideration of environmental material and genetic evidence lead him to broad agreement with Whittle that the earliest Neolithic appeared c. 4000 BC, and became fully established by c. 3800 BC as a result of ‘both small groups of people coming to Ireland and Britain from coastal and inland areas of north-west Europe, and their influence and interaction with indigenous hunter-gatherers’ (Ibid. 558). He views the early Neolithic as a period of particularly strong human impact on the Irish environment, rather than one step in a gradually evolving process.

Despite disagreement about when and how it happened there is broad agreement about the different aspects of material culture which, together with their entwined concepts, defined the Neolithic.

2.2 Aspects of the Neolithic.

The physical properties of the Neolithic landscape are important in the interpretation of megaliths. Any consideration of their significance needs to consider what the conditions were like at the time they were built and used. These conditions include climate, vegetation, bedrock, soil and sea level.

The adoption of agriculture is certainly one of the most important changes in the Neolithic, and was regarded as the defining aspect for many years. The actual date of the use of domesticated plants and animals is easier to estimate in Ireland than in some other areas as there are no native edible grasses or pulses, and no record of cattle, sheep or goats. The presence of domesticated animals can be detected not only in animal bones, but also in the dietary signature in isotopic analysis of human bone. The influence that the introduction of cattle had on the Irish diet is incontrovertible. Isotopic analysis shows an almost complete change from a marine-based diet in the
2. The Early Neolithic.

<table>
<thead>
<tr>
<th>Site</th>
<th>Region</th>
<th>Species</th>
<th>14C date BP</th>
<th>δ13C (‰)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilgreany Cave</td>
<td>Co. Waterford</td>
<td>Bovus taurus</td>
<td>OxA-4269=5190±80</td>
<td>-22.5</td>
<td>Woodman et al 1997</td>
</tr>
<tr>
<td>Dalkey Island</td>
<td>Co. Dublin</td>
<td>Ovis aries Bovis taurus</td>
<td>OxA-4566=5059±90</td>
<td>-19.6</td>
<td>Woodman et al 1997</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OxA-4571=4820±75</td>
<td>-21.4</td>
<td>Woodman et al 1997</td>
</tr>
<tr>
<td>Sutton</td>
<td>Co. Dublin</td>
<td>Bovis taurus</td>
<td>OxA-3691=6660±80</td>
<td>-20.5</td>
<td>Woodman et al 1997</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OxA-3968=6560±75</td>
<td>-23.5</td>
<td>Ibid.</td>
</tr>
</tbody>
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Fig. 10. Radiocarbon dates for early domesticates in Ireland. (Tresset 2003, 26).

Mesolithic to one in which protein was obtained almost entirely from terrestrial animals, even in coastal areas (Schulting 1998, Schulting et al. 2012). A similar abrupt shift in diet at the start of the Neolithic is noted from Scotland, many parts of England, Brittany and Denmark (Tresset 2000, 18). Such a complete change in lifestyle implies the influx of new people with new habits rather than acculturation. The introduction of domesticated animals to Ireland may have had a much greater effect on lifestyles and ideologies in Ireland than in Britain or other areas of northwestern Europe where red meat from deer and aurochs was available. In a country with no large indigenous mammals the arrival of cattle and caprovides would have accentuated the differences between the diet and day-to-day living of settlers and of their Mesolithic counterparts. The husbandry of such impressive creatures may have led the early farmers to celebrate their qualities in a symbolic way and to stress their significance.

Another indicator of Neolithic agriculture is contained in the pollen record, where analysis of core sediments reveals both the date of forest clearance and the date and species of farmed plants (cereals). The ‘Landnam’ period of extensive tree clearance has been dated in various parts of Ireland as lasting from c 3750 – 3500 cal BC with sporadic indications of early farming activity dating from 4000 cal BC (O’Connell & Molloy 2001, Molloy & O’Connell 1987, 1988). These writers suggest a model for early agriculture in Ireland as an initial introduction of limited, small-scale clearances within the woodlands from 4000 cal BC for periods of some two hundred years, followed by the establishment of intensive felling (by axe) and intensive farming (mainly pastoral) activity by larger, more cohesive groups for a period of some 200 to 300 years before tree cover regenerated and farming activity declined. The decline may have resulted from over-farming and soil exhaustion, or from climate change, or crop disease or predation. These conclusions are supported by other writers (Monk 1985/86, Edwards & Hirons 1984). Brown (2007) considered the
expanding evidence available from charred cereal grains in British and Irish contexts. Using only evidence which he considered to be very secure he found a marked concentration of Landnam dates ranging from 3800 – 3300 cal BC, with scattered indications of earlier cereal growth at c 3950 cal BC. Like O’Connell and Molloy (2001) Brown emphasises the period of 150 -200 years prior to the Landnam and the earliest likely date for megalith construction (c. 3800 BC) as being of particular interest in the earliest manifestation of the Neolithic, which is a question also raised by Whittle (2007a) with regard to Britain and Ireland.

Fig. 11. Simplified pollen diagram from Lake Sheeauns, Co. Galway, showing pre-elm decline grassland pollen, c.4000-4250 BC. Landnam identified at 3798-3470 cal BC. (O’Connell & Molloy 2001, 112). Ballynew portal tomb lies 50m to the north of the lake.
A multi-disciplinary study by Whitehouse et al. (2013) assesses the dating evidence for the introduction of agriculture to Ireland. The writers confirm the ‘rapid and abrupt transition to agriculture from c. 3750 cal BC (Ibid. 1) and also note ‘hints’ of earlier farming in a number of sites. They believe that there is evidence of widescale intensive woodland clearance and the adoption of agriculture from 3750 cal BC, a date which coincides with the ‘house horizon’, already identified (McSparren 2008, Whittle et al. 2011), and with the construction of court tombs (Schulting et al. 2012). It should be noted that the Bayesian analyses of rectangular houses and court tombs referred to above are based on a small number of examples and are not accepted by some writers. The early dating of human bone from Poulnabrone causes a problem; they admit that it is ‘more difficult to discount’ (Whitehouse et al. 2014, 17) and refer to work in preparation by Schulting. They suggest that farming was in ‘long-term, fixed plots or gardens’ (Ibid. 1).

The issue of settlement evidence during the early Neolithic has been involved in the debate concerning acculturation versus colonisation, and is still used to support each point of view. The scarcity of evidence from England led to the acculturation proponents claiming that Neolithic society, particularly in the early part of the period, was semi-nomadic, still following hunting and gathering lifestyles, and thus most likely to be indigenous people who adopted only those aspects of Neolithic culture which suited them. The substantial structures which did exist were more likely to have had ritual or social significance, perhaps ‘specialized structures … connected with the activities of an extended community rather than a domestic group’ (Thomas 1996, 12). Whittle (1996b) agreed that the lack of permanent settlement evidence pointed to a transient use of the landscape. This view of Neolithic society was extended, almost automatically, to Ireland. Cooney, writing in 2000, protested at the assumption that Irish and British evidence could be conflated, and at the implicit belief that, if early Neolithic inhabitants of Wessex left no evidence of sedentism then neither did the inhabitants of Ireland.

During recent years the identification of large numbers of Neolithic houses in Ireland has changed the perception of the Irish Neolithic. In 1996 Grogan was able to present details of over 50 Neolithic houses to the Neolithic Studies Group, but the recent increase in development-led excavation has led to many more house sites being identified. Mulligan (2010) discussed 62 different sites in his thesis (Fig. 12), but Smyth (2014) lists 104 and the number is still growing. The distribution evidence is
biased due to the fact that site location was determined by infrastructural development. Houses of two different styles have been identified, rectangular and circular. Of these the rectangular structures belong to the early Neolithic. They have been firmly dated within a very narrow time frame of just over 100 years (McSparron 2008, Whittle et al. 2011, Whitehouse et al. 2014). The short span of usage of these structures is striking (Fig. 13).

Fig. 12. Distribution of habitation sites. (Mulligan 2010).

Fig. 13. Early Neolithic rectangular houses in Ireland - Bayesian analysis of dates. (Whittle et al. 2011, 599).
Intensive cultivation of cereals implies that a permanent settlement site was likely, but animal rearing could have involved a seasonal movement to make use of the maximum amount of pasture, i.e. transhumance, or booleying. This practice might not have been common in the Early Neolithic where farming was most likely confined to ‘long-term, fixed plots or gardens’ (Whitehouse et al. 2014), and the dense native forest cover, in areas outside these plots, would have been unsuitable for grazing. Examples of temporary encampments like those at Townleyhall, Co. Louth and Knocknarea Co. Sligo may, as suggested by Waddell (1998, 42), have been used by some communities engaged in fishing or food gathering, or specialised activities such as the procurement of raw materials for craftwork. Bergh (2009) has suggested that the huts on Knocknarea may be connected with the extraction of chert and the manufacture of specialised scrapers linked with the passage tombs on the hilltop.

Smyth (2010) suggests that a link exists between the introduction of agriculture and the adoption of sedentism on two levels; there was a practical, material need for groups to remain together for a prolonged period to cultivate, harvest and process grain, while at the same time there was a need for a symbolic focus for kin-based societies who wished to emphasise and pass on their separate rights and identities. Thus she believes that the early homes were likely to have been constructed by incoming pioneering groups or colonists (Ibid. 2). No such needs were present in the Mesolithic and the very earliest farmers may not have had the time or commitment to a specified space to erect such a structure. Smyth considers that the comparatively swift abandonment of rectangular houses might have resulted from a change of emphasis towards the ‘houses of the dead’, the megalithic tombs (Smyth 2010, 13f). As local groups grew larger and more co-ordinated there was a need for a focal point which would accommodate larger numbers than the houses, and wooden structures were exchanged for more permanent stone. In support of this suggestion she mentions Ballyglass Co. Mayo, where a court tomb was build on top of a rectangular house (Fig. 14).

Circular houses have also been identified from the early Neolithic period, but dating is less precise than for the rectangular houses. In some areas the two were contemporary. Within the early Neolithic field system of the Céide fields the rectangular structure beneath the court tomb at Ballyglass 1 (Fig. 14) is within 5 kilometres of a circular house at Glenulra with similar deposits and dating (Cooney
2. The Early Neolithic.

Fig. 14. Ballyglass Co. Mayo - court tomb built over rectangular house. (Waddell 1998).

While the rectangular style may have lasted for little more than a hundred years circular houses remained the norm in Ireland for some three thousand years.

The use of new technologies - the introduction of pottery and of new styles of stone tools - is regarded as one of the markers of the Neolithic in Ireland. Stone tools were an essential part of everyday life, but their presence as common deposits at ritual, as well as domestic, sites indicates a perceived significance and stresses the lack of separation between ritual and domestic life in the Neolithic. Woodman ((1993, 217) has isolated what he believes to be a core Early Neolithic assemblage, consisting of large, leaf-shaped arrowheads, scrapers and plano-convex knives, and he considers that it is remarkably similar to British material of the same period, in striking contrast to the situation which had existed in the later Mesolithic (Fig. 15). Waddell (1998) agrees with this list and adds lozenge-shaped arrowheads, or possibly javelin points.

Concave and hollow scrapers are very common in the Irish evidence, and are ‘more or less unique’ to Ireland (Bergh 2009, 105). It is believed that they first appeared in the Middle Neolithic and disappear suddenly from the record at the end of the Neolithic, perhaps due to changing ritual beliefs and practices (Bergh 2009, 111, Woodman et al. 2006, 164). Bergh feels that the presence of ‘an extraordinarily high’ number of concave scrapers in close proximity to the passage tomb on Knocknarea Co. Sligo may indicate that they served a purpose in the associated rituals (2009, 110). The black chert from which these tools were made may have derived an extra significance from its location so close to a major ritual site.
One of the most important items of ritual deposition in the European Neolithic was the polished stone axe. Polishing the cutting edge of an axe will increase efficiency, but overall polishing, laborious and time-consuming, improves only the appearance. In Ireland there is evidence that some stone axes were polished during the Mesolithic, as in the cache found at the Mesolithic site of Ferriter’s Cove (Woodman et al. 1999), and stone axes continued in use well into the Bronze Age (Sheridan 1986, 27). A stone axe was obviously a woodworking tool, but its importance in the Neolithic was greater than its mere functionality, as demonstrated by the high degree of polishing. Cooney (2002, 179) finds a strong suggestion from archaeological and anthropological studies that, while pottery production is associated with women, the making and using of axes is normally carried out by men. Pottery is breakable and made from soft, local materials, while stone axes are hard and permanent and sometimes used exotic materials. Patton (1991, 69) sees the axe as a male phallic symbol, linked to reproduction and the fertility of land cleared by the
axe and describes some of the depictions in Breton passage graves as overtly sexual symbols. Battaglia (1983) describes mortuary exchange feasts of the Sabarl people of Papua New Guinea attended by kin and trading partners of the deceased. Greenstone axes, perceived as male and obtained from other islands, play an important part in the ceremonies by representing the dead person and demonstrating his new life as an ancestor. Ray (2004) assumes that axes are an archetype and regards the presence of miniature and highly polished, non-functional forms as emphasising their symbolic importance. He regards their importance as ‘part physical and part conceptual’ (ibid. 161). They are the quintessentially deposited item, in special places, with other special artefacts and human remains. He regards their form as seed-like, symbolising fertility and regeneration, and feels that they may have been important as bride-wealth (ibid.)

Suggestions that the axe was representative of another meaning are worth remarking, but it could also be said that the axe itself, the tool that felled the forests and shaped the timber, was a symbol of Neolithic life and ideology potent enough to stand on its own. Bell & Noble (2012) believe that the potency of the symbolic nature of the axe derived from ‘the axe’s effectiveness in allowing Neolithic lifestyles to be undertaken ... its ability to transform the environment and alter the balance in the relationship between people and place’ (Ibid. 89).

The non-functional significance attached to polished axes is indicated by the use of non-local material. Patton (1993, 1995) discusses the fact that, in both Brittany and the Channel Islands, perfectly suitable stone could have been sourced locally, but non-local stone was often preferred. The same could be said of Ireland where stone of varying types is easily available; even in areas with limestone bedrock there are glacial erratics and intrusions of metamorphic rock types eminently suitable for tools.

Pottery was an important new technology introduced in Ireland at the start of the Neolithic which may well have brought with it an extra layer of ritual significance, a further demonstration of the transformation of material substances into new objects. Its use indicates and encourages sedentism by constraining mobility (Cooney 2000, 184); early pottery vessels were heavy, fragile and lacked handles, and were also round-bottomed.

The material qualities of pottery have been invaluable in building a chronological framework for the Neolithic. Detailed studies of the typology, for
example by Sheridan (1986, 1995), can result in acceptable dating sequences and indications of movements of technologies and concepts, and of changing lifestyles within a society. It also gives indications of the level of technology practised by society: Neolithic pottery was made by hand, dried in the open air and fired on an open bonfire. Pottery is a skilled craft and may indicate the movement of selected people rather than a wholesale migration.

The main material constituent of pottery is clay – readily available, easily worked and of the earth - and its transformation into a pot produces a meaningful object. Material qualities of plasticity and malleability were harnessed and materialized by tempering, modelling, shaping and firing. Firing of the clay results in a permanent chemical change to ceramic – Gibson (2002, viii) describes it as an ‘industrial transformative process’. It could also be described as ‘altering the earth’, to use Richard Bradley’s evocative title for his 1993 study of Neolithic monumentality. The clay base for a pot had to be tempered with another material for strength and to prevent shattering in the fire. Gibson (2002, vi) suggests that this may have added another layer of mystique to the process – Neolithic potters knew that a tempering agent was essential but not why, and may have constructed mythological explanations.

There is a high level of acceptance that early pottery was endowed with conceptual significance (Gibson 2002, Petersen 2003, Thomas 1991a, Cooney 2000) and its significance is demonstrated by its deposition in ritual sites, even in tiny pieces. The earliest pottery found in Ireland was plain and uniform in style, similar to that found in northern Britain at the time (Fig. 16). Petersen (2003, 11) believes that the homogeneity was due to strict rules and procedures tightly bound up with the introduction of a new and mystic craft; only one design and one method of working were seen as acceptable. Although undecorated it is remarkably accomplished, unlikely to have been made by a totally inexperienced potter, suggesting that the earliest potters may have been instructed by experienced craftspeople or might themselves have come from elsewhere, bringing their skills with them. The fact that no examples of the sort of clumsy, bag-like pots deemed to be the earliest efforts of new potters have been found in Ireland is another reason to suspect that the earliest potters came from elsewhere, or perhaps that imperfect pots were destroyed, deemed to be unworthy of such a magical and significant craft. This situation did not persist;
examples of imperfect or clumsy pots from later periods have survived (Fig. 17). Later examples were less restricted in their choice of shape, fabric and design, perhaps reflecting the fact that potting had become a more accessible and widely practised craft, lacking the mystique and exoticism of the earlier examples.

Pottery is found as a common deposit in both domestic and ritual sites throughout Europe. Pots may have been concerned with the preparation, storing and serving of food; with the introduction of agriculture a whole new range of foodstuffs became available and pottery both enabled and was inspired by new cooking methods. More formalised methods of eating food may have evolved, leading to activities ‘socially significant: gatherings, feasts, funerals’ (Thomas (1999, 125). In fact, it enabled such formalised dining occasions, and may have been
instrumental in introducing the ritual of daily shared meals still practised today.

Megalithic monuments, the highly visible feature of the Neolithic in western Europe, concerned as they are with the disposal of the dead, may convey most information regarding the beliefs and ideologies of this past period. In Britain and Ireland they date from the early, but not the earliest Neolithic. The period from c. 4000 – 3800 BC probably saw the small-scale adoption of agriculture, pottery and other Neolithic elements, but the earliest megaliths seem to be slightly later, with, as discussed above (1.2, 2.1), the possible exception of portal tombs. Court tombs were probably constructed from 3700 – 3570 cal BC (Schulting et al. 2012) and the small tombs at Carrowmore, possibly the earliest passage tombs, reveal ‘no cultural evidence’ earlier than 3750 cal BC (Bergh & Hensey 2013, 258). The preceding two centuries remain unclear and it is possible that some, at least, portal tombs were constructed then: dating for Poulnabrone is discussed below (2.3.1. and Chapter 6.4.4).

Monuments were not built for concrete reasons like shelter. They often contained human remains yet they were not simply graves. Some may have been erected as markers of routeways or territorial boundaries, but their complexity and patterned design indicate a desire to convey another message. Apart from their physical presence and indications of societal organisation, monuments reveal the existence of beliefs and ideologies and an attempt to preserve and broadcast them. Pre-literate societies may have relied more heavily on the communication of ideas through material forms than modern literate societies (Tuan 1979), and monuments may have acted as mnemonic devices, designed and built in a planned way and sited in a particular location to act as a permanent reminder of the beliefs of their builders. Their appearance near the beginning of the Neolithic period is an indication of a probable change of beliefs and ideologies which needed to be stressed and broadcast. New lifestyles brought about new ways of understanding the world, and new beliefs encouraged new ways of living. The existence of a monument gave physical form to these ideas and beliefs, but also defined and refined them.

Most megalithic monuments which have been excavated contain human bone or traces thereof, but as Fleming (1973) points out their design made some more useful than others as graves, and some appeared to be intended for one usage only whilst others seemed designed to facilitate re-use. Styles like court tombs which
include a defined audience area are clearly intended for group participation, and those with a narrow entry suggest limited access to selected individuals. Closed monuments with no perceived entrance may have been intended for one use only, where the actual process of construction may have been the most important (Richards 2004a, b).

The study of monuments has been both a product of, and a source of knowledge about, possible beliefs and ideologies of the Neolithic. To some, the indications of new beliefs and ways of thinking are the most important indicators of the Neolithic, and the sudden introduction of monumental construction conveys a sense of a new direction in understanding of the world, and an attempt to display this understanding and to direct it.

2.3 Monumentality in Ireland.

Although it is generally accepted that megalithic monuments in Ireland dated from the Neolithic period, there are suggestions that certain Mesolithic sites might provide a link between ritualised natural places and ritual structures. Axe quarries, some of which may have been used in the Mesolithic, were natural places, but they were altered by quarrying; they were not built monuments yet were sites constantly revisited (2.2.3). Some have evidence of intentional deposition (Cooney 2008) and they are often situated in liminal, remote locations, fulfilling many of the criteria of Renfrew’s (1994a) indicators of ritual. Suggestions have also been made that middens might be described as Mesolithic monuments. Cummings (2007), who believes that megaliths were constructed as a reaction to, rather than as a signifier of, the Neolithic ‘package’, suggests that late Mesolithic shell middens, constructed, permanent places in the landscape which were revisited and often contained manipulated dead bodies, could have inspired early Neolithic megalithic monuments. They were thus likely to indicate the acculturation of the indigenous population rather than a new idea imported by colonists. To this writer however, the differences between middens or quarries and megaliths, monuments purposely constructed from large stones, are fundamental, and the sites are not comparable.
The separation of the Irish megaliths into four distinct classes was, in the main, the work of de Valera and Ó Nualláin in their monumental undertaking the ‘Megalithic Survey of Ireland’ (Vol. I, 1961). Although some structures were difficult to classify and had to be ‘squeezed’ into one category or another it continues to be the generally accepted model. As Kytmannow (2008, 6) points out, it is important to remember that the classification is ours and not necessarily that of the builders.

The distribution of each monument class is somewhat different (Fig. 18). Court tombs are almost entirely situated in the northern half of the country, with the exception of a number in Co. Clare and a small number in north Munster, e.g. Shanballyedmond in Co. Tipperary. The most notable feature of court tomb distribution is the extremely prolific distribution around Donegal Bay and the north Mayo coast. Passage tomb distribution is perhaps most notable by its absence in large areas of the country, and by the linear nature of the great cemeteries across the centre of the country from east to west. A cluster appears in the south Dublin area with a small scatter extending to the south. Linkardstown cists are comparatively scarce and are located in the southern half of the country. Wedge tombs probably date from the Chalcolithic period (O’Brien 2012) and are not contemporary with the primary usage period of portal tombs. Portal tomb distribution covers elements of both court and passage tomb distribution. They are commonest in the northern half of the country, particularly in the central Ulster area, and there is a small cluster in the south Dublin mountains. A notable spread occurs in the southeastern part of Ireland where there are no court tombs and a small number of passage tombs.

2.3.1 Origins. As discussed above there is no universally agreed explanation for the start of the Neolithic but the construction of stone monuments was a common thread running through many areas in the Early Neolithic in western Europe. Scarre (2002a) mentions the long tradition of maritime links between these areas, but also believes that the special character of the landscape may have produced a ‘characteristic Atlantean mind-set’ (Ibid. 2) resulting in the construction of megalithic monuments as an expression of beliefs and aspirations of communities at a significant period of social development. He suggests that communities living ‘on the edge of the limitless ocean...beyond which there was nowhere to go’ (Ibid.) may have been inspired to similar types of cosmology, and expressed these beliefs through similar structures.
The detailed design of a particular monument type may, however, be confined to one particular area and may have resulted from the necessity to alter the ‘blueprint’ to suit local interests and intentions: it is necessary to take account of ‘the regionally diverse and probably mosaic character of the Neolithic transition’ (Scarre 2002c, 24). Fleming (1972, 57) mentions the custom of ‘continental parallel-chasing’ and believes that it is

Fig. 18. The distribution of Neolithic monuments in Ireland. (Ó Nualláin 1989, Aalen et al. 2011, after O’Kelly 1989).
perfectly possible that a style of monument new to a locality may have been innovative development  ‘designers, priests and craftsmen are not half-witted copiers’ (Fleming 1972, 70).

The most likely area from which the inspiration for monumental construction came to Britain and Ireland is northern France. Discussions as to whether the influences on Ireland came directly from France or were filtered through Britain have not as yet been resolved; but a monumental tradition was firmly established in Brittany from the 5th millennium BC (Patton 1993, Scarre 2002a, 7), including menhirs, standing stone lines, and chambered tombs. It is possible that in Atlantic France aspects of Neolithic monumentalism were becoming evident in the late Mesolithic. In the Breton islands of Téviec and Hoedic Mesolithic shell middens contain slab-lined cists with collective inhumations and small stone stelae (Scarre 2003, 40); no such continuity has been found within Ireland - cists are unknown within Irish middens. In Britain the first monumental structures may have been long mounds, burial chambers of earth and stone encasing stone cists with collective burials (Darvill 2010, 109).

There is some evidence of a ritual treatment of human remains in a formalised burial in Mesolithic Ireland. Four cremation pits were found at Hermitage Co. Limerick and one, dating from 7550-7900 cal. BC, contained cremated human bone, a stone axe and scorched microliths, all arranged around a posthole which may have supported a grave-marker (Collins & Coyne 2003). This is the earliest evidence of a ritual burial treatment in Ireland and has implications in our understanding of Neolithic rituals, not least in the deposition of 12 axes in the surrounding area. Axes are often accepted as Neolithic artefacts but here they seem firmly linked with Mesolithic activity. The ritualised treatment of human remains is also surprising at such an early period, and the probable erection of a post as a grave marker could suggest a very early indication of ancestral veneration.
2.3.2 Chronology.

‘Chronology is not an optional extra .... It lies at the heart of better understanding of agency, of locating what people in the past did at particular times and places.’

Whittle et al. 2007.

The chronology of the four great tomb types is now fairly well understood, with the possible exception of the earliest passage tombs. Earlier attempts at dating and sequencing reflected the archaeology of the time, so that, for instance, at one time portal tombs were believed to have been modelled on the side chambers of court tombs and were thus late in the sequence. The politics of the archaeologist sometimes influenced interpretation; Estyn Evans worked in Belfast and believed that court tombs were an Irish version of the Clyde chambered tombs which were first brought to Ulster by Scottish settlers (Evans 1938, 11), while de Valera insisted that they were brought by ‘Celtic’ Bretons to the Mayo/Sligo area and thence spread to the rest of the country (de Valera 1965, 29).

Fig.19. Calibrated dates on human bone from Poulnabrone (Schulting 2014, 96).
As discussed in 2.1 it now seems likely that Poulnabrone was constructed c. 3800 cal BC (Schulting 2014, 108), and thus predates both court tombs (3700-3570 cal BC, Schulting et al. 2012) and rectangular houses (3710-3600 cal BC, Whittle et al. 2011). It also appears to predate the Landnam period when agriculture became widespread, and may have been constructed during the narrow period between the arrival of the first settlers and the Landnam proper, when the first sporadic tracts of forest clearance and grain pollen were becoming evident (Section 2.2 above). The Poulnabrone dating is the earliest currently available for a portal tomb and it is at present unknown whether other portal tombs were constructed at the same period. The presence of Early Neolithic pottery in most excavated portal tombs (Chapter 6.7.2) suggests that these tombs were constructed during the period 4000 – 3600 BC, so the possibility that they were all contemporary is quite tenable. The morphology of portal tombs is so similar in the basic design features and Poulnabrone is so ‘typical’ in all its features that it could be described as a ‘blueprint’ which conveys the impression that they may be contemporaneous, but further excavation is essential before such a claim can be verified.

Passage tomb construction continued over some centuries, with the small early ones like those at Carrowmore showing use believed to date from c. 3750 cal BC (Bergh & Hensey 2013, 356) and the complex examples from Brú na Boinne probably not appearing until c 3000 BC. Wedge tombs are the last in the line and are believed to have been constructed during the Chalcolithic period (O’Brien 2012) and may have been connected with the earliest use of metal in Ireland. Some portal tombs may thus have been in use at the same time as court tombs and some passage tombs.

2.3.3 Non-megalithic structures. While megaliths are the most obvious evidence of monumentality other structures have been revealed which seem to have been of a ritual nature. Causewayed enclosures are relatively common in Britain and are dated to the Early Neolithic and to date two have been located in Ireland, Donegore Co. Antrim and Magheraboy in Sligo. Donegore has similar construction dates to the British examples (c.3855 – 3665 cal BC, Whittle et al. 2011) but Magheraboy seems considerably earlier with possible construction starting at 4100 – 3950 cal BC (Danaher 2007, 104). This dating would place a causewayed enclosure as the earliest form of
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monumentality seen in Ireland, but further dating will be undertaken. The depositional material recovered from Magheraboy is similar to that of Donegore and typical of Early, but not earliest, Neolithic. The evidence from Magheraboy points to the possibility of an earlier adoption of Neolithic practices in Ireland than that suggested by Whittle *et al.* (2011); portal tombs may also substantiate this perception of ‘earliness’, as do the very early date for domesticated cattle remains at Ferriter’s Cove (Woodman *et al.* 1999).

Megalithic monuments contained burial material but they were not graves. Linkardstown cists, which appeared c 3500 BC, were a new form of human burial sites which may have indicated a new form of belief or a changed structure in society, although, as discussed in Chapter 6.6, some are contemporary with and located beside portal tombs, so may have been used by the same people at the same time. Their distribution is mainly in Munster and south Leinster, areas where early monumental structures are scarce (Fig. 18). Typically they contain the complete remains of a single individual, usually male, and while not strictly monumental in nature they were constructed of stone and covered by sometimes very large cairns.

2.4 The importance of stone.

2.4.1 Why stone? The selection of stone as the material for constructing the Neolithic monuments was a conscious choice. Timber was widely available and relatively simple to work and was the material of choice for dwellings (e.g. Mulligan 2010). Rectangular timber houses in Ireland have been dated from as early as 3715 BC (McSparron 2008), so expertise in building large timber structures was available. Timber was also connected with early mortuary structures, for example at Dooeys Cairn (Ap Simon, 1985/85). Soil was the material used for the cairns of the earthen longbarrows, probably the earliest monumental type structures in Britain (Darvill 2004b, 97). Stone was a challenging, labour intensive material for early societies, but was the selected material for all the great Irish monuments. Soil and turves were used in some cairns (e.g. Knowth, Waddell 1998, 62) and the passage roof in Newgrange passage tomb was sealed with burnt soil, animal bone and sea sand (O’Sullivan 2009), but the structural elements of all the great Irish monuments were of stone.
Stone was not only widely available, it was very visible in the landscape. Forest clearance would have revealed rock features, cliffs, outcrops and scree, and erratic boulders from retreating glaciers would have littered the landscape. Scarre (2009b) describes the ‘targeted selection’ of individual blocks which may have been ascribed with their own identities, and suggests that in Brittany even unworked blocks may have had elements of anthropomorphism, a concept which is revealed more strongly in some later Neolithic structures which appear to have been engendered (Ibid.). It is possible that the good survival rate of stone is responsible for a perception that it was the structural material for ritual monuments, but recent discoveries have revealed evidence of timber houses and earth henges, so its ubiquity does seem to be a true reflection of its actual presence.

2.4.2 The material qualities of stone. The physical, material qualities of stone make it an eminently suitable material for a significant structure, attracting attention and suggesting ideas and concepts. Stone is of itself monumental in nature, with what Lewis-Williams & Pearce (2005, 216) describe as ‘inherent potency.’ In the form of outcrops, cliffs and hilltops it may have been recognised as forming a natural monument, imbued with significance and with the ability to have ideas pinned onto it (Bradley 2000a). Some striking natural stone features may have been revealed for the first time as the forest was cleared. Cliffs, outcrops and ridges may have looked significant and inspired the idea of natural places as ritual sites, perhaps to become transformed into built monuments at a later period. Conversely such natural features may have influenced the form of built monuments, by creating them in such a way that they mimicked the significant, natural, features (Tilley 2007). The tors in Cornwall are fantastically shaped granite outcrops which Tilley and Bennett (2001) describe as ‘supernatural’ places of early ritual importance, with solution basins and horizontal fissures caused by weathering, leading to a belief that they were possibly created by the ancestors in their own images.

One of the most important physical attributes of stone is its enduring nature. Many of the monumental structures of the Neolithic have survived almost unaltered; artwork and significant structural detail can still be identified. Consideration should, however, be given to the question as to whether this enduring nature was recognised by Neolithic builders who also used stone to make tools that were readily discarded
and replaced (Cooney 2009). It seems likely, however, that the large size of the stones selected for monuments was an indication of permanency; any object which required so much effort to put in place must have carried with it a promise of longevity. Certainly it seems highly unlikely that stone could ever have been considered to exemplify ‘softness or wateriness, ephemerality or perishability’ (Parker Pearson 2002, 203).

Cooney (2009) stresses the ubiquity of stone in Neolithic culture. Stone was used not only for tools and structures; what he describes as ‘mundane’ stone had its place as the material used for pathways and threshold spreads, as packing stones around post holes, interspersed with other materials in pits, in foundation trenches for rectangular houses and as a ‘blocking’ structure when a monument presumably was no longer to be used. He feels that such usage of ‘mundane’ stone was not a casual act but was often as significant as the selection of the material for ritual structures, and may, in the case of pit deposits, have had elements of a miniature ritual structure, for example the pits at the quarry on Lambay Island which included stones in their deposits and which were covered by miniature cairns. Many monuments were surrounded or covered by cairns, constructed mainly of stones; their functions may have included protection for megaliths as well as providing structural support and perhaps an element of concealment, but cairns may also have carried a ritual significance of their own (Ibid.).

The texture of stone is a variable quality which may have been recognised in megalithic design. Bradley (1989) points out that certain areas of megalithic tombs were intended to remain in darkness; movement through the monument would have emphasised differing stone textures as participants used their sense of touch to guide them, and the use of differently textured stones may have been a purposeful choice to facilitate movement. Thomas (1990, 175) believes that the interior of the Boyne passage tombs ‘would have saturated the consciousness of the human subject through touch, smell, vision and movement in space’, and that the elaborate artwork was meant to be touched as well as seen, while Cummings (2002) suggests that oppositions between rough and smooth stones within monuments may have echoed the landscape setting with its different textures. The inclusion of stones with differing textures can be achieved by selecting stones of different types, mixing for example, sedimentary rock with glacial erratics of metamorphic origin. Tilley (1996a) noted this feature in
Scandinavian megaliths where he found a clear preference for local sedimentary rock for the upright orthostats topped by igneous capstones. A similar contrast can be achieved by working or dressing some stones and leaving others in their natural state. Quarried stone may be smoother on the side removed from the parent rock, and boulders have a rougher surface on their exposed upper side while the underneath remains protected (Tilley 1996a, 124). These differences would have been much more apparent at the time of construction than now, when centuries of exposure have smoothed the surfaces (Scarre 2002a, 10).

The physical qualities of material influence the way in which it can be used and also encourage or create certain qualities in those who make or use it. Stressing the need for a material-based approach to human culture, Boivin (2004, 69) believes that a more balanced approach will lead to a consideration of the possibilities enabled and the constraints imposed by virtue of their very material qualities. ‘Materials possess inherent physical properties that make them more appropriate for certain symbolic and metaphorical uses and less appropriate for others.’ (Boivin, 2004, 65). She mentions, for example, the material properties of soil (clay) which encourage communication of ideas (pots) but also constrain mobility, thus encouraging sedentism. The durability and hardness of stone directed its use for certain structures and objects, but it also directs an understanding of the meaning of these objects. Some interpretations are firmly ruled out by the physical qualities of the stone – ‘The material nature of stone sets limits on how it can be understood’ (Parker Pearson 2002, 203). The use of stone in an axe does not encourage a belief that the tool was an unimportant and disposable object, and a monumental stone tomb will never be interpreted as the temporary dwelling of a nomadic family. Boivin (2004, 67) expands her above statement by suggesting that the initiation of metal-working enabled the masculine warrior ethos of the European Bronze Age, which continued in the chiefly values of the Celtic Iron Age and ultimately to the medieval knighthood society. ‘Without the bronze’ (Renfrew 2001, 137) ‘there would have been no Bronze Age warrior idea.’ Without stone and its physical qualities, could there have been Neolithic monumentality, with its concurrent beliefs and ideology?
2.4.3 Materiality of Stone. Stone, with its varying physical properties and widespread availability, is an ideal material for displaying ideological concepts. Colour, texture, local or exotic origin, quarried or boulder, worked or unworked, are all variables which provide scope for the concept of materialisation, the ‘active process whereby these material objects carry meaning, or are invested with meaning by humans’ (Scarre, 2004). Stone is an unchanging part of the natural world, suitable for conveying concepts of cosmological beliefs, and, through its communal working into monuments, demonstrating and expanding ideological concepts of group culture. Conneller (2011, 82) believes that the selection of stone for monumental structures is ‘verging on universal’. If certain stones are seen to have been specially selected for reasons other than practicality then the materiality concept is stressed.

Stone was the material of choice for the first tools, used by hominids over 100,000 years ago (Renfrew 2007). It is likely that it was first selected on grounds of suitability and availability, but by the Mesolithic period there are indications that some stone tools, especially axes, were becoming of symbolic as well as of practical importance. Stone axes were polished to a degree unnecessary for use and were found in ritual deposit sites from Ireland (Collins & Coyne 2003) Brittany (Patton 1993) and Scandinavia (Tilley 1996a). Their symbolic importance was stressed by the use of exotic and imported materials.

The importance of stone as an expression of concepts and beliefs, and as an active agent in expanding and promoting these ideas, is well documented in ethnography. Paul Taçon, examining the culture of the Neolithic people of Arnhem Land, Northern Australia, attempts to go beyond the ‘narrow functionalist view’ of stone tools and stony parts of the landscape (Taçon 1991, 193). The Ancestral Beings created the landscape and many of them were believed to have been turned into stone. Certain stones, especially quartzite, were particularly significant. The Rainbow Serpent, one of the most potent of all Beings, swallowed other ancestors, and then vomited their bones which became rocky quartzite escarpments in the landscape, used for quarries. Stone tools from certain quarries were believed to have special qualities and were reserved for use by men (Ibid.).

In early Mesoamerica obsidian, a black, glassy rock, was imbued with ancestral power (Saunders, 2001). It originated from volcanoes, the dwelling place of the ancestors, and its physical tendency to fracture into sharp points made it
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supremely useful for making blades. These knives were used for human sacrifice to the gods who created the world. The underworld contained three levels made of obsidian – perhaps inspired by the obsidian mines.

Indications that the source of stones for building and tools was regarded as a special or even sacred space are of increasing interest. The use of exotic stone for Neolithic polished stone axes is seen as conferring significance to the objects and adding value to its use as a gift or exchange item. Stone axe quarries have been found at remote and inaccessible places like Tivebulliagh Co. Antrim (Sheridan 1992) and Lambay Island off the coast of Dublin (Cooney 1998), and Cooney suggests that white inclusions in the stone were representations of ancestral bones. Bradley & Edmonds (1993) found that the most worked areas of the stone axe quarry in Cumbria were often at the most inaccessible places where the stones were no better than at easier locations, indicating perhaps that special significance was given to stone from dangerous places.

An indication of the ritual importance attached to stone as a building material was found by O’Brien (1999) in his investigations into wedge tombs in west Cork. At both Toormore and Altar wedge tombs he found evidence of the careful disposal of stone debitage from the building blocks in pits at the entrance to the tomb. He suggests that this demonstrates that the stones were ‘imbued with special significance, befitting their use in a sacred structure’. While wedge tombs are late in the chronology of megalithic monuments it is entirely possible that such a practice had originated at earlier structures.

2.4.4 Colour. The stones of megalithic monuments as seen today present a very different appearance from when they were first built. In most cases the surface of the stone is obscured by lichen, and many monuments are also concealed by ivy, brambles and moss. In extreme cases it is not possible to identify the type of rock used, or to ascertain whether all stones in the monument are of the same type. A property of stone which may have been significant when it was first selected is its colour, and this can now be difficult to discern.

A study of the significance and meaning of colour in the archaeological record is an area of current interest. Gage (1999) believes that ‘all societies are concerned about
colour’ and Jones & MacGregor (2002) suggest that one of the reasons that archaeological artefacts have ‘fascinated and compelled ’ is their colour, and mention gold and jewelled ornaments, paintings and glass. Such objects are not evident in the Irish Neolithic, but it may be possible to distinguish a conscious selection of stone, in both structures and artefacts, based on colour. The presence of a stone or stones different from the main body of the monument or transported from a distance may be an indication of a conscious colour choice. Darvill, in his study of the use of quartz in Neolithic monuments on the Isle of Man (2002), points out that there are two different explanations for the selection of specific colour; it may be a universal preference or it may be socially determined and specific to certain communities. A contextual analysis and consideration of ethnographic analogies may indicate whether the colour of specific stones was a significant factor in Neolithic monuments.

The importance of white and black (or light and dark) as the basic, and earliest, colours recognised in ethnographic studies of small-scale societies is accepted as a generalised, cross-cultural phenomenon and, by using Parker Pearson and Ramilisonina’s scheme of ethnographic analogy (1998a), may be extended with some probability to Neolithic societies. Linguistic studies by Berlin and Kay (1969) confirmed that white and black were the first colours identified in all languages they studied, and that the next colour identified was red. They state firmly ‘all known human societies, past and present, made/make wide use of colour both general and for specific purposes.’ (Ibid.) Colour perception is accepted as an embodied, cross-cultural concept, but the categorization of colours is culture specific and thus revealing of past societies (A.Jones 1999, 340).

A concentration on these three colours is evident in many small-scale societies, both past and present. Paul Taçon, studying the native Australians of Arnhem Land, found that black, red and white were the colours of choice in body painting and rock art, and were often linked to bodily fluids (Taçon 1991). Most of the earlier stone tools from the Kakadu region, dating from c 4000 BC were made from grey or white quartzite or deep red chert (Ibid. 201). Darvill (2002, 74) notes that a similar ‘colour triad’ has been recorded in African societies in Zambia and Sudan.

Indications of colour selection in such societies is strong enough to justify an examination of such preference in the Irish Neolithic. No coloured artwork has been identified from the Irish Early Neolithic, nor has ephemera like clothing which might
indicate a colour preference, so a conscious choice of differently coloured stones for structures and tools is the only possible indicator of a colour preference. The most obvious demonstration of a colour choice in megaliths is in the use of quartz – pure white. On a material basis this is an obvious attention-focussing device, answering one of Renfrew’s Indicators of Ritual (Renfrew 1994a, 51). The excavator of Achnacree in Scotland describes the quartz pebble spread vividly ‘when we looked into the dark chamber from the outside they shone as if illuminated’ (Smith 1872, quoted in Darvill 2002, 81). It is an attractive, shining stone, widely available throughout Ireland, and Taçon (1999, 120) states that ‘most human societies are attracted to make special use of … objects that are bright or brilliant (e.g….quartz)’. Brilliant, shiny objects tend to be prestigious and desirable, as exemplified by the enduring allure of diamonds. Quartz is used in structural elements, both as quartzite stones and as stones with quartz vein inclusions, and as pebble spreads marking certain areas, particularly entrances. The reconstructed façade of the large passage tomb at Newgrange is a particularly good example as the white quartz is interspersed with dark grey granite, forming a striking colour contrast. The quartz was transported from the Wicklow mountains, indicating its importance to the builders (Cooney 2000). Quartz pebbles were found in a layer around the entrance to the wedge tomb at Toormore Co. Cork (O’Brien 1999) and it has been linked with many stone circles in Britain and Ireland (Burl 1979). Quartz crystals have an unusual material quality, the development of an electric potential under the application of stress – piezoelectricity. This means that when two crystals are rubbed together they produce a spark, and this property may have increased its attractiveness as an object which could convey an immaterial meaning.
It is likely that quartz was not selected merely for its material properties. Quartz has a strong ritual symbolism in other cultures and Lewis-Williams and Pearce (2005, 257) state that ‘throughout the world, quartz crystals ... are associated with spiritual beliefs’. Paul Taçon believed that in Western Australia the stone was imbued with spiritual significance and was often associated with sacred rituals and shamans (Taçon 1991). Darvill (2002, 73), who sees quartz as a substance in which colour and material combined to give a symbolic meaning, believes that folklore and the persistence of ancient traditions point to the perception of quartz as a universal symbol, involving cosmological concepts.

Quartz has many indications of endowed significance during the Neolithic in Ireland, and its use in so many ritual structures increases this significance while at the same time adding ritual importance to the structure. Bergh (1995, 153), noting its association with burial deposits and the property of piezoelectricity, suggests that it has a certain meaning in relation to the dead. He feels that the quartz ‘can be seen as giving the dead the power to undertake the journey to the otherworld. (It) ... can also have symbolized life, an assurance of re-birth’. Darvill (2002, 114) also suggests that quartz pebbles symbolise the soul, and may have had the idea of a passport into another world. Quartz has been connected with both the sun and the moon. Its presence at Newgrange, with its astronomical orientation, may indicate a link with the sun (Darvill 2002, 114), while Burl (1987, 37) suggests that the bright chips of quartz in stone circles were seen as particles fallen from the moon – ‘life-giving stones’.

The intensity or absence of light is an important consideration in revealing the colour of stone. Sunlight is the most important, but torchlight within a passage or chamber would also have revealed nuances of colour, sparkle and shine, and also illuminated otherwise unobtrusive stones like the underside of capstones. The diurnal and annual movements of the sun would have changed the perception of stone colour, and emphasised different stones at different times, whilst the movement of a torch bearer inside a monument could have purposefully increased the theatricality of the event. The penetration of the sun’s rays through the passage at Newgrange during the winter solstice sunrise is well known, but Hensey (2010, 146) believes that the entrance to Cairn G at Carrowkeel, previously thought to provide an ‘inexact’ route for the summer solstice, may have been purposefully constructed to allow the sun’s ray to travel along the tomb interior, illuminating different stones in
turn. In considering the layout of megalithic tombs in Brittany, Britain and Ireland, Bradley (1989) believes that their design was influenced by a desire to create areas of light and darkness within, with certain stones and artwork intended to be illuminated while others remained hidden. Some later Breton passage tombs were angled in such a way that the light was deliberately excluded from the interior, and Bradley (Ibid.) suggests that the blocking of entrances in some Irish and Scottish passage graves was intended to achieve the same result, indicating that the dead were now perceived as being more sharply divided from the living, with no direct communication between the two worlds. An examination of the colour and light of the stones and interiors of portal tombs is thus suggested.

2.4.5 Working with stone. If stone was regarded as a material of significance, imbued with ideas of permanence and ancestry, signifying and signalling concepts and beliefs, then building a stone monument was an occasion of deep significance. It involved technological skill and architectural vision, organisation of labour and physical exertion, but, most importantly, it was the physical expression of an idea, the creation in stone of a symbolic expression of beliefs which reflected a changed view of the world and of man’s place within it.

Building a stone monument accomplished more than creating a lasting structure. The monumentality of the structure meant that many people were working together, thus building a sense of community solidarity and communal awareness. The stone enshrined memory in a permanent fashion, as a constant reminder of those who had gone before and of their beliefs, the building of a stone monument was a celebration of shared beliefs, achievement and social cohesion. Referring to the builders Richards (2004b) suggests that they ‘...through their labour constructed both themselves and their relations with others’. He believes that, in some instances at least, the ritual of the construction activity was primary, and more important than its later use ‘instead of seeing architecture as built to be used, its actual use lies in its building.’ (Richards 2004b, 73). Evans (1988), while discussing the construction of causewayed enclosures, felt that the most appropriate way to view these monuments was as projects where ideas were conceived and resolved through the act of construction. These concepts are particularly significant if the monuments were conceived as single-use structures, not intended to be re-entered or structurally altered.
2.5 People of the monuments – Early Neolithic society.

‘Megaliths were as much a cause as a consequence of social complexity.’

Sherratt 1990.

Early agricultural societies have been labelled as ‘Local Groups’ by anthropologists Johnson and Earle (1990) and as ‘Tribes’ by Service (1962). Renfrew and Bahn (1991) use the same criteria to identify a ‘Segmentary’ society as they feel that the concept of a tribe implies an acceptance of a common ethnic identity which is not evident. These models have been broadly accepted for this study, although a caveat is entered in that these writers suggest that a village-based society was the norm whilst in Early Neolithic Ireland the evidence points to a dispersed settlement pattern with occasional small clusters (Grogan 1996, 2002, Cooney 2000, Mulligan 2010). Sherratt (1990) believes that as the Neolithic spread to marginal areas of western Europe dispersed rural settlement was the norm; megaliths took the place of the village tradition of central Europe, and the two were mutually exclusive.

Because of their visibility and comparative abundance in Ireland megaliths have traditionally been used to interpret the social structure and lifestyle. It is only recently that the numerous Neolithic houses uncovered have allowed settlement evidence to be added; the material culture revealed is remarkably similar to that found in excavated megaliths (Grogan 1996, 2002). Although the dating of portal tombs is very sparse it is possible that their construction predates the rectangular house horizon by c. 100 years (Chapter 2.2).

The construction of a megalithic monument indicates that a society had reached a certain level of organisation, technical competence, and group coherence. An understanding of the physical properties of stone and of how to transport it was also implicit. Excavations have revealed a suite of typical depositions so it is reasonable to assume that there was a pre-conceived ideal and a strong degree of connection between the societies who built and used them. While a small simple monument, like some at Carrowmore, could have been the work of an extended family (Bergh 1995, 152) large and complex structures obviously needed large and complex societies to build them.

The material culture of the Irish Early Neolithic can also reveal aspects of the nature of the society. The introduction of pottery demonstrates increased cooperation
and communication, and also suggests changed patterns of daily life, like diet and dining styles. Serving food from containers may have encouraged a more formalised approach to meals, bringing regularity to the daily routine and enabling an orderly presentation of food at gatherings and possibly feasting.

The architecture and setting of monumental tombs can convey information also about the social organisation and ideologies of the societies who built them. The ideological basis of a society may be revealed in the nature of built ritual monuments, and may have been altered by the use of such a structure. An examination of the layout of ritual monuments may make it possible to suggest that a society was either egalitarian and unstratified, or hierarchical and elitist. If part of the structure was divided from the rest, or was constructed in such a way that access was limited to a small number of people, it may be an indication that society was also structured and that some elements were more privileged than others, although it may reflect the nature of religious practice and the existence of religious specialists or shamans.

Information about social structure can be conveyed by evidence of patterned deposition practices but Richards (1988, 42) cautions against this use of mortuary evidence as a ‘direct index of social organisation’ (of the dead) and prefers that they should be examined for indications of social practices and relationships among the living. In his examination of the chambered tombs of Orkney he believes that it is the design of the cellular tombs, rather than the mortuary treatment, which indicated an increasing stratification within society, as the ritual space became more and more centralised and restricted to a small number of individuals.

Bradley (1984) suggests that the monuments preceded the emergence of elites but their increasing complexity may be an indication that differences in social structures were beginning to emerge, either in the area of construction or of ritual expertise. The construction period of portal tombs may have been just on the cusp of the egalitarian tribe developing a ranked society; in fact the construction of portal tombs may have initiated the change in social structure.

An emphasis on the cognitive changes between the Mesolithic and Neolithic was carried out by Barnard (2007). He used anthropological studies in southern Africa to demonstrate that the process of ‘Neolithisation’ involved changes in cognition, with a contrasting understanding of what was thought desirable amongst
groups with different lifestyles. His findings regarding the change in attitudes towards leadership and equality are particularly relevant in a consideration of the monument builders: he found that groups of early farmers with a Neolithic way of life were more likely to accept that an unequal society with leader(s) was the natural way to live than those who lived by hunting and gathering (Fig. 21).

Leadership.  Equality.

Fig 21. Suggested Mesolithic and Neolithic attitudes to leadership and equality. (Barnard 2007).

2.6 Summary.

Portal tombs were constructed in Ireland during the Early Neolithic period, possibly before 3750 BC, the generally accepted date for the introduction/adoption of the Neolithic proper. Before this date there are scattered indications of small-scale farming ventures and there is a possibility that one large ritual structure, the causewayed enclosure at Magheraboy, was already in use. New analysis on the bone from Poulnabrone has validated the early dating for this monument. There is very little dating from other portal tombs, but the depositional evidence does not contradict the possibility of early construction, and the closely similar pattern of design strongly suggests that other portal tombs were contemporary with Poulnabrone.

The widespread changeover to the Neolithic way of life probably took place in Ireland at around 3,750 BC when agriculture, sedentism, pottery and monument construction seem to have been adopted within a brief period. Court tombs were probably constructed within a hundred-year period which coincides with the
building and use of rectangular wooden houses. Portal tombs were in use then, either as a continued usage of century-old monuments, or as contemporary constructions. In the course of this study comparisons are made with court tombs, in regard to their siting, morphology and depositional practice, in an attempt to illuminate their relationship.

The most likely scenario for the introduction of the Neolithic seems, on balance, to have resulted from the arrival of a number of colonists, bringing with them domestic animals, seeds, new lifestyles and technologies, and beliefs. The early signs of very small-scale farming might have resulted from unsuccessful attempts made by some of the indigenous Mesolithic population, or, more likely, might represent the very earliest arrival of newcomers, too few in number leave signs of a permanent settlement. The origin of the settlers is normally accepted as being from northern France or Britain; no definite place of origin can be stated at present. It is possible that individuals may have originated from both these areas, and settled in different parts of Ireland.

The advent of the Neolithic brought major changes. The adoption of an agricultural lifestyle was accompanied by changes in the material culture in pottery, lithics and domestic structures, resulting in, or from, a major shift in ideology and beliefs demonstrated by the construction of stone monuments. The material evidence of portal tombs is studied in an effort to explain the ritual significance of the tomb deposits, and to enlighten the discussion on a possible sequence of construction, which might have been ritually determined.

Megalithic monuments in Neolithic Ireland were part of the monumental phenomenon of the Neolithic in Western Europe, but showed strong local influences. None of the monument types of Ireland are copies of monuments of western Europe; they demonstrate regional designs, aspirations and requirements within an overarching tradition. The small number of portal tombs in Wales and Cornwall suggest links with the communities in Ireland, but none has dates as early as Poulnabrone. Consideration is given to the nature of the ideology and/or beliefs which necessitated these structures.

The Neolithic is the New Stone Age, and stone retained its significance, both material and conceptual. Stone was selected for building ritual structures, and there
are indications that its sourcing and use was intentional, both in the monuments and in the lithic tools which were often deposited there.

It is believed that most people in Early Neolithic society lived in small, segmentary egalitarian tribes or bands. In Ireland, unlike the situation in central Europe, the most likely pattern was dispersed rural settlement. Monuments may have replaced the large longhouses of central European villages as focus points for group cohesion, as well as displaying the concepts of ideology and belief.

The emphasis on this period in Ireland seems to be on change, change in lifestyle, material culture, rituals and beliefs; portal tombs may demonstrate all of these.
Chapter 3. The Study of Portal Tombs – Recent and Current Interpretations.

‘When I use a word - it means just what I choose it to mean - neither more nor less.’
Humpty Dumpty. Through the Looking Glass by Lewis Carroll.

3.1 Introduction.

Previous interpretive works on megalithic monuments have studied them from all angles, and through a variety of theoretical viewpoints. Aspects of their function, use, intention and influence have all been deduced through focussing on the landscape setting, architecture and sequence of construction and deposition. This study focuses primarily on the ritual significance and intentions of the monument builders, drawing on previous examinations of chronology, typology and regional setting.

This chapter considers the most influential studies of portal tombs and other monuments, both recent and current, and those with most relevance to this thesis. Studies in related fields are included where they are relevant to the present work. Mythology and the views and interpretations of antiquarians and early archaeologists were discussed in chapter 1.2. Other work will be referred to at the appropriate points, but an attempt to summarise the current state of interpretation of megalithic monuments, in particular of portal tombs, is made here. In the interest of clarity the interpretations are discussed under headings regarding the primary concept that the writer wishes to stress. For example, the concept of ritual belief may be inferred by different writers from a study of the morphology of the tomb, its place in the landscape or its contents.

3.2 Interpretations of Society.

A conviction that the lifestyle and ideologies of society can be studied through a consideration of their ritual structures, or lack thereof, has become a common theme throughout recent literature. As discussed in Chapter 2.5 monuments were, until recently, the only archaeologically visible Neolithic remains in the Irish landscape and
their depositional contents provided the best clues to domestic life and ideals, but the significant number of early Neolithic rectangular houses now known (Smyth 2006, 2010, 2013, Mulligan 2010) has added considerably to the knowledge of Ireland at that time. The artefactual evidence from these houses is remarkably similar to that from contemporary monuments, stressing the lack of a distinction between the ritual and domestic spheres, as discussed by many writers, for example Bradley (2005), Barrett (1994). The contents of monuments, deposited in a repetitive fashion, were included with a purpose; they signified something to those who used them and were important signifiers of concepts about death and the dead. The treatment of human remains may indicate views on gender relations, age differentiation, social stratification, exclusion and inclusion. Interpretations about the mundane details of everyday life have also been made from monumental evidence, particularly from the depositional artefacts, but also from a consideration of landscape settings and how they related to the natural world of topography, geology, soils and vegetation.

3.2.1 Lineage. It seems most likely that society in the Irish Early Neolithic was organised in a system of small tribes or local groups of farmers and pastoral herders, with permanent, dispersed settlements, burial mounds and shrines. Religious elders may have conducted calendrical rituals and rites connected with changing identity within society like initiation into adulthood and death, as suggested by ethnographic evidence from early farming societies (Sahlins 1961, Service 1962, Johnson & Earle 2000). Recognition of a shared lineage was probably an important part of group solidarity.

An analysis of the design of Irish court tombs by Powell in 2005 interpreted the differing layout of the courts, galleries and cells as indications of lineage-based societies. He recognised that the meanings of material structures are dependent on the context in which they are constructed and used, and that the elements of court tomb design reflected and reinforced themes within society. Powell (Ibid.) argued that the design represented a group with a common descent and lineage; the separate cells (modules) gave the opportunity to display different identities within the common lineage, like marriages, divisions from the common group and alliances with outsiders. The insertion of subsidiary chambers in the cairn gave scope to reflect
relationships of increasing complexity and may have marked the inclusion of an unrelated family group.

Although most of this paper is concerned with court tombs Powell includes a short section on portal tombs. He suggests that the single-celled nature of portal tombs represents a group who laid little emphasis on extended lineage connections with their emphasis on ancestral importance. The ‘highly conspicuous’ architecture of the portal tombs may have indicated a group who had moved to new and unoccupied territory, and were the first to settle and farm there. He mentions Sahlins’ (1961) system whereby the first tribe in a new area was unlikely to develop a segmentary lineage system but to remain autonomous, and suggests that the similarity between portal tombs and the side chambers inserted into court tomb cairns may indicate that these independent groups developed over time into a lineage-based society marked by their absorption into the larger group of the court tombs.

This is a valuable paper, suggesting an intricacy of social relationships with aspects of development and even evolution displayed by the different architectural styles. It should be borne in mind when examining other aspects of monuments, like landscape siting, sequences of construction and contents. Powell’s suggestion that court tombs and portal tombs were constructed by groups with different social structures (Powell 2005, 20) may be an illustration of the likely chronological difference between the tomb types.

### 3.2.2 Societal structure

Hodder’s 1982 book *Symbolic and Structural Archaeology* was a most influential publication presenting new theoretical approaches to the study of archaeology. Amongst the contributions was a chapter by Michael Shanks and Christopher Tilley ‘Ideology, symbolic power and ritual communication: a reinterpretation of Neolithic mortuary practices’ a paper which attempts to interpret mortuary evidence as an indication that beliefs of class divisions and antagonisms existed throughout prehistory. In their study of mortuary evidence from sites in Southern England and Sweden they claim that the human remains were deliberately manipulated to present an incorrect view that society was egalitarian and to conceal the existence of an elite. This, relatively short, paper has had an immense influence on interpretations, with many regarding the conclusions as factual and proven. It should be borne in mind that Tilley has expressed the rather startling opinion that
The Study of Portal Tombs.

archaeology should change the past to suit the needs of the present (Tilley 1989). Acceptance of the idea of deliberate manipulation entails accepting not only that there was an existing elite but also that the ‘workers’ were either willing to accept their inferior status or unable, physically and mentally, to combat it. Barrett’s 1991 criticism is very valid: the ritual treatment of the human remains which Shanks & Tilley identified as manipulation of the evidence had to be observed by those who were to be manipulated, whereas in fact they were concealed from all except the elite, as noted by the writers themselves.

Hensey (2010) suggests that Marxist-inspired notions of the prevalence of elite manipulation have become ‘over-interpreted’ and commonly accepted without sufficient material evidence. In the present study it is felt that if two different interpretations are present then the simplest seems the most feasible, or, as Patton (1993, 15) puts it, the Realist approach, is preferred.

The Archaeology of Death and Burial by Parker Pearson was published in 1999. Parker Pearson also believes that aspects of the structure of society are revealed by the treatment of human remains, but he reaches a different conclusion from that of Shanks and Tilley. The book lays much emphasis on ethnographic information and analogy, and includes studies of the changing style of British funeral practice, recent and current. Of particular relevance to this study is his consideration of ‘secondary’ rites, involving a two-stage treatment of human remains, with final deposition in a different area. Disarticulation and a differential treatment of different parts of the body are, he believes, assertions of the importance of the collective over the individual.

Alison Sheridan has written extensively about many aspects of the Neolithic, including the Mesolithic / Neolithic transition and has directed her attention to the architecture of Irish passage tombs in 1985/6. Her paper ‘Megaliths and Megalomania’ is still accepted as a good model of the chronology of passage tombs. She used the changing features of the monuments – design, size and contents - to explain the changing nature of the structure of society. She admits that it is not possible to offer an unequivocal explanation of the structure of society from the material evidence in tombs, but feels that the passage tombs can be viewed as ‘conveyor(s) of information’ (Ibid. 27). She suggests that the passage tombs were used as symbols of power and mediums for inter-group competition, revealing increasing
social stratification during the period 3800 – 3050 BC, with a change from an egalitarian society to one which used the passage tombs to display their conspicuous consumption and prestige. The emergence of a powerful elite was paralleled by a linkage between temporal power and religious authority, strengthened by notions of ancestral, divine authority, established by the time of the great passage tombs of Newgrange and Knowth. As evidence for this model she notes the increasing size and decreasing number of the monuments which indicated a pooling of resources as smaller groups combined to form larger alliances, and the increasing sophistication of grave goods like the maceheads which might have been symbols of high status. She believes that even the earliest, simple tombs played a vital role in maintaining the cohesion and traditions of society and that they were thus used purposefully to demonstrate increasing wealth and power through displaying ‘conspicuous consumption’. The increasingly elaborate and arcane artwork indicated the emergence of a priestly elite, whose prestige and authority increased as they demonstrated and interpreted the celestial orientation. She sums up her arguments thus: ‘...Irish passage tombs can best be understood in terms of the attempts of competing groups to outdo each other in the hallowing of the dead.... The ideology of death appears to have been harnessed closely to the power politics of the living, and used as a medium for the assertion of status.’ (Ibid. 29).

Sheridan’s chronological model of passage tomb development is outside the scope of this study but, if it is accepted, her interpretation of the social structure at the time of the early passage tombs at Carrowmore is relevant to portal tombs. Although these structures are less complex than portal tombs her belief that monuments played a vital role in maintaining the cohesion and traditions of society can be considered in interpreting the social structure of the portal tomb builders (Sheridan 1985/86, 27).

Fleming’s 1973 paper ‘Tombs for the Living’ suggests that monuments played a key role in ‘maintaining the structure of contemporary social organisation’ (Ibid. 188). He believes that the impressive visual nature of the monuments, and their enduring quality, were intentional, and were constructed as signalling the power and position of the leader(s) of those who built them. In an effort to understand whether the emphasis was on their importance as tombs or as grandiose signals he compared mound sizes and chamber capacity and concluded that as the monuments increased in size the equivalent capacity for mortuary remains decreased. The development of
long mounds instead of round mounds increased both internal capacity and visual impressiveness without involving increased labour; Fleming concludes that monument design underwent a continuous process of improvement, and was not limited by ‘doctrinally determined blueprints.’ (Ibid. 187). The tombs were deliberately designed to rivet the attention of living individuals, both on the rituals performed there and of the meanings of those rituals, and on the power and position of the individuals connected with them. They may have had a role in instituting and maintaining a hereditary leadership. As agriculture was adopted the size of societal groups increased; the leader was no longer so familiar and obvious and needed a complex signalling system. In the absence of portable status-symbols, which Fleming says were absent in the Neolithic, the leaders used monuments to validate their authority.

On this last point, polished stone axes (discussed in section 6.5.2) were widely available in the Neolithic (and indeed in the Irish Mesolithic) and could have performed the function of badges of office, or status symbols very well.

Clues to the nature of societal structure at the time of the construction and use of portal tombs were sought in an examination of the monuments during this study. The morphology was examined to ascertain whether there was a structural division between participants and onlookers, and the deposits were assessed for evidence of elite items or differing treatment of remains which might have indicated the existence of a stratified society. Changes in the structure of a society may have been due to a change in lifestyle (adopting agriculture, or becoming sedentary) or to an alteration in beliefs. Although portal tombs have a similarity in their basic structure there are some differences, particularly among the examples in the Southeastern region, which might be due to an evolving chronology of the sort Sheridan suggests for passage tombs, but the available dating is insufficient to follow this interpretation.

3.2.3 Society – material aspects. The mundane, or everyday, pursuits of society can be interpreted from the material record, (discussed in chapter 2.2), as well as from settlement remains. Most excavated monuments have revealed traces of pottery, lithics and other items both inside the chamber and in the environs, and
chance finds have been added to the catalogues. These artefacts have been studied to construct models of typology which have been used to suggest dating and chronology, movement of people and artefact exchange, construction methods and likely work places, but they also increase our knowledge of what everyday life was like.

Bradley (2004) discusses the ways in which material culture changed at the beginning of the Neolithic ‘.. in earlier (Mesolithic) periods human beings had been integrated into the natural world, but in the Neolithic they seem to have acted upon it’ (Ibid. 110). He points out there was a major elaboration of material culture, in both quantity and variety, at the same time as the adoption of agriculture, exhibiting ‘complexity, abundance and longevity’ (Ibid.). Raising domesticated animals and cultivating grain involved a new conception of time, and introduced the concept of ownership. These concepts were materialized in new aspects of material culture, artefacts like pottery which demonstrated complete transformative processes of the material. Most of his paper concerns early Neolithic material culture in Scandinavia, and so he attributes this change in material culture to the adoption of agriculture rather than to sedentism. The construction of monuments, where these new artefacts were deposited, may have resulted in the materialization of these objects ‘.. these practices became imbued with greater formality’ (Ibid. 112) and ‘ritualized some of the elements of daily life’ (Ibid. 113) and resulted in a new understanding of the environment and the place of humans within it.

A very detailed paper by Sheridan (1995) describes the generally accepted sequence and dating of design in Irish Neolithic pottery. In this paper she reviews models made by Case (1961), Piggott (1954) and Herity (1982) and refines her own earlier sequence (Sheridan 1986). The earliest pottery in Ireland was made c.4000 cal BC and is found in different site types, for example rectangular houses as at Ballygalley (Simpson 1996, 124), the causewayed enclosure at Donegore (Sheridan 1995, 17), Kilgreaney Cave (Dowd 2002, 81) and Creggan devesky court tomb (Sheridan 1995, 8), as well as in portal tombs, all of which may have been approximately contemporaneous. The acceptance of this dating sequence has left other writers free to concentrate on the conceptual importance of pottery during the Neolithic, and on its significance within everyday life. Some have concentrated on the potter and her/his place within society, whilst others have turned their attention to
3. The Study of Portal Tombs.

the actual pot and its influence on changing lifestyles within the Neolithic. Pottery is discussed in this thesis in Chapters 2.2 and 6.3.

There is general acceptance amongst writers that early potters were women. This opinion is based on ethnographic analogy, and is expressed by, amongst others, Ian Hodder. His influential 1982 work *Symbols in Action* describes the potters of the Baringo area of Kenya, all of whom were female and who had learned their skills from their mothers. Other writers have followed this opinion, but a note of caution is expressed by Edwards & Pope (2012, 465) who believe that this opinion is unsustainable and supported only by ‘...unfortunate recourse to anecdotal ethnographic analogy’. It is, perhaps, safer to take the view that there is a strong likelihood that the early pottery was made by women; perhaps Neolithic society revealed gender differentiation without necessarily gender hierarchy.

A view that the potter was held in high esteem, and possibly regarded as a magical practitioner, has been expressed by some writers, notably by Thomas in 1996, when he devoted a whole section of his *Understanding the Neolithic* to pottery (Thomas 1996a, 89-125). Thomas examines pottery in two ways. On the physical, purely material level it was a new technology requiring a new skill in the Neolithic, and it both enabled and encouraged new forms of cooking in the form of porridges, soups and stews (Ibid. 96). Pottery vessels made mealtimes more formalised and socially significant, introducing the concepts of ritual feasting at important occasions (Ibid. 99). They may have become part of a gift circulation network, gaining identities and histories of their own as they passed from one group to another. On the conceptual side Thomas takes the view that, as Hodder declared ‘all material culture is meaningful’, and he considers the materiality, the significance with which a pot was imbued or which it gathered into itself through patterns of usage. In a preliterate society material objects may have been used as mnemonic devices through which past traditions were maintained and emphasised, and pottery, with its range of possible shapes and applied decoration, was an ideal medium for this (Ibid. 93-94). Thomas feels that the process of making a pot was so new and significant that it was regarded as an arcane, almost magical process, whose practitioners were regarded as special and highly esteemed. The process of making pots may have involved socially significant occasions – locating and gathering suitable clay and temper, shaping the pots, building a fire and keeping it at a constant temperature, and the whole process
could have formed a ritual performance of its own, thus both recognising and increasing its significance. Thomas suggests that the fact that pottery sherds were deposited at monumental sites increased both the importance of the site and of the artefact; he uses ethnographic analogy to assist in his understanding that the addition of certain objects into a sacred space adds the powers and significance they possess (Ibid. 96).

Most excavated monuments have contained deposits of lithics, including items of purely domestic nature like scrapers and small knives, and also what could be termed weaponry. Again these give information regarding society on two different fronts, the mundane details of everyday life and the ideology of how a society was structured and ordered itself.

Gabriel Cooney has investigated, described and interpreted Irish stone axes from their initial extraction to their final deposition, and his many publications on the subject cover all aspects (for example 1998, 2000, 2002, 2008). The most popular stone for Irish axes was porcellanite from Co. Antrim; it was used to make axes found all over the country and also in Britain, demonstrating the existence of trade or exchange routes. Reciprocity is shown by axes made from Cumbrian tuff found in Ireland, demonstrating that Neolithic societies from both sides of the Irish Sea were in communication with one another, and held similar views on the importance of axes. Cooney believes that the quarry from which the stone was extracted may have become a place of ritual importance through its association with a symbolic artefact of such importance (1998, 109), and this may have led to societal occasions when journeys to the quarries may have become formalised ritual occasions, undertaken by selected members of society. He sees the act of extraction as showing many of the classic signs of ritual activity - multiple, repetitive, formal actions taking place at formally defined locations - as listed by Renfrew (1994a, 51). Quarries were often located at liminal places, on islands like Lambay or high clifftops at Tievebulliagh. The work of quarrying therefore became more than a mundane task; it demonstrated again that there was little conception of a division between the mundane and the sacred.

Other lithic objects are also common articles of deposition in megalithic monuments. Knives, points, arrowheads and scrapers, the ubiquitous tools of Neolithic life, have all been found in all excavated portal tombs, and are still picked
up from their environs (for example Kytmannow (2008), found two flint artefacts during her survey). Stefan Bergh (2009) has written about the chert lithics found in the Knocknarea area of Co. Sligo and has interpreted the evidence both in terms of their place of manufacture and their likely usage in Neolithic lifestyles. Hollow and concave scrapers are unique to the Irish Neolithic, and Bergh also speculates that scrapers made from black chert in the ritually important area of Knocknarea may have been regarded as of particular significance, carrying a special meaning linked with the important ritual location (Ibid. 111). This is somewhat similar to the way that stone axes from particular quarries may have had increased importance, transforming them from useful, everyday tools into prized reminders of significant locations.

In this study the interpretation of depositions is somewhat limited due to the very limited contextual information available. Portal tombs are, in the main, situated in very accessible locations and are open to the elements, and to predators, of the animal and human kind. All excavated portal tombs showed indications that they had been disturbed; artefacts may have been removed and displaced before they could be recorded. When Drumanone, Co. Roscommon was excavated, fragments of iron and modern china were found in the socket of one of the sidestones (Topp 1962, 41). Nevertheless, the deposition of material objects in portal tombs was purposeful and should be considered for aspects of ritual.

3.3 Ritual practice.

Elements of ritual practice have been interpreted from different aspects of megalithic monuments. The architecture reveals patterns of movement, bodily posture and access which may well have been included to cater for the needs of the ritual practices. The inclusion and treatment of human remains demonstrate the ways in which the dead were treated, and the practices of the survivors. Material deposits may have been included as parts of the ritual paraphernalia. The situation in the landscape, particularly if there is evidence of repetitive selection of preferred sites, can be used to interpret certain practices, such as formal movement (processing), group participation or secretiveness.
3.3.1 **Indications of performance.** A belief that past rituals involved elements of performance, involving both participants and audience, has been suggested from a study of monumental structures, both their architecture and their landscape placement. Fleming (1972) used the design features of monuments to interpret their functions and stresses that British and Irish monuments should not be viewed as mere copies of earlier continental models: ‘...designers, priests and craftsmen are not half-witted copiers.’ (Ibid. 70). All rituals, he believed, necessitated an area for the participants and an area for spectators, and represented an exercise in problem-solving in order to reconcile these two elements (Ibid. 52). Where the monument included a burial site there was a need for some sort of container, and this would have become the focal point. The ‘modular’ design of court tombs as recognised by de Valera (1960) was a device for increasing the accommodation while retaining the design requirements of the ritual. Fleming suggests a diachronic approach to design may be evident in multi-period sites in order to accommodate two-stage rituals, such as initial cremation or temporary inhumation followed by collective burial at a later time (Ibid. 68).

A completely different approach to the same subject is provided by Thomas whose 1990 study of the interior of Irish megalithic tombs remains one of the most influential and inspirational papers on this subject. Almost *en passant* it includes a forthright defence of the subjective interpretive view, contrasting it with the ultimate in objectivity, the aerial photograph, unobtainable in the Neolithic. Thomas describes the phenomenon of moving bodily through the ‘written text’ of the courts and passages of the monuments, constrained and enabled by the architecture, stooping to enter small spaces, stretching to view artwork, bending to avoid low stone lintels. Using this physical experience he interprets the probable practices they indicated, and the means by which these practices were reinforced and emphasised by constant repetition. He does not dwell on portal tombs, regarding them as simple large stone boxes with only a division between the outside and the inside of the chamber, but stresses how the addition of a mound and a court transforms them into monuments with obvious paths of movement and orientation, with only one way of experiencing them. It became necessary to approach court tombs from a certain direction, a feature which became even more restricted and sophisticated with passage tombs (Ibid. 173). Access to the central ritual area became progressively more complex and constrained; Thomas sees this as an attempt to ‘orchestrate’ the ritual, with a corresponding
differentiation between those with full access and those who were excluded (Ibid. 175).

In the present study of portal tombs it was found that the basic structure does not encourage the sort of movement described by Thomas, and in some cases actively prohibits it, with obvious implications for the nature of the ritual practised there. It appears that Fleming’ interpretation can be applied to a limited extent; it seems likely that, in many cases, practitioners and spectators were all situated outside the tomb due to the constricted nature of many of the chambers.

3.3.2 The ritual of construction. An interesting concept, that the ritual importance of megalithic monuments lay in the act of construction, rather than in the later usage, has been suggested by some writers. The monuments are so large and needed such considerable inputs of labour, pre-planning and engineering skill that this is an attractive proposition. It was the physical expression of an idea, the creation in stone of a symbolic expression of beliefs which reflected a changed view of the world and of man’s place within it. In advancing this theory Richards (2004b, 73) talks about the ‘large numbers of people .. required for monumental construction’, and Whittle (2004, 81) says that the construction must have been ‘an achievement of special virtue’.

Richards (2004a) discusses this idea in an examination of the great stone circle of Brodgar, Orkney. Of this monument he says ‘its actual use lies in its building’, and he stresses the theatricality of the occasion ‘a ritual procession of performance’ (Ibid. 108). He suggests that the creation of the stone circle would have involved a mnemonic recitation of genealogies as each stone was placed and that the act of construction ‘created a network of relationships that enmeshed many people in many different places.’ In a later contribution (2004b) he applies this theory to the construction of Carreg Samson dolmen in Wales. He talks about the ‘misconception … of the notion that it is built to provide a function only after construction’ (Ibid. 72). He believes that calculations of the amount of labour required for monumental construction are misguided and unnecessary; the construction was the occasion for ‘an extravagant expression of social labour and effort … ritualised labour.’ (Ibid. 73); in these activities it was essential that large numbers of people were involved in order to reaffirm ‘a network of relationships’
His theory may be more difficult to apply to monuments with evidence of continued usage, such as deposits of different dates, unless these later deposits were unplanned and came about due to changing ritual practices.

Alasdair Whittle (2004) also suggests that the act of construction was of paramount importance. His discussion of ‘stones that float to the sky’ suggests that building the monuments was an act of transformation, that the act of raising the capstone was of supreme importance and that the purpose of the upright stones was to display the capstone rather than to define a chamber. He suggests that the ‘single act of creation’ (Ibid. 85) may have referenced a mythic view of the creation of the world, a common theme in mythology.

In an examination of the Neolithic monuments of part of southern Portugal Philine Kalb has a similar suggestion. In some cases the stones for constructing these monuments were transported over distances of ‘at least 10 km’ and from different sites (Kalb, 1996, 683) and she believes that there was no technical reason for this choice. She suggests therefore that the whole process of construction, from quarrying to transport and eventual erection, was conceived as the ‘construction ceremonial’ rather than their later use. The whole process might have been perceived as a victory of technology over nature – ‘the faith that moves mountains’ (Ibid. 685).

A conviction that the act of construction may have been regarded at the time as the prime ritual celebration does not necessarily rule out later ritual practice at the same structure. Both beliefs and practices may have undergone constant readjustment and alteration over time; the memory of the intense group experience of construction, and the presence of a striking ritual structure would surely have stimulated continuing ritual practice.

3.3.3 Other Neolithic ritual practices.

The indications of ritual practice in portal tombs lack some of the features identified at other Neolithic ritual sites. Artwork, so profuse and detailed at the later passage tombs, is entirely absent, with the possible exception of some simple cupmarks, which may not have been original. The passage tomb artwork has
suggested that hallucinogens were a feature of ritual practice (Lewis-Williams and Pearce 2005), so perhaps its absence suggests that the practices connected with portal tombs did not involve hallucinogens. Shamans, or other ritual specialists, are often associated with the use of consciousness-altering devices like hallucinogenic drugs; this suggests that the ritual practice may have been at a simpler, less intense level at portal tombs. Societal structure may have been egalitarian and open, with no need for ‘special’ people, and the introduction of passage tomb art may indicate that, at a later period, ritual became more complex and necessitated more complex practices and performers.

The deposition of quartz pebbles, on the other hand, might have been part of the paraphernalia of a shaman or ritual specialist, and were found in portal tombs. The importance of quartz is discussed in Chapter 2.4.4 and Whitley et al. (1999) use local ethnographic examples to explain the existence of quartz deposits in a ritual site at the Mojave Desert and conclude that shamans may have used the quartz in rituals of weather control. The occurrence of quartz deposits might indicate changing ritual practice, with the increasing influence of religious specialists and possible elaboration of society.

3.4 Beliefs.

While indications of ritual practice can be seen in the archaeological record the beliefs which they were celebrating are less clear. A patterning of depositions within a monument could indicate, for example, a belief that the ancestors should be honoured, or that the spirits of the earth should be appeased. Signs of organised movement inside or around a monument might result from formalised seasonal celebrations or from ceremonies that marked the passage of the dead to the afterlife.

Ethnographic analogy provides one method of assessing possible belief systems. Elements of religion, or belief in some aspects of the supernatural have been recorded in all societies and most prehistoric cultures have left traces which cannot be explained as part of the mundane business of living.
3.4.1 Early belief systems. It is believed that systems of beliefs linked with the supernatural, which might be termed religion, have existed from very early in human history. Discussions of the earliest signs of beliefs in humans are contained in an important book *Becoming Human: Innovation in Prehistoric Material and Spiritual Culture* (2009) edited by Colin Renfrew and Iain Morley. Indications of supernatural beliefs have been detected in pre-*Homo sapiens* hominids; for example de Lumley (Ibid. 19) describes a 300,000 year old burial of *Homo heidelbergensis* in Leon in Spain. The bones were accompanied by a number of handaxes, including a particularly magnificent pink quartzite ‘...evidently a funerary gift... the first expression of ritual thought’. Early humans demonstrated strong belief systems in their cave paintings in widely separated areas like Australia and southern Europe, where the depiction of animals and of human-animal hybrids are frequent.

A conviction that religious beliefs arise directly from the structure of the human nervous system and are thus common to all societies is expressed by Lewis-Williams and Pearce in *Inside the Neolithic Mind* (2005). They argue that commonalities

![Diagram showing the three interlocking dimensions of religion.](image)

*Fig. 22. The three interlocking dimensions of religion. Lewis-Williams & Pearce, 2005, 25.*

of religious beliefs and experiences which have been recorded around the world can only be explained by the ‘functioning of the universal human nervous system’ (Ibid. 41). They describe religion as having three different but interlocking dimensions: euphoric or transcendent experiences produced by the human nervous system, beliefs which arise from an attempt to explain or codify these experiences, and practices which are
an expression of these beliefs (Fig. 22). Certain religious practices in turn provoke experiences which may strengthen beliefs and re-stress practices.

The concept that all religious beliefs derive from the central nervous system is credible, but difficult to prove from archaeology. Lewis-Williams & Pearce use the perceived similarities of megalithic art to entopic images experienced during periods of altered conscious to substantiate this theory (2005, 48f), but this proof is not available for portal tomb practice, yet the monuments are perceptibly of ritual significance.

Stressing their belief in the universality of human consciousness Lewis-Williams & Pearce believe that this led to universal beliefs encompassing such concepts as a three-tiered cosmology, the opposition between heights and depths both in the physical and metaphysical world, the perceived spiritual significance of stone (particularly quartz), the importance of the sun, the significance of domestication of animals (Ibid. 140). They illustrate all their points by referencing archaeological sites, myth and ethnographic examples and point out the close connection between shamans and certain animals as depicted in Çatalhöyuk (Ibid. 145). This may demonstrate a belief that shamans gathered a supernatural potency from their relationship with large and potent animals like bull aurochs, which may have been sacrificed as part of ritual practices. The importance of celestial events is illustrated by the midwinter solstice orientation of Newgrange, emphasising continuity, while quartz is of ritual importance amongst simple societies in many parts of the world and in many prehistoric sites, but the existence of shamans in Early Neolithic Ireland is unconfirmed.

Bradley & Nimura (2013) discuss the existence of belief in a three-tiered cosmos in early Scandinavia, as revealed in the extensive rock-art of the area. They base their analysis on ethnography from the circumpolar zone, which, together with the archaeological evidence, may demonstrate that the three levels of the cosmos came into contact along the shoreline, the location of most of the rock art.

Mythology may indicate the existence of early beliefs, transmitted orally through the medium of story-telling in pre-literate societies, and many themes are universal. Indications are that such myths may have endured for millennia in some cultures. Group memory surviving in mythology for many centuries has been
identified, for example, amongst the Tlingit peoples of eastern Alaska (Crowell & Howell 2013). Archaeological and geological studies have confirmed the accuracy of mythology concerning the foundation, use and abandonment of a cliff fort over a period of some 800 years, and the writers mention other examples of embedded oral traditions which may be 2000 years old (Ibid. 5). Damm (2005, 76) believes that the oral traditions of the Sami peoples of northern Scandinavia provide ‘insight ... into the cosmos of the early Norse society’. She points out that some academic researchers accept that ‘traditional knowledge and memory may carry information about periods as far back as the late Pleistocene and early Holocene’ (Ibid. 78), and personally accepts the relevance of oral traditions.

An important paper by Alasdair Whittle (2004), mentioned in section 3.3.2 in a discussion of the ritual importance of the act of construction, suggests that portal tombs may illustrate a common theme in mythology, that of the creation of the world. Most early religions have a version of the ‘creation myth’, which may have been preserved in later world religions like the Judaeo/Christian story of the 7-day creation of the world. In Whittle’s interpretation the capstones are not roofs for chambers but rather ‘floating’ stones which signified the creation of figures which rose from the earth to the sky at the very beginning of time (Ibid. 86). Such concepts have been recorded in other societies. Alternatively, the capstones could have been viewed as a belief that earth and sky were once joined. ‘Construction’ remarks Whittle ‘emphasises stone from the earth, and presents great raised stones for display and contemplation.’ (Ibid. 87). The typical tilt of the capstone may represent the first rising of the earth, or portray the inversion of normality amongst the first humans. As discussed in Chapter 1.2 Whittle does not classify portal tombs as a distinct type of monument; he includes them with other monuments only distinguished by the existence of a large capstone, but this does not mean that his ideas are not relevant to Irish portal tombs.

3.4.2 The ancestors. A conviction that the influence of the ancestors held a strong place within the belief systems of early societies is widely held. Steadman et al. (1996) maintain that ancestor worship is a ‘universality’. If correct this would obviously be of great assistance in interpreting Neolithic monuments, but the opinion of the writers is not universally accepted. They argue their point by re-examining the
results of a well-respected ethnographic survey by Swanson in 1964, *The Birth of the Gods*, which found that ancestor worship was frequent but not universal. By including ghosts, spirits, totemic animals, shades etc. under the umbrella term of ancestors, and by widening the term worship to include reverence or respect, Steadman *et al.* (1996) manage to include all those groups which Swanson had believed did not practise ancestor worship. They therefore claim that ancestral worship is, and was, universal, and can be seen today in world religions which emphasise metaphorical common ancestors rather than actual kin-based ones.

A detailed use of ethnographic analogy was undertaken by Parker Pearson and Ramilisonina (1998a, b) in an effort to understand the concepts associated with Stonehenge. Monumental construction has been noted in many pre- and non-literate societies with simple agricultural systems, no metal usage and a low level of technology, and, as discussed above, ancestor worship is a frequent feature, although Parker Pearson and Ramilisonina do not accept it as universal (1998a, 310). They used the formal analogy of standing stones erected by one such society, the Medina of Madagascar, and similar standing stones in Neolithic Britain to examine the possibilities of conceptual similarities between the two societies, and in particular to illuminate the great stone monument of Stonehenge. They stress the fact that the material component of the monuments was stone, a substance which by its physical qualities inspires concepts of longevity and the eternal, whilst resisting associations with softness and decay (*Ibid.* 310). In Madagascar the standing stones represent the ancestors, regarded as significant and powerful members of society, whose memory should be venerated. Using the entwined principles of standing stones and ancestors the writers apply them to the archaeological evidence from Stonehenge and suggest that the stone monument was the realm of the dead ancestors contrasted with the domain of the living at the wooden henge at Durrington Walls (*Ibid.* 316, Fig. 7).

Critiques of this paper were presented by Barrett and Fewster (1998) and by Whittle (1998). Barrett and Fewster described the interpretation as ‘vulnerable’, and recommend a more sceptical approach towards universality of ancestor worship; in fact, Parker-Pearson and Ramilisonina (1998a, 310) did not claim this, but state that ‘Formal worship of ancestors is a feature of many societies, primarily in East Asia’, and they also question Steadman *et al.*’s 1996 conclusions. Barrett and Fewster (1998, 849) also dispute the equation of the hardness of stone with the dead, male ancestor, and softer
wood with females and the living, thus calling into question the whole interpretation of the greater Stonehenge site. Whittle was much more supportive of the paper, but queried the exclusion of people (the living) from the site – ‘...the power of the monument rested ... on the way it actively involved people’ (Whittle 1998, 853). He points out that there are many, rather than one, different types of kin-based ancestry in the Neolithic. While he strongly supports the use of analogy in interpretation he questions the validity of dividing analogy into different types and suggests that spirits, creators and gods were just as likely as ancestors to have been represented by the stones of Stonehenge.

An overall criticism of the emphasis on ancestral importance has been made by Whitley (2002) who is convinced that there are ‘Too Many Ancestors’ in modern British archaeological writing. He suggests that ‘... the universal ancestor has gone from being a suggestion to becoming an orthodoxy’ (Ibid. 119) and criticises the overuse of certain ethnographic analogies, in particular the Merina of Madagascar, in support of this concept. He prefers limiting the term ancestor to named, remembered individuals rather than to an amorphous collective group, and remarks that ‘... most ethnographers have noted that ancestors are remembered first as individuals before sinking into a collective anonymity’ (Ibid. 122). This criticism may have some validity, but there does seem to be general agreement that ancestral veneration was frequent and important, a concept of particular relevance in examining a monument which includes human remains, or which appears to have done so in the past. It is possible, however, that Whitley may have identified a changing attitude towards the ancestors during the Neolithic, the period of usage of the portal tombs. Initially, at the time of construction, portal tombs may have commemorated individual, named and remembered ancestors (our grandfather who first cleared this part of the forest, my aunt the potter), moving to a later, expanded concept so that the portal tombs were continuously used as sites of generalised tribal ancestry. This suggestion is explored throughout the study.

3.4.3 The spread of beliefs. Sherratt (1995) suggests that monuments in Neolithic Europe may have served the purpose of ‘conversion’ of the indigenous Mesolithic populations to the beliefs of Neolithic farmers, thereby leading to an acceptance of their technologies and presence. He believes that this is demonstrated
by the architecture of the great megalithic monuments, situated along the Atlantic seaboard where Mesolithic communities were stable and flourishing, and the ‘impressive architecture was used as a form of social propaganda’ (Ibid. 253). The stone chambered tombs introduced the idea of an enclosed ritual space where impressive rituals could be conducted by initiates, leading to an acceptance of new beliefs and a willingness to accept the new ideologies of social structure based on lineage descent which were necessary for the practice of agriculture. His belief that the process of conversion took ‘millenia’ to achieve (Ibid. 257), is not now supported, at least partly because it is believed that the Neolithic was been adopted very swiftly. It does seem that Neolithic features like sedentism, intensive agriculture and lithic changes were adopted quickly in Ireland. Sherratt’s paper has some very interesting comments regarding the spread of the Neolithic ideas and was borne in mind during the study; like other suggested functions for portal tombs his idea that they acted as signalling devices for the new order seems less likely when the frequently discreet situations of portal tombs is considered.

3.5. Interpretations of Landscape significance.

3.5.1 Introduction. The subject of landscape archaeology has become hugely popular over recent years, and many important papers have been written concerning the position of monuments in the landscape. The interpretation has fallen into two main themes; monuments in their actual physical landscape, and monuments in the conceptual landscape. Barnatt (1998) sets out clear, structured elements of the landscape which need to be considered when interpreting the individual choice of site for a monument. He lists the concepts which could be estimated from an examination of the site of a monument, including opposing principles on social levels (mobile versus sedentary, regional versus local, central versus peripheral) and on a more conceptual level (the everyday world versus other worlds, the living versus spirits and ancestors, procession versus arrival etc.). His ideas were valuable in the present study as portal tombs are monuments which display opposing principles - large and impressive structures which are frequently situated in a discreet, inconspicuous locations.
A summary of current approaches to landscape archaeology is provided by Thomas (2012). He also recognises two separate understandings of the term landscape; as a visually recognised territory and as a set of relationships between people and the land. A discussion of the influence of visual imagery, including photography, satellite images, geographical information systems and maps notes how such imagery, perceived to be objective, can be selected to present the desired effect. Thomas discusses ethnographic analogy that suggests that landscape may have been viewed as an animate being, involved reciprocally with human beings. His discussion of megalithic monuments in the landscape is particularly relevant, with a defence of Tilley’s phenomenological walk through the landscape (Section 3.5.4) which he describes as ‘enriching’ the understanding of a landscape achieved through maps or field visits (Ibid. 179), although he does make the related point that he is capable only of encountering the world through the body of a male 21st century academic. As a result, our understanding of the past can only be a contemporary one. In the present study the use of maps, both and current and antiquarian, proved immensely helpful, as did satellite images, but GIS was not attempted. Site visits, with an exploration of the monuments and their surrounding landscape, proved to be most revealing.

General works on landscape archaeology include Gabriel Cooney’s 2000 ‘Landscapes of Neolithic Ireland.’ This is an invaluable study with wide-ranging discussions and interpretations. He contrasts the earlier view of monuments as important fixed foci for mainly nomadic communities with his assertion that they were indicators of a complex, sedentary social landscape (Ibid. 127, Chapter 2.2). His view that monuments ‘supersede purely functional concerns’ (Ibid. 130) is illustrated by detailed studies of individual sites. He believes that the hilltop location of many passage tombs suggests increasing control of the ancestors while the more domestic locations of portal and court tombs indicated integration into daily life (Ibid. 113, 142): thus both local lineages and ancestral veneration were acknowledged. His suggestion of the increasingly complex nature of a likely ancestor cult during the Neolithic might be shown at an early stage in the changing attitude revealed in portal tombs, as discussed in this study, (Chapter 3.4.2).

Cooney acknowledges Bradley’s (1990) study of the importance of natural places as ritual sites and cites megaliths which may have been built on or over such
3. The Study of Portal Tombs.

sites to ‘increase the potency of the place’ (Cooney 2000, 93). This suggests that elements of pre-construction ritual practice might be evident in portal tomb sites, possibly extending knowledge of religious beliefs. He suggests that religious beliefs may have been bound up with the landscape and its seasonal changes and expressed in the ritual of the monuments (Ibid. 88); consideration of possible seasonal importance should be considered in relation to portal tombs. They were erected by early farmers; the annual cycle of crop rearing and animal husbandry must have been of crucial importance and may have been ritually marked and celebrated, even though the sophistication of the winter solstice celebration at Newgrange is not apparent.

3.5.2 Regionality. An attempt to recognise regionality in material culture was a preoccupation of early archaeologists. Culture historians classified the typology of artefacts and structures in order to illustrate their preconceived ideas about the movement of people and cultures, mainly from east to west, and from south to north. When the introduction of reliable radiocarbon dating did not support these theories attention became focussed on smaller areas within what were seen as areas of similar cultures.

Defining a Regional Neolithic, edited by Brophy and Barclay 2009, contains papers presented at the Neolithic Studies Group Seminar in 1996 which examine the question of regionality in Britain and Ireland. Amongst the contributions Jones discusses the broad scale distribution of monuments in Ireland. He defines a region as ‘an area defined by the intensity of its communication with other areas’ (Jones 2009) and considers how the landscape features constrained or enabled that communication. He believes that regions overlap and do not necessarily have a physical boundary; different people, perhaps defined by gender or social standing, may have a different view of their region, manifested by their experience of communication (Ibid.120-121). The example of similar burial practices extending across a large area is given. Within this ritual region there may have been different regions based on, for example, trade exchange or marriage, which may have been experienced differently by people of different status, age or gender. He suggests that the physical landscape of Ireland was one of the factors which influenced communication. Due to the topographical features of mountains and bogs communication was much easier in an east – west direction than from the north to the
3. The Study of Portal Tombs.

South. North-south movement was facilitated primarily along the east of the island, where the coast was more sheltered and the sea less dangerous. Other barriers to communication were bogs, drumlins and floodplains. Jones applies these physical landscape features to the location of megalithic monuments and suggests that their distribution demonstrates the probable communication routes between regions; people did not necessarily move along these routes but ideas and symbols were transferred or constrained according to the landscape.

This paper outlines a clear and logical explanation for the broad distribution of monuments. Although it must be conjectural, nevertheless it suggests an acceptable model for regionality which should be considered. The emphasis on symbolic transference rather than diffusion is important. The presence of a large number of portal tombs in a band from Dublin south to Waterford is cited as suggesting communication along the north-south routeway evident only in the east of the island, but no reason is given for the absence of court tombs in this area. If communication of portal tomb ideas was enabled by the physical landscape features in this region, then it seems strange that those for court tombs were not.

Vicki Cummings has discussed regionality in the Irish Sea Zone, in which she concentrates on ‘how people in the past may have conceived the notion of a region’ (Cummings 2011, 33), and makes some pertinent points. She notes that many regions have been defined on the basis of present-day boundaries, so that, for example, studies continue on areas like Scotland and Wales which had no prehistoric identity. She emphasises the difficulty in defining conceptual regions during the Neolithic but feels, like Jones (2009) that they may have been recognised on more than one level. A region based on kinship ties, for example, may have encompassed, or been encompassed by, a region based on land usage and settlement. In one regional concept an individual may have seemed at the core, while in another his position is much more marginal or peripheral. This interplay between differing scales can be exemplified by the landscape setting of megalithic monuments. On a purely local level the monument may be sited in relation to a specific feature of the local landscape, while on a larger scale it may be placed with regard to a wider set of concepts within the wider Neolithic community (Ibid. 37). This is a valuable concept which has practical application to the study of individual sites. Difficulties arise in recognising which local features are significant; Cummings’ work on ‘viewscapes’
3. The Study of Portal Tombs.

and significant relationships with outcrops (for example Cummings 2004, 2009a,b) are discussed below. It has been criticised by, amongst others, Fleming (2005) and Barrett & Ko (2009).

Attempts to define broad-based regions on the basis of similarities of monumental type and/or landscape siting have been made by different writers, and all are problematic, perhaps an indication that this approach is not justified. Ó Nualláin (1983) divided the country into 8 different portal tomb regions, based on differing topographical factors of the landscape siting. This results in such discrepancies as the inclusion of the whole of Co. Cork, with only two portal tombs in the extreme west, being included with areas like Waterford with its coastal cluster and an inland county like Carlow with its imposing, complex structures along gentle agricultural valleys. Portal tombs in the neighbouring counties of Donegal and Derry, of similar morphology and based in similar landscapes, are assigned to different regions.

Kytamnnow (2008, 2010) has attempted a similar regional division. She divides Ireland into only five different regions but runs into similar difficulties, particularly as she does not explain her reasons for the divisions. Her region 5 covers all portal tombs between Dublin and west Kerry, a distance of some 400 km. which, even more than Ó Nualláin’s region 8, includes a huge area with no megalithic monuments at all. There seems no reason why the portal tombs in Monaghan should be divided from those in Cavan and Longford; both counties form part of the wide drumlin belt which defines the northern edge of the limestone central plain, and the portal tombs are similar in size and siting.

Cummings (2009a) attempts to treat the entire eastern part of Ireland as a region, linked with parts of western Britain in an ‘Irish Sea Zone’. She defines her zone as ‘a clear and distinctive distribution of these sites in the Irish Sea zone’ (Ibid. Cummings 2009, 2) yet admits that in Ireland ‘there is no clear and obvious break in the distribution of monuments.’ (Ibid. 2). Her geography is distinctly muddled; she chooses Lough Neagh as the cut-off point to demark the western limit of her zone as ‘there are less monuments to the west of it’ (Ibid.), a statement which is simply incorrect, as shown in her distribution map. She then includes monuments in Derry and Tyrone, which lie well to the west of Lough Neagh. The inclusion of counties Carlow, Kilkenny and Waterford as part of an Irish Sea zone must also be questioned; Carlow and Kilkenny
are typically midland counties, and the Waterford coast lies at the Celtic Sea, not the Irish Sea. Confusion is increased by the inclusion of two different maps, one of which is entitled ‘the Irish Sea Zone’ (Ibid. 3), and the other ‘Early Neolithic chambered tombs in the Irish Sea zone.’ (Ibid 61). In this second map the Irish Sea Zone has now spread as far west as Donegal and Sligo. Her attempt at a regional division seems based on a preconceived conviction that such a region existed, followed by attempts to find it in the archaeology.

Small-scale regional studies on selected site types are more successful than attempts to identify large-scale regions. Of particular relevance to this study was one on the 49 megalithic tombs of Co. Leitrim in 1979 by Gabriel Cooney. Although this survey concentrates on the physical aspects of the landscape the information discussed can provide pointers into the perceived significance of the sites. Cooney compares the siting of the tombs between the two distinctive topographical areas of the county – the high tableland and deep valley area of the north and the drumlin belt south of Lough Allen. Areas of rockland, with thin soil cover and frequent rock outcrops occur throughout the county, and Cooney found that these were the preferred areas for monument sites. These were also the areas which may have had the best soil for early farmers, with less dense woodland and better drainage (Ibid. 81). Cooney suggests that this may reveal the location of settlement sites and that this may support Renfrew’s (1973, 1976) view that monuments may have been territorial markers, ‘a symbol of continuing control of the area’ (Ibid. 88). A careful study of his maps reveals that portal tombs tend to occur on the edge of, rather than in the centre of, these specific areas (Fig. 93, this study).

3.5.3 Landscape features. Richard Bradley continues to be one of the most influential writers on prehistory with a willingness to consider all interpretative viewpoints and the ability to weave disparate opinions into a coherent whole. With regard to monumentality his belief that natural places in the landscape were of ritual significance in the Mesolithic (1990) leads seamlessly to his (1993) view of how
changing attitudes and beliefs in the early Neolithic ‘altered the earth’ by the
construction of monuments at significant locales.

A completely different approach to defining monuments by their position in
relation to landscape features was undertaken by Tilley (1994) in an extremely
influential book *A Phenomenology of Landscape*. This work introduced his ideas about
phenomenological interpretation in archaeology, encouraging many imitators and
provoking many critics. His walk along the cursus monument of Dorset details his
conviction that he can recreate the bodily experience of a Neolithic man, marking the
various views and monumental alignments, but of most relevance to this study is his
section on the monuments of South Wales in which he surveyed 26 separate locations
with records of burial chambers. The monuments varied greatly in size, morphology
and preservation, a point which he stresses ‘...the archaeological morphology of the
monuments is particularly diverse ... difference is being asserted.’ (Ibid. 90), but some of
those he mentions are accepted as portal ‘dolmens’ with likely affinities to Irish portal
tombs. Despite the morphological differences Tilley believes that their landscape
situation is similar ‘...their location in relation to topographic features of the landscape is
highly structured and repetitive’ (Ibid. 93). He gives a detailed description of some sites
and claims that each is closely connected with nearby rock outcrops which are larger
and more conspicuous than the monuments, thus the outcrops ‘...key the monuments
into the landscape.... making them into special places’ (Ibid. 99). One of the difficulties
with this study is the very varied distance between the monument and the outcrop
which Tilley claims is significant. He concludes his description by remarking that
‘there are only a few monuments whose placement cannot be accounted for in relation to
costal cliffs, crags or rock outcrops’ (Ibid. 105), a statement which seems very obvious in
a coastal area of mountainous South Wales.

This work has been extremely influential, encouraging many imitators and
followers, and has had a strong influence on landscape studies, but it has also been
deply criticised, both as a theoretical model and on flawed methodology and specific
detail in the data. Joanna Brück (1998) describes the first part of the book, Tilley’s
account of his own perspective on archaeology, as ‘well-written, coherent and
interesting’ (Ibid. 24) but finds the section on his three study areas to be disappointing
and lacking in insight. She believes that his claimed universality of the human
body, and therefore of bodily experience, is simply incorrect; the nature of ‘Being’
varies so much across time and space, between genders and cultures that no such generalisation can be perceived. Tilley, she believes, has ignored the different conceptual frameworks through which past and present individuals view and interpret their world (Ibid. 28). The human body is a socially structured entity, our reactions are embedded within specific cultures and values. It is simply not possible for a 20th century, highly-educated, well-nourished, suitably-dressed man to experience, and therefore to understand, the landscape in the same way as his Neolithic predecessor. The second part of the book, a concentration on the physical features of the landscape, seems to contradict Tilley’s assertion that space cannot exist apart from the activities in which it is implicated.

Brück’s critique is measured, thoughtful and scholarly, and she believes that the study merits wide attention. Fleming (1999) is more robust in his criticism and makes the serious assertion that Tilley’s data and observations are inaccurate. Like Brück he finds much of the first section ‘stimulating and persuasive’ (Ibid. 119) but observations and interpretations in the three study areas are not factually based. He notes the ‘highly flexible’ determination of intentional proximity of a monument to a natural feature, varying from ‘alongside and against’ to a few hundred metres away, to twelve kilometres distant, all apparently significant features in the site selection of a monument. Fleming obviously knows the Welsh monuments intimately; he contradicts Tilley’s field observations and selective use of photographs in many places. He also questions the concentration on only one factor in the placement of megaliths, and swiftly lists eleven valid alternative hypotheses. His criticism of phenomenologically-based interpretation, (which he describes as post-processual landscape archaeology) of both Tilley and Cummings, is continued in 2005 and 2006, and he believes that ‘the evidence for long-distance relationships with rock outcrops is effectively non-existent’ (Fleming 2005, 923).

Far from being deterred by such cogent criticism Tilley continued with similar studies, such as that on the landscape of West Penwith in Cornwall (Tilley & Bennett 2001). In this they suggest that the natural outcrops (tors) in the landscape were themselves objects of veneration, and were regarded by the local population as ‘an ancestral creation’ (Ibid. 244). The writers produce no evidence for this theory; they then suggest that the local monuments (dolmens) were purposefully erected to
imitate the shape of the tors ‘…the dolmens were the tors dismantled and put back together again’ (Ibid. 345).

3.5.4 Viewscapes. One of the most prolific writers to use Tilley’s phenomenological approach to landscape siting, and to expand it, has been Vicki Cummings. She has written about the Neolithic landscape in Scotland, England, Wales and Ireland (2004, 2007, 2009a, 2009b, 2010, 2011) and has recently ‘specialised’ in the Irish Sea zone. She agrees with Tilley about the significance of natural outcrops in the micro-siting of monuments (Cummings and Whittle 2004) but expands the concept to encompass the study of ‘Viewscapes’ and their significance in the location of monuments. Of the many papers she has written on this subject one chapter from The Neolithic of the Irish Sea Zone (Cummings and Fowler 2004) will demonstrate her views. She believes that ‘… the builders seem to have constructed monuments in order to create connections across the wider Irish Sea zone’ (Ibid. 29) and that these connections were achieved by careful placement. It is occasionally possible, in good weather, to see the Irish coast from certain parts of Wales, but she does not claim that many of the Welsh monuments were placed with this direct view. Instead, she believes that ‘the monuments of the eastern Irish Sea have views of mountains which in turn have views out over the Irish Sea’ (Ibid. 30) which apparently demonstrates that the said monuments were connected with monuments in Ireland. Those monuments which cannot be explained in this way are described as being linked by the landscape and ‘similarity of setting’ (Ibid. 30). She summarises by saying ‘…monuments may have been located in order to have views of distant places, or of mountains which had views of distant places from their summits’ which seems to cover most locations. Fleming (2005) cannot accept these views. Because, he explains, ‘I found it difficult to look students in the eye, keep a straight face, and explain, on site, how the ideas of Tilley (and now Cummings) are supposed to work’ (Ibid. 930) he dissect her work mercilessly. He contradicts some of her fieldwork observations and criticises apparent selectivity. His selection of certain phrases and comparisons effectively holds the paper up to ridicule; ‘so that all of the landscape features are either visible or invisible’ and views its findings as ‘dependent on rhetoric, speculation, argument by assertion, and observations not always replicable when checked.’ He is prepared to accept Tilley’s 1994 work as acceptable as an experimental hypothesis, but is particularly scathing about the fact that Cummings has used this
phenomenological approach as though it were ‘normal science’. Further criticisms of Cummings’ interpretive approach are made by Barrett and Ko (2009) who claim that the approach of phenomenologists ‘reject the methodological consensus of scientific archaeology (Ibid. 276). These writers believe that, whatever interpretive method is chosen, the evidence can, and should, be agreed on (Ibid. 277).

A study of the landscape siting of portal tombs must include a consideration of the points of view expressed by current writers on the topic, and their opinions should be tested. The studies of Cummings, Tilley, Whittle and Richards are connected, in the main, with British monuments, but this does not render them irrelevant; the similarities between the Welsh and Cornish monuments which they discuss and the Irish portal tombs are so marked that they must surely be connected.

3.5.5 Routemakers. A belief that some monuments were functional structures, erected to serve a single purpose, was a common approach which became unpopular with the advent of Postprocessual or Interpretive approaches, when monumentality was seen as one of the important signifiers of the Neolithic, proclaiming messages of new beliefs and new understandings. To this writer it seems likely that monuments need not have been either one thing or the other; a structure could have indicated a pathway and proclaimed a religious belief; it could have been erected to claim ownership of a territory and at the same time demonstrate the ideologies of society.

An opinion that some monuments, particularly portal tombs, standing stones and stone rows, were signalling devices erected to mark paths or routeways is held by a number of writers, although there is no single paper covering this view. Jones (2007) believes that the portal tombs of the Burren area in Co. Clare may have been built to mark important routeways, particularly along the River Fergus which flows around the southern perimeter of the area and has clear archaeological signs of its use as a route right up to the medieval period. Two portal tombs, Ballycasheen and Moyree Commons, are sited very close to the Fergus and may have marked its presence. Ballycasheen is, in fact, within 500m of its source; the possible significance of this is considered in Chapter 4.4.5.
In a study of megalithic structures in southern Spain researchers using GIS analysis have suggested that some monuments were associated with medieval transhumance routes, which they believe may have been in use during the Neolithic (Wheatley et al. 2010). Their statistical analysis demonstrates that the monuments were closer to ancient transhumance routes than could have happened by chance, and they thus interpret these monuments as intentional ‘waymarks.’ It should be noted that the megaliths under consideration possessed both ‘prominence and visibility’ (Ibid. 389), and that the practice of transhumance may not have been common in Early Neolithic Ireland (Chapter 2.2).

The suggestion that portal tombs functioned as routemarkers is possible in some areas and should be considered with regard to landscape siting. The orientation of the monument may have some significance in this regard, and the direction to which the portals ‘point’ may be relevant. Natural features in the landscape like streams and valleys may have been used as pathways even in the Mesolithic and it seems quite possible that their routes were remembered and marked. It should be noted that there may be an element of ‘chicken and egg’ about marking routeways. It is quite possible that portal tombs were placed along paths, but it is also possible that paths only developed because a portal tomb was there.

3.5.6 **Territorial markers.** A belief that megalithic monuments were indicators of the territorial rights of a tribe or group has been a constant focus of attention, although some authors strongly disagree.

One of the most influential papers in this area was written in 1976 by Colin Renfrew. He claimed that the chambered tombs of northwestern Europe were erected by small-scale, early agricultural, segmentary societies as territorial markers, demonstrated by the presence of contemporaneous, regularly spaced megalithic monuments, indicating repulsion rather than attraction, and generally situated in the centre or ‘home range’ of the territory. He explains his ideas ‘...the territorial division of the terrain is given symbolic expression…membership of the group … expressed in rituals, which are often focussed upon a specific location’ (Renfrew 1976, 206). He illustrated his interpretation by reference to ethnographic accounts of stone monuments in some Pacific islands, and, most influentially, to two Scottish chambered tombs, and he
produced a model of the chambered tombs on the islands of Rousay and Arran which divided the islands into territorial units based on Thiessen polygons, each centred around a megalith (Fig. 23). An extension of his interpretation is that Neolithic monuments were produced by societies under stress; the western expansion of agricultural introduction had reached its limit and was followed by a decline in population growth induced by a lower birth rate (Ibid. 213). Monuments were therefore constructed some generations after the adoption of agriculture, when population were under pressure. Segmentary societies attempted to maintain their viability by strengthening group solidarity with the construction of a central ritual site.

In a publication in 1979 Timothy Darvill pursued these ideas with reference to court and passage tombs in Ireland. Although he considered the techniques for spatial analysis to be inadequate and of limited value in interpretation (‘only a tool’) he constructed Thiessen polygon diagrams for both tomb types. He believed that the presence of neighbouring groups will of necessity result in a boundary line developing between them, which may or may not be marked by physical features of the landscape. The uneven territories generated in his Thiessen polygons of court tombs result, he believed, from the uneven quality of the agricultural land. Although the basic structures conform to a standardised and accepted ideal the variety of design of the individual monuments demonstrates a lack of a centralised, hierarchical society, but do reveal contact between neighbouring groups. Like Renfrew he suggested that the monuments were built as territorial markers, focal centres which ‘involved the expenditure of a large amount of effort’ (Ibid. 319), with no evidence of a ranked society. He compares them with medieval cathedrals, built to mark the centre of a territory (the diocese) and to serve a ritual purpose. A change occurred with the introduction of passage tombs, marked mainly by the introduction of clusters, or cemeteries of tombs, often on high ground and hilltops, demonstrating a change in societal organisation, from a segmentary group to a hierarchical chiefdom. He did not include (or mention) portal tombs.

Thiessen polygons, initially developed to study rainfall, have been used in archaeology to define settlement patterns (Renfrew and Bahn 2004, 183). Neighbouring sites, which must be of similar size and contemporaneous, can display a polygonal area of influence around them, touching the neighbouring area of
3. The Study of Portal Tombs.

Thiessen polygons around chambered tombs on Rousay, Orkney. (Renfrew 1976, 209.).

Thiessen polygons on Arran, Firth of Clyde, Scotland. (Renfrew 1976, 212).

Court tombs with Thiessen polygons (Darvill 1979, 317).

Fig. 23. Thiessen polygons and megalithic distribution.

Influence. The use of Thiessen polygons in both the above papers does not seem justified or particularly successful. The sites selected are not of uniform size and the resulting ‘territories’ seem very uneven. The suggestion in both these papers that
monuments were territorial markers of some sort is not supported by the use of Thiessen polygons; in fact this technique detracts from the interesting idea of possible territorial marking. Darvill’s study is particularly strange as, by omitting portal tombs, it gives the impression that ritual monuments of the Early Neolithic were almost totally restricted to the northern third of Ireland; he did not explain this omission.

In 1981 the publication of *The Archaeology of Death*, edited by Chapman, Kinnes and Randsborg, provided a detailed study of mortuary practices in prehistoric Europe. With the stated intention to ‘… focus attention upon the meaning and expression of cultural reactions to death’ the editors felt that ‘… archaeologists need a body of theory in order to relate the mortuary data at their disposal to patterns of human behaviour within past human societies.’ (Chapman et al. 1981). Within this book the contribution by Robert Chapman ‘The emergence of formal disposal areas and the ‘problem’ of megalithic tombs in prehistoric Europe’ remains influential and much quoted. It enlarges on Renfrew’s territorial model and illustrates the degree to which ethnographic studies can assist in interpretation, by indicating possible avenues of comparison. Tilley includes it in his list of 16 influential articles in his analysis of megalith texts (Tilley 1999, 143).

Chapman agreed with Renfrew (1976) that monumentality emerged as an expression of territoriality within small-scale segmentary societies. Monumental tombs both reflected the importance of a permanent place within society and strengthened that permanent link to a particular place. In areas where the agricultural resources became scarce the idea of descent groups and ancestral significance stressed group solidarity and territorial claims, and this was reflected in the communal burials found in megalithic tombs. Chapman pointed out that in the Early Neolithic there appears to have been a chronological gap between the introduction of agriculture and construction of the earliest megalithic monuments, perhaps indicating that society was less structured with no need for territorial control before the advent of monumentality. He concluded by hoping that he has offered ‘broad correlations between the mortuary evidence and particular changes in its social and economic contexts.’ (Ibid. 81). This point that monuments were not the product of the earliest Neolithic is considered in chapter 2.2, although it now seems possible that in Ireland there may have been less of a ‘gap’ than previously believed.
The suggestion of a territorial function for megalithic monuments is contradicted and criticised by some writers. Ian Hodder included a discussion of both Renfrew’s and Chapman’s papers in his important contribution to *Ideology, Power and Prehistory* (1984) edited by Miller and Tilley. ‘Burials, houses, women and men in the European Neolithic’ has as its central theme the similarity between the longhouses of the LBK culture of central Europe and the long mounds of later ritual monuments in northwestern Europe. Hodder criticises the processualist, functionalist explanations of Renfrew and Chapman as being concerned only with ‘generalisation’, lacking evidence to prove the central thesis, and utilising a very ‘weak link’ between megalithic monuments and territoriality to maintain their positions. Any other site in the landscape, he felt, could have acted as a territorial marker just as effectively. He also believed they underestimate the importance of the specific variations in form and contents of the various monuments, which in turn leads to ignoring the monuments themselves in favour of their perceived function. Having thoroughly chastised Renfrew and Chapman and their ilk ‘...it can never be possible to ..... support the analogy that the tombs functioned as territorial markers ...without also having some hypothesis concerning the meaning of the tombs in the society concerned.’ (Ibid. 53) Hodder states unequivocally ‘the tombs signified houses’, and justifies this view with a list of eight perceived similarities, despite the chronological disparity. He proceeds to discuss what is revealed of early Neolithic domestic society in mid-European 5th and 4th millennia BC, in particular regarding attitudes to gender and lineage under changing technologies and suggests that the long mounds of northwestern Europe revealed similar social concepts. This interpretation continues to be influential even though some new evidence, for example the rectangular early Neolithic houses in Ireland, has emerged.

Ten years later Chapman (1995) reconsidered his paper in a chapter in *Regional Approaches to Mortuary Analysis*, edited by Beck. Whilst retaining the idea of the territorial model he answers Hodder’s criticisms by pointing out that it was never presented as the only function for monuments, but as a possible model that could be used ‘as a tool for the study of the archaeological record’ (Chapman 1995, 37). He emphasised that he considered the availability of agricultural land as only one aspect of territorial expression, that sedentism was not one of the features of the earliest Neolithic, populations were fairly mobile, living by a mixture of hunting and herding, and so the first monuments were built as ‘places in the landscape’ rather than at the
centres of defended territories. They demonstrated a period of transition in the appropriation of nature. Later monuments, built when communities were fully converted to agriculture, might demonstrate such a placement more accurately. Monuments, as well as acting as containers for the dead and as territorial markers, could have been manipulated and appropriated by groups within society (perhaps the same sinister elements who Tilley believed manipulated the actual bodies). The increased labour requirement for larger monuments demonstrated a greater emphasis on social ranking, as they were, initially at least, tombs for only a small section of the community. Chapman concludes by stressing that while a territorial significance was still a helpful model he was increasingly impressed by the differences in size and shape between monuments and by what that revealed about the changing societies; he suggests that his earlier thinking was ‘too static.’ (Ibid. 48). Again, these opinions may have less relevance to the Irish Neolithic than to that pertaining in southern Britain; sedentism may have been established and the transition to agricultural practices adopted early in the Neolithic.

These two suggested functions of a monument might have been combined in one portal tomb. A pathway through the landscape, like a river or change in the terrain, could have served as a useful place to mark the limits of a territory, while the boundary of a territory might have become a routeway to another tribal homeland.

3.6 Theoretical concepts in this study.

This thesis has directed study into three main areas – the morphology, the siting within the landscape, and the sequence of activities, including deposition, of portal tombs – with an emphasis on the ritual significance of each. Portal tombs are nearly six thousand years old, have rarely been excavated and are in many cases badly decayed; an interpretation of their significance needs the assistance of every possible theoretical approach. Indications that some of the tombs may have been constructed in stages, possibly on already ritualised sites, and that artefacts were deposited at varying times during the process, may have relevance in revealing themes of societal development and/or changing belief systems. The methodology used throughout the study has been discussed in Chapter 1.6.
The application of a processualist theoretical viewpoint may not seem the most natural approach to a study of ritual, but, to this writer, an assessment of the basic physical, material and cognitive aspects of the people who built and used them, and of the processes by which they related to each other and to other societies is essential to any consideration of what the monuments meant, how they were used and why they were built, at a particular time and in a particular place, and so this is one of the theoretical approaches used in this thesis. The processes by which changes in economic, social or ritual practices were achieved, and marked, by societies may have left evidence in the archaeological record, in the form of permanent structures which can convey information otherwise unattainable from a pre-literate society. The nature of the environment at the time and place of use seems vital when considering aspects of ritual practice and beliefs; while the environment would not have determined ritual it would certainly have been influential. An interpretation of ritual requires, for example, information about the nature of the landscape which could have enabled or prevented certain practices, and possible beliefs are of necessity affected by the natural world as experienced by those who developed them. Added to this is a necessary regard for the cognitive processes of the societies at the time of construction, in so far as this can be suggested. An explanation of possible changing trends in societal structure, beliefs, and aspects of cognition is also sought; change, or the lack of change, does not necessarily imply progress or evolution; it simply means change. Criticisms of the generalised nature of this approach can be countered by studying information from the bottom up, in particular by site visits to monuments so that they can be experienced individually.

Post-processual or interpretive approaches have also been used in this study. Landscape archaeology has become one of the most popular concepts in current archaeology. By its very nature it encompasses the two aspects of interpretation; that based on the evidence-based scientific approach and the more theoretically-driven study of past concepts. It can combine the best aspects of both. The landscape of a monument can be studied from different distances or scales. A broad, sweeping analysis will include aspects of topography, vegetation and climate along with concepts common to the Neolithic world like religious beliefs. With a closer focus features like water courses and soil composition come into view and aspects of territorial boundaries and indications of human movement may be considered. At the tightest focus it may be possible to find indications of farming practice and
3. The Study of Portal Tombs.

craftwork, settlement type and diet, while local social structure and ritual practices may become visible.

Each of the three aspects of portal tomb studied (landscape siting, morphology and the sequence of construction and use) provided evidence of a repetitive, structured choice, and this evidence was considered using structuralist principles. For instance, in the chosen landscape site, evidence was often found of adherence to a particular criteria such as a preference for certain water features, and an avoidance of others, which could not be explained by functional necessity. Attempts were made to ‘read’ the landscape and identify possible communication between different areas, as displayed by the location of portal tombs, and, on a smaller scale, possible ritual processional routes towards or around the monuments. The area surrounding each site may reveal possible ritual practice outside the monument with indications of a structured division between those who practised and those who witnessed the ritual performances. Oppositions between the striking nature of the structures and the often inconspicuous placement within the landscape, and the frequency of a coastal location combined with, in many instances, the apparent avoidance of a direct view of, or from, the sea, were considered to reveal ritually-based choices. With regard to the morphology, the evidence of a repetitive, structured design suggested that meanings of a ritual nature were embedded in the structure and efforts were made to ascertain whether the architecture of the tomb reflected construction and usage by an egalitarian group, or whether aspects suggested division into participant(s) and spectators, suggesting some hierarchical stratification.

There is some evidence of a structured approach to the choice of artefacts selected for deposition, although the small amount of evidence and lack of information concerning the context of deposition hindered this approach. Deposited artefacts reveal aspects of lifestyle, with indications that there was no perceived separation between the mundane and the sacred during the Neolithic. The main source of information was the excavation reports. Stone tools and pottery, which may have represented the work of men and women, were both deposited. The artefacts are mainly domestic in nature; in this study the question of why such articles should be deposited in a ritual site was considered. Again, evidence of patterning in both the nature and context of artefacts was sought. Comparisons were made with the
3. The Study of Portal Tombs.

contents of monuments of other types and dates in an effort to identify changing societal structures and lifestyles. The source of the materials used was considered.

Much of the most recent work carried out on megalithic tombs, particularly in Britain, has involved interpretation based on phenomenological theories (for example Tilley 1994, 1996b, Thomas 1990, Cummings 2004, 2009a, 2010, Fowler & Cummings 2003, Richards 2004b). Although this writer does not accept the premise that an individual of the 21st century can experience, and therefore understand, a prehistoric monument in the same way that those who built and used it did, some of the methodology used in these studies is both natural and helpful, as described in Chapter 1.6. Aspects of the landscape were examined in the same way, with particular attention paid to the possible significance of site selection based on proximity to selected landscape features, and to ‘viewscapes’, both of which are considered vital to the choice of sites within the landscape by current writers (Tilley & Bennet 2001, Cummings 2004, 2009a, 2010, Fowler & Cummings 2003).

An exploration of the possible religious beliefs which may have inspired the construction and use of the monuments was undertaken. Ethnographic analogy is a frequently-used tool and can be persuasive, but it is used very sparingly in this thesis. Modern-day people with cultures similar to that of the Irish Early Neolithic are invariably affected by the high-tech global communication systems of the modern world, so their ritual practices and beliefs may not be relevant. With regard to historical accounts of such people the background of the writers should be considered. Gender bias in ethnography is discussed by Johnson (1999, 121) who points out that a belief that male dominance in society was universal was authenticated by 19th century European male writers who reflected the values of their own societies. Christian missionaries may have felt it beneficial to their interests to exaggerate the ‘barbarity’ of ritual practice, whilst early colonial administrators may have disregarded ritual evidence in favour of details of military might or useful natural resources. Thus in this study ethnographic evidence is used as a pointer to what might be looked for in the archaeological evidence rather than what might be found. Environmental factors should not be ignored. For example, in looking for clues as to the importance of water in Irish Neolithic belief systems the beliefs and practices of Australian aboriginal people, well recorded and frequently employed (for
example by Taçon 1991), but living in a hot and arid landscape, may not be the most relevant.

The existence of some form of supernatural belief has been found in all societies, and has been suggested even for Neanderthals (J. Renfrew 2009, Taçon 2009). Swanson’s 1964 anthropological survey of ‘primitive and ancient people’ found that all such societies that he studied had some form of religion, and Rappaport (1971, 23) could state that no known society, either historical or current, existed without religion. There is a similar acceptance that certain ritual practices are also universal, and Arnold van Gennep, in his seminal ethnographic work of 1909, The Rites of Passage, believed that ritual ceremonies marking lifetime events, such as achieving adulthood or dying, were universal, differing from one culture to another only in detail. In this study it is therefore accepted that at the time of the construction and usage of portal tombs there was a belief in the supernatural and an intentional ritual treatment of the dead, which may be used to assist interpretation.

There is general agreement that ancestral veneration may have been part of the ritual practices of the portal tomb builders, and there may have been a belief that the ancestors had moved to the afterlife where they could influence events in the present. Changing attitudes towards ancestors may have emerged during the period of portal tomb usage, and evidence of this was sought in the study. It is possible that some form of religious specialist or shaman existed who organised the construction in an event of group significance, and who presided over the continuing use of the monument. Alternatively, this type of individual was not part of the community who erected the portal tombs, but emerged as a result of its usage.

Worldwide mythology reveals many similarities of storyline and character. Joseph Campbell, in his 1949 study of world-wide mythologies, believes that ‘the symbols of mythology ... are spontaneous productions of the psyche’ (Campbell 1993, 4), and he regards myth as the ‘secret opening through which the inexhaustible energies of the cosmos pour into human cultural manifestation’ (Ibid. 3). This idea has some similarities to the concept that all human brains are ‘hard-wired’ in the same way, resulting in universal beliefs and cosmologies (Lewis-Williams and Pearce 2005). In the present study the structures, their sitings and artefacts are considered in relation to universal themes of mythology, like the creation of the world and the three-fold nature of the
cosmos, and to the concept of a collective group memory, in an effort to discern a meaning.

With regret, the romance of Diarmuid and Gráinne, the fortunes of the *Fir Bolg* and the practices of the druids were not investigated.
Chapter 4. Portal tombs in the landscape.

‘Landscape ... is a construct of the mind as well as a physical and measurable entity.’

Tuan, 1979.

4.1 The landscape – physical and conceptual.

The distribution of portal tombs was examined on different scales, focusing in from the broad, generalised landscape to details of the particular, chosen site. Similarly, when examining the conceptual nature of landscape, consideration was given to broadly-based, overarching concepts, common to other similar societies, and then to possible localised differences expressing local group concerns. Convenience may have been a factor, but if a consistent patterning is identified then the choice of site becomes more significant. As Barnatt (1998, 95) puts it ‘... the choice of site may reveal how the monument builders saw their place in the world.’

![Fig. 24. Elements of the landscape. (Aalen et al. 2011).](image)

The physical landscape of early Neolithic Ireland was both similar to, and different from, the landscape of today. The coastal margin had beaches and headlands, estuaries and mudflats just as it has today, but the change in sea level brought about by the ending of the last Ice Age meant that such features may have occurred in different places. The changing relationship between land and sea meant that in some areas peninsulas became islands and traces of human activity were drowned, whilst in other places beaches were lifted to cliff tops and islands became headlands. On shore, apart from the lack of a built environment, the main difference
was in the vegetation. Pollen cores have revealed a landscape very different from that of the present (O’Connell and Molloy 2001, Molloy and O’Connell 1987, 1991, 2007). Thick woodland, dominated by oak, ash, willow, hazel and holly, covered most of the land (Fig. 46) and there was no evidence of blanket bog although some raised bog was developing in damp hollows and small lakes. Moraines, eskers and drumlins deposited by the retreating glaciers (Fig. 45) were marked by areas of less dense vegetation, and may have lacked thick tree cover. At some time around 4000BC the first signs of man-made changes to the landscape became visible. Small patches of woodland were felled and grasses and grains begin to appear in the pollen record (Brown 2007, 1050, Whitehouse et al. 2013). Agriculture was making its first tentative appearance in Ireland and the Landnam proper is recorded as occurring at around 3800 BC, as discussed in Chapter 2.2.1. As trees were felled and clearings began to appear the landscape was altered and hitherto concealed features like outcrops, glacial boulders and changes in contours were revealed. In Britain Tilley (2007, 333) believes that, as landscape was revealed sharply after forest clearance, sight became the dominant human sense; hearing and smell had been equally or more important to individuals who spent their lives in woodland, and he feels that lakeshore and coastal sites were popular during the Mesolithic, not only for hunting opportunities, but also because here the sky and the sun were visible. He suggests that the Mesolithic lifestyles and cosmologies were tightly linked to the ‘use and management of trees’ experienced under a dense leaf canopy, while the new Neolithic ‘mode of thought’ may have been stimulated by these new sensory experiences obtained under clear skies in open clearings (Ibid. 329).

The conceptual landscape is more difficult to assess and theoretical approaches to the study of landscape archaeology are discussed in Chapter 3.6. Many writers have suggested that a completely different attitude to the natural world pertained once agriculture began. Bradley (1993) speaks of ‘altering the earth’ and suggests that ‘Mesolithic societies participated in the natural world; Neolithic communities acted upon it.’ (Bradley 2004, 113), while Bergh (2002, 139) states that ‘one of the features that characterises the Neolithic is the changed attitude to place and landscape’. Scarre (2003, 42) writes about the Breton Neolithic landscape, where ‘new mythologies were being created along with the construction of the new monuments’. As with the physical features of the landscape the conceptual aspects can be examined at differing levels or zones. Darvill (1997) believes that the rules which underlay the conceptual understanding of
space were founded on a cosmological viewpoint, and suggests that a perceived patterning in landscape siting may have existed simultaneously in other aspects of material culture (Ibid. 7). Thus, for example, pottery with a repetitive bounded design may have been made by people who recognised a bounded territorial space.

In this section an attempt is made to find a ‘patterning’ in the location of portal tombs with regard to features in the landscape which may be of assistance in interpreting the meaning. If each tomb was intentionally situated, in a specific part of the landscape, and if this intention is repeated in a significant number of sites then this may reveal aspects of the ritual practices and underlying beliefs. Similarly, a repetitive avoidance of certain places in the landscape may have had a conceptual importance. Barnatt (1998) has suggested a series of structured oppositions, both physical and conceptual, which may have influenced site selection and may reveal the intentions behind the selection. He contrasts, for example, a central site with a peripheral one, the natural landscape with the made, the living with the spirits and the ancestors and the seen with the unseen. A once peripheral site may, over time and usage, become central. This structuralist approach has merit in a study of this kind. An immediate and obvious paradox in the landscape setting of portal tombs is the contrast between the striking, attention-focussing nature of the architecture and the quiet, discreet locations chosen in many cases.

4.2 Distribution.

'The complex but repetitive patterning of monuments across the landscape must have meaning'

Barnatt 1998.

Portal tombs are widely distributed throughout the country and are found in conjunction with all the other megalith types; distribution maps for the Neolithic monuments and Linkardstown-type burial cists are illustrated in Fig. 16. Portal tomb distribution is often said to be comparable with that of court tombs (for example by Evans 1938, de Valera & Ó Nualláin 1972, 166, Herity 1982, 260), but this is not strictly accurate. Court tombs are almost completely absent south of a line from Galway to Dundalk, while portal tombs, although most frequent in the northern half of the country, have a substantial distribution in a line from Dublin south to Waterford.
Court tombs cluster thickly around the southern shores of Donegal Bay, and along the north Mayo coast, where portal tombs, although present, are only thinly represented. The dating for portal tombs is discussed in Chapter 2.3.2. It is possible that their construction dates were somewhat earlier than those for court tombs, which are firmly dated within a narrow period between 3700-3570 cal BC (Schulting et al. 2012), but it is likely that the period of usage of the two tomb types overlapped.

Passage tombs, most of which were later than portal tombs, have a fairly similar distribution, although they seem to be completely absent from the western counties of Clare, Galway and Mayo, and are rare in Donegal, where there are many portal tombs. Like portal tombs, they cluster around the slopes of the Dublin mountains, but they are scarce in the southeast midland counties of Carlow, Kilkenny and Waterford. The great cemeteries at the Boyne valley and Loughcrew are not in portal tomb distribution areas.

Linkardstown-type cists, whilst not strictly megalithic, could be described as monumental in intention if not in structure, and they are contemporary with the later usage period of Poulnabrone, the only well-dated portal tomb (Fig. 175). Wedge tombs, the most numerous of the great megalithic monuments, were constructed considerably later than portal tombs, most likely during the Chalcolithic period, c. 2500-2000 BC (O’Brien 2012, 215), so they are not included for discussion in this thesis.

A large number of portal tombs (approximately one-third) are coastal, as are court tombs. The central plain north and west of the Carlow-Kilkenny region is avoided by all tomb types and in most of Cork, Kerry and Limerick only the later wedge tombs have been identified. Three ‘aberrant’ portal tombs have been identified on the coast in Cork and Kerry, far from the main distribution areas (de Valera & Ó Nualláin 1982, Walsh 2007). Portal tombs are common in the drumlin swarms of counties Leitrim, Cavan, Longford, Monaghan, Armagh and Down which define the northern edge of the central plain and are often seen as a barrier to communication, but they are entirely absent from the eastern edge of the central plain along the coastal strip from Louth south to Dublin, where the land is flat and communication is considered to be easy. As discussed in Chapter 3.5.2 attempts at dividing Irish portal tombs into regions based on their broad distribution are unconvincing. Consideration will be given to regionality based on morphology in
Chapter 5 of this thesis; possible regionality based on chosen landscape setting is examined in this chapter. A comparison of the known Mesolithic site distribution with portal tomb sites may reveal a continuity or lack of continuity of occupation of a particular area. This has obvious implications in the ongoing discussion on whether the Irish Neolithic resulted from indigenous acculturation or from colonisation (for example Cooney & Grogan 1994, Cooney 1997, 2007, Sheridan 2010a, Whittle et al. 2011). Shee Twohig (1997) states that there is ‘no evidence for the building of megalithic tombs at places which had been used by Mesolithic people’, but on a broad scale (Figs. 25 and 26) there may be some similarity in the two distributions. The coast is important for both and many areas of the midlands, Cos. Laois, Offaly, Kildare and Westmeath, appear to have been avoided in both periods. There is Mesolithic evidence for the Dublin area, with its 8 portal tombs, and the Tramore area of Co. Waterford has 6 portal tombs and considerable Mesolithic indications (the numerous Mesolithic lithic scatters found by Green and Zvelebil in 1993 in the Waterford Harbour area are underrepresented in Fig. 26). When the distribution is examined more closely, however, a different picture emerges. The dense Mesolithic evidence from the north-east contrasts strongly with the very infrequent portal tombs in the area, although it should be noted that the apparent concentration of Mesolithic dates in the north-east may be due to a bias in the sampling. Prior to 1980 information on Mesolithic remains
was very limited elsewhere in Ireland. Co. Donegal, with some 24 portal tombs and other Neolithic evidence, has few Mesolithic records. On balance, there seems no direct correlation, and it may be that, as Kytmannow (2008, 176) suggests, the two are ‘mutually exclusive’. She believes that this lack of overlapping also exists in those areas of Wales and Cornwall where portal tombs are located (contra Tilley 1994, 86 and Cummings 2010) and suggests that areas of Mesolithic influence were consciously avoided by Neolithic newcomers, probably during a rapid transition to new beliefs and lifestyles (Kytmannow 2008, 179).

A close examination (Figs. 27 – 29) of some portal tomb sites could support Kytmannow’s views. There are eight portal tombs in Co. Dublin, and all except Howth lie south of the city, in the foothills of the mountains. Mesolithic finds from the county are from the coastal areas north of the city with the exception of one record from the mouth of the river Liffey (north bank) where Mesolithic fishing traps have been found recently (Fitzgerald 2007, 13), and one from Dalkey Island. The portal tombs seem to actively avoid these areas.

![Map of Co. Dublin with markers for Mesolithic indications and portal tombs.](image)

*Fig. 27. Co. Dublin. Mesolithic indications (Stout & Stout 1992).*

Mesolithic fishing trap *(Fitzgerald 2007)* and portal tombs added.
Another area with an obvious contrast between Mesolithic and portal tomb distribution is the area around Lough Neagh, in Northern Ireland. The Mesolithic evidence is thickly clustered around all shores of the lake, but the portal tombs, well represented in the general area, seem to take a large ‘step back’ from the lake (Figs. 28 and 29). There is no obvious topographical reason for this avoidance; the area is farmed right to the lakeshore today (Fig. 30) and Watson (1956, 127) reviewing the geographical considerations which may have influenced the siting of megaliths in east Ulster, remarks ‘...the major belts of fluvio-glacial sands and gravels around Lough Neagh ... have very few (Neolithic) sites in spite of widespread, light, freely drained soils.’

![Map of Lough Neagh Mesolithic sites](http://www.worldmapfinder.com/BingMaps/En_Europe_Ireland.html)

**Fig. 28.** Lough Neagh – Mesolithic sites. Aalen et al. 2011

**Fig. 29.** Lough Neagh area – portal tombs.

**Fig. 30.** Good farmland on the shores of Lough Neagh near Randalstown Co. Antrim.
4. Landscape.

In her study of the crannógs of Lough Gara Co. Roscommon, Christina Fredengren (2002) found frequent indications of Mesolithic occupation along the lakeshore, in the form of lithic spreads found during field-walking and in the presence of small 'platform' crannogs with similar artefacts (Ibid. 132-5). She believes that 'all recognisable human activity in the Mesolithic took place in the border zone between land and water' (Ibid. 137), but in the Neolithic there was 'weaker evidence of activities' at the lakeshore. No Neolithic settlement sites have been found in the vicinity and there are no megaliths on the lakeshore or the islands which were so important to Mesolithic people. Drumanone portal tomb is some 4 km to the west of the lake and its siting may have been influenced by the presence of other water features - a stream, a ford and a well – rather than the lake which is not visible from the tomb. It seems strange that the lake, with its abundant food resources and easy communications, was avoided. Section 4.5.3 considers this avoidance of lakeshore siting in connection with communication, but here it supports the contention suggested in this thesis that portal tombs avoided areas with a strong Mesolithic presence.

With regard to a link between portal tombs and Neolithic settlement sites, there is (as yet) no evidence of a shared site or example of a close proximity such as that found at Ballyglass Co Mayo (Grogan 1996) where a court tomb was built on top of a rectangular house (Fig. 14). However, studies by, for example, Mulligan (2010) and Smyth (2013) show that there was Neolithic settlement in the general vicinity of some portal tombs, for example the south Dublin area, Sligo, north Mayo and parts of Donegal. In other areas, notably Lough Gur Co. Limerick and Knowth Co. Meath, there are Neolithic settlement clusters but no portal tombs, while in western Donegal, the Cavan-Leitrim-Monaghan drumlin belt and much of the south-eastern arc of portal tombs there is no settlement evidence. The only possible portal tomb as yet closely linked with Neolithic settlement is the Brehon’s Chair at Taylorsgrange in Dublin. Excavations during the period 1984 – 1987 revealed ‘a large area of habitation features .... 30 metres away from the orthostats’ (Keeley 1985), but unfortunately neither dating nor descriptions for this feature are available. Some indications of a link with settlement sites might be suggested at Ballynacloghy on the shores of Galway Bay, where Driscoll (2013) found domestic-type lithics in a ploughzone survey in the townlands adjacent to the portal tomb. Numerous (more than 139) stone axes were found in the area during the early 20th century and Driscoll located over 800 lithics in this coastal area, mainly Neolithic and Bronze Age, with one Mesolithic point. A
large number of similar, domestic flint implements were gathered by Flanagan (1966) from Straleel, Co.Donegal. These were identified as Neolithic, and, while the exact find-spots were not identified, they appear to have come from the vicinity of the portal tomb which is situated at the edge of an area of cultivated land surrounded by rough, rocky hillside (Chapter 4.7). Amongst the tools were a core and some fragments, leading the writer to believe that they ‘demonstrate quite clearly the working of flint on the site’ (Flanagan 1966, 94), which may indicate local settlement.

Although the often-repeated phrase that absence of evidence does not equate to evidence of absence must be borne in mind, so should Richard Bradley’s counsel against ‘Mr. Micawber archaeology’, (Bradley 1985) where there is constant expectation that new evidence will ‘turn up’; the evidence as it exists is what must be studied. It is safe to say that portal tombs are sometimes located in areas with settlement evidence, and that there is no evidence to suggest that they were intentionally kept separate.

Fig. 31. Neolithic house sites. (Mulligan 2010).
4. Landscape.

4.3 Topography.

4.3.1 Altitude.

It has long been recognised that portal tombs are situated at low altitudes (de Valera & Ó Nualláin 1972, 160, Ó Nualláin 1983, 75, Cooney 2000, Cooney & Grogan 1994, 69). Only two sites (Cunard Co. Dublin and Tawnaghmackhugh Co. Leitrim, a very doubtful portal tomb) are located at heights of 300 metres OD or just over, and the greatest number lie within the range of 50 to 100 metres above sea level (Fig. 32). Within these broad figures it can be noted that most portal tombs avoid the summit of even the most modest hills; although often situated on sloping ground they are typically found about one third of the way down from the summit. Ó Nualláin (1983, 86) states that almost 51% of the total are situated on ‘valley slopes or hillsides’ and that of these ‘virtually all are on terraces or smaller level tracts.’ This last observation is very obvious when visiting sites, and some, for example Ahaglasin Co. Cork, (Fig. 33), Straleel Co. Donegal (Fig. 34) and Clogher Co. Clare (Fig. 77), stand on hillside ledges ‘barely large enough to accommodate them.’ (Ibid.).

These figures do not always convey a correct view of the location. There are some portal tombs which, although at low altitudes, manage to give the impression of being on a mountain, and this is quite striking. Knockavalley (Fig. 36), Muntermellan (Fig. 110), Ballyannan (Fig. 35) and Legannany (Fig. 103), amongst others, all have a strong feeling of ‘look-out-post’ with wide-ranging views over the surrounding countryside, and an impression of remoteness. Although sites such as these give an
4. Landscape.

Fig. 33. Ahaglaslin Co. Cork.

Fig. 34. Straleel Co. Donegal.

Fig. 35. Ballyannan Co. Donegal.

Fig. 36. Knockavalley Co. Galway.

Fig. 37. Cloonlooaun Co. Galway.

Fig. 38. Lennan Co. Monaghan.
impression of height the monuments are never situated on the actual summit. Muntermellan (Fig. 110) is almost at the summit of the highest point of Horn Head, but it manages to avoid the summit by being tucked tightly under a steep ridge. Cloonlooaun (Fig. 37) is situated high up on the side of a steep gorge in a lonely part of Co. Galway; within metres of the side of the tomb a sheer cliff rises to the top of the ridge.

Many portal tombs are situated in the major drumlin belt stretching across the country from Leitrim to Down but only one example is found which is sited on the long slope of the drumlin. Lennan, Co. Monaghan is unusual in that it is silhouetted against the sky and very visible (Fig. 38), while the others are discreetly situated lower down against the short slope.

The comparatively low altitude of portal tombs might give an indication of the limits of agriculture at the time of their construction (illustrated in Appendix 2). Mountains and hilltops would not have been suitable for cattle grazing or tillage, whilst valley bottoms tend to harbour damp, heavy soil difficult to work with primitive tools. The labour involved in clearing woodland would have been intense, and perhaps only deemed worthwhile on gently-sloping, relatively low-lying ground where farming conditions were at their maximum. It is unlikely that there was such a shortage of land in the early Neolithic that marginal land needed to be cleared, and so high ground could be ignored. Some portal tombs are situated at points in the landscape which even today demonstrate a dividing line between good and less good farmland. For example, Ballyknock A and B are situated almost opposite one another on the sides of a north-facing valley 5 km east of the Céide fields (Fig. 39). De Valera & Ó Nualláin (1964) describe Ballyknock A ‘the tomb stands near the western edge of the cultivated land of the valley. Immediately beyond the tomb the sharp slope of the mountain begins. The lower slopes provide rough pasture but further up this gives way to gorse-grown bog’. This siting is visible today.

Similar situations with regard to the choice of site are discussed in this chapter (4.7) and in Appendix 2. Discussing the megaliths in north Co. Louth and eastern Co. Down (an area with many portal tombs) Watson (1956, 126), in a geographical study of the siting of megaliths in north-east Ireland states ‘suggestively enough, the main groups of megaliths are on the fringes of the present-day hill grazing.’ The portal tombs of
south Dublin are strung out in a line from east to west in the foothills of the Dublin Mountains (Fig. 27). If the altitude is not noted it could be suggested that they are sited along a routeway (Kytmannow 2008, 181) but when the tombs are considered in relation to the altitude it becomes clear that each is sited at the head of a valley. It is unlikely that a routeway would have followed such a tortuous line, but the tombs could have marked the limits of suitable farmland within the valley.

The avoidance of high ground may have been partially for practical reasons, but there may also have been a ritual or metaphysical reason for it. Bergh (2002) gives several reasons why mountains were chosen as ritual sites as demonstrated by the passage tombs (liminality and isolation, intervisibility with other monumental sites, the embodiment of a deity or ancestral link) and Cummings (2010, 120) also believes that mountains were significant ‘mountains often have a central role in mythology and cosmology ... sacred locales... part of creation myths ... mythical beginnings’. Mountains were clearly avoided as sites for portal tombs but she evades this difficulty by claiming that a choice of site with a view of a mountain would be conceptually significant and that such a view was ‘crucial’ to the siting of the chambered tombs of the Irish Sea zone (Cummings 2004, 2009a, 2010). In this study such a view was not found to be significant (4.4.2) and the tombs do seem to avoid mountains. It is difficult to explain this difference between portal and passage tomb sitting preference on ritual grounds, but it can be stated that there appears to be a different focus, and possibly practice, between the communities who built and used them.
4. Landscape.

The altitude preference of portal tomb sites is ubiquitous throughout the distribution areas of the monuments. This supports the suggestion that portal tombs marked the limits of forest clearance and delineated farmland; other factors supporting this possibility follow throughout the thesis and many examples are illustrated in Appendix 2.

4.3.2 Foundation stones – bedrock, outcrops and glacial features.

Fig. 40. Irish geology simplified. Bedrock distribution. Aalen et al. 2011.

The underlying geology of a portal tomb site can influence much of the landscape above. Although moulded and shaped over the millennia by ice and water the bedrock is the prime building block of the landscape. In the same way, although variable in size, shape and complexity, portal tombs are ultimately the product of the stones which made them, and to some extent of those who selected the stones. The
Geomorphology, or landform, is the result of the transformation of the basic bedrock by natural forces like climate and glacial activity.

During this study it was noted on the geological maps that in many cases individual portal tombs were situated on, or very close to, junctions between two different bedrock types. In some cases this junction is visible on the surface by an alteration of contours or an exposure of a different rock type in a cliff face or outcrop, and sometimes this discordance can affect local hydrology, resulting in waterfalls or cascades. Some portal tombs are sited so close to such exposures that an impression is created that the exposure is used for either concealment or for emphasis.

Fig. 41. Leaguan portal tomb Co. Galway.  
Fig. 42. Bedrock geology at Leaguan.

Leaguan Co. Galway is situated on limestone bedrock at the junction with a hard schist which appears in the landscape as a low cliff-like outcrop. The portal tomb is constructed of limestone slabs and built with its backstone only a couple of metres from the schist outcrop (Figs. 41, 42). Aghavas Co. Leitrim, a very ruinous portal tomb, is constructed of ‘local Lower Carboniferous sandstone which outcrops 125m to the south of the site’ (Cooney 1985). The bedrock at the site is limestone, but the sandstone outcrops most spectacularly in a steep clifffy hill which the tomb faces, and from which a small river falls in a series of cascades or small waterfalls within 100 metres of the site. The reason for selecting a site close to a faultline between two rock types may have been simply practical. Cooney (1997), in his report on his excavation of Melkagh, Co. Longford, describes the site as lying on the junction between conglomerate rock and an exposed outcrop of sandstone. The tomb was built of
4. Landscape.

Kilclooney Mór Co. Donegal.

Geological Survey of Ireland Bedrock Map, Sheet 3

Kilclooney Mór – bedrock geology.
Ardara granite, ArG1, 2 and 3.

Outcrop of grey granite, ArG2, 50m from PT, possible source of the construction stones.

Red granite, ArG3, cliffy outcrop 200m to south.

A piece of red granite, ArG3, beside grey ArG2.

Red granite backstone.

Fig. 43. Kilclooney Mór Co. Donegal. Selection of specific stone for backstone.
4. Landscape.

sandstone from the outcrop and Cooney remarks that ‘it must be considered a possibility that part of the attractiveness of the site was the availability of easily quarried sandstone.’ (Ibid. 235).

Rocks are not only visible at an outcrop but are often very accessible. Exposed rock faces may become friable through weathering action and crack or break away from the parent rock, needing only to be moved to the desired site for building. A possible demonstration of this is to be seen at Kilclooney Mor, Co. Donegal (Fig. 43). This huge granite portal tomb is situated only 50m away from an outcrop of very similar stone, exhibiting the same natural depressions on the rock surface. Some large portions of stone have become detached from this outcrop. Another outcrop some 200m to the south has also been used. This is a clifffy extrusion of Ardara Granite type ArG 3 which is of a distinctive red colour. A piece of this stone has been selected for the backstone of the portal tomb, making a striking contrast to the otherwise grey megalith (Chapter 5.3.2).

Location beside a cliff or outcrop may have been chosen for more than practical reasons. As forest clearance progressed and previously hidden stones and stone features were revealed they may have been imbued with significance by the early farmers. Scarre (2002a, 3) suggests that ‘the shared quality’ of the coastal landscape of Western Europe was responsible for the construction of monuments along the Atlantic seaboard by different communities of early farmers. He believes that, as a result of the use of local stone, ‘...qualities and powers of place were transferred to the monuments and vice versa’ (Ibid. 12), resulting in a kind of dialogue between the communities and local landscape features. He gives ethnographic examples of traditional peoples who imbue local landscape features with cosmological or mythical significance ‘... rocks, cliffs and outcrops feature predominantly among the places of power’ (Ibid. 16). This interpretation could have relevance for portal tombs: in many cases they have an intrinsic aesthetic appeal which results from their basic structure and its interpretation in local stone so that they add to, rather than clash with, the surrounding landscape.

As discussed (Chapter 4.2) the continuation of ritual usage of a site from the Mesolithic to the Neolithic in Ireland cannot be verified, and it seems more likely, based on the actual material record, that the opposite was true. This is not the opinion of some writers discussing megaliths in other areas. Tilley (1994, 87) states
that in coastal Wales ‘the overall distribution of Mesolithic sites and Neolithic burial chambers is complementary rather than exclusive’. (Tilley’s emphasis). Scarre (2009a, 16), suggests, in Neolithic Brittany, ‘a continuity of landscape understanding in which landforms were imbued with mythological or sacred significance ... which go back long before the Neolithic period’. Neolithic lifestyle may have followed a different course in Ireland than elsewhere (Chapter 2) and monuments may have been constructed for different reasons and in different places than the natural places revered during the Mesolithic, possibly demonstrating a different emphasis in ritual practice or societal structure than existed elsewhere in Europe. It is possible that the actual site was already considered significant; portal tombs were not constructed at the very beginning of the Neolithic but somewhat later than the first wide scale adoption of agriculture (Chapter 2.3.2), and the site may have been marked as significant by the earliest farmers, ancestors of the portal tomb builders (Chapter 6.2).

The conviction by some writers that portal tombs were situated in relation to natural stone outcrops has been discussed (Chapter 3.5.3). Tilley (1996b), Tilley & Bennett (2001), Whittle & Cummings (2007) argue that ‘topographic features of the landscape constitute a series of symbolic resources of essential significance in the ... creation and reproduction of structures of power’ (Tilley 1996b, 161). Tilley & Bennett (2001, 344) suggest that in Neolithic Cornwall tors (distinctive natural outcrops) were regarded as ‘the petrified shapes of ancestral beings’ (Ibid. 344) or were the result of actions of these ancestors, and that the local quoits (portal tombs) were modelled after these tors. Bradley (1998b, 13) agrees that ‘there seems to be a consistent relationship between the forms taken by rock outcrops in south-west England and those of megalithic tombs’, but points out that portal tombs are common in areas without similar outcrops. He regards the Cornish quoits as ‘the local manifestation of a wider structural tradition’ (Ibid. 20) and suggests that the tors may have been regarded as ancient and ruined portal tombs by the quoit builders. Tilley’s views on the significance of outcrops as indicators of beliefs and social systems are continued by Cummings. She (2007) concentrates on portal tombs in Wales to claim that an outcrop is significant if it is simply visible from the monument, no matter at what distance, and also claims significance for some outcrops because they are invisible (Ibid. 56).

During the course of this study a conscious effort was made to try to discern a significant relationship between portal tombs and nearby (visible) outcrops.
Kytmannow (2008, 127) calculates that some 49% of portal tombs ‘would have had a natural rock outcrop in the vicinity’, but her definition of ‘vicinity’ stretches to well over 1 kilometre in distance. It is difficult to imagine how such a distant rock outcrop would have had any significance in site selection, and in fact the present study did not identify a significant relationship between portal tombs and natural outcrops. In many areas of portal tomb distribution there are no visible outcrops. The tombs in counties Carlow, Kilkenny and Waterford, for example, are located in rolling countryside with smooth fields and gentle contours. In no case was a portal tomb perceived to be imitating the form of a natural outcrop which is claimed for some Cornish quoits by Tilley (2009, 345). Cooney (2000, 131) suggests that Altdrumman Co. Tyrone, situated only 3m from an outcrop, may have used the natural stone structure as a substitute long cairn, but as the monument faces directly into the outcrop, and as portal tombs with long cairns are normally set at the end of the cairn facing outwards, this seems unlikely (Fig. 44). It is possible that some portal tombs

![Muntermellan Co. Donegal – concealed by an outcrop or accentuated by it?](image1)

![Altdrumman Co. Tyrone – facing directly into an outcrop.](image2)

![Houth Co. Dublin. Directly beneath a cliff.](image3)

![Houth PT (cromlech). Just beneath the cliffs of Muck Rock.](image4)

*Fig. 44. Portal tombs and outcrops.*
4. Landscape.

were placed close to an outcrop in order to draw attention to the monument, or to conceal it, for example at Muntermellan in Donegal (Fig. 44), Aderawinny Co. Cork (Fig. 76), Howth Co. Dublin (Fig. 44). In these and other examples the portal tomb builders may have made use of an existing natural outcrop as a suitable location, but no suggestion that the outcrop itself was of ritual significance could be supported, nor was there evidence that the portal tombs were modelled on the shape of the outcrops. Kytmannow reaches the same conclusion ‘there is no evidence that rock outcrops played an important part in the belief system of the portal tomb builders.’ (Kytmannow 2008, 129).

Fig. 45. Glacial landforms (Aalen et al. 2011).

The last Ice Age in Ireland came to an end at approximately 10,000 BC, and the effects of this glaciation and its melting are moulded into the landforms of the Irish countryside (Fig. 45). Glacial U-shaped valleys, drumlin swarms, eskers, moraines and spreads of glacial drift material have had a major effect on the surface topography, and had to be used or avoided by successive societies. The effect of these landforms have been considered by, for example, Jones (2009) who suggests that the distributions of many Neolithic monuments may have been influenced by features of the landscape which either constrained or enabled movement, and thus ‘encouraged the development of routeways along certain paths’ (Ibid. 119). Drumlin belts are normally
taken as a barrier to communication; the small steep-sided hills are closely packed together in a ‘basket of eggs’ topography separated by lowlands of small lakes and boggy marshland. It is quite striking that one area of very dense portal tomb distribution, occurring in a band from the west coast in Sligo through Leitrim, Cavan, Tyrone, Monaghan, Armagh and to Louth in the east coast, closely mimics the major drumlin swarm which occurs along the northern edge of the limestone central plain. This landscape certainly does not encourage the development of major routeways; modern roads in these areas are narrow, twisting and hilly, and can be quite perilous.

Eskers, the ridges of gravel deposited by melting glaciers, were used as routeways at least as far back as the Early Historic period when many ecclesiastical sites, for example Clonmacnoise, were established on already existing routes, and they might have been attractive to Neolithic people with their dry, less densely forested, linear nature. The major eskers in the country stretch across the midlands in an east-west direction, an area with no portal tombs. Another major esker area stretches from north Galway, through west Roscommon to east Mayo, another area devoid of portal tombs. During this study an effort was made to find whether any portal tomb was located on an esker, but no such siting was found. While there is no evidence that portal tombs were sited along major communication channels, and thus acted as route markers it is quite possible that some small-scale local routes developed as a result of their siting.

Glacial drift is also evident in smaller, less defined deposits of soil which is different from the surrounding area, and often more fertile. Glacial drift in the Burren area is discussed in section 4.3.3, but it is interesting to note that Aalen et al. (2011, 9) state that ‘tongues of drift extend up many glaciated valleys but rarely above 240m. Their upper boundary often forms a striking divide, determining the altitudinal limits of farming and improved land.’ The altitude is very similar to the most usual limit of portal tomb distribution and this type of glacial deposition may have influenced the location of some portal tombs, for example in the Dublin Mountains and at Straleel, Co. Donegal (4.7).
4.3.3 Soil and Vegetation - what grew there?

The natural vegetation of Ireland was important and influential to the Mesolithic population, with their lifestyle of hunting, gathering and fishing, but the influence of soil type became of primary importance with the adoption of agriculture and the changeover to a settled lifestyle. Pollen cores have indicated that the vegetation underwent a significant change during the Neolithic, from a mainly forested land of deciduous trees – oak, holly and hazel - to a landscape with substantial areas of pasture and some grain tillage (Molloy and O’Connell 2001).

Fig. 46. Raheen portal tomb in Co. Kilkenny is situated in native woodland of oak, holly and hazel.

It has long been accepted that portal tombs tend to be situated in areas of good farmland, with light, easily-worked soil (Keeling et al. 1989, Cooney 2000, Kytmannow 2008, 122). The pollen record shows that, while pasture and stock rearing was the most important aspect of farming, Neolithic farmers also tilled the soil and grew grain crops (e.g. Cooney 2000, 45, Molloy and O’Connell 2001). There is no record of ards being used, ground was probably tilled with digging sticks and so light, friable soil was preferred, and may almost have been a necessity.

During the present study a close examination of portal tomb siting in relation to the different soil types was undertaken and the resulting maps are presented in
appendix 1. In his 1956 study of the geographical factors of the Neolithic of North-east Ireland Watson looked at the different soil types of monumental sites and stressed that present-day soil types are derived from the bedrock or from glacial drift, in itself a product of the bedrock, so that Neolithic soil would not have differed significantly from that of the present. Recent studies carried out at the University of Ulster have confirmed this judgement; throughout Northern Ireland, ‘weathering processes have not significantly altered the geochemistry of the soils,. soil geochemistry can be effectively used as a proxy for till and that till is primarily local in origin’ (Dempster et al. 2013). These results were based on 6826 soil samples taken at 2 km² intervals through the six counties of Northern Ireland. In the present study the National Soil Survey maps (http://www.agresearch.teagasc.ie/johnstown/soil_maps.asp) of An Foras Talúntais were downloaded and each portal tomb was scanned into position. Those tombs which are situated on blanket bogs were excluded, as Neolithic soil types in these areas are now invisible. The results showed that in many cases the tomb was located at the boundary between one soil type and another. It is difficult to give exact numbers of portal tombs which display this feature but a visual inspection suggests that about 56% are situated at, or very close to this soil junction. Kytmanow (2008, 122) states that ‘many portal tombs would be just on the edge of more marginal land’ but does not consider the typology of the local soil as a contributing factor.

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown earths</td>
<td>Good fertility, friable texture, easy to work.</td>
</tr>
<tr>
<td>Podzols</td>
<td>Poor soil, many nutrients leached out, often found in hilly areas.</td>
</tr>
<tr>
<td>Brown podzolics</td>
<td>Similar to podzols but more fertile. Suitable for crops and pasture.</td>
</tr>
<tr>
<td>Grey brown podzols</td>
<td>Similar, fairly fertile but may be of heavier texture.</td>
</tr>
<tr>
<td>Gleys</td>
<td>Poorly drained, unsuitable for tillage</td>
</tr>
<tr>
<td>Rendzinas</td>
<td>Shallow soil, only suitable for grazing.</td>
</tr>
<tr>
<td>Lithosols</td>
<td>Skeletal, stony soils, frequent bare rocks outcropping, rough grazing.</td>
</tr>
<tr>
<td>Peats</td>
<td>Unsuitable for farming. Blanket peat unlikely to be present during Neolithic.</td>
</tr>
</tbody>
</table>

*Table 1. Common Irish soil types (simplified). Data from An Foras Talúntais Soil Survey Bulletin no, 36, 1980.*

There are (and were) eight major soil types in Ireland (Gardiner and Radford 1980) with differing levels of fertility and friability, compaction and moisture
4. **Landscape.**

Retention ability. Basin peats should also be considered as they may have been present in the Neolithic (blanket peat was not) and would have been completely unsuitable for farming. Two areas are examined here, others in appendix 1.

**Area 1. Co. Clare and south Co. Galway.**

![Map of Co. Clare and part of Co. Galway](image)

**Soil type.**

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rendzinas</td>
<td>7</td>
</tr>
<tr>
<td>Grey brown podzolics</td>
<td>28</td>
</tr>
<tr>
<td>Basin peat</td>
<td>44</td>
</tr>
<tr>
<td>Gleys</td>
<td>21</td>
</tr>
<tr>
<td>Shallow brown earths.</td>
<td>33</td>
</tr>
</tbody>
</table>

*Fig. 47. Soil types and portal tombs – Co. Clare and part of Co. Galway.*
Most of the portal tombs in the map above (Fig. 47) are located in the greater Burren area, a region of bare karstic limestone with substantial Neolithic evidence (Jones 1998b, 2004, 2010). The area has been well studied by botanists, palaeobotanists and geologists, as well as archaeologists, and there is a consensus that the region was once covered with a shallow blanket of glacial till which has eroded away since the Bronze Age in most areas (Drew 1982, Moles & Moles 2001, Feeser & O’Connell 2009). This soil cover would have been sufficient to support tree and shrub growth prior to human land use (Drew 1983, 113) and some small spreads of till material remain, ‘patches of brown earth derived from calcareous glacial drift in hollows and valleys’ (Drew 1982, 120) providing comparatively fertile pasture.

Crannagh (Fig. 107) and Ballycasheen are each situated on the junction between the poor quality rendzina soils and much more fertile shallow brown earths. Moyree Commons (Fig. 88) is on the boundary between rendzinas and reasonably fertile grey brown podzolics, while the soils around Ballynacloghy are shallow brown earths and it is located well to the west of a small area of basin peat. Poulnabrone seems isolated in the centre of the rendzina soil area, now mostly bare, but is only 50 metres to the north of a deep spread of fertile glacial drift, very visible on the ground.

Clogher (Fig. 77) portal tomb is well to the east of the Burren landscape, and is situated on the junction between two different soil types, poorly drained gleys to the north and more fertile grey brown podzolics to the south. It also lies beside, but avoids, a small area of basin peat. It is suggested that all these tombs have been located at the margin between soil of poor fertility and soil of good or reasonable quality.
4. Landscape.

Area 2. Co. Derry.

With the exception of Tirnony (Fig. 124) which is situated just east of Maghera in an area of gley soil, the Co. Derry portal tombs also appear to be situated at the junction between soil types. Ervey and Drumderg have similar sites on the borders between brown podzolics and areas of poor quality peaty gley soil. Tamlaght and Crevolea are also at the edge of gleys, beside fertile acid brown earths. Tirnony seems different, but although the soil is poorly drained gley it appears to be in good farmland; Ó Nualláin (1983, 80) describes it as ‘rolling pasture land’ and McSparron et al. (2013) also mention pastureland, ‘...quite well drained ... because of its gently sloping
location’. It is possible that the inadequacies of the soil can be overcome by the nature of the bedrock and its incline.

A number of studies regarding the relationship of megalithic monuments and soil type have been carried out. Gabriel Cooney surveyed the landscape siting of the 49 megaliths in Co. Leitrim in 1979 and concluded that ‘there does therefore appear to be a correlation between the megalithic tomb distribution and areas of good modern soils in County Leitrim’. As discussed, it seems that present-day soil types have not changed significantly through weathering or land-use, and a close examination of the siting of the portal tombs from his map of south Leitrim demonstrates that they were mostly sited on the boundary between soil types, mainly on gley soils, and avoid basin peats.

Watson (1956) examined the siting of portal tombs and court tombs in north-east Ireland with reference to ‘geographical’ features, including soil type. He found that the megaliths were mainly concentrated on drift-free areas, where the soil was lighter, shallow and free-draining, and he named some which were right on the boundary with the heavy, sticky soil of the glacial drift. In the area south of the Mournes he found that the sites were ‘two miles out, where the soil is less boulder and
In Donegal the tombs in Malinmore are situated on the slopes on either side of a broad valley (Appendix 2). Malinmore A, with its 6 tombs in one long cairn, is a unique monument, but the other three are placed at much the same altitude along the opposite, south-facing, side of the valley, in areas now covered in blanket peat. Although no soil change can be identified here they may indicate a line separating lower levels which were suitable for early cultivation from upper areas where the effort involved was not justified by the return.

The vegetation of the early Neolithic is often examined only for indications of farming, with pollen cores revealing reductions in arboreal pollen accompanied by increases in grassland species and introduced grains. This is obviously important, but it is likely that, at the construction period of portal tombs, forest clearance and agricultural land use was not widely spread but patchy and diffuse. Whitehouse et al. (2014, 20) believe that the evidence suggests that the earliest agriculture was practised in ‘small permanent plots, best described as intensive garden agriculture’, and that substantive forest clearance did not occur until EN II (3750 – 3600 cal. BC), coinciding with the rectangular house horizon. While court tomb construction belongs to this period they mention the ‘emerging consensus’ that portal tombs fall comparatively early in the Neolithic and this dating is confirmed for Poulnabrone (Schulting 2014). Bayesian modelling of new dates, and of those from 1990 (Hedges et al. 1990) suggests that construction could have dated from 3885-3720 cal BC ‘at the very beginning of the Neolithic in Ireland’ (Lynch 2014, 172). These dates are discussed in Chapter 6.4.4.
Portal tombs may thus have been constructed in small cleared patches of land within the forests; Scarre (2009a, 9) suggests that the earliest European Neolithic monuments ‘...may have been constructed in landscapes that had not wholly been cleared for agriculture ...littered with rocks and boulders.’ The monument site may have been defined by the forest rather than the clearing; instead of regarding it as an open productive place it may have been regarded as an enclosed space within the forest, bordered and bounded by trees. In this scenario the forest might have been Hodder’s (1990) wild, the agrios, with the monument site the domus, where the wild had been conquered, the sky revealed and the sun enabled to shine directly on life, both ritual and mundane. It might then have been natural to express this new view of the cosmos in a new form of monument.

4.4 Orientation and Views – what the builders saw.

4.4.1 Orientation. Fig. 52 displays the orientation of most portal tombs although there are a few where the monument was so ruinous that orientation could not be ascertained. It can be seen that there is a general, but not universal, preference for a roughly easterly orientation, with approximately 60% facing between north-east and south-east. Further analysis revealed that this orientation was fairly similar for tombs in selected areas like the west coast, the southeast and all coastal sites; little regional difference in orientation is displayed.

A consistent orientation of ritual monuments is often considered to reveal cosmological significance, with the tomb builders choosing to ‘point’ the monument towards the sun at a certain time of day or year, or to the moon or other celestial body. With this in mind it is possible that portal tombs were referencing sunrise, at varying points on the annual cycle. Ireland lies between 55.3° and 52.6° N latitude, and sunrise ‘moves’ between north-east and south-east at varying times during the year. The movement of the sun, on both a diurnal and annual basis, may have been perceived as more significant with the onset of the Neolithic. Forest clearance, even if only in small patches, would have allowed the sun’s rays to shine directly without the filtering effect of tree cover, while the annual movement affected plant growth. The
winter solstice was considered so important that the builders of Newgrange directed their whole monument towards it. However, 40% of portal tombs are definitely not orientated towards sunrise. Perhaps there could be preference affected by the lunar cycle, or some astronomical feature, but the consistency of orientation seems too sparse to pursue this course. It is possible that the orientation reveals the beginning of a preference for an easterly orientation, more fully realised in the slightly later court tombs.

![Orientation - all portal tombs.](image)

![Orientation - Dublin and south east.](image)

![Orientation - western counties.](image)

![Orientation - coastal tombs.](image)

Fig. 52. Orientation of portal tombs. Images produced by Brian Mercer using data from Kytmannow (2008) and personal observation.

Court tombs, probably constructed slightly later than portal tombs but contemporaneous in use, have a more strongly defined easterly orientation, particularly in the western part of the distribution zone (Waddell 2000), and it is
suggested that this was a deliberate orientation on sunrise. Passage tombs have varied orientations and the small early examples tend to focus on a focal point within the cluster, or to another significant site (Shee Twohig 2004, 38). It is not until the construction of the large passage tombs like Newgrange and Knowth, later in the Neolithic, that a specific solar orientation can be assumed. Wedge tombs appear to favour the setting sun, typically oriented towards the southwest (O’Brien 1999, 7).

4.4.2 Viewscapes. The opinion of some writers that monuments were constructed and oriented with regard to a view of distant landscape features has been discussed in section 3.5.4 (Cummings 2004, 2009a, 2009b, Cummings and Whittle 2003, Cummings and Fowler 2004, Tilley 1994, 2007, Tilley and Bennett 2001), as has the criticism of this approach, including Fleming (1999, 2005); Brück (1998, 1999); Barrett & Ko (2009). Much of this work has concerned monuments in Wales and Cornwall, but Cummings has extended this study to portal tombs in Ireland (2004, 2009a). She claims that the fact that ‘monuments were carefully positioned so that specific landscape features were visible’ (Cummings 2009a, 127) has already been proven and accepted. She states that in the north- and south-east distribution areas between 73% and 94% of monuments had a view of mountains (defined as a landmass over 304m) and that this was a deliberate decision, emphasising the significance of mountains in Neolithic cosmology. She believes that ‘the landscapes of the Irish Sea zone are connected through the intervisibility of its mountains’ (Cummings 2004, 30) and that monuments were deliberately sited with views of these mountains due to ‘a new set of social relationships which were concerned with the creation of a broader community which spanned the Irish Sea area’ (Ibid. 35). Cummings does not discuss monuments in the rest of Ireland, and whether they had similar or different siting rules.

During the course of this study an effort was made to consider viewscapes, particularly in regard to mountains. As discussed in section 4.3.1 portal tombs are not situated on high ground, but are often on the lower slopes of modest hills. Many of them are located in such a way that there is no apparent view. They are tucked closely into cliff faces or escarpments, for example, Howth (Fig. 44), Aderawinny (Fig. 54), or situated at the base of steep glens (Brennanstown Figs.116, 120). No definite relationship between portal tombs and mountains was identified. Where a view of
distant mountains was evident it did not seem to have a particular significance, and
the orientation of the tombs and mountains seemed entirely arbitrary. Both
Cummings (2009a) and Kytmannow (2008) mention Glaskenny in Co. Wicklow as
being possibly positioned with a view of the striking-looking Sugarloaf Mountain
some 12 km to the south east, but the portal tomb is (unusually) oriented northwest
while the mountain is to the southeast (Fig. 53). Although it could be suggested that
an observer standing in front of the portals would have had a view of the mountain
behind the monument, this seems a very slight example to suggest a site selection
based on a significant view.

![Image](www.archaeology.ie)

**Fig. 53.** Glaskenny portal tomb Co. Wicklow (oriented to NW) in relation to the Great
Sugarloaf Mountain.

Some of the portal tombs situated on higher ground do have open views over
the surrounding countryside, including mountains. This is particularly true in
Donegal where, for example, Ballyannan has a fine view to the west over Lough
Swilley to the Mulroy peninsula, and Muntermellan overlooks the Muckish mountain
range to the south. Both these portal tombs are sited with their rear to the view, and it
is not possible to identify a particular feature which is important. The landscape of
north Donegal is such that is almost impossible to avoid a spectacular mountain view,
but Errigal, the highest and most striking-looking mountain, is not visible from any
portal tomb. Croagh Patrick, a similarly striking-looking cone-shaped mountain in
Mayo, of ritual significance up to the present, is not visible from any of the nine portal tombs in that county.

Although portal tombs are often situated in close proximity to court tombs there is little evidence of intervisibility. Many examples could be given; Claggan on Horn Head in Donegal is less than a kilometre from a large court tomb in the same townland but the shoulder of a hillside crops out between the two. Mayo in Co. Cavan is less than a kilometre from two court tombs, in Aghagaslan and Cohaw townlands, yet neither is visible. Ballynew, at Cleggan Co. Galway, is in close vicinity (200-400m) to 3 court tombs but due to the rough, uneven terrain it is impossible to see any from the portal tomb.

With regard to the apparently discreet, secluded sites of many portal tombs Barnatt (1998, 97) suggests that monuments sited in this way may heighten the sense of ‘otherness’ or removal from the land of the living, possibly indicating concern with death and the supernatural world rather than with ‘everyday’ rituals such as rites of passage or calendrical celebrations. If this is applied to portal and court tombs, it could be suggested that court tombs, with their more open and visible siting, were intended for everyday rituals while portal tombs were removed from daily life and reserved for the supernatural.

4.5 Portal tombs and water.

*’If I were called in to construct a religion I should make use of water.’*


Whatever else they were, portal tombs were not domestic structures. No-one lived in them, kept their cattle there or used them to store grain. An indication that a water feature played a part in site selection would thus indicate that water had a ritual significance.

4.5.1 The sea (or not the sea?) Of the approximately 180 portal tombs in Ireland some 54, or roughly one-third, may be described as coastal. For the purposes
of this study any tomb situated within 4 km of sea is considered as coastal; this seemingly arbitrary decision is based on the fact that there is a distinctly coastal ‘feel’ about sites within 4 km of the shoreline. The air smells salty, the vegetation is coastal, lacking woodland and tall trees, and often the sea is audible from this distance. An adult will cover 4 km on foot in less than an hour, so the sea is readily accessible as a communication route and as a source of raw materials. The visibility of the sea from portal tombs within this distance varies very greatly. The sea is just visible in about 60% of cases, but most of the views are mere glimpses and there appears to be a positive attempt to avoid a direct view. In most cases an open view of the sea would have been easily achieved if that had been deemed desirable; the over-riding impression gained is that the sea is avoided where possible. Even in those tombs which are situated less than 1 km from the shore there is no indication that any was placed with the intention of viewing the sea. Some appear to have been sited with the express object of avoiding such a view. Aderawinny in Cork is only 1.2 km from the coast and is situated in such a way that it has virtually no views at all (Figs 54, 55). The four portal tombs in Co. Louth are all within 4 km of the coast, yet none has a view of the sea.

Not only do the tombs seem unconnected with a sea view, in many cases they are sited so that they are invisible or unobtrusive from the sea. Cloghcor, a large portal tomb close to the shore in Co Sligo, (Fig. 58) has good sea views from the back and side, but it cannot be seen from the shore. Muntermellan in Co. Donegal, situated high on Horn Head which was probably an island in the Neolithic (Harkin 1893, 47), has fine sea views to the south and east (back and side of the tomb) but is virtually invisible from any angle until very close by (Fig. 59). Brennanstown Co. Dublin (Fig. 56), 3 km from the sea, is tucked down in the bottom of a steep, narrow gorge, invisible from all angles. Proleek is an enormous portal tomb in Co. Louth just 1 km from the coast, yet cannot be seen from the sea (Fig. 57).

The orientation of coastal tombs is very similar to the orientation of all portal tombs, i.e. with a distinct but not universal easterly orientation. Approximately 60% of all portal tombs and 60% of coastal portal tombs face in a generally easterly direction. However, a detailed study of the orientation of individual portal tombs reveals that, almost without exception, they were oriented away from the sea, with either the backstone or one side facing the coast (Table 2).
4. Landscape.

Fig. 54. Aderawinny Co. Cork – close to the sea. Oriented to right of the image.

Fig. 55. Aderawinny – actual view from the monument towards the sea.

Fig. 56. Brennanstown Co. Dublin.

Fig. 57. Proleek Co. Louth.

Fig. 58. Cloghcor Do. Sligo.

Fig. 59. Muntermellan Co. Donegal.
### Table 2. Coastal portal tombs – orientation, orientation to sea, view.

<table>
<thead>
<tr>
<th>Portal tomb</th>
<th>Orientation</th>
<th>Orientation to sea</th>
<th>View of sea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloghcor</td>
<td>NNE</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>Ardabarone</td>
<td>NE</td>
<td>Angled</td>
<td>Yes</td>
</tr>
<tr>
<td>Malin Mór A</td>
<td>E</td>
<td>Varied, mainly rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Malin Mór B</td>
<td>E</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Malin Mór C</td>
<td>ESE</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Malin Mór D</td>
<td>E</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Kilclooney Mór A</td>
<td>SE</td>
<td>Rear</td>
<td>No</td>
</tr>
<tr>
<td>Kilclooney Mór B</td>
<td>SE</td>
<td>Rear</td>
<td>No</td>
</tr>
<tr>
<td>Róisín Theas</td>
<td>SE</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Gilbertstown</td>
<td>SE</td>
<td>Angled</td>
<td>No</td>
</tr>
<tr>
<td>Lackaghatermon</td>
<td>SE</td>
<td>Rear</td>
<td>No</td>
</tr>
<tr>
<td>Toome</td>
<td>E</td>
<td>Rear</td>
<td>No</td>
</tr>
<tr>
<td>Ards Beg</td>
<td>NE</td>
<td>Angled</td>
<td>Yes</td>
</tr>
<tr>
<td>Claggan</td>
<td>E</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Muntermellan</td>
<td>N</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Gortnavern</td>
<td>S</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>Carnaghan</td>
<td>NE</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Eskaheen</td>
<td>NW</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Templemoyle</td>
<td>SE</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>Bin</td>
<td>SE</td>
<td>Angled</td>
<td>Yes</td>
</tr>
<tr>
<td>Errarooey Beg</td>
<td>E</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>Wardhouse A</td>
<td>NE</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>Wardhouse B</td>
<td>S</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Slieveemmore</td>
<td>W</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>Ballyknock A</td>
<td>N</td>
<td>Front</td>
<td>Yes</td>
</tr>
<tr>
<td>Ballyknock B</td>
<td>NE</td>
<td>Angled</td>
<td>No</td>
</tr>
<tr>
<td>Doogort W</td>
<td>N</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Claggan</td>
<td>SE</td>
<td>Parallel</td>
<td>No</td>
</tr>
<tr>
<td>Gortbrack</td>
<td>NE</td>
<td>Parallel</td>
<td>No</td>
</tr>
<tr>
<td>Knocknalower</td>
<td>SE</td>
<td>Back</td>
<td>No</td>
</tr>
<tr>
<td>Dunhill</td>
<td>E</td>
<td>Parallel</td>
<td>No</td>
</tr>
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4. Landscape.

<table>
<thead>
<tr>
<th>Town</th>
<th>Orientation</th>
<th>Orientation to Sea</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brittas</td>
<td>WSW</td>
<td>Angled</td>
<td>No</td>
</tr>
<tr>
<td>Brennanstown</td>
<td>W</td>
<td>Rear</td>
<td>No</td>
</tr>
<tr>
<td>Ballybrack</td>
<td>E</td>
<td>Angled</td>
<td>No</td>
</tr>
<tr>
<td>Howth</td>
<td>SE</td>
<td>Angled</td>
<td>Yes</td>
</tr>
<tr>
<td>Leaguan</td>
<td>SE</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>Knockavalley</td>
<td>SE</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>Ballynew</td>
<td>N</td>
<td>Parallel</td>
<td>No</td>
</tr>
<tr>
<td>Cloonlooan</td>
<td>SE</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>Ballynaclochy</td>
<td>SE</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>Lurgankeel</td>
<td>N</td>
<td>Parallel</td>
<td>No</td>
</tr>
<tr>
<td>Monascreebie</td>
<td>W</td>
<td>Parallel</td>
<td>No</td>
</tr>
<tr>
<td>Aghnaskeagh</td>
<td>N</td>
<td>Back</td>
<td>No</td>
</tr>
<tr>
<td>Proleek</td>
<td>NW</td>
<td>Parallel</td>
<td>No</td>
</tr>
<tr>
<td>Aderawinny</td>
<td>NW</td>
<td>Parallel</td>
<td>No</td>
</tr>
<tr>
<td>Ahaglaslin</td>
<td>E</td>
<td>Rear</td>
<td>No</td>
</tr>
<tr>
<td>Ballyvennaght 1</td>
<td>W</td>
<td>Rear</td>
<td>No</td>
</tr>
<tr>
<td>Ballyvennaght 2</td>
<td>E</td>
<td>Front</td>
<td>Yes</td>
</tr>
<tr>
<td>Ballyvennaght 3</td>
<td>E</td>
<td>Front</td>
<td>Yes</td>
</tr>
<tr>
<td>Wateresk</td>
<td>NW</td>
<td>Angled</td>
<td>Yes</td>
</tr>
<tr>
<td>Kilfeaghan</td>
<td>N</td>
<td>Rear</td>
<td>Yes</td>
</tr>
<tr>
<td>Killeel</td>
<td>SW</td>
<td>Parallel</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 2. Coastal portal tombs – orientation, orientation to sea, view.

Leaguan in Co. Galway is one exception (Fig. 41, 42). It is orientated SSE and faces Streamstown Bay less than one kilometre away. It should be noted, however, that in the Neolithic it is believed that sea levels on the west coast of Ireland were lower than at present (Williams 2004, Mercer 2008, 7) so that Streamstown Bay, which is a narrow and shallow sea inlet, was most likely dry land at the time and Leaguan portal tomb would not have faced the coast to the west. Two of the three portal tombs at Ballyvennaght in Co. Antrim face towards the coast, as does one of the ruined examples at Ballyknock in Mayo. None of the other portal tombs are orientated towards the sea and that seems unlikely to be accidental. The opposing orientation, i.e. where an individual will face the sea if standing in front of the portals, also seems
unlikely. It is estimated that of the 54 coastal portal tombs approximately 20 are sited with the backstone facing the sea, but even in these cases the tomb itself would have been tall enough to block the view of the sea, and the secluded nature of the site would further reduce the sight of the sea.

Fig. 60. Orientation – all portal tombs.
Fig. 61. Orientation – coastal portal tombs.

Fig. 62 Orientation of coastal portal tombs in Co. Louth.
Fig. 63. Orientation of coastal portal tombs in Co. Donegal.
This strange feature can be illustrated by the positioning and orientation of a group of monuments on the east coast, in Cos. Louth and Down, clustered around Carlingford Lough (Fig.62). Not one of these coastal monuments faces the sea, despite the fact that here the sea lies to the east, the dominant direction of portal tomb orientation. Similarly, there are 18 coastal portal tombs in Co. Donegal, yet none faces the sea (Fig. 63). This strange fact, combined with the apparent unimportance of a sea view and the low visibility of portal tombs from the coast, might be connected with the major change of diet evidenced in the early Neolithic in Britain and Ireland from a marine to a terrestrial source of protein (Richards & Hedges, 1999; Schulting 1998, 2004; Schulting et al. 2012). Isotopic analysis on human bone and teeth samples from Poulnabrone (Kador, 2010; Ditchfield, 2014), and a phalanx found by Kytmanow (2008, 104) in the chamber at Ballynacloghy, Co. Galway, and radiocarbon dated to 3700-3525 cal BC demonstrated that all the individuals had eaten a terrestrial-based diet. This is particularly surprising in the case of Ballynacloghy, given that the tomb is close to the seashore of Galway Bay, home to the famed oysters and other shellfish, and included a number of seashells (undated) amongst its deposits (Waddell 1977/78). Human bone from seven court tombs, which were in use contemporaneously with portal tombs, also revealed that there was little or no consumption of marine protein by these individuals (Schulting et al. 2012).

The reason for this change in diet is unknown and mysterious. Thomas (2003, 70) suggests that the avoidance of marine food most likely represented a cultural prohibition or taboo, implying ‘a fundamental change in the relationship between human beings and the sea at the start of the Neolithic’. The avoidance of the sea might have been related to an avoidance of those areas most associated with the indigenous Mesolithic population (this chapter, 4.2). The deliberate turning away from the sea by these early farmers may have had its origin in a number of newcomers who brought with them dietary practices already evident in parts of Britain and Northwestern Europe. There may have been some overarching belief system concerning the sea which influenced the sites of portal tombs. For whatever reason, there is enough evidence to state that the avoidance of the sea seems to have been a conscious choice in site selection, and that it was more likely to have been based on ritual rather than practical reasons.
4.5.2 **Lakes – why not?** Lakes were an important resource during the Mesolithic in Ireland. They were a source of food, both fish and wildfowl, and provided watering holes for wild pig which would have been hunted. Seasonal habitation sites dating from the Mesolithic have been found on the shores of Lake Boora, Co. Offaly (Waddell 1998, 14), and Fredengren (2002) and Fredengren et al. (2010) found Mesolithic evidence during studies of Lough Gara in Co. Roscommon and Lake Kinale in Co. Longford. The importance of lakes probably continued into the Neolithic. A source of water was vital for watering stock and crops, and also for normal household tasks; lakes were paths in the landscape, simpler for movement than the thick forests which still covered most of the land, and navigable by boat. They would have assisted rather than constrained movement and communication.

Ireland has a large number of lakes. The major rivers, like the Shannon, the Erne, the Corrib, and the Liffey are threaded with large lakes, and Lough Neagh is the largest body of inland water in the British Isles. Smaller lakes abound throughout most of the country. It is surprising, therefore, that there are virtually no portal tombs sited on or near lakes. This is shown quite dramatically in the contrast between the known Mesolithic activity on the shores of Lough Neagh and the avoidance of the lakeshore by portal tombs (Figs. 28, 29). This is particularly noteworthy as the terrain around the lake is eminently suitable to early farming methods with ‘*widespread light, freely drained soils*’ (Watson 1956, 127). Two exceptions should be noted. Menlough (Co. Galway) is situated on the south east shore of Lough Corrib, and Loughscur portal tomb is on the shore of Lough Scur, Co. Leitrim. Classification of both of these as portal tombs is very doubtful. Loughscur is low and wide, with transversely set portals; it has a squat appearance more suggestive of a wedge tomb and de Valera

![Image: Kytmannow 2008.](https://example.com/image)

**Fig. 64. Loughscur Co. Leitrim.**

**Fig. 65. Menlough Co. Galway.**
and Ó Nualláin did not accept it as a portal tomb in their Megalithic Survey of 1972 (Fig. 64). Menlough is 100 metres from the shoreline of Lough Corrib and is also somewhat dubious (Fig. 65). The distance between the portal stones is 1.4 metres, which contrasts with the average gap of approximately 80cm (Chapter 5.3.2). The monument is so overgrown and damaged that it is difficult to assess but Kytmannow (2008) believes that there are some upright orthostats in front of the portals which may suggest that it is a portal tomb/court tomb hybrid.

This lack of lakeside siting seems strange. Portal tombs are found beside small pools or ponds. For example, Ballynew Co. Galway (Fig. 9) is 50 metres from Lake Sheeauns, but this is a circular pool only 30m in diameter while the large Ballynakill lake only 400m to the east is avoided, and is not visible from the portal tomb. Fredengren et al. (2010, 97) noted this phenomenon in relation to the Lough Kinale area of Co. Longford ‘curiously, there are no megalithic tombs near Lough Kinale’ (Ibid. 246) and suggest that as the Neolithic progressed and monuments were built the emphasis on lakes which was evident during the Mesolithic became less compelling and lakes were purposely ignored in the siting of portal tombs. They cite Middletown portal tomb in Co. Cavan (Fig. 5), only 400m from White Lake, but hidden from it by an intervening ridge; Cleenrah in Co Monaghan, similarly sited with regard to Leebeen Lough, is another example.

4.5.3 **Rivers and Streams – contradictions in terms.** There is no clear-cut distinction made between these two types of watercourses, although perhaps it might be said that rivers flow directly to the sea whilst tributaries and streams do not. Rivers are obviously larger than streams, but the most obvious difference visible in the landscape is in the size of the valley carved out of the landscape.

Throughout most of the country no portal tombs were located on the banks of major rivers. Although Ó Nualláin (1983, 87) claims that 57% are ‘close to, or overlook rivers,’ this is a very generalised statement without any definition of what is meant by close. Waddell (2998, 90) notes that they are ‘often near streams’ and Cody (2002, 273) repeats Ó Nualláin’s opinion of a riverine association which he believes might indicate preferred settlement locales or, possibly, an indication of ritual or symbolic factors. However, his belief that they were associated with both rivers and coasts as
the obvious arteries of communication is questioned by elements of micro-siting, as discussed in section 4.5.1 for coastal sites. With regards to rivers, it is difficult to conceive of a deliberate connection between portal tombs and communication routes along water when there is no example sited beside the Shannon, the Liffey, or the Boyne, all of which flow through, or near, areas of portal tomb distribution. The monuments seem to deliberately ignore, or hide from, large rivers.

A slightly different situation might be suggested for the portal tomb area of the southeast. In Co. Waterford Sheskin, Ballyquin and Whitestown all lie close to tributaries of the River Suir while Gurteen is only 400m south of the river, although it is on the banks of a small stream and the river is both invisible and inaudible (Kytmanow 2008, Catalogue 257). The Suir could certainly be regarded as a major river. In Carlow both Haroldstown and Ballynoe are situated on the banks of the Dereen River, a fairly substantial tributary of the Slaney which could be considered as a routeway.

The situation in regard to streams is difficult to assess accurately. Kytmanow (2008) regards any stream within 1 kilometre of a portal tomb as being a significant factor in site selection and calculates the average distance as 243m. At this distance most small streams will be invisible and inaudible, and in many cases there is no sign of a stream eroded valley. In many parts of Ireland it is difficult to find a situation which is not within 1 kilometre of a small watercourse. Many present-day streams may not have existed in their present locales during the Neolithic, and may have originated as drainage ditches. Others may have completely disappeared through land drainage schemes, afforestation, or the growth of peat bogs. For these reasons the orientation of the tomb in relation to a stream (parallel, cross-stream etc.) has not been considered as a relevant factor, although Kytmanow (2008, 124) suggests that there is a preference for an upstream, parallel orientation (52%). With these qualifications in mind there are still numerous portal tombs which are situated close to a stream. It was also noted during the present study that c. 20% were situated less than 1 kilometre from marked fords or stepping stones. These indicate places where the stream or river was easy to cross and might have been marked as such by the monument. They could also have indicated places where it was suitable to water cattle.
4. Landscape.

The absence of a stream does not necessarily preclude the presence of a portal tomb. In the karstic limestone landscape of the Burren area in Co. Clare and Galway Poulnabrone (Section 6.5) and Crannagh (Fig. 107) are situated with no stream nearby, water tends to flow underground in this landscape. The same situation exists in the Burren area of Co. Cavan where there are two portal tombs (Figs. 70, 71). Kilclooney Mór in Donegal (Fig. 43) is situated on a waterfree bog and Cloghcor in Sligo (Fig. 58) is high on a ridge near the sea with no watercourse nearby. Many of the portal tombs situated in drumlin country are close to the badly drained valley bottom where there are no streams but where the land is waterlogged and marshy.

It is possible that the avoidance of large waterways, lakes and rivers, and the apparent avoidance of a sea view might demonstrate an avoidance of areas favoured by, and possibly still occupied by, individuals with a Mesolithic lifestyle. It may also indicate that portal tombs avoided, rather than indicated, major routeways; perhaps they were monuments intended for insiders, members of the group/tribe, and not intended for the guidance of outsiders. The frequent preference indicated for discreet locations supports this view; a structure intended to draw attention to the existence of a route would surely have been situated where it could be seen most easily.

4.5.4 Springs and Wells. During this study another association with a water feature was investigated. Approximately 30% of portal tombs were sited within 1 kilometre of a spring or well. In many cases this is no longer visible due to changes in the landscape, but these water features are marked on the 1st Edition Ordnance Survey Maps, dating from varying years within the 1830s. Portal tombs were not domestic sites so proximity to a spring well was not a practical essential. Many springs were Christianized and given saints’ names, and some form the core of early monastic sites and hermitages. It is believed that many such early Christian foundations were purposely sited at places of pagan veneration, in an effort to expedite the adoption of the new religion. Pope Gregory the Great (540-604 AD) gave instructions to missionaries to England:

‘...the idol temples should by no means be destroyed... it is important that they should be changed from the worship of devils to the service of the true God’

(Hamlin & Hughes 1997, 31)
4. Landscape.

A possible example of the persistence of ritual memory is marked by the presence of Knockeen portal tomb in Co. Waterford (Fig. 86) which is incorporated into the wall of a graveyard beside the ruined Kilburne church. 200 metres to the south is a wedge tomb. Ballyquin, also in Waterford, is 150 metres north of a holy well beside which were the foundations of an ancient hermitage and a modern ‘grotto’ with an enormous crucifix. The well flows into a stream which can be heard from the portal tomb. Unusually, the well is named after two saints, Cuan and Breoghan, (Blackett 1851, 497) and there was a second portal tomb 50 m from the surviving one.

A suggestion that a natural spring was relevant to the location of a portal tomb for ritual reasons cannot be proven, but is frequent enough (approximately 30% of the total) to warrant serious consideration. Raheen in Co. Kilkenny stands in a natural woodland of native trees, oak, holly and hazel (Fig. 46), and has no visible water features nearby (Fig. 67). However on the 1st edition Ordnance Survey map three wells are marked in a line some 250m to the west, with the central one exactly opposite the portal tomb (Fig. 66). Taylorsgrange in Dublin is 75m to the east of St. Sadhbh’s Well.
Table 3. Wells and springs, stepping stones and fords.

<table>
<thead>
<tr>
<th>Portal tomb</th>
<th>Well/spring</th>
<th>Distance</th>
<th>Ford/stepping stones</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Donegal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Claggan</td>
<td>St. Fian’s well</td>
<td>1.5km</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gilbertstown</td>
<td>St. Colmchille’s well</td>
<td>600m</td>
<td>Fords</td>
<td>300m</td>
</tr>
<tr>
<td>Errarooey Beg</td>
<td>St. Fian’s well</td>
<td>1.5km</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malin Mór A</td>
<td>St. Fian’s well</td>
<td></td>
<td>Fords and stepping stones</td>
<td>6-800m</td>
</tr>
<tr>
<td>Malin Mór B</td>
<td>St. Fian’s well</td>
<td></td>
<td>Fords and stepping stones</td>
<td>5-600m</td>
</tr>
<tr>
<td>Ards Beg</td>
<td>St. Colmchille’s well</td>
<td>600m</td>
<td>Fords</td>
<td>300m</td>
</tr>
<tr>
<td>Kilclooney Mór</td>
<td>Spring (Borlase 1897,240)</td>
<td>‘a few yards’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Róisín South</td>
<td>3 holy wells</td>
<td>600 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sraith Bhuithne</td>
<td>St. Fian’s well</td>
<td></td>
<td>Stepping stones</td>
<td></td>
</tr>
<tr>
<td>Templemoyle</td>
<td>Holy well</td>
<td>600m</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cork</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ahaglaslin</td>
<td>St. Fachtna’s well</td>
<td>400 m</td>
<td>Stepping stones and ford</td>
<td>400m</td>
</tr>
<tr>
<td><strong>Leitrim</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fenagh Beg</td>
<td>St. Everan’s well</td>
<td>100m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drumany O’Brien</td>
<td>Well</td>
<td>700m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sunnagh Mór A</td>
<td>Holy well</td>
<td>1km</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sunnagh Mór B</td>
<td>Holy well</td>
<td>1 km</td>
<td>Stepping stones</td>
<td>1 km</td>
</tr>
<tr>
<td>Annaghmore</td>
<td>Holy well</td>
<td></td>
<td>Stepping stones (many)</td>
<td>All round</td>
</tr>
<tr>
<td><strong>Galway</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crannagh</td>
<td>Well (Nastaig lios ringfort)</td>
<td>700m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knockavalley</td>
<td>Holy well</td>
<td>200m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballynacloghy</td>
<td>Holy well</td>
<td>500m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marblehill</td>
<td>2 wells</td>
<td>500m, 1 km</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Derry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ervy</td>
<td>Many wells</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drumderg</td>
<td>Well</td>
<td>750m</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Down</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wateresk</td>
<td>St. Fian’s well</td>
<td></td>
<td>Ford</td>
<td>100m</td>
</tr>
<tr>
<td>Location</td>
<td>Features</td>
<td>Distances</td>
<td>Notes</td>
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</tr>
<tr>
<td>Tyrone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altdrumman</td>
<td>5 springs</td>
<td>1 km</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballyrenan</td>
<td>1 spring</td>
<td>500m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Athenree</td>
<td>2 wells</td>
<td>700m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carnocorran Glebe</td>
<td>11 spring wells</td>
<td>500m radius</td>
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<td>Cashel</td>
<td>3 springs</td>
<td>100m</td>
<td></td>
<td></td>
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<tr>
<td>Churchtown</td>
<td>10 spring wells</td>
<td>Vicinity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cloghfin</td>
<td>2 wells</td>
<td>200m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radergan</td>
<td>Well</td>
<td>‘Near’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altcloghfin</td>
<td>Well</td>
<td>Beside</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scraghy</td>
<td>Spring</td>
<td>100m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leitrim</td>
<td>Many spring wells</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crosh</td>
<td>Many wells</td>
<td></td>
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<tr>
<td>Killynacht</td>
<td>2 spring wells</td>
<td>Very close</td>
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<td></td>
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<td></td>
</tr>
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<td>Ardabrone</td>
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<td>30m</td>
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<td>Carrickglass</td>
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<td>400m</td>
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<td></td>
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<td>Crowagh</td>
<td>Holy well</td>
<td>1km</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballinvrillick</td>
<td>Spa well</td>
<td>2 km</td>
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<tr>
<td>Knockanbaun</td>
<td>..........................</td>
<td>................</td>
<td>450-900m</td>
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<td>Springfield</td>
<td>St. Patrick’s well</td>
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<td></td>
</tr>
<tr>
<td>Tawnatruffaun</td>
<td>..........................</td>
<td>................</td>
<td></td>
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</tr>
<tr>
<td>Cavan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banagher</td>
<td>..........................</td>
<td>................</td>
<td>600m</td>
<td></td>
</tr>
<tr>
<td>Longford</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melkagh</td>
<td>Well</td>
<td>150m</td>
<td>Fords</td>
<td></td>
</tr>
<tr>
<td>Birrinagh</td>
<td>..........................</td>
<td>................</td>
<td>Stepping stones</td>
<td>800m</td>
</tr>
<tr>
<td>Location</td>
<td>Well Name</td>
<td>Distance</td>
<td>Notes</td>
<td></td>
</tr>
<tr>
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<td>-----------</td>
<td>----------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>Dublin</td>
<td>St. Patrick’s well</td>
<td>1 km</td>
<td>Stepping stones</td>
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<td>Brennanstown</td>
<td>St. Sadhbh’s well</td>
<td>75m</td>
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<tr>
<td>Taylorsgrange</td>
<td>Holy well</td>
<td>500m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Howth Demense</td>
<td>St. Patrick’s well</td>
<td>1 km</td>
<td>Stepping stones</td>
<td></td>
</tr>
<tr>
<td>Waterford</td>
<td>St. Martin’s well</td>
<td>200m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Savagetown</td>
<td>Tobar na Cuigeann</td>
<td>200m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheskin</td>
<td>St. Martin’s well</td>
<td>200m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballyquin</td>
<td>2 wells, Tobar Cuan, Tobar Broghan</td>
<td>100m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilkenny</td>
<td>Well</td>
<td>200m</td>
<td>Ford 300m</td>
<td></td>
</tr>
<tr>
<td>Killonery</td>
<td>Holy well, spring</td>
<td>250m, 500m</td>
<td>Ford 500m</td>
<td></td>
</tr>
<tr>
<td>Owning</td>
<td>Spring 3 springs in a line</td>
<td>250m</td>
<td>Ford 300m</td>
<td></td>
</tr>
<tr>
<td>Raheen</td>
<td>Holy well</td>
<td>500m</td>
<td>Ford 300m</td>
<td></td>
</tr>
<tr>
<td>Kilmogue</td>
<td>Holy well</td>
<td>1 km</td>
<td>Ford 50m</td>
<td></td>
</tr>
<tr>
<td>Newmarket</td>
<td>Holy well</td>
<td>1 km</td>
<td>Ford 50m</td>
<td></td>
</tr>
<tr>
<td>Glenclochlea</td>
<td>St. Brandon’s holy well</td>
<td>250m</td>
<td>Ford 50m</td>
<td></td>
</tr>
<tr>
<td>Carlow</td>
<td>Holy well</td>
<td>1.5km</td>
<td>Ford and stepping stones 1.5 km</td>
<td></td>
</tr>
<tr>
<td>Haroldstown</td>
<td>Holy well</td>
<td>1 km</td>
<td>Ford and stepping stones 150m</td>
<td></td>
</tr>
<tr>
<td>Ballynoe</td>
<td>Holy well</td>
<td>1 km</td>
<td>Ford and stepping stones 150m</td>
<td></td>
</tr>
<tr>
<td>Wexford</td>
<td>Collops and Harry’s wells</td>
<td>200m, 1 km</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newbawn</td>
<td>St. Cowan’s well</td>
<td>750m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballybrittas</td>
<td>Holy well</td>
<td>400m</td>
<td>Ford and stepping stones</td>
<td></td>
</tr>
<tr>
<td>Mayo</td>
<td>Holy well</td>
<td>400m</td>
<td>Ford and stepping stones</td>
<td></td>
</tr>
<tr>
<td>Enagh Beg</td>
<td>Holy well</td>
<td>400m</td>
<td>Ford and stepping stones</td>
<td></td>
</tr>
<tr>
<td>Claggan</td>
<td>Holy well</td>
<td>400m</td>
<td>Ford and stepping stones</td>
<td></td>
</tr>
</tbody>
</table>

*Table 3. Wells and Springs, stepping stones and fords.*
4. Landscape.

<table>
<thead>
<tr>
<th>Portal tomb</th>
<th>Feature</th>
<th>Distance apart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aghavas</td>
<td>Waterfalls – very audible</td>
<td>200m</td>
</tr>
<tr>
<td>Ardcrony</td>
<td>Swallowhole</td>
<td>1 km</td>
</tr>
<tr>
<td>Ballintrillick</td>
<td>3 waterfalls</td>
<td>500 m</td>
</tr>
<tr>
<td>Ballycasheen</td>
<td>Poulnaboe (Hole of the Bull/cow) – source of the R. Fergus. River wells up with loud booming sound</td>
<td>600m</td>
</tr>
<tr>
<td>Ballyvennaght 1</td>
<td>Sinkhole</td>
<td>1.5 m</td>
</tr>
<tr>
<td>Bin</td>
<td>Waterfall</td>
<td>1 km</td>
</tr>
<tr>
<td>Claggan</td>
<td>McSwyne’s Gun – audible blowhole (Petty’s Map)</td>
<td>c. 1 km</td>
</tr>
<tr>
<td>Cloghroe</td>
<td>Waterfall</td>
<td>1.3 km</td>
</tr>
<tr>
<td>Cloonlooaun</td>
<td>Small waterfall</td>
<td>50 m</td>
</tr>
<tr>
<td>Cloonlum</td>
<td>‘Stream runs underground’ (1st edition O.S.I)</td>
<td>Beneath PT</td>
</tr>
<tr>
<td>Crannagh</td>
<td>Turlough lake, Caherlassaun tidal freshwater lake</td>
<td>30 m, 1 km</td>
</tr>
<tr>
<td>Creevy</td>
<td>Swallowhole</td>
<td>100 m</td>
</tr>
<tr>
<td>Drumany O’Brien</td>
<td>Swallowholes</td>
<td>300 m</td>
</tr>
<tr>
<td>Fenagh Beg</td>
<td>Swallowhole – flood from lake almost disappears</td>
<td>100 m</td>
</tr>
<tr>
<td>Gortnavern</td>
<td>Waterfalls</td>
<td>100 m</td>
</tr>
<tr>
<td>Killacloghane</td>
<td>Underground river (local information)</td>
<td>Beneath PT</td>
</tr>
<tr>
<td>Killonery</td>
<td>Waterfall</td>
<td>600 m</td>
</tr>
<tr>
<td>Kilmashogue/Harristown</td>
<td>Waterfalls</td>
<td>800 m</td>
</tr>
<tr>
<td>Lurgankeel</td>
<td>Waterfall</td>
<td>1.5 km</td>
</tr>
<tr>
<td>Moyree commons</td>
<td>Disappearing river</td>
<td>400m</td>
</tr>
<tr>
<td>Poulnabrone</td>
<td>Intermittent sink/seepage hole</td>
<td>40 m</td>
</tr>
<tr>
<td>Prebaun</td>
<td>Waterfall</td>
<td>150 m</td>
</tr>
<tr>
<td>Springfield</td>
<td>Swallowhole</td>
<td>50 m</td>
</tr>
<tr>
<td>Taylorsgrange</td>
<td>2 waterfalls</td>
<td>300 m</td>
</tr>
</tbody>
</table>

*Table 4. ‘Strange’ Water Features.*
4.5.5 ‘Strange’ Water Features (Table 4). A number of other water features which cannot be included under the other headings were identified in close vicinity to portal tombs. These are features which can only be classified as ‘strange’ or ‘unusual’, and may have been a defining landscape element in the small-scale siting of the monuments. Kytmannow (2008) mentioned some such features, the Shannon Pot in relation to the portal tombs in the Burren townland Co. Cavan, the ‘vanishing’ lakes at Ballyvennaght Co. Antrim and Carrickglass Co. Sligo, and the source of the River Fergus at Ballycasheen Co. Clare, but in this study more were identified.

It is notable that many portal tombs are sited near sinkholes and swallowholes. Poole (1986, quoted in Tilley 1994, 59) refers to the Bimin-Kuskusmin peoples of Papua New Guinea, who believe that the deep sinkholes in the limestone ridges, down which the rivers disappear, mark the entrances to the underworld of the dead. The ancestors return through these sinkholes ‘to haunt and to bless the living’. This belief that sinkholes were entries to the underworld is well recorded in ethnography.

It is not possible to state definitively that these ‘strange’ features were important in the location of portal tombs, but it is possible. Like the spring wells they may have been identified as significant places by the earliest farmers, later celebrated by the erection of the first monuments, which in turn gained ritual significance from special water features.

4.6 Portal tombs and other monuments.

The association of portal tombs with other monuments has been noted by many writers, (for example Cody 2002, 278; Cooney 2000, Ch. 5; Kytmannow 2008, Ch. 9) and a consideration of old maps and antiquarian descriptions reveals that not only have many portal tombs been destroyed, but that many possible links with other monuments no longer exist. New monuments are still being identified which may lead to new associations being revealed. Traditionally, passage tombs have been considered as clustered or occurring in cemeteries (Waddell 1998, Cooney 1990 etc.) but the association of portal tombs and other monuments does not seem close enough
to be regarded as a ‘cluster’. Where portal tombs and court tombs are located close
together (within 1 kilometre) it is likely that they were almost contemporary and may
have been constructed and used by the same people. Although most passage tombs
are believed to be later it is possible that small, simple passage tombs might have been
contemporary, and Cooney (1990, 741) points out that there are ‘chronological,
morphological, cultural and spatial overlaps in the occurrence of all tomb types’.

4.6.1 Paired portal tombs. During the present study it was noted that there
appeared to be a number of ‘paired’ or ‘twinned’ portal tombs. Twenty such sites
were identified where portal tombs were, or had been, situated at less than 1
kilometre from each other (Table 5). In no case were the monuments intervisible, and
typically they were very different in construction style and landscape siting. This
‘twinning’ occurs throughout all the distribution areas for portal tombs, and seems no
more prevalent in one area than another. Cummings (2011, 37) claims that some
portal tombs in the southeast are paired in a particular way, with a small, discreetly
sited portal tomb being ‘paired’ with a large monument (‘nearby’) in a more open
environment with wide views. This is an interesting concept, but unfortunately she
does not name any examples and this study could not identify any such. The possible
‘paired’ portal tombs shown in Table 5 should not be confused with ‘composite’
portal tombs, where two or more structures are contained with one cairn; these are
considered in Section 5.7.

Kytmannow (2008, 131) does not mention the possibility of pairing; instead
she discusses ‘clusters’ with three or more portal tombs in close vicinity. She
identifies five such clusters, at Malin More, Easky River, Slieve Gullion, Burren Co.
Cavan, and Ballyvenaght, but the difficulty here lies in defining the size of the
relevant area. Within her stated definition of three or more portal tombs ‘no more than
2-3 km from each other’ (Ibid. 131) it would, for example, be possible to include the eight
portal tombs close to Tramore in Co. Waterford or Loughscur, Drumany, Creevy and
Fenagh Beg south of Ballinamore in Leitrim as clusters, particularly those in
Waterford where there are few other monuments. The type of close clustering as
seen, for example, with the passage tombs at Carrowmore or Kesh Corraun in Co.
## 4. Landscape.

<table>
<thead>
<tr>
<th>Site 1</th>
<th>Site 2</th>
<th>Distance apart</th>
<th>Comment</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sligo</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clochcor</td>
<td>Druids Altar mound</td>
<td>500m</td>
<td>Site 2 destroyed</td>
<td>NMS</td>
</tr>
<tr>
<td>Tawnatruffaun</td>
<td></td>
<td>250m</td>
<td>Site 2 local knowledge</td>
<td>NMS</td>
</tr>
<tr>
<td><strong>Donegal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Esaheen</td>
<td>Giants Grave</td>
<td>300m</td>
<td>Site 2 destroyed</td>
<td>OS 1st ed.</td>
</tr>
<tr>
<td><strong>Cavan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burren A</td>
<td>Burren B</td>
<td>500m</td>
<td>Both sites visible</td>
<td></td>
</tr>
<tr>
<td>Middletown</td>
<td>Drumhawnagh</td>
<td>500m</td>
<td>Both in good condition</td>
<td></td>
</tr>
<tr>
<td><strong>Monaghan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lennan</td>
<td>Corleanamaddy</td>
<td>1 km</td>
<td>Site 2 concealed</td>
<td>NMS</td>
</tr>
<tr>
<td><strong>Longford</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aghnacliff</td>
<td>Clenrah</td>
<td>1 km</td>
<td>Both in good condition</td>
<td></td>
</tr>
<tr>
<td><strong>Waterford</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballyquin</td>
<td>Megalith structure</td>
<td>100m</td>
<td>Site 2 destroyed</td>
<td>OS 1st ed.</td>
</tr>
<tr>
<td><strong>Kilkenny</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballylowra</td>
<td>Unclassified meg.</td>
<td>200m</td>
<td>Site 2 destroyed</td>
<td>OS 1st ed.</td>
</tr>
<tr>
<td><strong>Carlow</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kernanstown</td>
<td>3 dolmens</td>
<td>1.1km</td>
<td>Site 2 destroyed</td>
<td></td>
</tr>
<tr>
<td>Ballygraney</td>
<td>Druids Altar</td>
<td></td>
<td>Site 2 destroyed</td>
<td></td>
</tr>
<tr>
<td><strong>Mayo</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballyknock A</td>
<td>Ballyknock B</td>
<td>500m</td>
<td>Site A destroyed</td>
<td>NMS</td>
</tr>
<tr>
<td>Knocknalower</td>
<td>Gortbrack</td>
<td>1 km</td>
<td>Both sites visible</td>
<td>NMS</td>
</tr>
<tr>
<td><strong>Kerry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Killacloghane</td>
<td>Unclassified meg.</td>
<td>750m</td>
<td>Local information</td>
<td>OS 1st ed.</td>
</tr>
<tr>
<td><strong>Leitrim</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wardhouse A</td>
<td>Wardhouse B</td>
<td>100m</td>
<td>Part of cluster</td>
<td>NMS</td>
</tr>
<tr>
<td>Loughscur</td>
<td>Redundant record</td>
<td>150m</td>
<td>Site 2 not visible</td>
<td></td>
</tr>
<tr>
<td>Sunnagh Mór A</td>
<td>Sunnagh Mór B</td>
<td>500m</td>
<td>Both sites visible</td>
<td></td>
</tr>
<tr>
<td><strong>Tyrone</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crosh</td>
<td>Glenknock</td>
<td>500m</td>
<td>Both sites visible</td>
<td>NI SMR</td>
</tr>
<tr>
<td><strong>Armagh</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballykeel</td>
<td>Aughandove</td>
<td>750m</td>
<td>Both sites visible</td>
<td>NI SMR</td>
</tr>
</tbody>
</table>

*Table 5. Possible ‘paired’ portal tombs.*
Sligo, is not found among portal tombs. The concept of clusters of portal tombs is therefore not considered separately in this study, but included in a consideration of clusters of all monumental types, or ritual landscapes. The significance of ‘twinned’ portal tombs is not clear, and may in fact be simply accidental. It does, however, seem notable that similar monuments should be sited so close together yet not intervisible and with no signs of shared usage and two examples are discussed here below.

Co. Longford – Aughnacliff and Clenrah.

Aughnacliff and Clenrah in Co. Longford are one kilometre apart in an area with no other Neolithic evidence. On a broad scale they lie in similar landscapes, amongst the drumlin belt of the north midlands and approximately 1 kilometre west of Lake Gowna. Each one is situated on the downslope of a drumlin, which ‘swarm’ in a north-west to south-east direction here, marking the line of glacial retreat. Present day land usage is pasture. When the details of the individual sites are examined a very different picture emerges, and the structures are even less alike. Aughnacliff is conspicuously situated on open sloping pasture, leading down to a large stream and orientated to the north, sitting parallel to the valley slope. It is often quoted as being in a very typical location for a portal tomb. Clenrah is on a drumlin side, but much nearer the bottom, lying in rough, badly-drained boggy pasture. There is no clear sign of a stream and de Valera and Ó Nualláin (1972) describe it as ‘inconspicuously’ sited at the side of a rocky ridge which appears to be concealing it.
4. Landscape.

To the west of this ridge is a small lake; both it and Lake Gowna are invisible from the monument, which is oriented to the west. Structurally they are even less similar. Aughnacliff is immensely tall (remaining portal is 2 metres high) with large double capstones. It is an impressive-looking monument with a small open chamber. Clenrah is small and low with an enclosed chamber accessible through the narrow gap between the portals. The portals are carefully selected to support the unevenly shaped capstone which may have been chosen because of a large quartz inclusion running vertically down the front. Clenrah has good evidence of a kerbed, sub-circular cairn, while at Aughnacliff there is no cairn.

Co. Cavan – Burren A. and B.

Fig. 70. Burren A Co. Cavan.

Fig. 71. Burren B, the Calf House dolmen.

Burren A and Burren B (the Calf House dolmen) are situated 500 metres apart in an upland karstic limestone landscape in Co. Cavan, in an area with evidence of concentrated ritual activity. Although the overall landscape is similar each portal tomb occupies a very different site, and, while constructed of the same stone, presents a very different appearance. Burren A is situated on rough sloping ground close to the southern edge of the tableland, with the land dropping steeply to the south 100 metres from the rear of the portal tomb. Without the current forestry cover it would have had panoramic open views, and would have been quite visible except from the south. It is a small, low (portal stones just over 1 metre high) monument with an enclosed chamber covered with two capstones, carefully balanced by padstones, and
is oriented to the north west. It is just possible to enter the chamber. The monument is almost completely covered by a large circular cairn, now overlain by peat growth. Burren B lies further to the north, on flat ground overlooked to the north by a cairn-topped, craggy hill, in a more concealed site than Burren A. It is probably oriented to the north east with a wide view towards Lake Macnean. It is very ruinous but still an enormous monument with portals of over 2 metres tall and a capstone measuring 5 x 4 metres. It seems likely that the chamber would have been at least partly open. There is no evidence of a cairn and the surrounding land was farmed within historic times.

These two examples might demonstrate that portal tombs were being constructed by different groups within the same neighbourhood but there is no evidence to support this. The same people may have built and used both monuments, but at different times. Again there is no concrete evidence. Cooney (2000, 112) suggests that this ‘twinning’ feature, which he claims is also visible in court tombs and passage tombs, might indicate the splitting of a small scale society into two groups with different lineages. This might explain why twinned portal tombs are structurally different from one another. It is possible that the differing structural elements and choice of sites indicate that, while the monuments were constructed by the same people and contemporaneously, there were different ideas and intentions, and perhaps different ritual practices. The overarching principles of Neolithic monumentalism were present and the basic structures of portal tomb design and siting were followed, but within these broad parameters different choices were made.

4.6.2 Portal tombs and court tombs – contemporary or not? There is a perceived strong link between these two monument types, based on similarity of deposits and the small amount of dating available. It is probable that portal tomb construction predated court tombs by a short period but the deposits found in each monument type support a close contemporaneity of use (Chapter 2.3.2; Schulting et al. 2012; Lynch, 2014). The monuments occur close together throughout the northern half of the country and in Co. Clare, but court tombs are entirely absent from the important portal tomb area of the southeast. Table 6 lists those sites where portal tombs and court tombs are so close together that there may have been an intentional linking; the perception that this association is frequent is not supported.
### 4. Landscape.

<table>
<thead>
<tr>
<th>Portal tomb</th>
<th>Court tomb</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SLIGO</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cloghcor</td>
<td>Cloghboy CT 600m to north</td>
<td></td>
</tr>
<tr>
<td>Tawnatruffaun</td>
<td>2 CTs 500m to NW and SW</td>
<td>Portal tomb in centre</td>
</tr>
<tr>
<td>Crowagh</td>
<td>1 CT 1 km to east</td>
<td></td>
</tr>
<tr>
<td>Ardabrone</td>
<td>Carrownaboll CT 1.2km to south</td>
<td>Unclassified Giants Grave</td>
</tr>
<tr>
<td>Knockatobair</td>
<td>Carricknagat CT 750m to east</td>
<td>PT is on southeast edge of group.</td>
</tr>
<tr>
<td></td>
<td>Arnasbrack CT is 1.2km to north</td>
<td>PT is on northern edge of group</td>
</tr>
<tr>
<td>Gorteen</td>
<td>2 CTs 1.5km to east</td>
<td></td>
</tr>
<tr>
<td>Moytirra West</td>
<td>3 CTs 2-300m to south</td>
<td></td>
</tr>
<tr>
<td><strong>DONEGAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malin Mór ABC &amp; D</td>
<td>3 CTs</td>
<td></td>
</tr>
<tr>
<td>Kilclooney Mór B</td>
<td>1 CT 1.5km to west</td>
<td></td>
</tr>
<tr>
<td>Tuaim</td>
<td>1 CT 1.5km to west</td>
<td></td>
</tr>
<tr>
<td>Errarooey Beg</td>
<td>2 CTs 600m to SW and NE</td>
<td>Portal tomb on edge</td>
</tr>
<tr>
<td>Claggan</td>
<td>1 CT 1km to east</td>
<td></td>
</tr>
<tr>
<td>Bin</td>
<td>2 CTs 2 km to west and NW</td>
<td></td>
</tr>
<tr>
<td><strong>CAVAN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burren A &amp; B</td>
<td>1 CT, 1 unclassified megalith</td>
<td>Ritual centre, PTs at edge (A) and in centre (B). also 3 wedge tombs, standing stones.</td>
</tr>
<tr>
<td>Banagher</td>
<td>1 CT 200m to west</td>
<td>1 passage tomb, 2 stone circles.</td>
</tr>
<tr>
<td>Mayo</td>
<td>2 CTs 500m south, 1 km south</td>
<td>PT on edge</td>
</tr>
<tr>
<td><strong>MAYO</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ballyknock A &amp; B</td>
<td>Dense CT cluster to west</td>
<td></td>
</tr>
<tr>
<td>Knocknalower</td>
<td>3 CTs 2 km to SE</td>
<td>PT in centre</td>
</tr>
<tr>
<td></td>
<td>3 CTs 2-3 km to north</td>
<td></td>
</tr>
<tr>
<td>Gortbrack</td>
<td>2 CTs 1 km to west</td>
<td>PT on edge</td>
</tr>
<tr>
<td>Claggan</td>
<td>Drumgollagh CT 1 km</td>
<td></td>
</tr>
</tbody>
</table>
### Table 6  Portal tombs and court tombs.

Across the northern half of the country an association between portal tombs and court tombs is a much more frequent occurrence in the west than in the east. Co. Down, for example, with 9 portal tombs and 18 court tombs, displays only one example of a possible association, whereas in Donegal, where there are 24 portal tombs and 44 court tombs, a close association is found in 6 sites. Sligo, with eleven
portal tombs and over fifty court tombs, shows the greatest number of possibly linked monuments, seven. In total 33 portal tombs were constructed close to one or more court tombs throughout the whole island. A close association between the two monument types is evident in approximately 18% of the total, so that, although significant, it is not very frequent.

Powell’s very complex interpretation of the two tomb types (discussed in Chapter 3.2.2) suggests that, while court tombs were erected by groups with an emphasis on lineage-based descent, portal tombs may have been constructed by groups with much less interest in ancestral descent, who had moved into new, unoccupied territory and wished to display their presence by the ‘conspicuous architecture’ of the portal tombs (Powell 2005). His suggestion that they were built by groups with different social structures may indeed be valid, although the similarity in deposits could contradict this (Chapter 6), and the preferred portal tomb siting seems to avoid display. This paper was written at a time when it was considered that the two tomb types were constructed at the same time, or that the portal tombs may have been later; although it now appears likely that portal tombs predated court tombs by a century or more the suggestion that they were built by the first group in a new area is very valid. Powell’s interpretation that these earliest monuments displayed little emphasis on the importance of ancestral descent should also be considered.

If the two monument types were contemporary or in contemporary usage then the question arises whether they were built and used by the same people for different reasons or were used by different groups. Both are part of the same, overarching Neolithic tradition of megalithic construction, and both contain similar deposits, including human bone (Chapter 2.3.2). The micro-siting in the landscape might provide some support for the view that the monuments were built by the same people. Cody (2002, 278) notes that portal tombs display ‘a greater preference for low-lying ground than court tombs’ and their widely demonstrated preference for discreet, hidden sites is not shown by court tombs. He suggests (Ibid. 279) that the greater number of court tombs in Donegal resulted from the greater size and complexity of these monuments, which offered more communal scope in burial capacity and ceremonial activity for an increasing population. This suggestion might have relevance in other areas where the same tomb types are in evidence; in most areas where the two tomb types occur together court tombs tend to be more numerous (Ibid.
It is also possible that portal tombs ‘served’ a number of different communities whose ritual practices or societal structure needed separate court tombs, and the existence of ‘composite’ portal tombs may demonstrate that an effort was made to increase the size of the monument to cater for a larger population or a change in ritual practice (Chapter 5 Morphology).

4.6.3 Portal tombs and other Neolithic monuments

Portal tombs are very rarely found in close proximity to passage tombs. One such association, at Fenagh Beg in Leitrim, is discussed below (4.8), and another is found in the small ritualised landscape of Banagher, Co. Cavan. Passage tombs tend to occur at the higher altitudes avoided by portal tombs, but it is notable that there are no portal tombs close to any of the clusters of early passage tombs, even those at low altitudes. Carrowmore, Co. Sligo, a cluster which probably originally comprised more than 60 small passage tombs (Bergh 2000, 14), is situated on a low-lying stretch of rolling countryside overlooked by Knocknarea with its large cairn. There are eleven portal tombs in Co. Sligo, but none is situated in the vicinity of Carrowmore.

Linkardstown cists are a type of small burial monument increasingly recognised. Typically they consist of a stone-lined cist containing the inhumed remains of a single or small number of individuals, normally adult men, accompanied by a round-bottomed pot and covered with a cairn. They appear to date from the Middle Neolithic (Cooney 2000, 97; Cleary & Kelleher 2012, 128) and are most frequently found in Munster and South Leinster. Although they were probably constructed at a later period than the portal tombs their distribution coincides in certain areas of the southeast. Poulawack, a cairn with a Linkardstown-type cist at its centre, is situated within 2 kilometres of Poulnabrone portal tomb Co. Clare. This association is discussed in Chapter 6.9.

Wedge tombs are the latest of the great megaliths and their construction period is not contemporary with that of portal tombs.
4.7 Portal tomb sites and ritual practice.

Within the generalised parameters discussed above there are aspects which can only be judged by visits to the actual sites. The finer points of individual siting cannot be assessed by map or photograph inspection, not deduced from a catalogue description. In places the modern landscape bears little resemblance to what it was like in the Neolithic, whilst in others it may have changed little. Two portal tombs in Dublin (Taylorsgrange and Ballybrack) are located in the middle of housing estates; one is enhanced by floodlighting and the other defaced by graffiti. Ballindud, on the outskirts of Waterford city, is marooned and unreachable within a modern motorway system, while Ballybrittas in Co. Wexford, a large and perfectly preserved tomb was invisible within its almost impenetrable covering of briars, gorse and conifers. Even those landscapes which bear little sign of modern use must have changed beyond recognition. The forest, that vast spread of Mesolithic vegetation, has disappeared from the land. Possible glimpses of what it may have been like can be seen at two sites, Mihanboy Co. Roscommon (Fig. 72) and Raheen Co. Kilkenny (Fig. 73), where native woodland surrounds the tomb. Noble (2010) describes the early Neolithic landscape as containing localized ‘islands’ or pockets of cultivated land within the unchanged forest and suggests that these islands were both physical and conceptual.

Fleming (1972, 58) points out that rituals involve both participants and principals (performers) and that a ritual structure and its site must provide suitable spaces for each. The principals need a focal point at which to conduct the ritual, and this point must be visible by the participants. With this in mind most of the portal
tombs were visited and consideration was given to these aspects; the ritual nature of the structure is considered in chapter 5.

Kytmannow (2008, 119) states that portal tombs are ‘usually’ sited parallel to a valley, and estimates that this feature occurs in c. 70% of cases where such a valley was obvious. As already discussed (4.5.3), the difficulty of deciding whether or not the location of a stream and its valley was relevant during the Neolithic seems to rule out the significance of this observation. Ó Nualláin’s (1983, 86) statement that approximately half of the portal tombs are sited on valley slopes or hillsides seems more supportable. There are, however, very different valleys involved. Haroldstown Co. Carlow (Fig. 74) and Ahaglasin Co. Cork (Fig. 75) are both parallel to their respective valley sides, but the first is situated on the gently-sloping margins of the Dereen River while the second stands high on one side of a steep, rocky gorge. The immediate area surrounding Haroldstown would have been eminently suitable for a ritual performance with ample viewing space and clear, almost flat ground in front of the portals, whilst the slope at Ahaglasin is so steep that it is difficult to stand upright there and the tomb is almost inaccessible. These two extremes of slope are evident throughout all areas of portal tomb distribution, and in many cases there is no impression that the site was selected as a suitable place for a large-scale, group ceremony.

Fig. 74. Haroldstown Co. Kilkenny.  Fig. 75. Ahaglasin Co. Cork.

Many of the portal tombs located on a hillside are sited on a small terrace of level ground (Ó Nualláin 1983, 86 and personal observation) and the available flat
ground suitable for a ritual performance would have been very limited indeed. A
good view of any proceedings would have been possible from above the tomb when
the angle of slope was not too steep, but the differing orientation of the monuments
reduces the likelihood that this was an intended effect.

Ritual is not always carried out as a group performance by a number of
participants, and may not require witnesses. Private ritual ceremonies were carried
out by, amongst others, eremites or hermits of the early Christian tradition in many
parts of the world, but societies in the Irish Early Neolithic period were communal; it
is likely that their ritual sites were intended for group ceremonial use. The intended
group may not have been large, but in many cases the choice of sites for portal tombs
does not suggest that later group ritual use was intended.

In the southeastern area there are more sites which would have provided a
suitable arena for a ritual performance than elsewhere; this may be simply due to the
general nature of the topography in this part of the country, or may demonstrate a
different ritual emphasis. Within this area, however, there is no consistency of site
selection and tomb placement. Haroldstown (Fig 74), Kilmogue (Fig. 143), Dunhill
and Knockeen (Fig. 86) are all large portal tombs sited on similar gently-sloping,
broad valley sides. Haroldstown is parallel to the valley side, Kilmogue and
Knockeen face upslope and Dunhill faces downslope towards the stream. Some of the
portal tombs in the Dublin area are suitable locations only for a ritual performance
involving a small number of participants.

Other portal tomb sites seem entirely unsuited for ritual performance even if
sited on fairly level ground. Aderawinny Co. Cork faces directly into a cliff just 2
metres away (Fig. 76) and Muntermellan in Donegal is so close to a huge quartz
outcrop that its cairn obscures the base of the outcrop (Fig. 59). Srath Bruithne
Uachtarach (Fig. 78) and Cloggan (Fig. 79), both in Donegal, are surrounded by large,
rough cairns which would have rendered any ritual action very difficult, and in both
cases give the impression that the cairn was constructed to make the monument
difficult to access rather than approachable. Clogher, an enormous and ruinous tomb
in Co. Clare, is perched on a small ledge jutting out from a steep, rocky hillside.
There would simply have been no room for a group performance or ceremony here
(Fig. 77).
The apparent invisibility of many portal tombs, whereby they are not obvious in the landscape until one is very close by, may have been intentional. It is partly due to the selection of local stones and the decision not to alter them. This creates what Scarre (2002a, 10) describes as a ‘resonance’ between the landscape and the monument, expressing ‘a desire for and integration between the monumental and the natural which invested the former, perhaps, with some of the special qualities of the latter’. It may have been the intention to stress or make obvious some hidden quality believed to be immanent in the landscape. He illustrates this with two examples from Brittany, but it could be seen in many portal tombs in Ireland. The Burren area of Co. Cavan is an upland karstic plateau with two portal tombs. Strangely, they are not constructed of the limestone bedrock but of sandstone erratics, which are common in the area. It is possible that this was just for convenience, but they may have been intentionally selected to reflect the strange nature of the landscape (Figs. 80, 81).
Tilley (1996a, 124) has suggested that the stones in some Swedish passage graves have been deliberately set to duplicate the layers of the local geology, involving both sedimentary and igneous stones, while Bradley speculates that the natural tors of south western England may have been regarded as artificially constructed quoits (portal tombs) constructed by the ancestors (Bradley 1998b). Scarre also describes the choice of natural kames as burial sites for early tribes in the Great Lakes region of North America. Kames are glacial mounds somewhat like eskers, and excavated examples revealed communal burials. In the same area in the later Middle Woodland period burials took place beneath artificial mounds which resembled the natural kames, perhaps demonstrating the continuance of a tradition from the natural landscape into an artificial construction (Scarre 2002a, 9).

One type of ritual practice which would not have been hindered by the choice of site is the ritual of construction, discussed below in Chapter 6.3.

4.8 Portal tombs and farmland - a ritual boundary marker?

A strong impression that the location of the tombs may have been selected to mark the edge of cultivable land, the boundary of the known and tamed, the limit of forest clearance, became evident during site visits. The situation regarding altitude, bedrock and soil types has been discussed (4.3), but there are signs, even today, that many of the tombs are at, or close to, the border between potentially good and poor farmland even if there is no apparent difference in the physical constituents of the
4. Landscape.

landscape. Examples are to be found throughout the country. Gaulstown Co. Waterford (Figs. 82, 83) is situated on the southern slopes of a small, steep and rocky hill. The National Monuments Service describes its location as ‘at the bottom of a steep north facing slope, at a junction with a gentler slope,’ and the difference in terrain is very obvious on the ground. The monument is concealed at the very edge of hilly, rocky weed-strewn terrain, whilst elsewhere is lush farmland. Ballybrittas Co. Wexford, is hidden in a patch of rough scrub and woodland, at the very edge of smooth pastureland (Figs. 84, 85). The situation was similar a century ago; Grattan Flood described the setting ‘on a furze knoll ... never been disturbed by the ploughshare’ (Flood 1912,13). Knockeen, Waterford, lies in fertile farmland, within 50 metres of an outcrop of rough, untiled scrubland (Figs. 84-6, 87). Moyree Commons is located in an area of karstic rock, south of the Burren proper. It lies at the very edge of a pocket of fertile pasture (Fig. 88).
4. Landscape.

Fig. 84. Ballybrittas Co. Wexford

Fig. 85. ... hidden in dense vegetation at the edge of fertile pasture

Fig. 86. Knockeen Co. Waterford

Fig. 87. ... close to an outcrop of rough stony soil, scrub-covered. Noted in the 1st edition OS map, visible today.

Fig. 88. Moyree Commons Co. Clare, at the edge of cultivated land, surrounded by bare karst.
4. Landscape.

Straleel is a large, somewhat ruinous, portal tomb situated on a small level platform high on a rocky, boggy hillside in Co. Donegal (Fig. 89). Above the site, less than 50 metres to the west, the nature of the land changes abruptly and cattle graze on pasture amongst the ruins of stone houses, the remains of a small village. Flanagan (1966) describes 22 Neolithic flint tools (scrapers, plano-convex knives and blades) which were found in the vicinity, probably indicating settlement with farming. De Valera & Ó Nualláin (1961) describe the site ‘it stands on a small patch of grazing land ... to the east is a tract of bare crag’.

![Image: Google Earth. Straleel portal tomb Co. Donegal. On a ledge on a rocky hillside.](image)

![Image: Straleel (Dermot & Gráinne’s Bed) on the 1st Edition OS map (1837). Houses and fields are marked.](image)

Cultivated land on the other side of the fence

Fields and abandoned houses visible to the west (left) of the monument.

Fig. 89. Straleel portal tomb, Co. Donegal.
While it has long been recognised that there is a landscape association between Neolithic monuments and farmland the suggestion that they were firmly based at the boundary of each cultivated plot, perhaps at the cessation of forest clearance, is a further refinement of this observed association not previously highlighted. Similar patterns have been recorded in ethnography. The Tandroy of Madagascar, a much quoted farming group who appear to have some similarities with early Neolithic lifestyles in Ireland, place their tombs ‘beyond the cultivated fields’ (Parker Pearson 1999, 131). Far from being places for later rituals, the tombs and the area immediately around them were protected from future visits and agricultural disturbance by taboos.

In addition to the examples discussed above further sites (80+) are presented in Appendix 2.
4.9 Case Study  

**Fenagh Beg, Co. Leitrim.**

This monument is studied as an example illustrating some of the landscape features considered above. It is situated within a small ritualised landscape, showing the persistence of memory and the continued importance which the construction of a ritual monument conferred on the landscape. This continuance of ritual association is recorded in the Book of Fenagh, a 15th century manuscript copy of poems pertaining to the 6th century St. Caillin. Included in this is a story of how the saint rid the area of druids by transforming them into stones, probably the standing stones.

The portal tomb is also sited in an area with a considerable number of other portal tombs nearby. It is named as ‘dolmen’ and ‘Dermot and Grania’s Bed’ on the old maps.

![Typical drumlin landscape](image1)  

*Fig. 90. Typical drumlin landscape (Aalen et al 1972).*  

![Fenagh Beg portal tomb](image2)  

*Fig. 91. Fenagh Beg portal tomb, from the west.*

4.9.1 **Physical landscape.** Fenagh Beg portal tomb is situated on the outskirts of the small village of Fenagh in south-east Leitrim. The landscape is dominated by the major drumlin swarm which stretches across the country from the Atlantic coast of Sligo/Leitrim to the Irish Sea at Co. Louth, delineating the northern edge of the limestone central plain (Fig.90). The topography is typical of the ‘basket of eggs’ of rounded oval drumlins interspersed with marshy areas of small lakes and swamps. In this area the drumlins ‘point’ in a north-west to south-east direction. In a study of the megalithic tombs of Co. Leitrim Gabriel Cooney (1979) described the tombs as situated on undulating areas of ‘rockland’ between the drumlins, where there are
frequent rocky outcrops through the shallow soil. He speculates that the conditions for early agriculture would have been better than on the gravelly drumlins or marshy areas between, and that forest cover was less dense. No settlement evidence has been found.

The underlying geology of the area consists of limestone, with areas of shale to north and south. The soil is mainly gley, characterised by poor drainage but the portal tomb is just on the border of a small area of shallow brown earth (Fig.92) which would have been much more fertile. There are nine other portal tombs in the vicinity (within 20 kilometres of Fenagh Beg), all on the same gley soil, but it is noticeable that most of the others are situated at the edge of areas of basin or raised bogs, which may have been present during the Neolithic and were unsuited to farming (Fig.92). This suggests a deliberate choice of site at the very edge of the more favourable land.
The portal tomb is situated at an altitude of 70m OD well within the average range (4.3.1). The site is surrounded by drumlins except to the north (the ‘back’ of the monument) so there is no apparent view and no sense of the portal tomb being in a dominant position. It is situated within 25 metres of a small river which flows from Fenagh Lough in the south, to the small Lake Reane in the north; each lake is about a kilometre from the monument and neither is visible.

![Map of south Leitrim showing the megalithic tomb distribution in relation to modern soil categories.](image)

Fig. 93. Gabriel Cooney's map of megalithic tombs and soil type in south Leitrim (1979, 84).

4.9.2 Ritualised Landscape. While the physical landscape is quiet and unremarkable the ritualised landscape presents a clustered, multi-period landscape. (Fig. 94).Within 1 km of the portal tomb there are two passage tombs, one court tomb, a holy well, six standing stones, and a group of later ecclesiastical structures. The portal tomb is the feature furthest to the north, with St. Everan’s Holy Well across the river to the east. 120 metres south of the portal tomb, and right above the river are two small passage tombs some 30 metres apart and each with a clear view of the portal tomb. A double-galleried court tomb is 500 metres south, situated on top of a grassy ridge of ‘rockland’ terrain, and not intervisible with the other megaliths. Three
standing stones lie to the east of the portal tomb and three are scattered to the south and east. The Christian structures are to the south of the portal tomb.

**Fig. 94. Fenagh Beg ritualised landscape.**

**Fig. 95. Double galleried court tomb.**

**Fig. 96. View of portal tomb from passage tomb.**
4. Landscape.

4.9.3 Aspects of the Site. Fenagh Beg is situated 25 metres to the west of a small river on a narrow flat terrace of land beneath which the land drops almost perpendicularly to the river. This selection of a flat terraced site on sloping ground is very common. To the west the land rises steeply for a short distance before levelling off to a more gentle slope and as a result the monument is invisible from the east and west until close by. The field in which the tomb is situated is an uneven pasture.

Fig. 97. View from west. The land drops steeply to the river east of the portal tomb. The cairn extends to the north (left in the image).

Fig. 98. Ordnance Survey 1st edition 6 inch map. Dermot & Grania’s Bed = portal tomb, Carns = passage tombs. Note Holy Well, Swallow Hole and quarry.
4. Landscape.

Fig. 99. Portal tomb site – normal weather conditions.

Fig. 100. Portal tomb site – winter flood conditions.
4. Landscape.

Water features appear to have influenced the choice of site. The portal tomb is sited beside a stream, and on the far (eastern) bank is St. Everan’s Holy Well, still recognised by local people. On the 1st edition 25 inch OS map (but not on any other) a swallowhole is marked in the river some 100m to the south of the portal tomb (Fig. 98). Normally the river at this point is a small meandering stream in a wide marshy bed, but in wet periods the small lake Reane to the north overflows and a considerable amount of water flows down the valley against the normal direction of the river. This moving floodwater is fastflowing and very audible from the portal tomb. At the marked swallowhole it suddenly disappears, noisily, down what a local resident described as ‘slits in the limestone’, and only a narrow stream meanders slowly northwards (Figs. 99, 100). There was a spectacular difference in the appearance of the river at different visits over the course of the present study, and local information was that flood conditions were quite frequent, occurring most winters. There are some rock outcrops visible in the vicinity and a quarry is marked on the early map some 50m to the west of the site, no longer visible.

4.9.4 The Structure. The tomb is constructed of local rough limestone slabs, and has a huge growth of ivy on the capstone. It faces south; this is an unusual orientation for a portal tomb (5.4.1) as most tend towards the east, but no significance has been found for this and approximately 15 do point to the south (Fig. 101). The remaining upright portal stone (the western one) is approximately 2.1 m high. The eastern portal stone is broken; the upright stump is 1 metre high and the prostrate top

![Orientation - Portal Tombs - All](image1)

![Fig.101. Orientation of portal tombs.](image2)

![Fig.102. The half-buried sillstone.](image3)
4. Landscape.

would bring its height up to match the western one. The backstone is gabled and is 1.5m high. The capstone is a flattish slab and part of it is broken off. It slopes from front down to the back. Entrance into the fairly large chamber (it is possible to stand upright) was not inhibited. The portals are a metre apart and the sidestones do not reach the capstone. De Valera and Ó Nualláin (1972) speculate that a set stone touching the western portal might be a buried sillstone and this study agrees with this, as probing revealed that it continued right across the entrance (Fig. 102). It is suggested that this is a common occurrence and that sillstones are more numerous than listed (6.3.4).

The portal tomb is situated at the southern end of an exceptionally long cairn. This feature is estimated at over 30 metres long and 9.5metres wide (de Valera and Ó Nualláin 1972) and reaches a height of approximately 1 metre. Fenagh Beg demonstrates that, in this case at least, it would have been impossible for the cairn to have covered the whole tomb. A stable cairn of a suitable height would have been too large to fit on the level terrace on which the monument is constructed (Fig. 97), as is the case in other portal tombs similarly sited (5.5).

4.9.5 Other sites. Some 100m to the south of the portal tomb are two small passage tombs, 30 m apart (cairns on 6-inch map) situated on Cnoc na Rí (the King's Hill). Explorations produced a poppy-headed pin, stone beads and a pendant (Piggott 1954, 205, Gogan 1930). They are categorised by Alison Sheridan (1985/86, 18) as simple, Stage 1 passage tombs, dating from 3800 – 3400 cal BC, and so may have been almost contemporary with the portal tomb. The portal tomb is in clear view from each (Fig. 96). It is unusual to find passage tombs in such close proximity to a portal tomb. 500 metres to the south in Commons townland is a double court tomb, (Giants’ Graves) orientated NW to SE (Fig. 95). Two back to back galleries are separated by some 2 metres, with little remaining of the courts. The tomb is unusually situated on a small ridge, it is not clear whether the courts have been removed or were never complete due to the constricted nature of the site. The tomb is surrounded by rolling drumlins except to the west where there is a more open view, and it appears to be on fertile pasture. At least six standing stones are situated to the east, south and west of the site.
4. Landscape.

Medieval remains to the south of the portal tomb include an abbey, a graveyard and a hospital, with a ruined medieval church just 100m due east of the court tomb, believed to mark the site of a much older church (St. Caillin’s).

4.9.6 Comments. The name Fenagh comes from Fionach, meaning woody land; there are some patches of recently planted coniferous woodland in the vicinity, but the present landscape is almost completely pastoral.

The village lies on the secondary roadway linking the small towns of Ballinamore and Mohill in a quiet, isolated part of rural Ireland. Narrow roads make communication difficult; the narrow-gauge Cavan-Leitrim railway closed over fifty years ago. The drumlin topography seems to preclude any other description than as a backwater, but this was not always so. The manuscript Book of Fenagh was produced in the 15th century at Fenagh Abbey, part of a renowned ecclesiastical site with two churches, a seminary and a convent, centred on a large ring fort and said to have been founded by St. Caillin in the 6th century. Fenagh seems a strange place for such a major site to have developed; it is possible that the identification of the site as a ritual centre, which began some 5 ½ thousand years ago with the construction of a portal tomb, was continued right up to the 16th century AD when the monastery was destroyed by Cromwellian soldiers (Read & Markley 2008).

Cooney’s 1979 study of the megalithic tombs of Co. Leitrim concluded that the tombs were predominantly situated on the lighter soils of the rockland areas which would have been easier for early farmers to cultivate than the marshy inter-drumlin soils or the gravelly drumlin summits. He points out that these areas are still considered the best for farming and suggests that early farmers ‘had a good understanding of soil conditions’ (Ibid. 87). The detailed soil map from An Foras Talúntais (Fig. 92) shows that all the portal tombs in south Leitrim are situated on gley soil, a poor-quality soil which is none the less the best to be found in Leitrim. Some (Loughscur, Drumany O’Brien, Annaghtmore, Lear and Cloonfinnan) are right at the boundary with areas of basin, or raised peat, which would not have been suitable for farming. It is suggested that they may have marked the limit of cleared land in the early Neolithic, together with an avoidance of bogland. Fenagh Beg is not beside a
raised bog, but it is just on the margin of a small area of shallow brown earth, a much more productive soil type than gley. The portal tomb may have marked (and claimed) the edge of this fertile patch. The superior fertility may have been the reason for the continued success of this territory, as marked by the construction of a large court tomb and two passage tombs and the later medieval evidence. The persistence of ritual memory is shown by the number of later standing stones.

While the attraction of good soil may have been marked by the erection of a ritual monument, the significance of water may have been the reason why the portal tomb was located exactly where it was. Fenagh Beg is situated on the banks of a small stream, as are many portal tombs, but it is very close to a fault in the limestone bedrock where, at exceptionally wet times of the year, most of the floodwater suddenly disappears underground. This feature is only noticeable at certain times, when the river is full, and is quite spectacular and noisy. The presence of a well on the opposite bank of the river may have been another attraction; this feature is common to many portal tomb sites (4.5.4).

The structural features of Fenagh Beg might be considered typical, of a medium sized portal tomb, using local stone, sloping from front down to back, at the end of a long cairn. Entrance to the chamber is not physically barred, and it is possible to stand upright and to take a couple of steps inside. There seems to be a sillstone marking the entrance, perhaps indicating a conceptual ban on entry. The belief that portal tombs were not covered by cairns is strengthened by its position on a narrow terrace of land which would not have been wide enough to support a substantial cairn. The portal tomb is the northernmost monument in the ritual landscape, at the boundary, another possible indication of the importance of forest clearance and farming land in the location.

Fenagh Beg would make an ideal subject for excavation. It is built on limestone bedrock so good preservation of bone might be expected, yet the distance from Poulnabrone is sufficient to rule out any suggestion of regional similarity. It is a medium sized portal tomb in fairly good condition and is easily accessible. In the course of excavation the enormously thick ivy growth could be removed, thus removing the danger of the monument being overwhelmed.
4.10 Summary.

When examining the landscape of portal tombs an apparent contradiction becomes evident. Portal tombs are soaring, striking-looking monuments yet most are positioned in secluded, inconspicuous sites. This is not universal but is constant enough to seem planned rather than coincidental. This seclusion is carried through to the avoidance of large landscape features; portal tombs are never sited on mountains, or beside large lakes and rivers. It may be that this dichotomy is dictated by the two levels of meaning ascribed to the monuments. On the one hand they are an expression of the overall Neolithic belief system, expressed in many parts of western Europe by the construction of large megaliths by people who had adopted the lifestyle and ideology of agriculture. At a narrower, localised scale they were adapted to suit the needs and preferences of small local groups, segmentary tribes who preferred to keep their ritual occasions and monuments within their own group.

A study of the landscape setting of portal tombs reveals a number of distinct, widely-displayed patterns which seems to indicate a purposeful selection, suggesting that the builders chose their sites with firm intentions. In later chapters of this thesis further evidence from morphology and deposition will be sought to expand these ideas.

Suggestions that portal tombs were linked with the location of early agriculture are conveyed by the choice of sites, which, in many places, appear to be on the limits of land suited for early farming. Indications of this are conveyed by the preferred altitude of sites, the situation on the boundary between soil types, proximity to, but avoidance of, the edge of raised bogs, and a frequent choice of site right at the edge of marginal land. The siting of many individual monuments reveals, through maps and field visits, that the monument was very close to a change in landuse between cultivated land and rough, unsuited terrain; in some cases this is still visible in modern farming practice. Appendix 1 and 2 illustrate the extent of these locational choices.

Although portal tombs are located in areas where Neolithic settlement has been identified, none is situated directly beside a habitation site. This adds to the impression that they may have been on the edge of a cultivated plot rather than in the centre.
Ritual practice normally includes an element of theatricality, with, as Fleming (1972) explains, suitable locales for the principals (performers) and spectators. The location of many portal tombs did not appear to have been selected on this basis and it is suggested that the monuments may originally have been intended for a single ritual occasion only – the ritual of construction (Chapter 6.3). If the tomb was sited at the edge of the cultivated land, it may have been a celebration of completion, where the forest had been felled to the limits of suitable land, and where a stone structure was erected to mark this place, in both concrete and metaphysical ways. This monument did not need to be in a very visible, commanding site; it was built for insiders, a commemoration of their own achievement. Deposits in some portal tombs indicate that in some cases at least the tombs were used on more than one occasion, but this may have been unplanned by the original builders. Changing beliefs and practices, evolving social structure or farming intensification may have led to reuse of a monument which had been intended as a single celebration.

It does not seem that portal tombs were erected in areas of known Mesolithic distribution, and in some cases they appear to intentionally avoid such areas, perhaps in a desire to minimise confrontation, or due to specific location requirements which required different locations. This strengthens the evidence for some inward movement of people at the start of the Neolithic, and could be an added reason for the choice of discreet, hidden sites and the avoidance of mountains and hilltops.

Water features appear to have had a strong influence on the choice of site for portal tombs, either by association or avoidance. As they were not domestic structures and may not have been built for future ritual practices needing water for performative purposes, an association with water was not a physical necessity; instead it appears to have been dictated by ritual beliefs. The avoidance of large-scale water features may indicate that they were not erected to mark routeways, an impression strengthened by the inconspicuous locations of many examples.

Interpretations that stress the importance of viewscapes, or proximity to, or avoidance of, rock outcrops or mountains were not found to be relevant. Each portal tomb seems in complete harmony with its own particular landscape. Orientation towards sunrise might have been intended, but the percentage (roughly 60%) with an easterly orientation is not high enough to substantiate this. Perhaps it is an indication that a preference for an eastern orientation, possibly for cosmological reasons, was in
its early stages and became more fully revealed in the location of the later court tombs.

With the exception of one area the landscape siting did not give any indication of regionality. Previously suggested regions were not supported; the monuments followed the same patterns of location throughout the island. Only in the south-east were there any indications of a slightly different pattern; further signs of this are sought in examination of the morphology and depositions (Chapters 5 and 6). The differences are nuanced rather than striking. Court tombs, often associated with portal tombs in rest of the country, are not found in this area. Portal tombs in the south-east avoid major rivers but are situated beside much larger tributaries than in the rest of the country, and many sites would have been suited to later performance rituals. They are much more likely to be found in open, visible locations and avoid locations in the foothills of mountains so common in the rest of the country. It is possible that there is chronological difference. Fraser (1998, 216), discussing the placement of the passage tombs at Loughcrew, believes that the small, earlier tombs were sited ‘sympathetically’ with the landscape features, intensifying the existing landscape, while the complex, later passage tombs were ‘constructive’, and harnessed the landscape features to create new vistas and landscapes. This feature might be applied to portal tombs. Initially, sites may have been chosen due to their importance as natural ritual places, to be enhanced by the building of a monument in a discreet location, but perhaps open sites were acceptable to portal tomb builders at a later period when concealment became less important and tribes were more confident of their presence in the landscape. This interpretation remains speculative in the absence of excavation in this area.
Chapter 5. Morphology.

5.1 Introduction.

The basic architectural form of the portal tomb is the simplest of the great megalithic tomb types of the Irish Neolithic. The essential design consists of three upright stones supporting a large capstone which is normally slanted upwards towards the portals and is larger than needed to cover the chamber. Although other stones are frequently included the existence of the four basic stones acceding to the normal plan is sufficient to classify the monument. The very different appearance of many tombs is mainly due to the type of stone selected and to the size.

Some writers have disagreed that portal tombs form a separate class and have included them in a generalised investigation of early Neolithic megaliths, distinguished only by the inclusion of a single, large capstone. Whittle (2004) writes about a ‘spectrum of forms’ which he includes in a discussion of Welsh portal ‘dolmens’, and he considers that the display of a large capstone was the primary purpose of the structure. Colin Richards (2004b) continues this theme in his consideration of the dolmen of Carreg Samson in Wales. He uses it as an example of what he believes to be the reason for the erection of such monuments, the excavation of a large stone from a pit and the raising of it in the air ‘raising a mythical or sacred stone from the earth into the air’. Vicki Cummings (2009a) believes that portal tombs and the small early Neolithic passage graves, like those at Carrowmore, are so similar that they can be considered as one ‘type’. She states that the small passage graves are virtually identical to the ‘portal dolmens’ on both sides of the Irish Sea ‘apart from the
5. Morphology.

presence of a small passage tacked onto the entrance into the chamber.... typically set within a round cairn’ (Ibid. 67), see Figs.103 and 104.

In the present study the portal tombs are considered as a separate monument type, based mainly on their morphology, the excavation evidence and on the typical landscape setting as observed by field visits. The capstone is undoubtedly the most important stone in the structure, but if its display was the only intention then it seems strange that it is (diagnostically) supported by three uprights. A table-like support with four stones might have been much more stable, as Thomas Wright pointed out in 1748:

Fig. 105. Wright (Louthiana, 1748).

There is no evidence in Ireland that any capstone was excavated from a pit and raised directly onto the uprights; indications are that the capstones were hauled up stone or earthen ramps and dropped onto previously wedged uprights (discussed below 5.3.1). The capstone appears to purposely delineate the chamber, the importance of which is stressed by the inclusion of side stones in most cases. Where there are no side stones, in the tripod dolmens, it is believed that a chamber was originally delineated by some form of walling, perhaps corbelled stone or wattling. Collins (1965, 66), who excavated Ballykeel tripod dolmen, believed that the pattern of deposits indicated that some form of walling ‘must be postulated’. These lines of evidence suggest that the identification of small passage tombs with portal tombs as one monument type does not seem justified although they may have some chronological overlap. In addition, the small passage tombs did not have cairns (Bergh 1995, 79), they were surrounded by a circle of stones which were not found at portal tombs, many had indications of a passage but none had the secondary or subsidiary capstone which is a feature of approximately 20 portal tombs (5.3.1). This feature is not explained by those writers who attempt to ‘declassify’ portal tombs. Passage tombs are normally located in clusters or cemeteries, whilst portal tombs are not. The deposits at excavated examples of each type are very different, with those at
Carrowmore of the typical passage tomb type of stone balls, bone and antler pins and stone ‘pendants’ (Bergh 1995, 151) while those in portal tombs are completely different, mainly of domestic-type articles, and have a strong affinity with the finds from court tombs.

It may be that the ‘dolmens’ in Wales, morphologically and chronologically similar to the portal tombs in Ireland, are less clearly defined and distinctive from other megaliths, thus justifying their consideration as merely a part of the megalithic phenomenon as a whole. The ‘quoits’ of Cornwall, included by Kytmannow (2008) in her catalogue of portal tombs, are even less clearly differentiated from other early megaliths and she questions the inclusion of several in this classification. The tilt of the capstone, so characteristic of Irish portal tombs, appears on only one of the Cornish examples, Trethevy Quoit (Kytmannow 2008, Catalogue number 2 19).

While there are undoubtedly some structures which can only be loosely defined as ‘megaliths’ this study considers that portal tombs were a separate, definable class of monuments which should be considered in their own right.

Possible structures which predated the monumental construction are discussed in chapter 6.

5.2 Stone.

The construction of large stone monuments is one of the signifiers of the Neolithic in Western Europe. As discussed in chapter 2.4 stone was selected for monumentality, for both its material and conceptual properties. Monuments could have been constructed from other materials; earth and stone monuments are known from Neolithic Britain (Darvill 2004b, Field 2010, 3, Gibson & Bayliss 2010, 72) but stone was necessary to fulfil the aspirations of the portal tomb builders. Stone was the only material used in their construction, with the exception of soil incorporated into some cairns (Lynch and Ó Donnabháin 1994, 5, Collins 1965, 48, Evans 1936, 236). Furthermore, large (mega) stones were carefully used, even though this must have posed problems for construction. Stone working techniques like corbelling and drystone building were probably known but were not used for the main components of monuments. Burren A Co. Leitrim and Crannagh Co. Galway both show slight
evidence of corbelling or drystone walling around the sidestones, but these are very much the exceptions. Large blocks may have been deemed important for their perceived significance; in a diachronic relationship Scarre (2004a) believes that human engagement with materials like stone invests the material with meanings, and that the material quality inherent in stone promotes or precludes the meanings. Thus the material qualities of stone, like hardness and durability, suggest that the monument would convey a message of permanence and immobility. Stones used in portal tombs were not worked or altered from their original form, so it seems likely that their material property of permanence was stressed.

This study concurs with the opinions of other writers (O’Riordan 1979; Cooney 1997; Kytmannow 2008) that the stones used for the tombs were of local origin. Cooney (ibid. 235) believes that one reason for the choice of site at Melkagh was ‘the availability of easily quarried sandstone’. Thorpe and Williams-Thorpe (1991) in an overview of Neolithic megalith construction in western Europe conclude that ‘we are not aware of any megalithic monument that requires stone transport from a rock outcrop or a local glacial deposit from a distance exceeding c. 5 km.’ (Ibid. 72). In the course of the present study there was no evidence of exotic or non-local stone being used; where stone of a different type than the bedrock was used it was almost certainly a glacial erratic boulder, plentiful over most of Ireland. As a result the appearance of the tombs is very varied, although the basic structural plan remains constant. In most cases each monument is composed of the same stone type; where one stone is different it suggests that it was specifically chosen for purpose. The geological landscape of Ireland is varied and rock is revealed in outcrops, cliff faces, mountain ridges and river beds. Most of the island was ice-covered during the last glaciations.
5. Morphology.

and, when the ice melted, boulders were deposited over the landscape, sometimes of a different rock type than the bedrock. When the forests were cleared by the first farmers the rocks were newly revealed and available for monument construction. Scarre (2009a,) believes that stones were ‘taken from places already endowed with sacred or mythological significance’, and points out that ‘the symbolic significance of stone will have formed part of a belief system that gave meaning .... to megalithic blocks, and very probably the boulders, cliffs and outcrops from which they were taken.’ (Scarre 2009a, 17).

In a small number of cases there are indications that stone was transported from a short distance. Drumanone Co. Roscommon today presents a rather forbidding aspect, composed of rough, grey, lichen-encrusted sandstone, but when new it must have gleamed and glittered. The stones are ‘coarse quartzose sandstone’ containing ‘much mica’ (Topp 1962, 38) which most likely came from the foothills of the Curlew Mountains to the north where the bedrock changes from the plain Boyle sandstone to the quartz-rich Keadew sandstone, some 1 kilometre to the north of the site (Geology Survey of Ireland, Bedrock Geology Sheet 12). As discussed in Chapter 4.3.2 the builders of Kilclooney Mór in Donegal also selected one stone, the backstone, from c. 300 metres away for reasons other than functional (Fig. 43).

Fig. 108. Drumanone Co. Roscommon.

Fig. 109. Drumanone - bedrock geology. (GSI Sheet 12).
Quartzite is a very common stone found in many parts of Ireland, and its snowy-white colouring is attractive and attention-focussing. It is believed to have had ritual importance during the Neolithic (Chapter 2.4.4). The façade of the giant passage tomb at Newgrange probably included white quartzite stones transported painstakingly from the Wicklow Mountains (Cooney 2000, 137). Strangely, no quartzite was identified as a structural stone for portal tombs during this study, and in some cases it appears to have been actively avoided. Muntermullan portal tomb is situated near the summit of Horn Head Co. Donegal. It is situated close beside the base of a ridge partly composed of sparkling white quartzite, yet the monument uses none of these spectacular stones in its structure (Figs. 110, 111).

Fig. 110. Muntermellan Co. Donegal.  
Fig. 111. Quartz boulders in ridge abutting Muntermellan PT.  

Fig. 112. Malin Mór Co. Donegal, Tomb 2. Quartz boulder in wall.
Similarly, Srath Bruithne Uachtarach in Donegal is situated on a hillside littered with white quartz boulders, yet does not use any. Malin Mór A, a complex monument consisting of 6 portal tombs in a row, is composed in the main of the local grey schist. In the wall between the roadway and the second monument is a spectacular white quartzite block which was not used in the tomb construction, although it is possible that it could have had some relevance in the overall site (Fig. 112). At Malin Mór B Kytmannow noticed ‘a high number’ of white stones in the remains of the cairn, but none in the structure (Kytmanow 2008, catalogue number 13).

Bergh (1995, 1997) has noted a similar feature in the small, early passage tombs at Carrowmore Co. Sligo. ‘Quartz, or other distinctive stones, never occur in the actual constructions’ (Bergh 1995, 153) although he notes that quartz pebbles and crystals are frequent deposits inside the chamber of the early passage tombs, a situation which is repeated in portal tombs (Chapter 6.4.1). His suggestion that, in the early passage tombs, the power of the quartz is linked to the deceased individuals, whilst in later tombs where quartz is structural its power is transferred to the monument itself, might be applied to portal tombs. Perhaps this is an indication that at the construction period of portal tombs ancestral veneration was directed towards named and remembered individuals, as discussed in Chapter 3.4.3 and below, 6.4.2.

There is little evidence that the stones were worked or modified in any way. The lack of modification is not due to a lack of the necessary skills; people had been working stone for millennia. An uneven capstone could have been made more even; instead, suitably shaped portal stones were sought to compensate for the irregular shape, as shown in Figs. 116 and 120. It may be that it was important that the selected stone was not altered in any way, perhaps it retained a particular essence which needed to be retained. In a study of Danish megaliths Scarre (2004, 147) found that, rather than altering the stones, orthostats of uneven heights were set in foundation sockets of different depths in order to achieve the desired height.

It is believed that the source for stones used for lithics, particularly stone axes, was sometimes regarded as being of ritual importance, in a ‘two-way’ process whereby the landscape endowed the tool with particular significance and received added ritual importance from the significance of the tool (Whittle 1996a, Cooney 1998, 2000, Barnatt 1998) amongst others), see chapters 2.2.3 and 6. Something similar
might have happened with the stones selected for portal tombs, particularly the capstones. The place in the landscape in which the special stone was found, whether as part of an outcrop or as a single erratic, might have been perceived as the best place to build the monument, within the broader parameters such as proximity to water, altitude, topography. The landscape site was significant because that is where the significant stone was located, and the stone became more important, and therefore not to be altered, because it came from a landscape made potent by the location of a ritual monument. Scarre (2009b, 11) details ethnographic studies which suggest that, amongst certain societies, the stone may have been located in a place already significant in the landscape, and thus ‘the significance and power of their symbolic or supernatural associations was also appropriated.’

In a study of the stones of Stonehenge Parker Pearson and Ramilisonina (1998) suggest that the individual stones of the monument represented ancestors, discussed above (3.4.2), and that the material properties of stone, hardness and durability, enhance the idea that it may represent permanence and endurance, thus ensuring that the ancestors will be revered and remembered. They are careful to maintain that ‘most societies have elements of ancestor worship’ (Ibid, 848), avoiding the claim that it was a universal practice. In applying this to portal tombs it could be suggested that the two portal stones might have commemorated the male and female ancestors of the group, ensuring that their memories would survive. While this is speculation it does seem that the use of stone, and only stone, for the construction of portal tombs was intended to ensure permanence with a constant reminder of the ideas they represented.

5.3 The Stones.

5.3.1 The capstone. The capstone is the most visible and impressive stone in the monument, which has led to suggestions that the whole point of the structure was to exhibit a stone, as high and as exuberantly as possible, drawing attention and proclaiming a message (5.1). Whittle (2004) expands this idea by describing portal dolmens and related monuments of west Wales as ‘stones that float to the sky’ which he believes demonstrates indigenous myths about creation and origin. Richards (2004b,
76) also suggests that the purpose of the monument was to display the capstone ‘raising a mythical or sacred stone from the earth into the air,’ and thus any deposits were intended as offerings. Both Richards and Whittle have found indications that in a number of Welsh sites the capstone was quarried and raised directly into the air, leaving a pit beneath. This operation would have required immense amounts of labour over a long period of time (Richards 2004a, 76), and would have constituted the actual ritual act. There is no sign that such was the case with the Irish tombs. With one possible exception the excavated examples found no large pit beneath the chamber, and during this study an effort was made to identify such a feature beneath the many tombs where the capstone has been removed or has fallen. It is generally considered that Irish portal tombs were erected by dragging the capstone up a ramp and Borlase (1897, 57) includes a drawing by Du Noyer of an unfinished portal tomb at Ballyphillip Co. Waterford which seems to illustrate this (Fig. 113). Unfortunately this monument has completely disappeared.

Fig. 113. Ballyphilip Co. Waterford (Borlase 1897, 57)  
Fig. 114. Ballynageeragh Co. Waterford. (Du Noyer 1866).

Ballynageeragh portal tomb in Co. Waterford is the only possible site recorded as having a pit from which the capstone was lifted (Fig. 114). In 1940 a rescue operation was undertaken by the Commissioners of Public Works when the tomb was in danger of collapsing. The stones were removed, concrete poured into the sockets(!) and the stones were replaced. An archaeologist, L. Mongey, was in attendance and he described ‘...in the cell floor was found a pit, 3 feet deep, following closely the stones of the dolmen on two sides....the edges of the pit were deep to a depth of about 18 inches.’ (Mongey 1941, 3). Ballynageeragh is an unusual portal tomb as it has no portal stones, and the
5. Morphology.

Capstone is supported by a septal stone. Unfortunately the repair work in 1940 precludes any further examination of the structure.

Capstones are frequently enormous and/or distinctive-looking, and most are much larger than necessary to cover the chamber. Kytmannow (2008, 129) believes that the location of a suitable stone was the deciding factor in the micro-siting of the monument and suggests that the exact location of the selected stone was regarded as a meaningful site from which it was important not to move the stone. Ó Riordáin (1979), in describing the massive capstone at Brennanstown Co. Dublin (Fig. 56), states that the availability of the enormous erratic boulder was important in choosing the site of the portal tomb. In the course of the present study there was no evidence of exotic or non-local stone being used; where stone of a different type than the bedrock was used it was almost certainly a glacial erratic boulder, plentiful over most of Ireland. Capstones of various sizes are found throughout the country, but in the Dublin area and in the four counties of the southeast there is a greater than average number of large capstones.

![Fig. 115. Location of portal tombs with larger than average capstones (15+ cu.m). (Distribution based on Ó Nualláin 1983, 76. Data from Kytmannow 2008.)](image-url)
5. Morphology.

Ballynoe Co. Carlow.

Brennanstown Co. Dublin.

Duffcastle Co. Cavan.

Straleel Co. Donegal.

Erarooey Beg Co. Donegal.

Haroldstown Co. Carlow.

Leitrim Co. Tyrone.

Kernanstown Co. Carlow.

Fig. 116. Carefully chosen capstones.
5. Morphology.

An indication of the importance attached to the capstone is the fact that any signs of the selection of a ‘special’ stone are usually seen only in capstones (Fig. 116). There are numerous examples of stones of unusual shapes or features, all of natural origin. In Carlow the ruined portal tomb of Ballynoe is topped with a gigantic stone shaped like the cap of a mushroom and deeply grooved. Similar grooves are visible on the capstones of the complex, double-capped Haroldstown nearby, and at Straleel in Donegal. A quartz inclusion down the front of the oddly shaped capstone at Clenrah in Longford (Fig. 69) has necessitated the use of differently shaped portal stones to display it, while Middletown in Co. Cavan (Fig. 5) has a deep, strangely-shaped hole directly over the portal. Leitrim in Co. Tyrone (Fig. 116) has a large quartz inclusion at the front of its enormous capstone. Some capstones were too enormous for structural stability but still seem to have been chosen for their very distinctiveness. Kernanstown Co. Carlow was so large that the rear was probably never raised (Fig. 116), Kiltiernan Co. Dublin needed extra orthostats to hold it and Clogher in Clare (Fig. 77) is so heavy that it has simply collapsed straight down, splaying all supporting stones outwards, and looking like a squashed beetle. Possible artwork decorating capstones is discussed later in this chapter.

Most capstones display a distinctive tilt with the largest end pointing upwards over the portals. Powell (2005) uses the evocative expression ‘bravado’ to describe this feature (Fig. 117). The importance of this is indicated by the careful positioning of small padstones to stabilise or accentuate this feature in some tombs. In other cases the capstone achieves its tilt by resting on a secondary or subsidiary capstone. This tilt is such a common and distinctive feature that it may be considered essential to the classification of the monument; while it is attention-focussing it adds nothing to the structural stability and may have had conceptual importance.

Secondary or subsidiary capstones are found at 21 sites, with a strong likelihood that there were more at sites now too ruinous to assess. McSparron, for example, did not find a secondary capstone during the excavation at Tirnony, but believes that, as the chamber was too large to have been covered by the capstone the existence of a (now missing) secondary capstone was ‘a probability’ (McSparron et al. 2013, 13). The purpose of these is unknown; as mentioned above they serve as supports for the capstone in some cases. They result in a more precise delineation of the chamber in tombs with very tall portals and high roofstones (e.g. Kilmogue Fig. 118, 143), but they also make the chamber even less accessible. In some cases, for
5. Morphology.

Fig. 117. The ‘bravado’ of the tilted capstone.

Fig. 118. Secondary capstones define the chamber

example Muntermellan (Fig. 59) and Tuaim, the secondary capstone rests on top of the half doorstone, thus completely closing off the entrance to the chamber. It is possible therefore that this feature has more to do with the differing ritual practices associated with doorstones than with displaying the capstone. At Greengraves Co.
5. Morphology.

Down (Fig.117) a superb balancing feat is achieved where the heavy capstone slopes steeply down to perch on the horizontal subsidiary capstone which is held perfectly level on the tip of the gabled backstone by the insertion of a small padstone. They are found throughout the distribution areas. This feature is not mentioned by those who prefer to include portal tombs with other megaliths distinguished only by a large capstone.

*Fig.119. Portal tombs with secondary capstones.*
5. Morphology.

5.3.2 Portals and backstones. Apart from the capstone, portal stones are the most prominent parts of the structure. They are normally the tallest uprights and are frequently well matched in height and shape. They appear to have had two functions, to support the capstone and to allow, and emphasise, entry to the chamber. Backstones are also supportive but normally much lower and less visible.

The capstones appear to have been the priority for the builders, whether for conceptual or architectural reasons, and the portal stones selected to facilitate these, sometimes enormous, stones. Whittle’s belief that the display of the capstone was the significant point of the monument (Whittle 2004) has been discussed, and the selection of portal stones specific to the display of each capstone might support this idea. In contradiction to this is the fact that there is almost always a single backstone. In some cases the portal stones seem to have been carefully chosen to facilitate capstones of uneven shape, but another interpretation is that the capstone was selected to balance out uneven portal stones (de Valera and Ó Nualláin 1972, Annaghmore portal tomb Co. Leitrim). It seems more likely that the capstone was the primary stone and that the portals were chosen to display it.

The backstones are sometimes almost invisible and are rarely visually obvious. Their function seems limited to holding the rear of the capstone off the ground, but the size and shape of backstone chosen has a major affect on the angle of tilt of the capstone – what Powell (2005) describes as the ‘bravado’. There are a number of
‘gabled’ backstones, particularly in the northern part of the distribution, with
distinctively pointed tops. These would have presented extra difficulty in
constructing the monument so must have been selected for reasons other than simple
support. They would have been particularly effective in displaying the capstone
‘floating’ to the sky, and they may have been chosen for aesthetic reasons, but gabled
backstones are less efficient as supports than standard flat-topped versions as in most
cases the capstone has slipped off or been removed entirely. Gabled backstones are
also found in court tombs, and Waddell (1998, 81) suggests that they would have been
suitable supports for corbelling.

Traditionally portal stones have been viewed as defining the entrance to the
chamber, hence the name, but it should be remembered that it was archaeologists
who chose the name and not necessarily the builders. While they certainly look like
doorways they were named by archaeologists who wished to stress the links with the
other great Irish megalithic types and who were very aware of the indications of
movement through the chambers of passage tombs and court tombs. Portal tomb
chambers are not designed for movement. The space between the portal stones is in
many cases so narrow that access is extremely difficult or even impossible, and is
often sealed or limited by doorstones. Even when access is possible between the

Fig. 121. Gabled backstones in Co. Donegal.
portals it is difficult to conceive of a dignified entry suitable for conducting a ritual or ceremony. On the other hand the ‘front’ of the monument would have made an ideal frame for a significant individual to command attention or conduct a vocal ritual. This, however, demands that (s)he is visible to an audience, and the micro-landscape setting often does not seem designed for this. Most portal tombs are situated on sloping ground, and some are facing directly into steeply rising ground (Chapter 4.4).

5.3.3 Sidestones. Sidestones are present in the majority of portal tombs, and may have been a common feature. As they are not normally load-bearing they are more likely to collapse than portals and backstones. As suggested in section 5.1 their purpose appears to have been to define the area of the chamber, rather than to contain it, and those portal tombs with no evidence of sidestones at all (the tripod dolmens) may have had structures of loose stones or hurdling to define the chamber. Collins (1965, 66), discussing his excavation of Ballykeel portal tomb, a classic tripod type, states that ‘*some form of side walls to the chamber must be postulated to account for the distribution of sherds*’ and he suggests, that as no trace of socketing for sidestones was revealed, there may have been a ‘*slight and flimsy form of walling, say hurdling*’ which contained the numerous pottery sherds inside the lines where sidestones would have been laid.

There are suggestions (Cody 2002, 242) that corbelling of loose stones may have been in place above and around the sidestones, which would have had the effect of making the chamber more enclosed, darker and more distinct from the outside. Burren A Co. Cavan displays this feature (Fig. 106).
Sidestones usually lean inwards (Cody 2002, 276, de Valera & Ó Nuallain 1972, 154) and are often prostrate or missing. De Valera & Ó Nuallain (Ibid.) suggest that they may normally have been very shallowly set, and Davies (1937, 93) notes that the sidestones of the back chamber at Ballyrenan ‘rest on black earth at a high level ... even their bases were exposed on the inside.’ It is possible that later entry to the chamber may have been made by climbing over the sidestones or removing them altogether, particularly in cases where there was a full blocking doorstone or where the gap between portals was exceptionally narrow. If this was the case it suggests a change in ritual practice. At the time of construction it may not have been intended that chambers should be accessible at a later date, but changing rituals and beliefs may have necessitated revisiting the chamber, possibly for later depositions. One portal tomb, Haroldstown in Co Carlow (Fig. 123), appears to have been specifically constructed to allow for later access through the side. A full doorstone blocks entrance between the portals, but the right sidestone is splayed outwards, leaving a substantial entrance to the chamber. This entrance is roofed by the capstone, forming a portico. A somewhat similar situation is described at Tirnony, Co. Derry, excavated in 2010, where the excavators described the back west sidestone as low and set slightly out of line with the front west sidestone (McSparron et al. 2013), suggesting that it may have functioned as a large sillstone indicating a second tomb entrance (Fig. 124). Tirnony has no doorstone but entry between the portals would have been difficult as they are set only 0.6m apart and are not very high (c. 1.5 m). Tirnony is discussed in Chapter 6.2.

Fig. 123. Haroldstown Co. Carlow.
5. Morphology.

5.3.4 Doorstones. The presence of a doorstone, or blocking stone of some type, in many tombs is the most significant morphological difference between portal tombs. Of those portal tombs where measurements can be taken some 60% have a doorstone, varying from a full doorstone which is of a similar height to the portal stones, to a half doorstone, and down to a sillstone which may be barely visible. Interestingly the three ‘types’ are quite distinctive. Exact measurements were not taken, but all visible doorstones were easy to distinguish by eye. Unfortunately 54 tombs were too ruinous to distinguish the presence or absence of a doorstone.
In those examples which have been excavated it is clear that the doorstone was part of the original structure, and was not a later addition. Topp (1962, 44) described as ‘the feature of outstanding interest at Drumanone’ the fact that the full doorstone did not function as a moveable closing feature and was a ‘constructional complement’ to the portal stones. The sillstone at Poulnabrone was inserted in a natural gryke in the bedrock (Lynch & Ó Donnabháin 1994) and again seemed to have been part of the original structure, as human bone was found pushed down into the grykes both inside and outside the sillstone, but not beneath it. Collins (1965, 67) states that the positioning of the doorstone at Ballykeel (Fig. 136) in a socket ‘precludes any idea of easy removal to facilitate re-entry.’ He suggests that the doorstone might have been the last stone erected, the ‘final act’ after the placing of the burial deposits which necessitated access to the chamber.

In general, the same type of stone is used for the doorstones and the rest of the structural elements of the monument. There is little evidence of ‘special’ stones being selected but in four cases, Kilclooney Mór, Poulnabrone, Ballybrittas and Tawnatruffaun, the sillstones have a similarly shaped rectangular piece missing at one end of the top of the sillstone (Fig. 126). This ‘missing’ piece appears to have been a natural feature; at all these sites there are plenty of evenly shaped stones available so the selection of these stones seems to have been deliberate. Ballyannan in Donegal has a gabled sillstone, which almost exactly matches the backstone; this detailed design feature may have been an aesthetic choice (Fig. 121).

Doorstones of all sizes are found throughout the portal tomb distribution area (Fig.127). In the northern half of the country there seems no particular patterning, with doorstones of all types and none being found in all areas, but in the Dublin – Carlow – Kilkenny – Waterford zone there is a striking preference for full doorstones. Of the 20 tombs which could be classified 16 had full doorstones, 4 had half-doorstones and 2 had none. No sillstones were noted in this area. In this area there are no court tombs but there is an overlap with Linkardstown cist distribution. Cody (2002, 278) has an interesting suggestion (previously made by Herity 1982, 290 and O’Donovan 1993, 14) that portal tombs with full doorstones ‘represent the concept, if not necessarily the reality, of a sealed chamber,’ similar to the Linkardstown cists, and may give indications of either a chronological change, or of different ritual practice. In this
regard the full doorstoned site at Ballynageeragh, Co. Waterford (Fig. 114) may be considered. A considerable quantity of cremated human bone uncovered in the chamber was examined by a local (presumably medical) doctor, Stephen Shea. Mongey (1941, 4) writes ‘from Dr. Shea’s report it is sufficiently clear that the bone content of the tomb represented only one person.’ Many Linkardstown cists contain the remains of only one individual, but this situation has not been found in any other portal tomb. Unfortunately no portal tomb in the southeastern area has been properly excavated, and the finds from Ballynageeragh have been lost (Kytmanow 2008, 91), so the suggestion of a different mortuary ritual in this area, or at this particular time can only be surmised. The information from Ballynageeragh should be treated with caution as the monument has no surviving portal stones and it is now encased in concrete.

Full doorstones completely block the physical entrance to the chamber. This raises the question of whether in fact the portal stones were supportive columns
rather than doorways, as discussed in 5.3.2, but if they were marking the entrance then full blocking may indicate that the monuments were conceived as single use structures. The doorstones were part of the original structure so the original deposits were placed before or during construction. This prohibition on re-entry was not just a physical barrier; the material stone may have indicated a conceptual barrier between

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Fig. 127. Distribution of doorstones. Map based on Lynch 2014 with additions, data from Kytmanow 2008 and personal observation.
the living world outside and the dead or spirit world inside, or it might have conveyed a social demarcation between those who understood and controlled the sacred space and those who did not. There is some evidence of multi-usage of tombs; later entries may have been carried out between or over the sidestones (Section 6.3.3), indicating a difference in ritual practice and perhaps in religious beliefs. One portal tomb, Haroldstown in the southeastern zone, seems to demonstrate an intentional inclusion of both practices (Fig. 123, Section 5.3.3), whereby there is a side entrance as part of the original structure. The chamber in this portal tomb is uncharacteristically high and large: it is possible to stand upright and walk around inside.

The half doorstones are an interesting feature. They are not high sillstones or low full doorstones, but a definite ‘half-way’ point which seems intentional. Cody (2002) notes that where there is a half doorstone in a portal tomb with a subsidiary roofstone, for example at Tuaim and Muntermellan in Co. Donegal, entry to the chamber is completely blocked. It is in most cases (just) possible to enter the chamber by climbing over the stone, but not in any dignified or ceremonial way. It is difficult to imagine a solemn ritual where the practitioner has to clamber over a large stone and wriggle through a narrow gap before dropping to the chamber floor, perhaps with a precious item of deposition. On the other hand, if the doorstone was meant to inhibit such an entrance it seems strange that it did not continue to the top. They could be regarded as a compromise between different ritual practices or different societal factions, or as a staging post on the road to ritual change whereby entrance to the sacred place was becoming more concealed or more open. They are scattered throughout the northern distribution area, with one (Ballycasheen) in Co. Clare.

![Half doorstones - Drumany O'Brien Co. Leitrim.](image1)

![Errarooey Beg Co. Donegal.](image2)

Fig. 128. Half doorstones.
Sillstones do not hinder entry to the interior in a physical way. They are not found at the entrance to other megalithic monuments, but are common in the interior of court, passage and wedge tombs when they mark the transition between one chamber and the next. At Parknabinnia court tomb the sillstone between the two chambers was structural and served to support the two jamb stones in an upright position (C. Jones pers. comm.) but this situation was not noted in regard to portal tombs. In many cases the sillstone did not touch either or both portal stones, and in others it was too low to have a supporting function. They may have had a purely ritual or symbolic significance, demonstrating a religious belief or societal concept. They are thinly scattered throughout the distribution areas except in the Southeastern area where they are entirely absent, but it is possible that sillstones were much more frequent than is generally accepted, as some may have been completely concealed by cairn material. At Kilfeaghan, Co. Down, described by Evans (1937, 245), Collins (1959, 30) and Kytmannow (2008, catalogue no. 154) as having no sill, an early investigation by Howard (1905, 266) identified a sillstone beneath the surrounding stones which ‘seemed to go down as deep as the two supporting stones’; this feature was entirely missed by later writers. The sillstone at Poulnabrone is barely visible on the surface, and at Fenagh Beg this study identified a sillstone which had been suggested only as a possibility by de Valera and Ó Nualláin (1972).

Any consideration of the significance of doorstones should include a discussion of those sites where there was no doorstone. In approximately 40% of those tombs which could be measured there was no trace of a doorstone. These tombs give the impression of being much more open to repeated usage than those with doorstones, but many inhibited re-entry to a considerable degree due to the narrow space between the portals (5.3.2), and it possible that they were originally blocked by a temporary structure such as hurdling or drystone walling, as Collins suggested for the sidewalls of Ballykeel (Collins 1965, 66). Even if entry was possible it was not encouraged. Walsh (1995, 125), in a consideration of the structural elements of wedge tombs, noted that ‘the evidence ... as in the case of some, at least, of the portal tombs, it would appear that while re-entry was possible and did occur it was not intended.’
5. Morphology.

5.4 The chamber.

The chambers of portal tombs are normally small and low, and do not increase with the overall size of the monument. The enormous and complex Kilmogue in Co. Kilkenny (5.9) has an estimated chamber size of 5.32 cubic metres (Fig. 143), almost the same as the much simpler Drumanone Co. Roscommon (Fig. 108) (Kytmanow 2008). Aghnacliff and Cleenrah are situated less than 1 kilometre apart in Co. Longford. The capstone at Aghnacliff is raised some 2 metres into the air, while squat Cleenrah has portal stones little more than a metre high but has a larger estimated chamber size (Figs. 129, 130).

Fig. 129. Cleenrah Co Longford.  
Fig. 130. Aghnacliff Co. Longford.

During this study an attempt was made to enter each chamber to explore the monument from the inside out, and to try to understand the visual and sensual experience. In most cases the chamber was very cramped, limiting movement and posture, and some were too small to enter completely. It was possible to stand upright in only a few sites and walking was limited to a few steps in a very small number of sites (for example Haroldstown Co. Carlow and Gortnavern Co. Donegal.) The amount of light entering the chamber, and the view of the outside varied very greatly. In ‘tripod’ type portal tombs the external view was not limited but these may have had a temporary walling at the time of construction. None of the chambers entered was completely dark inside. Only the two tombs with a covering cairn, Burren A Co. Cavan and Srath Bruithne Uachtarach, Co. Donegal (Figs. 131, 132) seemed dark inside, but these chambers were too small to enter, and it is widely
believed that the majority of cairns formed low supporting ‘platforms’ rather than covering mounds (Section 5.5).

Bradley (1989) points out that the orientation of megalithic monuments had the effect of concentrating the light around the entrance at certain times of the day or year, reducing as the human remains were transported deeper inside the tomb. He suggests that this light was deliberately ‘channelled’ by the orientation and architecture of the monument. As some 60% of portal tombs are oriented towards the east (Section 5.4) it could be that the light of sunrise was particularly important to the practices or beliefs of the portal tomb builders, but the inclusion of a full doorstone would have negated this. Bradley’s (ibid. 257) description of a sequential development among Breton megaliths where light was progressively reduced and eliminated by architectural features might be considered. He suggests that this demonstrated a sharper division between the living and the dead. Further dating is needed before this could be considered for the Irish portal tombs.

The view of the outside was directed through the portal stones where there was no doorstone, but if the doorway was blocked it was normally possible to see outside over the top of the sidestones or between the sidestones and backstone. The interior stones do not seem worked or artificially smoothed and the original flooring is unknown. Excavated examples suggest that cairn material covered the interior ground surface in some cases, but in other examples there were indications of a rough stone floor as at Tirmony (McSparron et al. 2013, 20), or of clay at Aghnaskeagh (Evans 1936, 237) and Ballyrenan (Davies 1937, 90).
If the chambers were constructed for the sole purpose of housing the type of deposits uncovered by excavation they are considerably larger than necessary, yet if the purpose was to provide a performance area for rituals they were, in most cases, much too small. Only a static ritual performance by a very small number of practitioners would have been possible in the majority of portal tombs. There is no defined ritual passageway as obvious in court tombs and passage tombs, and in many cases the space is too small for any formalised movement, and it is impossible to stand upright. With regard to human interment it would have been possible to bury a complete body in some cases but not in others.

5.5 Cairns.

Cairns are usually described as supporting structures and/or remnants of ramps used for raising the capstone. Excavators such as Cooney state ‘It seems likely that the cairns were not originally much higher than at present’ (Cooney 1997, 231), and Lynch and Ó Donnabháin (1994, 5) believe that ‘...when originally built, the cairn at Poulnabrone appeared much as it does today.’ Evans (1937) in his excavation of Aghnaskeagh removed the entire cairn and stated that ‘there is reason to believe that the cairn was never much higher than at present.’ (Ibid. 237). During the present study it became obvious that the siting of many portal tombs on small flat ‘terraced’ areas on a valley side supports this view. If a cairn was high enough to completely enclose the monument it would, for reasons of stability, have been so wide at the base that it would not have fitted on the terrace and would have tumbled down over the edge. Examples such as Fenagh Beg Co. Leitrim (Fig. 91) and Ahglaslin Co. Cork (Fig. 75) demonstrate this. Similarly, there are many portal tombs built so close to stream banks that an enclosing cairn would not have been possible (Brennanstown Co. Dublin, Fig. 120, Kilgraney Co. Carlow, Fig. 200, and Letterbrat Co. Tyrone).

The presence of deposits within the cairns of excavated examples indicates that they were regarded as an integral part of the whole monument (Chapter 6.7). They were not essential for structural stability as, when completed, the heavy capstone ensured that the supporting stones remained upright, but their presence lent extra stability. When viewed in the landscape cairns have two opposing effects; they draw attention to the monument and make it more visible but at the same time they
obscure at least some of the features. The newly recognised portal tomb of Srath Bruithne Uachtarach in Donegal stands out on a heather-covered hillside due to its prominent circular cairn, but the structure is almost invisible except for its capstone and part of one portal stone (Fig.78), with the rest being buried in the cairn.

It is difficult to obtain an accurate assessment of cairn numbers, although Cody (2002, 273) suggests that there were traces of cairns in 65 cases, around one third of the total. In contrast Kytmannow (2008, 42) lists ‘at least’ 86, but Cooney (1997, 231) feels that there are only 26 long cairns and 16 others. In many cases there is no evidence of their existence, and it is unclear whether they existed at all or whether they were removed over the centuries as a convenient source of building stone or to increase the area of cultivable land, but most excavations have revealed some indications that a cairn existed. The most recent excavation, at Timomy Co. Derry, revealed no trace of a cairn (McSparron 2013), but the excavator believes that evidence may have been removed during the construction of a 19th century road. In general there appears to have been two basic forms, long and subcircular or oval. Cody (2002, 273) suggests that subcircular cairns can be difficult to identify and might possibly have originated as long cairns which became truncated at a later stage.

There are some indications of regionalisation in the presence and form of cairns. In the south-east area there is no evidence of long cairns. It is possible that this is due to more intensive agricultural practice in good farmland, where some cairn stones were removed for field walls, leaving only truncated, sub-circular remains, but in the foothills of the Dublin mountains, on marginal farmland, only one, Kiltiernan, has cairn evidence. In other areas cairns of both shapes are found. Almost all long cairns are found in the northern half of the country, and all are located in areas with court tombs, which also have long cairns. In two sites, Burren A, Co. Cavan and Srath Bruithne Uachtarach, Co. Donegal, (Figs. 106, 132) the cairn almost covers the monument. This may have been intentional or may have occurred as a result of later activity, but in all other cases the majority of the orthostats are visible and the cairn can be regarded as a ‘surrounding platform’ (Whittle 2004, 81), which has the effect of delineating and emphasising the monument. Some evidence of kerbing exists, for example at Crannagh Co. Galway (Fig. 107, 134), Cleenrah Co. Longford (Fig. 69, 135), and Ballycasheen Co. Clare, but it is not possible to state whether this was a common or uncommon feature, due to later removal. Excavated examples indicate

5. Morphology.
5. Morphology.

that it may have been more frequent than indicated by the surviving examples; Ballykeel Co. Armagh was excavated in 1963 by Collins who found that four roughly parallel lines of stones were placed along the long axis of the cairn ‘some 90 feet long with an average breadth of 30 ft.’ (Collins 1965, 48). The excavator suggested that the outer two stone alignments were kerbs and the inner lines were placed to emphasise the linearity of the structure (Ibid.) (Fig. 136).

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**Fig. 133. Suggested surviving cairn distribution.**

Remnants of a possible kerb were found by Cooney (1997, 231) at the excavation of Melkagh Co. Longford. Davies (1937) identified kerbstones and sockets delineating the edge of the cairn at Ballyrenan Co. Tyrone. The presence of kerbstones may have had the functional purpose of confining the cairn stones, but they may also have symbolised the division between the sacred space of the monument and the mundane space outside. A similar clear division is indicated by the boulders which encircle the earliest passage tombs at Carrowmore (Bergh 1987, 246). The natural
landscape is transformed by the construction of the megalith and its sacred confines clearly marked.

Some depositional material has been found in all the excavated cairns. At Ballykeel Collins (1965) found numerous pottery sherds in the cairn structure both within the chamber area and outside it, indicating that the material was most likely deposited as the cairn was being built, or possibly ‘even before the construction of the tomb’ (Collins 1965, 68, see also Chapter 6.3). At Poulnabrone Lynch (1988b) found fragments of human and animal bone, pottery and a stone point in the cairn. She also found a sandstone block ‘a possible hammerstone’ (Ibid.) with a hollowed area produced by pecking, which seems somewhat similar to a small sandstone ‘faceted stone’ found by Evans (1937, 247) in the cairn debris at Kilfeaghan Co. Down. At Drumanone, Co. Roscommon (Fig. 23) Topp (1962) found two Bann flakes and a black chert scraper in the area immediately outside the ‘spread of large stones’ which surrounded the monument (Ibid. 42). She believed that this stone spread was the much reduced remains of a cairn. At Aghnaskeagh Co. Louth Evans (1936) described a revetted cairn with a basal solid core of heavy, flat, well-bedded boulders in which he found fragments of pottery, charcoal, several lumps of quartzite and a flint scraper. Cooney (1997) found a number of small lithics in the cairn material at Melkagh Co. Longford. At Ballyrenan Co. Tyrone Lady Alexandra Hamilton’s stone beads appear to have come from the cairn ‘we dug outside the second cromlech ..... inside about 3 feet ... we got altogether seven large beads’ (Cochrane 1907, 400).

The presence of a long cairn surrounding a portal tomb may indicate that the idea of these monuments lies within the long barrow tradition which includes the Cotswold-Severn monuments in Britain, the stalled cairns in Orkney and the long passage graves in Brittainy. Hodder (1984), stressing the need to concentrate on the meanings of the monuments themselves rather than generalities of significance, has famously linked the long mounds with the long houses of the early Neolithic LBK culture of central Europe. He describes eight points of similarity between the sites, stressing the long, narrow nature of the structures and the common east-west orientation, and his ideas are supported by, amongst others, Bradley and Patton (Darvill 2004b, 43). Whittle et al. (2007, 139) write about the possibility of ‘long-term memory’ and how the memory of the longhouses might have been retained over many generations in the form of myth. It is possible that memories of the longhouse
tradition lingered with the portal tomb builders of Ireland, particularly if they were not indigenous but their forebears had originated elsewhere. If this was correct the portal tomb builders, erecting their own style of monument, may have felt constrained to surround it with a long cairn. The longevity of group memory, embedded through mythology, is discussed in this study in chapter 3.4.1.

An alternative model of origin is suggested by Scarre (1992) who believes that the tensions developing between Mesolithic hunters and Neolithic farmers along the Atlantic seaboard resulted in the widespread construction of similar type monuments. Excavation in Brittany has revealed that many long mounds originated as sub-circular or oval structures. He suggests that a concentration on the 'shared Atlantic cosmologies' (Ibid. 55) may reveal the power of such ideologies in transforming new ideas. In Ireland this could be applied to the morphology of portal tombs which are distinctive versions of Neolithic monuments, but the ruinous condition of most of the remaining cairns means that it is not possible to say how many cairns were subcircular or oval, or whether these were originally long.

Kytmannow (2010, 216) believes that there is a particular sub-type of some 15 small portal tombs with large circular cairns in the northern part of Ireland. She suggests that the purpose of the cairn was simply to draw attention to smaller portal tombs and make them more visible which would have improved their suitability for ritual performance. In this study it was difficult to isolate this group; a division of portal tombs into sub-types based on their morphology was not undertaken.

The presence of deposited items in excavated cairns indicates that the cairns were considered as part of the monument, particularly as they were not functionally necessary. Today many cairns are just a scattered heap of stones, but at the time of construction they may have been much more formally delineated and may have been regarded as intrinsically vital, both structurally and conceptually, as indicated by the presence of deposits within them.

The presence of a cairn drew attention to the situation of the portal tomb in the landscape, but had the affect of concealing the base of the monument from view. This might have been an intentional concealment of the entrance to the underworld, the place of the dead, from those at a distance.
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The lack of long cairns in the southeastern portal tomb region could be neatly explained by a chronological progression. If the portal tombs in this area were later than those elsewhere it could be suggested that the earlier portal tombs reflected the long mounds and longhouses of the ancestral past, to be succeeded by smaller, truncated circular mounds and eventually abandoned altogether, leaving the portal tombs open in the landscape. Unfortunately there is not enough dating evidence to apply this theory; none of the tombs in the southeastern area has been excavated with the exception of Ballynageeragh Co. Waterford, where no dating was possible in what should be termed an exploration rather than an excavation. Intensive agriculture in the fertile farmland of the southeast may have resulted in the removal of cairns to increase the available land.

5.6 Occasional features.

5.6.1 Flankers. In a small number of cases an upright ‘flanker’ stands close to one of the portals. This is normally interpreted as marking an incipient court and is taken as an indication that portal tombs either developed from court tombs or vice versa. Two portal tombs showed some indications of a court structure in front of the portals. Ticloy Co. Antrim had a crescentic line of stones on either side of the portals (Evans & Watson 1942), but this in not now visible, and the funnel-shaped entry feature at Ahaglaslin Co. Cork, described by de Valera & Ó Nualláin (1982, No. 55), is so overgrown with vegetation that it cannot be discerned.

During this study seven sites were identified where flankers are present and four others were possible but very ruinous. Howth Co. Dublin is a large, partly collapsed monument facing south-east into a high cliff. A high flanker is situated to the west of the portal, taller than either of the portal stones and exhibiting a striking quartz intrusion. The most westerly tomb in the Malin Mór complex in Donegal has a tall, slender upright in front of the southern portal stone, described by Cody (2002, 123) as a ‘set stone’. Although this complex structure is very difficult to interpret, the set stone is of a different stone type than the rest of the monument and is very striking looking, being tall, slender, white and shiny. The enormous portal tomb at Kernanstown Co. Carlow has a sturdy flanker to the south of the portal which is completely separate from the other stones. Tirnony in Derry, recently excavated, has a flanker northeast of the western portal stone. The excavators (McSparron et al. 2013)
5. Morphology.

found that it was set into a shallow depression with no packing or socket, unlike the portal stones which appeared to have been set onto a prepared surface (Ibid. 22). They suggest that this indicates that the flanker was an addition to the tomb rather than a primary feature, with no direct stratigraphic evidence linking it to other orthostats (Ibid. 31). Eshaheen in Co. Donegal has an enormous capstone and one flanker beside the north portal, and Goward in Co. Down has at least one. Possible flankers are located at Moyree Commons (Clare), Claggan (Mayo), Menlough (Galway), Roshin South (Donegal) and Ballywholane (Tyrone), but these monuments are in very poor condition.

Malin Mór 1 Co. Donegal.  
Howth Co. Dublin.

Kernanstown Co. Carlow.  
Timony Co. Derry. (Image C. Jones).

Fig. 137. Portal tombs with flankers.

The suggestion that a single flanking stone might indicate a court seems unsubstantiated; if there were an upright orthostat on either side of the portal this would be much more indicative but this has not been identified. An alternative suggestion is made here that they might be standing stones, erected at some later date to ‘modernise’ the portal tomb and connect it to changing ritual practice. The ancient ritual site would thus be honoured by inclusion in new beliefs, and new practices and ideologies would be strengthened by association with an ancestral ritual site. A
5. Morphology.

A substantial standing stone is situated some 10 metres to the rear of Scraghy portal tomb in Co. Tyrone (Fig. 138). Standing stones are normally dated to the Bronze Age (Cooney 2000, 131, Waddell 1998), but the dating is based on the burials uncovered at the small number of excavations which have been carried out. Cooney (2000, 135) points out that the burials may have been located at places which were already marked as being of ritual importance by the presence of a standing stone (Chapter 6), and he lists a number of standing stones of Neolithic date placed both inside and outside megaliths (for example Cohaw, Annaghmore and Browndod court tombs). It is possible therefore that some portal tombs were marked in this way, indicating continued ritual importance and usage. If standing stones were indeed of Bronze Age date then their additions to portal tombs could coincide with the depositional evidence of reuse during this period.

5.6.2 Artwork. The famous artwork of the later passage tombs at Newgrange, Knowth, Loughcrew and elsewhere is profuse, complex and of obvious significance. It has been likened to the art of Breton megaliths, with its geometric motifs and swirling abstract designs which may have been produced under the influence of mood-altering substances or practices (Lewis-Williams and Pearce 2005, 48, Chapter 3.2.3). Artwork on court tombs, whose construction date is now firmly dated to the period 3700-3570 cal. BC (Schulting et al. 2012) is very limited. The court tomb at Malin Mórb Co. Donegal has some ornamentation at the entries to two subsidiary

Fig. 138. Scraghy portal tomb in Co. Tyrone, with standing stone at the rear.
chambers described as ‘... similar to that of passage tombs’ (Lacy 1983). Portal tombs, which may have been the earliest monuments, may have had no artwork at all, or may have displayed the simplest motif, the cupmark, in a small number of cases. A large number of what appear to be cupmarks are displayed on the capstones of Errarooey Beg in Donegal and Rathkenny Co. Meath, but it has proved impossible to ascertain whether these are applied or are of natural origin. The other stones in each megalith do not display any such markings, which might support the idea that they were applied, but this could have happened at a later date. Shee Twohig (1981, 116) considers that where stones are decorated only with cupmarks then they ‘may well be natural’. Whatever explanation is correct the presence of markings on the capstones demonstrated the importance of these stones; they were selected because their natural markings stressed their significance, or they were decorated at some period to accentuate their importance. Rathkenny portal tomb also displays some plainly later decoration in the form of a triskele and interlocking circles inscribed on an upright (Shee Twohig 1981). These appear to be of Iron Age style and indicate a much later use/veneration of the monument. There is a ring barrow very close to Rathkenny portal tomb.

It is likely that there was no applied artwork at all on portal tomb stones. This may be because the idea of pictorial representation was not present in the community at this early stage, but it might have been a positive choice. As discussed in Chapter 2.4 construction stones were not worked or altered in any way. This unwillingness to interfere with the natural stone might have precluded the carving of motifs.
5.7 ‘Composite’ portal tombs.

There is a small number (c. 16 or 9%) of tombs which might be described as composite, where more than one chamber is situated in the same cairn, or where there are indications that a cairn existed. All of these are situated in the northern half of the country. There are two different types of multi-chambered sites: those with two or more portal tombs, for example Malin Mór or Kilclooney Mór, and those with two or more different types of structure in the same cairn, as at Ballykeel or Aghnaskeagh.

<table>
<thead>
<tr>
<th>Two or more portal tombs</th>
<th>Portal tomb with different structure(s)</th>
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</thead>
<tbody>
<tr>
<td>Malin Mór A</td>
<td>Tawnatruffaun.</td>
</tr>
<tr>
<td>Malin Mór B</td>
<td>Sunnagh Mór A</td>
</tr>
<tr>
<td>Kilclooney Mór</td>
<td>Tawnamachugh</td>
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<tr>
<td>Tuaim</td>
<td>Ballykeel</td>
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<tr>
<td>Ards Beg</td>
<td>Ballywholan</td>
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<tr>
<td>Banagher (possible)</td>
<td>Ticloy</td>
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<tr>
<td>Sunnagh Mór B (double-chambered tomb)</td>
<td>Corleanamaddy</td>
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<tr>
<td>Ballyvenagh 1</td>
<td>Aghnaskeagh</td>
</tr>
<tr>
<td>Ballyrenan</td>
<td>Melkagh</td>
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*Table 7. Possible ‘Composite’ portal tombs.

Monuments which contain two or more recognisable portal tombs may have been erected at the same time. The most impressive of these is Malin Mór A, where a line of six structures stretches for a distance of 100 metres. The two terminal structures are definite portal tombs; the central four may well be. Four other sites in Donegal display multi-portal tombs. Two of these, Kilclooney Mór (Fig. 43) and Ards Beg are particularly memorable. Each consists of a large, well-preserved portal tomb with a miniature one behind it, sharing the same orientation. The small tomb at Ards Beg has disappeared but it is well recorded.

Ballyrenan Co. Tyrone was excavated twice, in 1906 and 1936, (Cochrane 1907, Davies 1937) and two probable east-facing portal tombs were revealed in a long cairn. The western tomb was an unusual double-chambered structure, similar to that in Sunnagh Mór B, and with cupmarks on the capstone. Although Davies (1937) believed that the back (western) chamber was secondary to the front one he believed that there was only a short period of time between the two, and in fact they could
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Two or more portal tombs in one cairn. Portal tombs with other structures.

Fig. 141. Possible ‘composite’ portal tombs.

have been contemporary. Finds from both tombs contained early Neolithic pottery with later stone beads and cremated human bone dated 2281-2033 cal. BC was found in the back tomb (Kytmannow 2008, 107). This tomb was clearly used at different times.

In cases where the secondary structure is of a different type it is possible that it was an insertion into the primary cairn at a later date, thus indicating a later reuse of the portal tomb, but this is not always the case. At Aghnaskeagh the portal tomb is situated in the centre of an oval cairn (Fig. 142). Estyn Evans’ excavation results of 1935 were reassessed by Brindley in 1988 and she suggested that the original oval cairn around the portal tomb was extended during the Bronze Age to cover six cists. Both the portal tomb and the cists contained human bone, pottery sherds and flint flakes, but the orientation of the cairn differed from that of the Neolithic (Jones 2007, 118), indicating that although the site was still considered sacred and suitable for burial the emphasis of one aspect of ritual had changed and the later burials needed a new cairn covering. There may have been a conceptual reason for not altering the
original monument; perhaps the memory of the ancestors who were honoured there still remained in group memory. The monument is at the centre of a ritually important area, with two court tombs and a standing stone nearby.

At Ballykeel the large tripod portal tomb stands at the southern end of a long cairn and a slab-built cist is at the northern end (Fig. 136, 183). Different phases of activity associated with the site are clearly indicated by the deposits, mainly of pottery, which demonstrate usage from the Early and Middle Neolithic periods. Here the excavator believed that the cist was an original feature of the design rather than a later insertion due to its location on the long axis of the cairn (Collins 1965, 67). It contained a small amount of pottery and lithic deposits but no indication of bone, while the portal tomb had high levels of phosphate which may have indicated human burial.

Ballywholan is a small portal tomb set at the eastern end of a large, high long cairn, investigated in 1897 by Rev. Joseph Rapmund (Wulff 1923). This strange monument, much destroyed, probably has two stone cists at the western end where Rapmund observed ‘osseous fragments ... uncalcined .. and calcined’ and a leaf-shaped arrowhead. The portal tomb contained a flint knife and some pottery.
5. Morphology.

The reason for these complex monuments is unclear. The distribution is very distinct but otherwise they seem to have little in common. Cody (2002) speculates that "the distribution of portal tombs, both simple and composite, along the north-west coast might demonstrate population growth which necessitated bigger monuments. In certain areas, for example coastal Donegal, this resulted in the development of composite monuments, while in others the portal tomb tradition faded out and was replaced by court tombs, with their larger area and a design more suitable to flexible ritual practices'. His opinions could have relevance in other areas of 'composite' portal tomb distribution; the construction of tombs with two differing structures in other areas of Ulster might have been a local reaction to similar population growth.
5.8 Case Study – Kilmogue.

A study of Killmogue portal tomb is included as it exemplifies many of the morphological features discussed in this chapter.

Kilmogue Co. Kilkenny, also known as Harristown and Leac na Sceal, is one of the largest portal tombs in the country. It represents an example of the south-eastern band of portal tombs which spread from Dublin to Waterford, and which are distinguished from those in the rest of the country by certain subtle differences in structure and siting. This group of portal tombs is widely separated from the main distribution areas, and, interestingly, is not associated with court tombs which are very commonly found close to portal tombs in the rest of the country. The nine tombs in Co. Dublin are somewhat dissimilar in landscape siting and might be considered as a separate ‘group’, divided from the rest by the granite mass of the Wicklow Mountains.

Fig. 143. Kilmogue portal tomb, Co.Kilkenny.
5. Morphology.

5.8.1 Physical landscape. The landscape in Co. Kilkenny consists mainly of smooth, rolling pastureland with low rounded hills. The bedrock is a complex mix of conglomerates and sandstones. The portal tomb is some 200m north of a stream which flows easterly to the Pollanassa River which joins the south-flowing Black Water, a tributary of the River Suir. This is very typical of the portal tombs here. None of them is associated with one of the major rivers, the Barrow, the Nore, the Suir or the Slaney, but all are beside a tributary, or a tributary of a tributary.

![Fig. 144. Kilmogue – location map.](image)

Although most of the county is below 300m OD there are some mountainous areas, like the Blackstairs and the Comeraghs. Portal tombs in other parts of the country often cluster around mountain foothills, or in the valleys leading up to hills as is shown very clearly in Co. Down where 5 portal tombs are situated around and in the Mourne Mountains, but never at a summit. (Fig. 145). The Dublin portal tombs, often regarded as similar to the southeastern examples, also demonstrate this aspect of siting very clearly as seven of the eight are situated in the foothills of the Dublin mountains (Fig. 146). The portal tombs in the southeast of Ireland seem to avoid mountains and their foothills completely.
The soils in Co. Kilkenny are generally fertile brown earths and podzolics and produce some of the best pasture in the country (Appendix 1, no. 4). The portal tombs are sited on these good soils, with some, like Kilmogue, Ballyheneberry and Killonerry, appearing on the margins between the two types, perhaps identifying and claiming land on the best side of the boundary.
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5.8.2 Ritual aspects of the landscape. Kilmogue lies in a busy Neolithic region, but is not in close vicinity to any other monument. It is most likely that it was constructed earlier than either the passage tombs or the Linkardstown-type structures, and there are no court tombs in the area, so portal tombs were the pioneers of constructed ritual sites; the sites were selected either by portal tomb builders or their close ancestors (Chapter 6.2). There is some Mesolithic evidence from the area; a ploughzone survey of the area around Waterford harbour by Green and Zvelebil (1990) found several deposits of Mesolithic lithic material, but, although there are six portal tombs to the west of Waterford city none is close to identified Mesolithic evidence.

Fig. 148. Neolithic ritual sites in Cos. Carlow, Kilkenny, Waterford and Wexford.
5.8.3 **Aspects of the Site.** The portal tomb is situated in good pastureland sloping gently to the small stream in the south-west. The tomb is orientated to the north-east and no significant view could be discerned. There is a small stream encircling the structure on the northern side but it seems likely that this is a ditch rather than a natural stream. Downslope of the portal tomb is a standing stone approximately 50m to the south-west; there is no other Neolithic evidence from the vicinity.

A small stream flows from west to east to the south of the portal tomb but it is not visible from the site. Holy wells are located 200 m to the north-west and c. 600m to the south-east. A low hill (Mullenbeg, OD 314m) lies to the north-west, but although only c. 2 km distant it is not visually dominant and is located to the side of
5. Morphology.

the portal tomb. There is no attempt to conceal the structure or to set it in a discreet location as is so common elsewhere, and if the present hedgerows and trees were removed it would in fact dominate the landscape.

5.8.4 The Structure. This is a large, complex portal tomb, as are many in the south-east and Dublin areas. It is composed of the local conglomerate sandstone, with strikingly large quartz inclusions, accentuating the strong visual nature of the structure. The monument is over 4 metres high, but the chamber is very small and difficult to access. It would not be possible to stand upright inside and movement would have been very restricted. The secondary capstone delineates the chamber and is carefully positioned resting on the backstone and one of the sidestones, kept level by the insertion of a padstone and stabilised by the weight of the massive, steeply angled capstone. The fact that this awesome balancing feat has endured for nearly six thousand years is a testimony to the skills of the builders and the convictions of those who conceived them. The monument is completed by a full height doorstone, completely sealing entry to the chamber from the front, and resulting in a portico-like area sheltered by the front of the capstone and a very common feature.

Fig. 150. A huge monument but a small, almost inaccessible chamber.
There are slight indications of a cairn, sub circular in shape, but field clearance may have removed many more stones. The monument exhibits a strange and very frequent feature whereby the structure looks completely different from different angles. From the front it is closed, forbidding and earthbound, while from the side it is open and elegant and suggests flight and lightness.

5.8.5 **Summary – Kilmogue.** Kilmogue portal tomb is a good example of the subtle differences which exist between tombs in this area and in the rest of the country. If taken individually they seem unremarkable, but the cumulative effect may indicate a difference in ritual practice and/or societal structure. The Dublin portal tombs are often considered as part of the same group but in this study it is suggested that the choice of location seems to differentiate them.

The size and architecture of a monument can give information about the society which built and used it (2.5 and 3.2). A large, complex monument indicates a large, complex society and there are more large structures as a percentage of the total in the south-east of the island than in the island as a whole. In the 5 south-eastern counties just over one third, or 36% of the total could be classified as larger than average, while the percentage for the island as a whole is 26%, and a similar percentage of larger than average capstones was noted in this area (5.3.1).
The presence or absence of a doorstone, full, half or merely a sillstone, has not been explained, yet it is a deliberately chosen feature which had significance. In the southeastern area full doorstones are much more frequent than in the island as a whole but there are no sillstones. Cody (2002, 278) points out that the inclusion of a full doorstone has the effect of creating a closed monument, like the Linkardstown cists which are found in the area, thus they seem ‘to represent adherence to the concept, if not necessarily the reality, of a sealed chamber’. He suggests that this indicates an ‘underlying unity’ in burial rite in south-east Ireland, apparently different from that obtaining in the northern one third of the country.

There is also a difference in the chosen location. Portal tombs are generally situated on good agricultural land where that is available, but as virtually all the land in these counties is prime farmland that is not necessarily a choice, and there is little of the apparent marking of different soil types. What is apparent is that the foothills of mountains are completely avoided, and that many of the tombs are very evident in the landscape with no effort at concealment or discretion as is commonly displayed in other areas. Some monuments appear to dominate their landscape and call attention to themselves, perhaps, as suggested by Powell (2005), displaying the strength and self-confidence of the group, or advertising the power of the leaders of society who not only constructed the monuments but also controlled the rituals conducted there (Fleming (1973). This would indicate a different societal size and structure in these counties, and might also concur with Renfrew’s 1976 explanation of territorial markers which should have been visible to be effective.
5. Morphology.

The absence of court tombs from these areas is also suggestive of different practices and structures. Court tombs appear to provide a site for group ritual practice, with differentiated areas for practitioners and spectators. In the absence of court tombs the portal tombs may have been used for continuing ritual practice not evident elsewhere. Their open, accessible locations would have provided suitable areas for ritual occasions.

Differences may exist in the details of the monuments, but the fundamental design remains constant, indicating that the basic beliefs were similar.

The reasons for the apparent differences in these south-eastern portal tombs can only be speculative without some excavation. It is possible that there was no concrete reason why these differences exist: it could simply be an illustration of what Scarre (2000) suggests for Breton monuments, that the intrinsic qualities of landscapes determined the form and visual appearance of the monuments.

5.9 Summary.

The morphology of portal tombs displays two distinct intentions. On the one hand there is a constant adherence to the simple structural form with three upright stones holding a large, tilted capstone, yet on the other there are differences in size, the presence or absence of sidestones, doorstones, cairns, and a different appearance due to the selection of stones. It seems most likely that the monuments displayed a universal overarching significance which was open to displaying local differences in ritual practice or social structures, regionality or possibly in chronology.

Ritual practice is often regarded as a theatrical performance (Fleming 1972, 1973), involving action and organised movement (Richards 2004a, Barrett 1991, Thomas 1991b, Chapter 3.3). In this respect portal tombs provide both a positive and
5. Morphology.

a negative setting. They are strong, attention-focussing structures, with a well-emphasised front providing a frame for a single individual, but the entrance and interior seem to preclude ritual movement. In many chambers there is no space for ritual postures like kneeling or prostration, and in some entry is impossible. Exterior ritual practices might be possible but the landscape siting (Chapter 4) does not encourage large-scale processing or organised movement. It would not be possible to see inside many chambers if some ritual was being practised. Later entry to the chambers has been suggested between some portals or through the sides, but this, although possible, could not have been conducted in a ceremonious way. Ritual practice associated with use of the tombs seems to have been static and limited to a small number of practitioners, and visibility by a large ‘audience’ is not stressed.

It seems possible, or even probable, that portal tombs were erected as single-use monuments, never meant to be re-entered, and perhaps with the act of construction as the premier ritual occasion (Richards 2004a, 72). There is evidence that some portal tombs were used on more than one occasion (Chapter 6), but this may have occurred due to a change in ritual practice or beliefs, or a change in social structure which permitted re-entry to some in society.

The presence or absence of a doorstone, and the different heights of doorstones, is the most striking difference between tombs, but it is not possible to say why it occurred. It could be explained neatly by chronological change, but the evidence is not there. It suggests differing ritual beliefs and/or practices, but if, as suggested above, the tombs were conceived as single-use monuments then the different practices existed side by side as the different types are all found in the same areas. Full doorstones are not found in any other monument type and seem particularly strange. Why build a doorway and block it? The suggestion that the portal stones are not framing a doorway but supporting a capstone has been considered, but the presence of a chamber seems to negate this. The strongest impression gained is that a doorstone signified strongly that no re-entry was permitted, thus the suggestion of single usage only is supported. Sillstones and half doorstones may have been constructed to suggest the concept rather than to physically impose it.

The special significance given to the capstone might have emphasised the importance of the spirit world over the living one, or it may have had a more practical
function. It certainly drew attention to the monument and might have carried a message about the strength and prestige of the builders and users and might, as suggested by Sherratt (1995), have carried a message regarding the superior power and insight of newcomers and their agricultural economy. Powell (2005, 20), emphasising the ‘highly conspicuous architecture’ suggests that the monuments demonstrated the strength of a territorial claim with the ‘bravado’ of the tilted capstone ‘reflecting the group’s display of physical strength and collective self-confidence’. Again, these suggested functions seem unlikely in those monuments which are situated in discreet, unobtrusive locations.

Monuments have been described by Chris Scarre (1994a, 75) as ‘the most eloquent testimony to the importance of symbolic and ritual practices to ... early farming communities.’ Where a monument type displays a universal and striking architectural form it seems likely that it is testimony of a universally held belief and demonstrates a similarity of ritual practice. In the case of portal tombs there is a strong case to be made that they represent an understanding of a three-tiered cosmology (Chapter 3.4). Lewis-Williams and Pearce (2005) believe that this concept is ‘hard-wired’ into the human brain and cite ethnographic examples of early agriculturalists who demonstrate belief in the concept. Eliade (1957, 46) agrees that this is a universal concept and believes that it is displayed in ritual structures.

The three-tiered cosmology may have been represented in two ways. There were almost always three supporting stones and the form of the monument resulted in three horizontal layers, the capstone, the chamber as delineated by the uprights, and the underground in which the uprights were rooted and deposits made. It is almost impossible to avoid interpreting these as the sky, the realm of the spirit world, the earth, the realm of the living, and the underground, the dwelling place of the dead, the ancestors, where all living things eventually decay. Ethnographic accounts of the out-of-body experiences of shamans in the San communities in southern Africa describe how the souls of these ritual practitioners are perceived to have journeyed to the underworld of the spirits during periods of trance (Lewis-Williams & Pearce 2009, 124), the underworld as represented by the sub-surface of portal tomb chambers. If there was any pre-construction ritual activity associated with portal tombs it took place here, marking the place of the dead.
Whittle (2004, 86) believes that the monuments represent a different cosmology, that of a myth of creation, with the capstone as a primeval being emerging from the earth to the sky via the mountains. This is credible, but is based on his assumption that the capstones were quarried ‘lifted up’ from directly beneath the monument, which does not seem to be the case with Irish portal tombs. Interestingly, Irish mythology is one of the very few world mythologies which does not record a myth of creation; the earliest stories tell of a series of invasions. It is possible, however, that mythological versions of creation did exist and were simply ignored by the monkish scribes who first recorded versions of ancient Irish myths, with the intention of promoting the Christian, Adam and Eve version.

Portal tombs are examples of early Neolithic monumentality, common along the Atlantic coast of Europe, adopted with comparative suddenness by early farmers in far-flung areas. They are not copies of any other monumental type; with the exception of the Welsh dolmens and the Cornish quoits the structures displayed in both Britain and Brittany, the most likely places of origin of settlers to Ireland, are very different from portal tombs except in the choice of large stones. In Ireland a distinctive, island-wide morphological design was selected and followed with impressive consistency despite widely differing sizes and stone types. There must have been an overriding reason for adherence to such a defined architecture; it must have symbolised or suggested something important to the beliefs or lives of the builders. Although, as discussed, the architecture of portal tombs is strongly suggestive of a depiction of a three-tiered cosmology, there are particular aspects of the design which might suggest an alternative interpretation, or perhaps a linked, entwined significance expressing a concept of particular insular importance within a structure which celebrated the overarching beliefs of European early farmers.

5.9.1 The bull from the sea?

Mary Renault’s compelling historical novels include a retelling of the myth of Theseus, legendary king of Mycenean Greece, whose life and kingship were entwined with bulls, both real and symbolic. As a young man he took part in the ritual bull dance at the court of Minoan Crete, and later his life was altered by the death of his only son in a tsunami, ‘the bull from the sea’ of the book’s title.
The bull was a potent symbolic force throughout European prehistory. Bulls are included amongst the animals in the Palaeolithic cave paintings of Lascaux and Altamira. The Neolithic houses of Catal Hoyuk were decorated with bull horns and models of their heads adorned the walls. Theseus and his companions probably danced with the bulls during the Minoan Bronze Age, and the Táin Bó Cuailgne, the Irish narrative poem which may have celebrated events in the Iron Age, concerns a tribal war originating from the theft of a famed bull. Bronze trumpets or horns, believed to be copies of bull horns, have been found in ritualised deposits throughout Ireland dating from the later Bronze Age (Waddell 1998, 234f; Coles, 1965, 1967) and may have been for ceremonial display suggesting the existence of a ‘bull cult’ (Coles 1965). Four beautiful bronze horns, decorated in the Iron Age La Tène style, were deposited in Loughnashade, close to the ceremonial centre of Navan Fort, demonstrating the continued importance of cattle in ritual contexts. Emphasis on
cattle as a measure of wealth and power continued in Ireland through the medieval period and is still to be glimpsed today.

Carvings of horned animals, probably cattle, have been found on Breton menhirs, possibly the earliest megalithic monumental types from the area, dating from the Early Neolithic (Patton 1993). Bradley believes that these carvings may be linked to depictions of shepherds' crooks and possible ploughs, all found on menhirs, and all symbols ‘peculiarly appropriate to the new mode of production (agriculture)’ (Bradley 1989, 71).

Fig. 156. Horned bovids carved on a Breton menhir (Patton 1993, 59, 60)

There are no native large mammals in Ireland. Aurochs, the wild form of cattle, were found throughout Europe, including Britain, but they have never been located in Ireland. The presence or absence of deer during the Neolithic is still debated; even if they were present they do not seem to have played an important part in the life of the early farmers (Woodman 2003). The first cattle would thus have been startlingly visible; bulls in particular may have been deemed more important as part of the Neolithic lifestyle here than elsewhere where large mammals were familiar. They would have marked an important difference between the incoming Neolithic settlers and the indigenous inhabitants, in both physical and symbolic terms. Perhaps this significance was celebrated in the chosen design for the earliest monuments.
5. Morphology.

There are particular aspects of the architectural design of portal tombs which suggest to this writer that they might have been intended to celebrate the might and importance of the bull. Almost invariably the capstones of portal tombs are tilted up towards the front and the stone usually has its heaviest portion to the front. Most capstones overhang the portal stones by a varying amount, forming a feature described as a portico. These design features are not found in contemporary megaliths elsewhere.

Perhaps these features depict an abstract representation of a bull, with an emphasis on the strong head and shoulders, tapering to fairly insignificant rear quarters. Figurative art is not found in early prehistory in Ireland, but it is just possible that the portal tombs are an early attempt to celebrate this important creature in visual form, to monumentalise its arrival from overseas and emphasise the authority of those who had brought it.

Fig. 157. Portal tombs and 'the bull from the sea' – a suggestive design?

Louis le Brouquy's abstract depiction of the brown bull of Cuailgne.

Murnells Co. Tyrone.

Proleek Co. Louth.

Gortnavern Co. Donegal.

More over
5. Morphology.

Brennanstown Co. Dublin.

Legannany Co. Down.

Altdrumman Co. Tyrone.

Leitrim Co. Tyrone.

Kiltiernan Co. Dublin. 18th century watercolour by Beranger (Harbison 1991).

Fig. 157. Portal tombs – a suggestive design?
Chapter 6. Rituals of construction and use.

6.1 Introduction.

The most recent excavator of a portal tomb, at Tirnony Co. Derry, has discussed the possibility that the monument was not constructed at one time, but resulted from a sequence of events, including episodes of preconstruction ritual activity at the site. Although the excavation report has not yet (August 2014) been published in full, Tirnony portal tomb is described as ‘a multi-phase ritual monument’ (McSparron et al. 2013, 5), with an ordered sequence of construction events which ‘may reflect different aspects of the ritual and beliefs of the tomb builders’ (Ibid. 29). The writers believe that they have identified details of sequencing in construction and ritual activity which have been only hinted at in excavations of other sites. It has not been possible to reveal whether these episodes followed swiftly after each other, or whether there was a delay, for even years or centuries between each episode.

6.2 Pre-construction ritual activity.

At Tirnony the excavation uncovered two pits beneath the surface of the chamber, filled with loam, and concealed beneath a layer of flattish stone flooring which covered the entire interior of the portal tomb and continued beneath the portal stones (McSparron et al. 2013). The larger pit lay partially beneath the eastern portal, emphasising the comparative lateness of the portal stone erection. The pits were

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Fig. 158. Tirnony portal tomb interior during excavation. Two pre-construction pits, 403 and 411, are indicated above. (McSparron et al. 2013, 23). See also fig. 165.
described as shallow and sub-circular and were filled with a grey-brown loam soil (Ibid. 20). The layer of flat stones above may have been laid as a covering for the pits or as flooring for the chamber.

Hints of pre-construction pits emerge from other excavation reports. At Melkagh, Co. Longford, excavated by Gabriel Cooney in 1984-86, a quantity of information regarding the cairn and the possible method of construction was uncovered. Although the tomb was very ruined and little depositional material was found, there was a ‘steep-sided hollow in subsoil/bedrock surface, containing a sandstone slab’ (Cooney 1997, 234) lying within the area believed to have been the chamber, presenting ‘an interpretative problem’. Cooney suggested ‘it is possible that (it) represents early activity on the site, pre-dating the cairn’ (Ibid. 224).

![Fig. 159. Melkagh excavation – pit in subsoil (Cooney 1997).](image)

Taylorsgrange in Co. Dublin was excavated over four seasons by Valerie Keeley and Associates. Unfortunately the full results are not available but pits were uncovered in the vicinity of the portal tomb which showed traces of human burial (Keeley 1986), and might indicate pre-tomb ritual activity.

Ballykeel in Armagh was excavated in 1963 by Collins (Fig. 183). It is a tripod tomb set at the end of a long cairn and excavation revealed the presence of a ‘loosish’ deposit of old soil with charcoal at the end of the cairn farthest from the portal tomb.
6. Rituals of construction and use.

which Collins suggested could be explained ‘in terms of pre-cairn occupation’ (Collins 1965, 48). Traces of similar pre-cairn soil with charcoal were noted in other depressions at the base of the cairn, and within the chamber was a depression approximately 12 inches deep, filled with dark, charcoal-blackened soil and ‘floored ‘with stones, laid with ‘some care... in their selection and placing’ (Collins 1965, 54). The excavator also suggested that the fact that Western Neolithic (carinated bowl) sherds were mainly located just outside the chamber, very low in the stratigraphy, (Fig. 182) may indicate that they pre-dated the construction of the tomb (Ibid. 68); further indications of sequential construction are discussed below (6.3).

Clonlum portal tomb Co. Armagh is a small portal tomb set in a distinctive sub-circular cairn (Figs. 160, 161). Excavated in 1934 by Davies and Evans it revealed a ‘puzzling’ stratification in the chamber. Two shallow pits in the floor of the chamber were filled with clean brown earth and partially covered by a layer of hard yellow clay, containing deposits of pottery and a stone bead. The excavators suggest that the pits might have had a structural purpose, ‘for the reception of shores ..... to hold up the end-stones while the side stones were being placed in position’ (Davies and Evans 1934, 167), but they do not seem convinced by this and describe it as a ‘tentative’ conclusion. The section drawing of the excavation below does not suggest that the pits were supportive; they could rather have been earlier ritual pits similar in purpose to those at Tírnony.

Fig. 160. Clonlum Co. Armagh.

Fig. 161. Clonlum excavation - pits? (Davies & Evans 1934).
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Ballyrenan Co. Tyrone (Figs. 162, 166) is a double-chambered portal tomb investigated in 1907 by Lady Alexandra Hamilton and excavated by Davies in 1937. Davies describes the presence of a ‘small black pocket in the floor’ (Davies 1937, 92) a short distance behind the front chamber and on the central axis of the cairn. This pit contained hazel charcoal. Another pit was located along the same axis, in front of the back chamber (Ibid. 94); this was filled with stones and earth.

The information from Poulnabrone does not identify any pre-construction activity, and appears to indicate that there was none. At the time the monument was constructed there was a very thin soil cover, averaging 10 – 12 cm, in the vicinity, and although within the chamber itself soil reached a depth of 25 cm (Lynch & Ó Donnabháin 1994, 5) this depth would not have permitted postholes for supporting substantial posts. The excavator noted that the soil in the chamber ‘had suffered remarkably little disturbance’ (Lynch 1988, 106), which seems to preclude the existence of pits.
The intention or meaning of these features occurring in several portal tombs is unknown but the excavators at Tirnony (McSparron et al. 2013, 31) suggest similarities between this sequence and the possible series of events at a court tomb at Dooey’s Cairn, Ballymacaldrick, where three pits containing cremated bone, charcoal and pottery, believed by the excavator to be ‘the first step in the elaborate ritual of burial’ (Evans 1938b, 68), were later covered by the chamber of a fine court tomb (Evans 1938b; Cooney 2000, 99). Cooney (2000, 101-3) believes that these pits had contained posts which supported a wooden cremation structure, possibly a raised platform. The structure might have been used for the initial excarnation of bodies with later
cremation in a ditch dug along the line of the posts. Some of the burnt bones were later deposited in one of the pits, and the whole structure burnt and covered with rough paving. The single chamber of the later court tomb was built over the long axis of the posts ‘to give permanence to a site that was at first perishable’ (Jones 2007, 112), and the whole sequential use of a single ritual site, lasting for some 500 years, was terminated by the closure of the tomb entrance and the deposition of blocking stones within the court. The use of timber cremation structures has been suggested at other locations within Ireland and in Scotland (Cooney 2000, 102).

The suggestion that a similar sequence of events took place at Tirnony seems possible (Fig. 165). While only two pits were identified here the chamber of the portal tomb was constructed directly above them and aligned in the same direction. Two pits were also evident at the double portal tomb at Ballyrenan (Fig. 162). Although neither tomb here was built over a pit the long axis of both chambers and the cairn followed the same line as the pits. A similar situation exists at Clonlum, although these two pits might have been for structural supports for the portal tomb (Fig. 161). With regard to the pits identified at other portal tombs there is less certainty. Only one was found at Ballykeel, within the chamber (Fig. 183) and Melkagh, and at other excavations, for example Poulnabrone (Lynch 1994), Drumanone (Topp 1962) and Aghnaskeagh (Evans 1936), no such pits were found. Nevertheless this suggestion of possible sequential construction has implications in our understanding of portal tombs; the chosen site may have been influenced by the presence of pre-construction pits and the ritual practices which inspired them.

The suggestion that the pits were pre-construction cremation structures interprets them as postholes, but they could have been simple pits, dug for depositions. These appear to have been a relatively frequent occurrence in England, with fewer examples from Ireland, although many more have been found in Ireland over recent years, mostly due to development-led excavation (Cleary & Kelleher 2011, 132). At a recent excavation of a Neolithic settlement site at Tullaheady Co. Tipperary 268 pits of probable Early to Middle Neolithic date were found (Ibid. 51) and many contained structured deposits of domestic items, mainly pottery and lithics, and charred hazelnut shells. The excavators believe that, in general, they did not represent structural foundations, but, although mainly isolated from each other, their similar size and fills suggested that they had similar function (Ibid.). Smyth (2014, 112) believes that ‘pit-digging and deposition was a very common practice in the Irish
6. Rituals of construction and use.

Neolithic, particularly the Early Neolithic’, and found evidence of pits in association with houses, other structural remains and in isolation. Pits at houses normally contained simple fills of clay with charcoal, burnt and unburnt stone and hazelnut shell with occasional potsherds and lithics (Ibid. 113), but she regards them as more meaningful than rubbish disposal holes. Thomas (1999, 64) describes the typical Neolithic pit as ‘most often shallow, bowl-shaped forms’, typically between 1 and 3 feet deep, and frequently containing domestic material which had been burnt (Ibid. 65). He finds strong indications that the depositions were structured and therefore meaningful, and believes that they rendered their locality significant; many were associated with important ritual sites like causewayed enclosures and henge monuments. The act of deposition might have been a commemoration of a particular event like a gathering or period of occupation. Bradley (2007b, 353), commenting that in Ireland isolated pit deposits are unusual, suggests that this may be because houses provide a suitable deposition site for domestic articles, but Cooney (2009), as discussed in Chapter 2.4.2, describes the use of stone as a structuring material in pit deposits in Lambay Island, site of a Neolithic axe factory, a ritual, rather than domestic, site.

Danaher (2007, 109) interpreted pits at Magheraboy causewayed enclosure in two different ways (Fig. 164). Post-pits within a bedding trench containing packing stones and potsherds may have functioned as the foundation for an excarnation platform, while the 55 pits found within the otherwise empty central area were interpreted as sites of structured deposition of domestic items, representing the ‘ritualization of objects from domestic life’ (Ibid. 110). These pits contained charcoal, potsherds, cremated bone, seeds, and were dated (from charcoal) at varying periods from very Early Neolithic (4220 cal BC) to Middle Neolithic (3520 cal BC) (Ibid. 111).

![Pits in a possible foundation for excarnation platform.](image1)

![Pits for deposition.](image2)

Fig.164. Pits at Magheraboy. Danaher 2007, 106, 108.
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The fact that none of the portal tomb pits contained evidence of depositional material might suggest that they were postholes, as suggested by Cooney (2000), but their shape, as far as can be ascertained, makes this less likely. With one exception they appear to have been shallow and bowl-shaped, not very suitable for supporting heavy timber posts. The pit uncovered at Melkagh (Cooney 1997, 234) was described as steep-sided and could have supported a post, but the site was so disturbed that no firm conclusions could be made. Taphonomic destruction could have removed all traces of organic deposition and, as the earliest identified treatment of human bone in portal tombs is not cremation but inhumation, the possibility that that the pits were for deposition purposes seems most likely. The existence of pits which probably predated the construction of the portal tombs illustrates the strength of ritual tradition in site selection. Memory of the cosmological or other significance which first identified the site may have become embedded within the mythology of the group. It was thus natural, or even inevitable, to reuse this site when erecting a new, permanent structure. Reuse of the same site may show that there was no major change in beliefs between the two episodes; there is no evidence of the time which elapsed between them and it might have been very brief.

6.3 Rituals of construction.

The excavation of Tirnony revealed strong evidence that the structure had been erected in sequential stages, and it is possible that the same may have been true of other sites. At Tirnony the excavators found that the first orthostats to be erected were the backstones, the east sidestone and the rear west sidestone (Fig. 165). These stones were set directly onto the subsoil either after the two pits were dug, or possibly at the same time (McSparron et al. 2013, 29-30). A layer of ‘medium-sized flattish’ stones was then laid as a floor for the chamber and/or as a cover for the pits. This ‘floor’ continues beneath the portal stones and the west front sidestone, which were thus erected at a later date, ‘after an indeterminate period of time’ (McSparron et al. 2013, 5). The time lapse between the various sequences of construction is unknown, as is the place within the sequence of the erection of the capstone. No cairn material was found which might have indicated the sequence of capstone placement, but it must
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Fig. 165. Tirnony excavation. (McSparron et al. 2013; feature names have been added).

Have been later than the erection of the portals. The flanker, discussed in chapter 5.6.1, was a later addition.

It is less easy to identify the possible sequence of construction at other excavated sites as the excavators may have had a perception that the monuments were constructed at a single occasion. At Clonlum the structure had been thoroughly examined by treasure seekers and the sequence, described by the excavators as ‘puzzling’ (Davies & Evans 1934, 167), was rendered almost impossible to interpret. The western portion of the structure (the portal stones) was wholly enclosed in the body of the cairn, which indicates that they were in position before the cairn was completed, and all the orthostats were erected on ‘small boulders partly sunk in virgin soil’ (Ibid. 164). At Ballyrenan Davies believed that the back chamber was constructed at a later period than the front chamber (Davies 1937, 90). A floor of orange clay covered the front surface of the structure, and extended over the kerbstones, thus postdating the base of the cairn (Figs. 162, 166). The excavator believed that the clay floor was contemporary with the front chamber, but the sidestones of the back chamber revealed that they rested directly on black earth ‘at a high level’ i.e. the orange floor did not extend to the back chambers. The base of the sidestones of this chamber are visible today, and fragments of cremated bone were found beneath one of the south sidestones, proving, said the excavator ‘the structure was built around the bones, which were laid in position first’ (Ibid. 93). Davies also suggests that the
6. Rituals of construction and use.

construction of the second chamber must have involved the removal of nearly half the cairn, and that the similarity of potsherds from the two structures indicate that there was only a short period between the two construction episodes.

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There is some evidence of a construction sequence at Ballykeel (Fig. 136, 183). The backstone was inserted into the cairn ‘the backstone had been set in a shallow cavity only 1 ft deep formed within the mass of stones’ (Collins 1965, 54), whereas the portals were set deeply within the underlying till. The backstone was therefore installed at a later point in the sequence of construction. Within the cairn itself the inner two lines of stones predated the rest of the cairn, as they supported other cairn stones. Collins speculates that they may have preserved some memory of earlier design features, as they seemed completely non-practical (Ibid. 65). The lower layer of the cairn must have been in place before the deposition of most of the pottery within the chamber, as these potsherds lay on top of the basal layer. The doorstone at Ballykeel could have been inserted late in the sequence, permitting access to the chamber after the removal of ramp material (Collins 1965, 66). It is notable that this is different from the sequence at Drumanone, where the excavator stressed that the doorstone was contemporary with the portal stones – ‘it was not a mere closing stone but a constructional complement to (the portal) stones’ (Topp 1962, 42).

Estyn Evans removed the entire cairn at his excavation of Aghnaskeagh (Evans 1935), Fig. 167. He believed that the cairn was laid down uniformly, directly on the natural till, in two layers, the lower of which was more solid and well-laid than the upper, particularly in the immediate vicinity of the monument. The upright stones of the megalith were set directly into the underlying till, thus almost certainly
6. Rituals of construction and use.

Fig. 167. Aghnaskeagh excavation – section. (Evans 1935, 239).

being in position before the cairn was built, and, as at Tirnony, a stone floor layer was then laid. This in turn was covered by a layer of brown loam, within which most of the depositions were found. The whole ground surface was finally covered by a charcoal-rich layer, at an unknown date but possibly much later; Evans speculates on the likelihood of the structure being used as a shelter during the Iron Age (Evans 1935, 242). No further indications of sequential activity can be deduced from the primary construction period and the later extension of the cairn is believed to have been constructed at the period of the insertion of Bronze Age cists, as discussed by Brindley (1988).

Melkagh was so badly damaged that very little of the structure could be identified and no suggestion of a sequence of construction was made (Cooney 1997), and the excavation at Poulnabrone does not identify a sequence of construction (Lynch 2014).

The limited information available seems to indicate that, although the tombs may have been constructed in an ordered sequence, possibly separated by periods of inactivity, there was no commonly followed sequence of construction for portal tombs. At Tirnony the back of the tomb was in place initially (McSparron et al. 2013, 29-30), but at Ballykeel the backstone was not set until late in the sequence (Collins 1965, 54), while the portals were set in sockets in the till, thus predating the cairn construction (Ibid. 54). The doorstone at Drumanone was erected at the same time as the portals (Topp 1962, 42), whereas at Ballykeel it seems to have been a late insertion, into the cairnstones, and all the uprights at Aghnaskeagh appear to have predated the cairn construction (Evans 1935, 238).
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If the portal tombs were erected in intentional sequences there is no information which could indicate the length of time between each part of the sequence; the process could have continued seamlessly from one aspect to the next or could have involved planned breaks in the sequence, perhaps for long periods. The fact that there does not seem to be an overriding, commonly followed sequence at different sites makes it more likely that construction was carried out without periods of inactivity; had there been an accepted sequence of construction then the conclusion of each particular stage could have been marked by a cessation, with a possible ritual celebration. It is quite possible that the tombs were constructed in whatever sequence seemed most convenient at the time.

As discussed in chapter 3.3.2 some writers have suggested that the act of construction was the intended ritual occasion, and described ‘... the misconception ... of the notion that it is built to provide a function only after construction’ (Richards 2004b, 72), and this interpretation has been suggested for other monument types, for example stone circles (Richards 2004c) or causewayed enclosures (C. Evans (1988). This study suggests that the act of construction of portal tombs may have been the intended ritual celebration.

The construction of a portal tomb would probably have happened only once in a lifetime and was most likely attended with various ritual ceremonies. The sequence of construction activities might have matched the sequence of land clearance and initial farming, perhaps with the first planting of a seed commemorated by the filling of a ceremonial pit with significant items. The moment when the capstone became fully supported by the uprights must have been a moment of supreme achievement, both physical and cognitive, and may have had a quality of completion and finality. It could be suggested that the placement of the capstone, most likely the last stone to be installed, commemorated the last of the trees to be felled in the particular plot of land being cleared. The satisfaction attained by successfully completing the laborious task of forest clearance may have been echoed by the achievement of completing the construction of a significant monument and would have warranted a major celebration. Lynch (1972, 77, quoted in Whittle 2004) believes that it would have been an ‘achievement of special virtue to the builders of Portal Dolmens’, and Cummings & Harris (2011, 374) regard the significance of monuments as ‘the act of coming together to work on building something communally’.
6. Rituals of construction and use.

The ritual importance of the construction occasion may have been stressed by foundation deposits, as found in some excavated examples. At Drumanone the excavator found the cremated remains of parts of a skull and a tooth beneath a sidestone (Topp 1962), and Davies (1937) found that structural stones of Ballyrenan portal tomb were raised over fragments of cremated bone. Collins (1965, 67) also believed that deposits at Ballykeel may have been made before the erection of the ramp up which the capstone was raised. At Tirnony Co. Derry traces of a small fire were found beneath the western portal stone (McSparron 2011, 27) and the excavator believes that ‘this seems likely to have been a ritual associated with tomb construction’ (Ibid.). At Aghnaskeagh Evans (1935, 242) found lumps of charcoal against the south portal stone showing that ‘fierce fires had been burning on the spot’ which he speculates could have been used for cremation purposes. It is possible that they had some other ritual function connected with construction but, as the charcoal has not been dated, Evans points out that the structure could have been used as a domestic shelter during the Iron Age (Ibid.).

The theatricality of ritual practice, involving action and organised movement, is stressed by many writers (e.g. Fleming 1972, 1972, Barrett 1991, Thomas 1991b, Richards 2004a) but as discussed in chapters 4 and 5 neither the morphology nor the preferred siting of many tombs encourages a theatrical-type performance involving a substantial number of participants and/or witnesses. The occasion of construction, however, could have provided an opportunity for a ritual performance, including aspects of sourcing and transporting stones (as suggested by Kalb 1966, see Chapter 3.3.2). The theory that construction might have been conducted in a sequence of episodes does not detract from this suggestion; even if construction took place over a number of years the ritual aspect of each part of the construction process could have been celebrated. Similarly, later ritual practice at the same site is not ruled out even if not originally intended. Beliefs and their associated practices may have undergone constant readjustment and alteration over time, resulting from, and stimulating, changes in social structure and cognition.
6. Rituals of construction and use.

6.4 Rituals of human burial.

“Burial is a highly symbolic activity through which concepts of the world are reflected in the representation and treatment of human remains.”

6.4.1 Introduction. Death is the one inevitability in life and a ritual treatment of human remains is a universal human reaction. It is not the dead who bury themselves but the living; the beliefs and ritual practices of the living are reflected in the archaeological record, and sometimes the beliefs and cultural backgrounds of archaeologists permeate the interpretations. Interpretation of human remains in portal tombs has reflected the theoretical stance in vogue at the time of writing, and Thomas (1991b, 126), in a discussion of Beaker period funerary practices in Britain, remarks that many interpretations have been made by those with ‘mutually antagonistic philosophies’.

Study of the ritual aspects of human remains was not undertaken in the early days of archaeology, as it was considered that the study of ideology, ritual and belief was the ‘hardest inference of all’ to understand from material remains (Hawkes 1954, 162). With the introduction of more scientific methods of analysis human remains became a legitimate subject of interpretation and a discussion of some recent and current interpretations, with regard to both societal ideology and belief systems, is included in Chapter 3.2 and 3.4. Chapman’s 2003 paper discusses the social dimension of burial practices, and reviews the changing interpretations over the last 40 years. He concludes that ‘current interpretations could be regarded as highly fragmented’ (Ibid. 310) with a wide range of theoretical approaches. There is now a general acceptance that treatment of human remains may reveal aspects of the concepts and beliefs of society as well as social structure (Beckett 2005, 31), or as Bergh (1995, 143) puts it ‘the deceased becomes an active part of a more complex and pronounced symbolic action’, but Richards (1992) cautions against using mortuary treatment as an indication of social structure, believing that the architecture of the burial structure conveys more information about the social structure.

Interpretations regarding the structure of society are somewhat polarised between those that view the burial evidence as a true reflection of society and those which view them as a result of organised manipulation which aimed to hide the true facts and present a view favourable to their own interests (Chapter 3.2.3).
6. Rituals of construction and use.

6.4.2 Mortuary practice in the Irish Neolithic. Portal tombs are only one of the places in which Neolithic human remains are found in Ireland. Aspects of burial are evident in different burial contexts and have been examined in an effort to gain information on societal structure and beliefs.

Arnold van Gennep, in his seminal ethnographic work of 1909 ‘The Rites of Passage’, believed that ritual ceremonies marking lifetime events such as death were universal, differing from one culture to another only in detail. He describes the three stages in any ceremonial rite as rites of separation, of transition and of incorporation and finds that the latter two are much more important in funeral ceremonies than the rite of separation, perhaps revealing some evidence of a belief in the afterlife. The transition rite, where the flesh is separated from the bones, could be accomplished either by cremation or by slower bodily decomposition. Hensey (2010) applies this to suggest a developmental sequence for passage tombs, based on a movement from simple separation rites, dividing the dead from the living, in the small early passage tombs, through transition rituals of coming of age ceremonies in the larger tombs like those at Carrowkeel, to the full-blown incorporation rites of the great Boyne monuments.

Most of the recovered human remains from the Irish Neolithic come from the great megalithic tombs, with others from the Linkardstown cists and caves. As discussed in Chapter 2.3 it is generally accepted that portal, court, simple passage tombs and Linkardstown cists may have been used contemporaneously, during the early and middle Neolithic (4000 – 3300 BC) and that portal tombs may be the earliest monuments, and thus the site of the earliest visible Neolithic burials (Whitehouse et al. 2013; Schulting 2014, 109). Human remains have also been recovered from caves where a reassessment of all such material, undertaken in 2005, revealed that there was ‘a concentration of dates in the Neolithic’ (Dowd et al. 2006).

Burial evidence from the Irish Mesolithic is sparse and difficult to discern, in sharp contrast to the powerful presence of the Neolithic megaliths. The fact that human remains were included in a structured way in built monuments demonstrates an awareness of the permanence of death which may not have been obvious in the Mesolithic (Parker Pearson 1999, 158) when there is little evidence of mortuary ritual in Ireland, although Chapter 2.3.1 mentions the ritualised Mesolithic burial at Hermitage Co. Limerick. A new commitment to place was marked by the interment
6. Rituals of construction and use.

of ancestral bones in a permanent, prominent monument which had the effect of changing the landscape. Bergh (1997) regards this as a mental as well as physical alteration of the landscape.

Evidence of both cremation and inhumation has been found in Irish Neolithic burials (Cooney & Grogan 1994, 67). Each of these bodily treatments may have involved more than one location and the movement of bone to its final interment. Bodies may have been decomposed or cremated at a distance from the tomb. Due to the high acid levels in most Irish soil it is believed that much unburnt bone did not survive so a numerical comparison between the two types of treatment is not valid. At some sites both methods of disposal have been used.

The most frequently found burials in Neolithic Ireland comprise collective burials. The remains of the different individuals, cremated and inhumed, men, women and children, were often thoroughly mixed together to form a collective deposit, emphasising a communal identity for the living tribe. This has been noted from passage tombs (Bergh 1995, 247; Cooney 2000, 108), court tombs (Herity 1987, 111; Jones 2007) and caves (Dowd, 2008, 309) as well as from portal tombs. Collective burial has been interpreted as indicating either an egalitarian small-scale society with no ranked hierarchy, or evidence of deliberate manipulation of the remains to conceal the existence of an elite (Chapter 3.2.3). Single burial, or burial of a small number of, usually male, individuals, has been recorded from Linkardstown cists, mainly located in Leinster and Munster, and dating from the middle Neolithic (c. 3600 – 3200 cal BC) (Waddell 1998, 106). It may indicate the emergence of some social stratification whereby one or two individuals were considered worthy of special treatment, although the inclusion of the remains of children in some cases might be more indicative of a representative selection of the community being selected.

Although some of the burial sites contained large numbers of individuals a smaller number is more normal and it is assumed that there was an element of selection. Indications of taphonomic destruction, however, suggest that the surviving number of bones may represent only a proportion of those originally interred (Beckett 2005, 2011; Beckett & Robb 2006). The survival of an unbalanced suite of bones, typically with an underrepresentation of small bones, has traditionally been used to suggest secondary burial where small bones were misplaced during movement of a disarticulated body, but taphonomic factors may have produced the
6. Rituals of construction and use.

same result (Beckett & Robb 2006, 60). Taphonomic studies of megalithic tombs within the Burren area are discussed in this chapter (6.4.3).

The practice of moving and manipulating the bones may suggest that ancestral veneration, a common theme within early agricultural societies (Chapter 3.4.2), was practised. The manipulation of bones within tombs and their possible removal may be an indication that the ancestors were revered, placated and solicited. If body parts were periodically removed from the tomb they may have been passed around the community in a way that suggests the Mediæval fondness for saintly relics and a belief that they had curative or divination properties. Similar practices are described amongst the Tobriand Islanders, a group of small-scale farmers of Papua New Guinea by Tilley (1996a, 236). In that society, after an initial burial of approximately 18 months, the period necessary for the body to decay to bones, some bones were removed and distributed to relatives of the deceased who displayed them and passed them around the group. Parker Pearson (1999, 59) suggests that ‘for most people, relics were the saints’; this might suggest that Neolithic manipulation of individual bones symbolised a manipulation of the ancestors. Certainly the acceptance of agricultural practices would have emphasised the contribution of previous generations in clearing and working the land.

6.4.3 Burial evidence in portal tombs. While portal tombs almost certainly had other meanings and functions it is ‘beyond doubt that they comprised a space apart for the deposition of the bones of the deceased’ as Bergh (1995, 143) says of passage tombs. Although they should not be described solely as burial places they are certainly places with burials, and may have ‘fulfilled several functions on various levels of abstraction’ (Ibid. 142). The bone evidence from portal tombs is very scanty and, with the exception of Poulnabrone, the dating even less exact, but there is enough information to state that burials in portal tombs were collective, both cremated and inhumed, and included men, women and children. Most of the evidence comes from Poulnabrone, excavated by Ann Lynch in 1986 and 1988, and dated from the Early Neolithic. This evidence is considered in the following section (6.4.4). Later dating by Kytmanow (2008) on stray finds and older material produced, in the main, dates from the Bronze Age which were not primary deposits.
<table>
<thead>
<tr>
<th>Site</th>
<th>Reference</th>
<th>Human bone</th>
<th>Dating, if available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballynacloghy</td>
<td>Stray finds (Duignan, Kytmannow).</td>
<td>4 human, inhumed. 5 teeth.</td>
<td>3700-3523 cal BC (Kytmannow, 2008)</td>
</tr>
<tr>
<td>Drumanone</td>
<td>Topp 1962</td>
<td>Cremated fragments.</td>
<td>2134-1905 cal BC</td>
</tr>
<tr>
<td>Springfield</td>
<td>Stray find (Kytmannow)</td>
<td>1 child’s tooth. 6 pieces cremated bone.</td>
<td>No – lost</td>
</tr>
<tr>
<td>Ballynoe</td>
<td>Stray find</td>
<td>1 cremated</td>
<td>No</td>
</tr>
<tr>
<td>Radergan</td>
<td>Brannon 1981.</td>
<td>3 cremated fragments</td>
<td>No</td>
</tr>
<tr>
<td>Ballywholan</td>
<td>Wulff 1923.</td>
<td>‘a number’ of cremated and inhumed fragments.</td>
<td>No – lost.</td>
</tr>
<tr>
<td>Taylorsrange</td>
<td>Valerie Keeley Associates.</td>
<td>‘flecks of cremated bone’.</td>
<td>No record available</td>
</tr>
<tr>
<td>Ballynageeragh</td>
<td>Mongey 1941.</td>
<td>cremated – ‘many’</td>
<td>No – lost.</td>
</tr>
<tr>
<td>Ballyrenan</td>
<td>Davies 1936.</td>
<td>cremated fragments</td>
<td>2281-2033 cal BC (Kytmannow)</td>
</tr>
<tr>
<td>Athenree</td>
<td>Stray find</td>
<td>‘several’ cremated bones.</td>
<td>No</td>
</tr>
<tr>
<td>Aghnaskeagh</td>
<td>Evans 1936.</td>
<td>4 cremated bones</td>
<td>No</td>
</tr>
</tbody>
</table>

Table 8. Human bone in portal tombs.

Bone recovery from other portal tombs is extremely scarce but does not contradict the Poulnabrone evidence except in the inclusion of some cremated bone. The only other Early Neolithic date (3735-3523 cal BC) from a portal tomb was obtained by Kytmannow (2008, 101) on a piece of tooth she found at Ballynacloghy.
6. Rituals of construction and use.

Co. Galway. Other teeth and human bones were found on the surface of this chamber (Waddell 1977/78) and were initially described as cremated, but they have been reassessed as inhumed (Figs. 168, 169). This increases the likelihood that the earliest treatment for bone was normally inhumation; preservation of unburnt bone of this age is unlikely except in areas with limestone bedrock.

The tomb at Drumanone was excavated in 1962 by Celia Topp who found a large quantity of cremated human bone within the greatly disturbed chamber. The bone was very fragmentary and was ‘mixed haphazardly’. Kytmannow dated a sample of this bone, and a piece from Ballyrenan; both recorded Bronze Age dates.

A ‘virtual tomb’ experiment using data from Poulnabrone, Poulawack and Parknabinnia (Beckett & Robb 2006) found that in each case there was substantial and similar taphonomic destruction of earlier bone when a new internment took place, whether of a complete body or of a partial, secondary burial. This resulted in a concealment of the true number of bodies with the typical MNI showing an underrepresentation; this has obvious implications in understanding the nature of the burials involved and is discussed below relation to Poulnabrone.

Fig. 168. Human bone from Ballynacloghy. Fig. 169. Teeth from Ballynacloghy.
6. Rituals of construction and use.

6.5 Human remains from Poulnabrone - a case study.

![Poulnabrone portal tomb](image)

Fig. 170. Poulnabrone portal tomb.

This study is included to demonstrate the ritual nature and significance of deposits in one portal tomb, and to discuss how they may display ritual practices by the community in the surrounding landscape. Although the deposits at Poulnabrone are more numerous and diverse than in any other excavated example they share a basic similarity and patterning with other sites.

Comparisons are made with two other sites with burials in the vicinity.

6.5.1 Poulnabrone in its landscape. Poulnabrone is located in the centre of the distinctive karst landscape of the Burren, Co. Clare, at an altitude of 140m OD in the centre of a level basin in the uplands plateau. To-day, the landscape is mainly bare limestone pavement crossed by deep grykes, cracks in the pavement where abundant alpine-type wild flowers grow. Relics of glacial drift soil support pasture in patches, and shrubby tree growth, mainly hazel and blackthorn, is abundant in areas where the cattle are no longer allowed to roam freely. Analysis of charcoal and landsnails found beneath the cairn area suggest that local vegetation at the time of tomb construction was mainly woodland, with a preponderance of shrub species like hazel, yew and birch and little evidence of a larger canopy tree cover (O’Donnell 2014, 164; Long 2014, 165). There may have been areas of an open, rocky nature such as exist today, and Long (Ibid.) suggests ‘it is possible that the Poulnabrone portal tomb was
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Fig. 171. Poulnabrone portal tomb. Bare karst landscape with glacial drift soil and pasture to south. Dry river bed with intermittent spring to the east.

Fig. 172. Conjectural reconstruction of Poulnabrone (Uto Hogerzeil, in Lynch, 2014).

Fig. 173. Poulnabrone – plan and section. (deValera & Ó Nualláin 1965).

constructed in an open, rocky area, within an otherwise wooded/vegetated landscape’. It is believed that in the Early Neolithic the site would have had a thin, acid soil, but it lies very close to an area of deep glacial drift soil which provides good farmland, still visible today. The area is characterised by an abundance of caves and underground water courses.

Natural drainage in the Burren uplands is unusual. There is a scarcity of rivers and springs, and intermittent springs and seepages provide water. Groundwater drains away through grykes and through the porous limestone. The
6. Rituals of construction and use.

The portal tomb is within 30 metres of a dry river bed to the east, within which a spring appears intermittently (Lynch 2014, 177). These strange water features may have influenced the siting of the monument (Chapter 4.5). To the south of the portal tomb the terrain changes abruptly where a deposit of glacial drift has resulted in an area of good pasture; again this points to a careful site selection. As discussed in Chapter 4.9 the tomb might have marked the limit of forest clearance and early farming. The main north-south roadway through the Burren lies some 150 metres to the west of the portal tomb; it has been suggested that the tomb might have been erected to mark a major routeway across the Burren (Jones 2007, 71). The distribution of soil types in the Burren area is illustrated in Chapter 4.3.3 and in appendix 1.

Mesolithic activity, dating from fifth millennium BC, has been detected in the current excavation of a coastal midden at Fanore, some 14 kilometres west of Poulnabrone, but no other Mesolithic evidence has been found in the Burren area (Lynch 2014, 174). Lynch believes that the builders of the portal tomb were the close descendants (perhaps the grandchildren) of the very earliest farming settlers to the area, who constructed their monument as soon as their settlement and farming practices were established (Ibid. 175). To date, no evidence of settlement has been uncovered, but the remains of a circular hut-site and a figure-of-eight enclosure have been identified 500 metres north of the portal tomb which may be investigated (Ibid. 188).

Poulnabrone stands in solitary splendour, soaring above the bare cragland, but there are other Neolithic ritual sites nearby, some of which were in use at the same time. Ballycasheen, Moyree Commons, Ballynacloghy and Crannagh portal tombs are each within 25 kilometres of Poulnabrone and there are three court tombs, one of which (Parknabinnia) has been excavated, on nearby Roughan Hill, with substantial Neolithic/Chalcolithic settlement (Jones 1998b, 2007, 2010). Two kilometres to the south is the multi-period cairn of Poulawack, where excavations revealed a Linkardstown-type cist, dating from c. 3500 BC, as the earliest structure. Both Parknabinnia and Poulawack have been excavated and reveal human remains. While it seems likely that Poulnabrone was constructed earlier than either, there is a chronological overlap in usage between all three monuments, and different burial patterns are revealed.
6. Rituals of construction and use.

6.5.2 The Structure. Poulnabrone is a medium-sized portal tomb, (capstone 3.3 cu m) composed of flat limestone slabs. All stones are in place with the exception of the backstone which is missing, and it is likely that there was a secondary capstone, now lying behind the tomb. The eastern portal stone is a modern replacement, inserted at the time of excavation. There are two sidestones on the east side and one on the west, with a gap between it and the western portal stone. A low sillstone is almost buried in the cairn; excavation revealed that it had a ‘missing’ corner at the west edge (Section 5.3.4). The tilted capstone forms a portico in front of the portal stones and the monument is oriented towards the north-east.

6.5.3 Depositional evidence – human bone. Poulnabrone was excavated during the 1980s and revealed extensive deposits of unburnt human bone. The interpretation of these remains has changed over time; it is now accepted that the remains were deposited at intervals over a period of 600 years, and were most likely of whole bodies. The date of the earliest burial (3820-3755cal BC, Schulting 2014) is believed to indicate the construction date of the tomb (Lynch 2014, 109) for several reasons. The survival of different bone types is very uneven, with a much larger than normal proportion of small bones, from the hands and feet. No evidence of exposure is visible on the bones, nor any signs of animal damage. It is believed that if the bodies had been interred elsewhere initially (Where? interjects Schulting 2014, 109) many small bones would have been overlooked, and so it appears that Poulnabrone was the original burial site, and therefore must have been in existence at the time of deposition of the earliest individual. There are 4 to 8 examples of articulation (Ó Donnabháin & Tesorieri 2014, 61) and too many teeth to be accommodated in the surviving jawbones: both these features also seem to preclude the movement of defleshed bodies. Although the remains of 36 individuals were identified there were too few longbones in the deposit. It is likely that these may have been purposely removed for ritual treatment, and passed around members of the group in an act of ancestral veneration or petition. The damage to bones, many of which were found scorched and in fragmentary state, and the mixed chronology of the bones pushed into the grykes was due to disturbance of earlier remains as newer burials were added to the chamber.
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The burials at Poulnabrone were collective and deposited at different times. Initial dating of the bone (Hedges et al. 1990) produced dates varying between 3800 and 3200 cal BC, and more recent work has confirmed these dates and produced more. The preferred dates for the construction of the portal tomb is now believed to lie between 3875 and 3725 cal BC (95% probability, Schulting 2014, 112), which coincides with the suggested date for the commencement of the Neolithic in Ireland, 3850-3740 cal BC (Cooney et al. 2011), and notably is earlier than the well-documented construction date for either the rectangular house horizon (McSparron 2008) or court tombs (Schulting et al. 2012). Lynch, however, believes that there was a ‘Neolithic presence’ in the Burren area by 3900 cal BC, the close ancestors of Poulnabrone builders (Lynch 2014, 175).

![Fig. 174 Modelled start and end for burial at Poulnabrone (Schulting 2014, 100).](image)

The minimum number of individuals buried in Poulnabrone was 36, consisting of 19 adults and 17 sub-adults, both male and female. Most of the bones were located within the chamber area and many were pushed deeply into the grykes, with some younger bones lying underneath older bones. Some signs of ‘sorting’ the bones might be suggested and many bones exhibited scorching, produced on dry bone. No signs of excarnation or deliberate defleshing, nor of interference by animals were evident (Beckett 2014, 84). The bones were disturbed and manipulated after the initial burial, demonstrating a sequence of practices (Lynch 1987, 1988, 1989, 2014; Lynch & Ó Donnabháin 1994; Beckett, 2014, 59). At some later stage (after defleshing) some of the older bones were subjected to scorching; it is possible that fires were lit within the chamber in a ritual ceremony, perhaps suggesting a token cremation.
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Isotopic analysis of 4 samples revealed a predominantly terrestrial diet (Kador, 2010; Ditchfield, 2014), coinciding with results seen elsewhere in the Neolithic (Schulting 1998). The possible significance of this is discussed in Chapter 2.2. Most of the material examined revealed typical levels of strontium isotopes for the locality, but one tooth was slightly different, suggesting that at least one of the individuals buried had been raised elsewhere, perhaps in the Slieve Aughty area some 40 km to the east (Ditchfield 2014, 92). The townland of Marblehill within the Slieve Aughty area has the remains of numerous, possibly Neolithic, megalithic structures, including one portal tomb.

Indications of post-burial manipulation and sorting were also evident in the placement of substantial numbers of skull fragments along the side walls of the chamber, and in the concentration of foot bones within the grike in the chamber (Beckett 2014, 84). The bones were not cremated, but 91% showed signs of scorching, carried out after defleshing (Ó Donnabháin1994, 6). The presence of a foetus dating from 1750-1412 cal BC (Hedges et al. 1990) indicated much later usage. Taphonomic destruction occurred when the earlier burials were disturbed, so the number of individuals included might have been larger than indicated. In a wide-ranging comparative study Beckettt & Robb (2006) identified a tendency for quantifiable human remains in Neolithic monuments to reduce to a MNI of approximately 20 individual even if very different numbers had been buried originally, due to taphonomic destruction by natural attrition and handling as later burials were inserted into the tomb.

6.5.4 Human bone at two contemporary sites – a comparison. Two nearby Neolithic monuments containing human burials have been excavated and the results make an interesting comparison with Poulnabrone. Parknabinnia, an atypical court tomb located on Roughan Hill some 8 km south of Poulnabrone, was excavated in 1998 – 2001 (Jones 2004), and the large cairn at Poulawack, just 2 km from the portal tomb, was excavated in 1934 by Hugh Hencken and the Harvard Expedition (Hencken 1935). Although both were constructed later than Poulnabrone there is an overlap in usage dates.
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Detailed taphonomic analyses on these three Neolithic burial places carried out by Beckett & Robb 2006, Beckett 2011 revealed the existence of differing ritual practice at sites in contemporaneous use. At Parknabinnia there appeared to be no unusual bone representation, suggesting complete burial with later manipulation. Later burials may have included episodes of sorting or ‘tidying’ the older bones suggesting that older bones may have been moved to make room for new depositions; bones of similar types were found in piles in certain areas of the chambers, particularly at the edge and in corners. Both cremation and inhumation were evident although cremation was less common, and the dated bone varied from 3690 cal BC to 2620 cal BC, (Schulting et al. 2012). The earlier dates fall within the normal range of dates for court tombs, and also coincide with some of those from Poulnabrone. Parknabinnia is not a structurally typical court tomb and two very similar atypical court tombs are situated close by, with a possible third only 500 metres east of Parknabinnia (Jones 2004, 51). This might indicate that the people in the Burren were insular, with their own ideas of correct architecture (Ibid.). In contrast the five portal tombs in the greater Burren area (Poulnabrone, Moyree Commons, Ballycasheen, Ballynacloghy and Crannagh) all conform to the norms of portal tomb design.

Fig. 175. Overlap of usage periods in Burren area monuments. (Lynch 2014, 184).

Fig. 176. Concentrations of bone at Parknabinnia (Jones, 2004, 50).
At Poulawack the earliest burial site was identified as a Linkardstown-type cist (Ryan 1981), containing the unburnt, disarticulated bones of three adults (male and female) and one infant, dated to c. 3350 BC (Brindley & Lanting 1992), later than the likely date for Poulnabrone construction but within the period of use. The bones were in poor condition, but as there was more evidence of weathering and rodent destruction here than at the other sites this may simply have been due to poor preservation. Later burials were impossible as the cist was completely sealed by the erection of a covering cairn at a later date, but later burials were inserted into the upper layers of the cairn.

Fig.177. AMS dating of human bone at Parknabinnia, Poulnabrone and Poulawack. Schulting et al. 2012, 33. NB This does not include the latest dating from Poulnabrone, (Schulting 2014)
6. Rituals of construction and use.

Fig. 178. Linkardstown-type cist at Poulawack (Hencken 1935).

6.5.5 Discussion. The existence of different burial rites at three such closely situated Neolithic sites is striking. In particular, the burial rites at Poulnabrone and Poulawack, only 2 kilometres apart, are particularly different, while Poulnabrone and Parknabinnia exhibit more similarity.

Certain elements are common to all three sites. The burials are mainly of unburnt individuals, although Parknabinnia does contain some cremated bone. It appears most likely that at all sites the bodies were complete at the initial burial, and that they were not exposed elsewhere beforehand. No gender or age selection was visible. Deposits of similar material objects were also made within the tombs.

There are some major differences. Poulawack remains were the result of one deposition episode – the cist was completely sealed and later burials were inserted into the surrounding cairn without disturbing the initial deposit. The small number of bodies, and their separate condition (remains were not mixed with one another) indicates more concern with the individual than with the group. It might also reveal the emergence of a hierarchical structure in society – the four individuals involved were obviously not the total number of the group. They may have been considered elite in some form or other, or they may have been selected as a representative sample of the group.

The tomb at Parknabinnia was used for approximately a thousand years, and the morphology of the tomb reflected some sequential deposition. The back chamber
was sealed before burials ceased in the front chamber. In Poulnabrone there was no modification to the original tomb architecture, but dating of the bones proves that bodies were added for a period of 600 years. In both cases the bones were manipulated and rearranged after their initial deposition. At Parknabinnia some were sorted into distinctive piles, while at Poulnabrone many were thrust deeply into the grykes, mixing older bones with newer, and some large bones may have been removed for circulation. The individuals who carried out later burials and manipulated the older bones would have been well aware of the destruction they were causing to previous burials. Beckett and Robb (2006, 69) suggest that this destruction was accepted as a natural occurrence, and that the disintegration of individuals was a means of creating a group history, a complete contrast to the undisturbed cist at Poulawack.

Although the existence of different burial rites within such a small locality is unusual, it is not unique. A similarly close location between a portal tomb and a Linkardstown cist exists at Ardcrony Co. Tipperary. The Linkardstown cist was excavated by Wallace (1977) and contained the disarticulated skeletons of two males, with a highly-decorated carinated pot. A bone was later dated to 3,500 cal BC (Brindley et al. 1983). The portal tomb at Ardcrony is less than 1 km distant. It is quite isolated from the normal distribution of portal tombs and has never been investigated. Passage tombs, with their specific burial rites, can be included in this very localised contemporary usage, as shown at Fenagh Beg portal tomb (Chapter 4.9). Cooney (2000, 121) remarks that throughout Ireland as a whole the period 3500 to 3000 BC is characterised by the contemporaneity of the various different burial rites. There were, he feels ‘recognised ways of treating the remains of the dead, but the way these customs were put into practice to integrate the living, the dead and the ancestors were very different at a regional and local level and may have supported different social strategies’ (Ibid.). The evidence from the three tombs in the Burren shows that these different practices existed even within intimate localities, amongst people who must have at least been in close contact with each other, and possibly by the same people. It is difficult to imagine that social strategies could have varied greatly at such close quarters in areas with identical environments, and there is no evidence that people with a different place within society, based perhaps on gender or age, might have preferred the rituals at one site rather than another. If there were different needs or
preferences for certain individuals they are too nuanced to be visible in the material record.

Cooney includes the strange site of Millin Bay, Co. Down, in his discussion of the contemporaneous usage of different mortuary treatments. This seashore site was excavated in 1953 (Collins & Waterman 1955) and revealed a wide variety of practices on individuals buried in different parts of the site which the excavators believed to have been in use at the same time. Cremation, inhumation, collective interment within one cist, cists with single burials, burials outside cists, sorting and arranging of body parts, removal and reinsertion of teeth were all found within the same structure. Some parts of the structure were sealed, reminiscent of the closure of the back chamber at Parknabinnia, and suggesting that this specific treatment had been discontinued (Cooney 2000, 124). Millin Bay, like some portal tombs, was constructed at a site already ritually marked, in this case by a drystone wall which had no apparent material function. The excavators describe it as ‘a single unified construction ... no reason to believe that the process was interrupted’ (Collins & Waterman 1955, 26), but Cooney (Ibid.) suggests that it could also show a change of focus over time, with different burial rites being practised. There is, however, agreement, that the earliest structural unit was the wall with a north-south orientation which was followed by both the main burial cist and the sandy cairn which sealed the whole structure. No AMS dating is available for this site, but a potsherd indicates a likely Middle to Late Neolithic date.

Although portal tombs do not resemble the Millin Bay site and are likely to be earlier in date, the two lines of stone settings uncovered by Collins (1965, 65) within the cairn at Ballykeel and described by him as having ‘completely non-practical significance’ (Ibid.) might resemble the original drystone wall at Millin Bay. Collins believed that these settings, which he compares to the buried walls in some Severn-Cotswold tombs, might have preserved memories of pre-construction date. They certainly had a significant effect on the orientation and linearity of the portal tomb cairn (Fig.183).
6. Rituals of construction and use.

6.6 Portal tomb burials – possible significance. Funerary rites were conducted by the living and may well reveal more about society than about the deceased individual. The information they convey can be considered on two different planes, as an expression of societal structure and concerns, and as a statement of beliefs and spiritual aspirations. These are not necessarily opposing concerns; in the Neolithic it is possible that there not a distinctively perceived division between the sacred and the mundane.

Our understanding of the burial rites in portal tombs is biased due to the concentration on one tomb, Poulnabrone, which, situated in an extremely dense concentration of Neolithic evidence, may not be ‘typical’. Certain points are, however, clear and inarguable. At least one portal tomb was constructed in the early Neolithic, probably representing the earliest megalithic type in the country. Although the monument may initially have been intended for single use it was used sporadically for over 600 years. The evidence from Poulnabrone clearly demonstrates that, in this case at least, there were a number of burial episodes. Evidence from other tombs, although sparse, does not contradict this, and it appears to question the impression gained from the morphology and landscape siting that they were constructed for one ritual occasion only. It is here suggested that this later usage may have been unintended by the original builders, and resulted from a change in beliefs and/or ideologies which was expressed in ritual practices.

The human remains suggest that there may have been a chronological development in ritual practice, although nothing so defined as Hensey’s 2010 sequence for passage tombs is suggested. Initially, perhaps, complete bodies were buried as part of the monumental construction, in a ritual of metaphysical importance, including the narrative of group lifestyle and ideology within the ritual structure, commemorating the founders and first farmers and ensuring that their memories would endure. Lynch (2014, 175) feels that it is ‘reasonable to conclude that the builders at Poulnabrone were the close descendants of the earliest agricultural settlers in the Burren’, and these earliest farmers may have been remembered as named individuals by the builders. Later, the cult of the ancestors may have become more pronounced and less personal; ancestors may have become generalised personages, whose influence could affect the group as a whole. Damm (1991, 45), in a discussion of Danish Neolithic megaliths, suggests that while they were initially built to
6. Rituals of construction and use.

commemorate the builders, at a later period, when the memories of these individuals had faded, they became the places of the ancestors. In the case of portal tombs this might have been marked by a renewed interest in the older remains which resulted in certain bones being removed and circulated.

Whittle’s (1996a) suggestion that tombs of the Neolithic period began as religious sites but were later claimed and manipulated by lineage groups may have relevance in the case of portal tombs. At this later date the portal tombs might have been revisited and the ancestral bodies moved and removed; robust relic bones may have been passed around living individuals while new dead were placed with the ancient bodies, honouring the ancestors and gaining prestige from them. These new interments may have been very sporadic, perhaps occurring at times of tribal crisis or celebration when the commonly used court tombs were deemed too familiar. The scorching which is visible on some of the bones in Poulnabrone could have resulted from ritual treatment at this later stage, as the burning was carried out on dry bone (Ó Donnabháin 1994, 6). It might have been regarded as a token cremation, in a final treatment of the ancestors so that ‘the dead entered the community of the ancestors, an anonymous group in which individual identity was no longer recognised’ (Scarre 2007, 23), corresponding to a possible increased cult of ancestor veneration noted above.

6.7 Rituals of material deposition.

‘Material objects become invested with meaning through the social interactions they are caught up in’. (Gosden & Marshall 1999, 170).

6.7.1 Introduction. This section examines the individual contents of the portal tombs, other than the human remains, in an attempt to gain insights into each type of deposit. The information conveyed by the deposits may assist in interpretation of the society which made, used and deposited them, on both a material and conceptual level. The physical attributes of a material object dictate both its possible uses and its perceived meaning: tools made from stone could have signified permanence and contrasted with fragile, ephemeral pottery. Material is perceived as actively influencing social relationships.
Of the approximately 180 portal tombs in Ireland only 28 have been excavated or have produced stray finds. Some of the earlier ‘excavations’ should more properly be described as investigations (e.g. Ballywholan Co. Tyrone, Wulff 1923), and some of the stray finds were located in the vicinity of the monuments rather than unquestionably associated (e.g. Kilfeaghan Co. Down, Evans 1937). All excavated tombs had evidence of previous investigation so the context of individual finds may be questionable and many artefacts may be missing due to the depredations of collectors and robbers. Even in well-excavated and relatively undisturbed tombs the depositional evidence is unlikely to be complete, so that a consideration of the possible sequential nature of deposition is difficult.

While taking account of these reservations it can fairly be said that the deposits in portal tombs are scanty and unimpressive, but while the finds may be scanty their selection seems purposeful and therefore revealing. Although there are variations among individual tombs and no homogeneity, enough general similarity exists to regard the existing deposits as ‘patterned’ representatives of the normal portal tomb contents.

6.7.2 Pottery. Pottery was a new technology at the start of the Neolithic, and, as discussed in chapter 2, is regarded as one of the markers of the Neolithic (Petersen 2003, 151). It is a possession, an addition to the objects already familiar to hunters and gatherers, a further accumulation of material objects in daily use. It may have brought with it an extra layer of ritual significance, a further demonstration of the transformation of material substances into new objects. Bradley (2004, 109) describes pottery as an example of the change which defined the start of the Neolithic from the use of organic raw materials to processes which involved the transformation of the finished artefact.

Studies of pottery typology (for example Sheridan, 1995, discussed in chapters 2.2, 3.2.3) have resulted in a generally accepted sequence and dating in the Neolithic period in Ireland which has assisted in the chronology of the various sites in which it was deposited (Chapter 2.2.4). Its significance is demonstrated by inclusion as a deposit in ritual sites, and these sites in turn gain added ritual importance from association with an object of material and conceptual significance. Pots must have
### 6. Rituals of construction and use.

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Reference(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aghnaskeagh</td>
<td>Several sherds EN carinated bowl</td>
<td>Evans 1935</td>
</tr>
<tr>
<td>Ballykeel</td>
<td>‘Hundreds’ of sherds, Early Neo just outside chamber, 3 highly decorated MN bowls within chamber, many BA throughout.</td>
<td>Collins 1965</td>
</tr>
<tr>
<td>Ballynacloghy</td>
<td>4 sherds, probably EN</td>
<td>Waddell 1977/78</td>
</tr>
<tr>
<td>Ballyrenan</td>
<td>‘Neolithic’ pottery</td>
<td>Davies 1937</td>
</tr>
<tr>
<td>Ballywholan</td>
<td>‘Rudely baked’ unglazed potsherds</td>
<td>Wulff 1922</td>
</tr>
<tr>
<td>Carnaghan</td>
<td>EBA food vessel</td>
<td>Swan &amp; Davies 1938</td>
</tr>
<tr>
<td>Clonlum</td>
<td>2 reddish sherds, comb-marked, possibly EBA</td>
<td>Herity 1964</td>
</tr>
<tr>
<td>Goward</td>
<td>Urn (lost)</td>
<td>Gray 1884, Evans 1936, Herity 1964</td>
</tr>
<tr>
<td>Greengraves</td>
<td>1 decorated sherd, possibly EBA, nearby</td>
<td>Davies &amp; Evans 1943</td>
</tr>
<tr>
<td>Kilclooney Mor</td>
<td>5 sherds plain carinated Early Neolithic</td>
<td>Herity 1964</td>
</tr>
<tr>
<td>Kiltiernan</td>
<td>Carinated vessel 3600 BC Late Middle Neolithic decorated bowl</td>
<td>Ó hEochaidh 1957, Herity 1964</td>
</tr>
<tr>
<td>Legananny</td>
<td>1 sherd MN, 1 food vessel, 1 urn – all lost</td>
<td>Gray 1884, Herity 1964</td>
</tr>
<tr>
<td>Poulnabrone</td>
<td>c. 60 sherds, E. Neo, M. Neo, EBA</td>
<td>Lynch 1987, 1988, 1989, Brindley 2014</td>
</tr>
<tr>
<td>Radergan</td>
<td>‘Rudely baked’ unglazed potsherds</td>
<td>Wulff 1922</td>
</tr>
<tr>
<td>Taylorsgrange</td>
<td>‘Some’ pottery – not described</td>
<td>Keeley 1985</td>
</tr>
<tr>
<td>Ticloy</td>
<td>2 sherds possibly E. Neo, 1 ‘whipped cord decorated, M. Neo.</td>
<td>Evans &amp; Watson 1942</td>
</tr>
<tr>
<td>Tirnony</td>
<td>70 sherds, probably Early Neolithic</td>
<td>McSparron 2011, 2013</td>
</tr>
</tbody>
</table>

**Table 9. Pottery evidence from portal tombs.**

been highly valued objects; to break them and then bury them is an indication of the importance of the ritual site and of the material object. The pottery relevant to this study is that of the Neolithic. Later depositions can give evidence of possible reuse of the monument, but an understanding of the ritual intention, sequence and usage of the original structure will be indicated only in the earliest deposits.
6. Rituals of construction and use.

The earliest pottery found in portal tombs is described as Carinated Bowl, and appears to have been adopted rapidly throughout in Britain and Ireland from about 4000 BC (Gibson 2002, 69). Neolithic pottery has been found at 18 portal tombs, mainly of the early Neolithic type, and typically in small sherds which come from a number of different vessels, but at three sites, Ticloy, Ballykeel and Ballyrenan, both Early and Middle Neolithic pottery was found, indicating a continuing usage of the tombs. Kytmannow (2008, 96) concluded that Early Neolithic pottery (Sheridan’s Traditional Carinated Bowl), dating from c 3950-3560, was the dominant pottery type in Irish portal tombs (Fig. 179), followed by the Middle Neolithic style (c. 3600-3450) with much more openness in style and fabric, (Ibid.) perhaps revealing a less mystical role for the potter, and the development of regionalisation in the choice of styles (Gibson 2002, 70). All pottery found in portal tombs was in fragmentary sherds, and seems to have been deposited in this condition. In no case were sufficient pieces found to make a complete vessel; it appears that the pots were broken before deposition and only some sherds included.

The clay base for a pot had to be tempered with another material for strength and to prevent shattering in the fire. Darvill (2004c, 195) believes that the choice of tempering material was a ‘cultural choice’. Pottery from Irish portal tombs was tempered with crushed stone, and a significant number of examples used quartz. Others were described as having a temper of crushed white stone, or white grits, which may also have been quartz. Similar inclusions in Welsh Neolithic pottery are described by Gibson (1995, 29) as breaking the surface of the vessels with no attempt at concealment - the quartz grits were meant to be visible as an important part of the finished vessel. A similar high visibility of quartz temper can be seen in some examples from Irish portal tombs. The symbolic importance of quartz in the Neolithic
6. Rituals of construction and use.

Fig. 180. Visible quartz temper in EN pottery (Gibson 1995).

Fig. 181. Visible quartz in pottery from Ballynacloghy Co. Galway.

Table 10. Tempering medium in Neolithic portal tomb pottery (where identifiable).

<table>
<thead>
<tr>
<th>Site</th>
<th>Quartz</th>
<th>White stone</th>
<th>Other/unspecified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ticloy</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ballykeel</td>
<td>1</td>
<td>8</td>
<td>many</td>
</tr>
<tr>
<td>Clonlum</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilclooney Mór</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greengraves</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Kiltiernan</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Ballynacloghy*</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aghnaskeagh</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ballyrenan</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Poulnabrone**</td>
<td>8</td>
<td>6</td>
<td>60+</td>
</tr>
<tr>
<td>Radergan</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taylorsgrange</td>
<td></td>
<td>‘several’</td>
<td></td>
</tr>
</tbody>
</table>

6. Rituals of construction and use.

is widely accepted and is discussed in Chapter 2.4.4. Its selection as the preferred tempering agent for pottery, and the way in which it was left visible in the pottery, suggest that the perceived symbolic importance of the quartz was added to pottery, increasing its significance and potency. Quartz is not regarded as an ideal substance for tempering pottery. Gibson (1995, 29) says that its water content can 'violently' convert to steam during the firing process, leading to breakage and splitting, and it is an angular, sharp rock which would have made the moulding of clay uncomfortable to the hand. Thus, its selection may not have been for practical reasons. Quartzite is widely available throughout Ireland, but it is noticeably scarce in some areas, for example the Burren region of Co. Clare. Ballynacloghy portal tomb is situated on limestone bedrock on the seashore at the northern edge of the Burren, yet the 4 pottery sherds found there were tempered with crushed quartz (Waddell 1977/78, 63). This is particularly strange given that Ballynacloghy is within 50 metres of Galway Bay with its rich fishing grounds and oyster beds – fish bone and shell are good, easy-to-use tempering agents. Quartz was also commonly used as the temper in vessels from court tombs as Herity (1987, 151) noted 'the grit normally used was crushed stone, quartz being the most frequently noted'.

A guide to the possible sequence of deposition of pottery might lie in the location of the deposits within the tomb, but this is often not clear. In some early excavations the location of the pottery finds was not listed, and in many cases there was evidence of considerable disturbance of the tomb before excavation. Table 11 indicates that the most frequent area of deposition was in the chamber, but some sherds were found within the cairn at Ballykeel and Poulnabrone. As discussed in chapter 5.5 cairns appear to have been significant, integral parts of the structure, marked by significant deposition. At Tirnony the identifiable pottery appeared to date from the Early Neolithic, and the excavators noted that in no case were there enough sherds to make one complete vessel (McSparron et al. 2013, 33). The sherds were found within both the lower stone and earth layer and the loam layer above it, indicating that they were deposited sequentially later than the construction of the stone ‘floor’ (Ibid. Appendix 5) which postdated the two pits. They identified ‘a certain amount of patterning’ of pottery deposition, coinciding with the location of the three flint knives, each of which appeared to lie on top of a small concentration of
6. Rituals of construction and use.

<table>
<thead>
<tr>
<th>Site</th>
<th>Pottery Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tirnony</td>
<td>c. 70 sherds, probably EN, above level of pre-construction pits and stone floor. 3 piles within chamber, one at either side and one at the entrance. Each pile included a flint knife.</td>
<td>McSparron 2011, 2013</td>
</tr>
<tr>
<td>Poulnabrone</td>
<td>60+ from ‘the burial deposit’, 5 sherds in the cairn. EN and MN.</td>
<td>Lynch 1988, Brindley 2014</td>
</tr>
<tr>
<td>Aghnaskeagh</td>
<td>‘several sherds’ in the chamber.</td>
<td>Evans 1936</td>
</tr>
<tr>
<td>Kilclooney Mór</td>
<td>5 sherds from the chamber.</td>
<td>Herity 1964, 138</td>
</tr>
<tr>
<td>Taylorsgrange</td>
<td>‘several’ sherds, probably from chamber.</td>
<td>Manning &amp; Hurl 1989/80, 74.</td>
</tr>
<tr>
<td>Kiltiernan</td>
<td>3 sherds in the chamber, EN and MN.</td>
<td>Ó hEochaidhe 1957.</td>
</tr>
<tr>
<td>Ticloy</td>
<td>3 from the chamber floor</td>
<td>Evans &amp; Watson 1942, 64.</td>
</tr>
<tr>
<td>Clonlum</td>
<td>2 pieces in yellow clay layer on the floor of the chamber, covering shallow pits.</td>
<td>Davies &amp; Evans 1934, 166.</td>
</tr>
<tr>
<td>Ballyrenan</td>
<td>In front chamber:1 piece outside chamber, 1 in chamber floor. ‘Considerable’ remains outside portals. Back chamber: many fragments beside portals. Remains were very disturbed.</td>
<td>Davies 1937</td>
</tr>
<tr>
<td>Ballykeel</td>
<td>Many sherds, EN and MN. Inside and immediately outside chamber, in cairn exactly on long axis (Fig.175).</td>
<td>Collins 1965.</td>
</tr>
</tbody>
</table>

Table 11. Location of pottery (where specified) at excavated sites.

potsherds, and define this as ‘structured deposition’ (Ibid.5.) The possibility of later disturbance cannot be discounted.

The location of the pottery sherds within the cairn and the chamber of Ballykeel portal tomb is carefully illustrated by Collins (1965) and this may illuminate the possible sequence of construction of the tomb (Figs.182, 183). The cairn is some 25 metres long, and its length is emphasised by the parallel settings of stones which the excavator found within the cairn. He also identified a deposit of numerous ‘coarse flat-bottomed vessels’ which were located ‘exactly on the long axis of the cairn’ (Ibid. 50) and which would have added to the impression of linearity. The fact that these deposits were made within the cairn as it was being constructed suggests that they may have predated the construction of the chamber (Jones 2007, 75). Early, plain, carinated bowl sherds were found just outside the chamber area, particularly in an area to the east of the eastern portal stone, and Collins speculated that they might
6. **Rituals of construction and use.**

have been deposited before the construction of the tomb (Collins 1965, 68). Within the chamber were sherds of three ‘outstanding’, elaborately decorated Middle Neolithic bowls (Figs. 182, 183). In Sheridan’s 1995 scheme these would be classified as Middle Neolithic decorated bipartite bowls, very fine and very different from the plain Carinated Bowl ware, which Collins found just outside the chamber. Decoration on the bipartite bowls was applied over the whole pot including the base and used a variety of techniques. The decoration on the neck of bowl 1 is particularly interesting, consisting of three semicircular applied motifs, each bisected and decorated with minute whipped cord impressions. Collins (1965, 68) suggests that they are ‘unintelligent local renderings’ of Mask features as seen in Danish Passage graves, but Sheridan (1995, 11) believes that the Ballykeel examples are earlier. She agrees that the motifs had a special symbolic meaning but it is at present unknown. Wickerwork containers may have provided the original models for pottery containers (Thomas 1999, 90) and it is possible that the motifs are skeumorphic representations of handles.

**Fig. 182.** *Ballykeel Co. Armagh – pottery finds.*
The decorated bowls from Ballykeel are profusely and elaborately decorated and they seem unsuited for domestic use. Such fine ware would probably not have been used for cooking over an open fire, and, while they might have held liquid for a short period, their shape precludes successful pouring or drinking. They may have been made specifically for ceremonial use and could have contained something important for the ritual ceremony conducted within the chamber. The elaborate decoration may have had symbolic resonance. Cooney (2000, 185) suggests that these particular pots appear to be more suited to storage than to consumption of
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presentation of food, and points out that they ‘dominate in mortuary contexts, (Ibid.). He also considers that their presence in mortuary contexts might be linked to a provision for the afterlife, but finds suggestions of regional variation in their symbolic meaning. It is interesting to note that ‘none was anywhere near complete’ (Collins 1965, 60), and it seems most likely that they were deposited in a broken and incomplete fashion; it is unlikely that a careful excavation could have overlooked the missing pieces. This makes it unlikely that the vessels were used during rites at the portal tomb.

Ballykeel portal tomb is large and carefully constructed; a small padstone between the soaring capstone and the backstone indicate acute engineering ability and an insistence on the importance of the exact angle of the capstone. It is situated on a relatively level terrace in the foothills of Slieve Gullion, in an area with an abundance of Neolithic ritual sites, including four portal tombs and a court tomb. On the summit of the mountain is a passage tomb, emphasising the continued ritual importance of the area. Although, as suggested, the original portal tomb may have been constructed for single usage only, the immediate surroundings here would have allowed later ritual performances or ceremonies. The alteration in pottery decorative styles might be an indication of changing social structures. Bradley (1984, 72) suggests that as a particular design style became popular and commonly used a new design was developed by or for the elite in an effort to remain ‘exclusive’ and privileged. The presence of a passage tomb at the summit of Slieve Gullion points to the possibility of a hierarchical society in the area; in a careful study of the development of passage tombs Sheridan (1985/6, 22) identifies this tomb as belonging to her Stage 4, c. 3500-3050 BC tombs, constructed by a complex, stratified society wishing to demonstrate their power and gain prestige by the conspicuous consumption of a large and complex passage tomb. In this scenario the portal tomb might have been revisited and reused by an elite who wished to honour the ancestors from whom they claimed descent.

Pottery has been found from all excavated portal tombs except Drumanone and Melkagh, and stray finds have been identified from others. Pottery deposits have been found at 31 court tombs and are very similar to those in portal tombs (Herity 1982, 1987). These are normally tempered with crushed stone which is often quartz, and examples with decorations similar to those at Ballykeel, although less elaborate, have been found at 22 sites (Ibid.). The fact that there are proportionately more later
6. Rituals of construction and use.

Pottery types at court tombs than at portal tombs may indicate that court tombs tended to continue in ritual use for a longer period.

The depositional patterning continued into the passage tomb tradition although the style of pottery had changed to Carrowkeel ware, and pottery is also associated with settlement sites in the Neolithic. While much of this may be the result of normal domestic use there is some evidence of a purposeful structured deposition which would indicate a ritual context (Mulligan 2010). Cross (2003) uses the presence of pottery sherds within large rectangular structures to suggest that they were ceremonial halls rather than domestic dwellings. She considers that the shape of the early Neolithic carinated bowls was unsuited for cooking but would have been ideal for serving food at ritual feasts. With this in mind it could be suggested that the presence of pottery at portal tombs may indicate that they had been used for feasting. If, as suggested, portal tombs were originally intended as monuments for a single use, with an emphasis on the importance of the construction ritual, then feasting might have been an important element of ritual practice.

A pottery vessel might have evoked memories of its construction, its maker, its materials and their locations. The inclusion of pottery sherds may have signified the inclusion of the narrative of the pot, from its origin in the earth to its final deposition in the earth. These memories may have been transferred into the deposition, enriching the site and creating new group memories in a group tomb. The materials carry their own message of plasticity and flexibility, of the latent growth of soil, and of the possibility of transformation. The addition of the magical quartz to bind the clay and keep it from splitting may have involved a metaphysical dimension. Firing the vessel completed the transformation and may have involved careful selection of suitable material, weather, and seasonality. Through it all were the actions and decisions of the agent, the potter, an individual of significance, and possibly of cultic status, who guarded the knowledge and skills (s)he had inherited and used them for the betterment of the group in a final offering when the pot was sacrificed, broken and buried in a monumental statement of group belief. If the potter was a woman then the pottery sherds may have been a deposit with gender significance. Human remains included men, women and children; pottery may have been important as an inclusion in a ritual site as an indication that all members of the tribe were included.
6. Rituals of construction and use.

6.7.3 Stone deposition. The importance of stone in the Neolithic (discussed in Chapter 2.4 and 3.2.3), demonstrated by its use for the construction of ritual monuments, is emphasised by the obvious significance of stone tools, artefacts of a mainly domestic nature, which were deposited in the most sacred spaces of the community, possibly adding a lustre and a deeper ritual weight to these sites, and thereby gaining a reciprocal significance by their deposition.

The physical, material qualities of stone enable and constrain its possible uses, both practical and conceptual. Boivin (2004, 69) believes that ‘materials possess inherent physical properties that make them more appropriate for certain symbolic and metaphorical uses and less appropriate for others’ and this opinion seems very relevant in the case of stone tools. The material qualities of stone, like hardness and durability, enabled the construction of essential tools, and ensured their survival. The creation of a stone tool was an act of materialisation - ‘an active process whereby these material objects carry meaning, or are invested with meaning by humans’ (Scarre 2004). Stone tools could be altered and reshaped; ideas and beliefs could develop and change. The combination of physical and conceptual qualities made stone artefacts ideal for deposition in a ritual monument; they would endure for as long as the monument did and would ensure the persistence of their conceptual meanings. Deposited items in burial contexts are normally interpreted as either grave goods to accompany the dead on their journey to the unknown, or as votive gifts to the spirit world. The lithics may have been intended to ask for assistance in the daily tasks for which they were intended – hunting, preparation of animal carcasses, tree felling and general woodwork. They could also be regarded as an act of propitiation, returning to the earth what came to the earth. It is also possible that they are the material remains of rituals conducted at the sites, and were deposited as a celebration of the rite.

6.7.3.1 Stone axes As discussed in Chapter 2.2 polished stone axes are regarded as highly significant ritual objects during the Neolithic, although in Ireland they were also used during the Mesolithic. Stone axes were important symbols throughout Neolithic Europe, for example in Britain (Bradley & Edmonds 1993), Brittany and the Channel Islands (Patton 1991) and Scandinavia (Tilley 1996). Two polished axes have been found in portal tombs, both miniature and neither made of local material.
6. Rituals of construction and use.

<table>
<thead>
<tr>
<th>Site.</th>
<th>Mesolithic</th>
<th>Stone axe</th>
<th>Other</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drumanone</td>
<td>Bann flake, flint. Piece of Bann flake, chert.</td>
<td>1 porcellanite, miniature.</td>
<td>1 scraper 1 piece rose quartz.</td>
<td>Topp 1962</td>
</tr>
<tr>
<td>Aghnaskeagh (primary site)</td>
<td>1 possible Bann flake</td>
<td>1 flint blade 3 scrapers 1 quartz pebble, several lumps</td>
<td>1 piece Bann flake, chert.</td>
<td>Evans 1935</td>
</tr>
<tr>
<td>Ticloy</td>
<td>1 Bann flake, flint</td>
<td>1 possible – ‘in the field below’*</td>
<td>1 leaf-shaped arrowhead, flint.</td>
<td>Evans &amp; Watson 1942 *Mogey 1946</td>
</tr>
<tr>
<td>Poulnabrone</td>
<td>1 miniature</td>
<td>3 arrowheads 8 flint and chert scrapers 2 quartz pebbles</td>
<td>1 possible Bann flake</td>
<td>Lynch 2014 Jones 2007</td>
</tr>
<tr>
<td>Melkagh</td>
<td></td>
<td>Flint concave scraper. Chert arrowhead, flake.</td>
<td>1 flint knife 1 flint arrowhead</td>
<td>Cooney 1997</td>
</tr>
<tr>
<td>Ballywholan</td>
<td></td>
<td>1 flint knife 1 flint arrowhead</td>
<td>1 marble blade scraper, flint. Small quartz flecks.</td>
<td>Wulff 1923</td>
</tr>
<tr>
<td>Kiltiernan</td>
<td>1 large axe 50m distant.</td>
<td>1 chert arrowhead, 3 hollow scrapers, flint, 1 round scraper.</td>
<td>1 possible Bann flake, chert.</td>
<td>Ó hEochaidh 1957</td>
</tr>
</tbody>
</table>

Table 12. Lithic deposits at portal tombs.

The material from which polished axes were made seems to have been carefully selected, and was not always the most functional. The miniature axe from Drumanone was made from porcellanite, originating in the Tievebullagh Hills Co. Antrim. This stone ‘by far the most important lithology used in the production of stone axes in Ireland’ (Cooney 1998, 112) is a fine-grained dark grey stone which achieves a high polish and is the material from which 53.8% of Irish deposited axes were made (Waddell 1998, 47). Locally it is called ‘bluestone’. The Poulnabrone axe was highly polished and made from a dacite stone which may have originated in the Cumbria region of north-west England (Lynch 2014, 124) and was found within the chamber intermingled with human and animal bone. A fragment of another, similar axe was located within a north-south grike within the chamber (Ibid). The complete axe shows ‘some evidence of use on its cutting edge’ (Ibid. 123) and may have been used for carpentry. Lynch (Ibid.126) suggests that the status it gained from its exotic, imported origin may have increased its suitability for inclusion as a ritual object.
The origin of the stone can convey information about the extent of communication between groups, and about possible exchange mechanisms. As discussed in Chapter 2.2 axes made from porcellanite from Co. Antrim have been found scattered widely throughout Scotland, the Isle of Man and north central England (Sheridan et al. 1992) while indications of movement in the other direction
6. Rituals of construction and use.

are shown by the occurrence of axes made from Cumbrian tuff in Ireland (Fig. 186).
The little axe in Drumanone had therefore connections not only with the source of its
stone in Antrim but with communities throughout Britain. The quarry at
Tievebulliagh, from which the Drumanone porcellanite came, is situated in an
inaccessible mountainous area. Extraction would have been not only difficult but
potentially hazardous. This may have increased the significance of the stone, and
therefore of the axe, making it a suitable candidate for ritual deposition.

A stone axe was obviously a woodworking tool, but its importance in the
Neolithic was far greater than its mere functionality. Two of the polished stone axes
found in ditches of the causewayed enclosure at Magheraboy showed evidence of
ritual treatment before deposition (Danaher 2007). One was purposely smashed,
perhaps displaying ritual death and burial (Ibid. 102), and the other was in pristine
condition, obviously unused and surrounded by 30 pieces of quartz (Ibid. 103),
perhaps celebrating new life. The portal tomb axes both seem more domestic in
nature, with traces of use, and suitable for woodworking rather than tree felling. Ray
(2004) regards axes as archetypal symbols and believes that the presence of miniature
and highly polished, non-functional forms emphasises their symbolic importance;
their ‘seed-like’ form may have symbolised fertility and regeneration (Ibid. 161).
Sheridan (1986, 23) believes that small axes might have been specially made for ritual
deposit. Both the stone axes found in portal tombs were miniature and this may have
increased the likelihood that they were primarily ritual objects.

Other writers have suggested that axes may have been male fertility symbols
(Patton 1991, 69, Cooney 2002, 179) and this suggestion is supported by Debbora
Battaglia (1983) in an ethnographic account of the Sabarl people of Papua New
Guinea. Axes constructed of exotic materials are used in mortuary ceremonies,
presented as gifts to male heirs of the deceased and are perceived as male. As stated
in Chapter 2.2 the stone axe, the tool that felled the forests and shaped the timber, was
of such importance during the Neolithic that it was a symbol of Neolithic life and
idealism potent enough to stand on its own without needing other symbolic
connotations.

Given the weight of evidence of ritual significance elsewhere, it seems likely
that the deposition of stone axes at Poulnabrone and Drumanone was firmly in the
European tradition which stressed the unique importance of the axe as a symbol of
values and beliefs. The presence in a portal tomb of an item of ritual symbolism throughout the Neolithic world indicates that the local people were part of a shared tradition of beliefs and ritual practices. The social significance of the deposited axes is demonstrated in evidence of links with other communities, perhaps in a developing social network of gift exchange or trade. A polished stone axe fulfilled all the necessary functions of an object suitable for gift exchange. It was portable, capable of being suitably beautified by polishing, instantly recognisable among different societies, possessed a mystique from its far-flung origins and carried a message of a specific lifestyle, a new understanding of the world and man’s place in it. As it moved from place to place it may have amassed further allure, carrying with it the memory of ritual and celebration gathered en route, and creating its own ‘biography’ until its final deposition within a stone portal tomb.

6.7.3.2 Other stone tools. Stone tools or parts thereof are common deposits within all megalithic tomb types, and in settlement sites. The commonest objects in portal tombs are scrapers, arrow heads and knives or blades, and quantities ofdebitage have also been found.

Mesolithic lithics.

An examination of the distribution of portal tombs and known Mesolithic sites seems to indicate that they did not coincide (Chapter 4.2), but the inclusion of Bann flakes, seen as firmly Mesolithic in date, in 3 portal tombs should not be ignored. They suggest that in a few areas at least there was some communication between the two communities.

Ticloy Co. Antrim. A large flint Bann flake ‘heavily used at the bulb end’ was found ‘presumably’ in the chamber (Evans & Watson 1942, 65). This is a very interesting tomb as it also contained a later well-worked leaf-shaped arrowhead and had suggestions of a court in the drawings made by Stokes in 1835. This feature is no longer visible.

Aghnaskeagh Co. Louth. This complex tomb shows multi-period usage. As well as the Mesolithic flint Bann flake (with slight signs of use (Herity 1964, 134), Evans (1935) also found Neolithic lithics.
Drumanone Co. Roscommon. One Bann flake and a fragment of another were found 6 inches below ground surface, 3 and 4 metres south of the south-west portal stone (Fig. 188). Both showed signs of much use (Topp 1962, 44). The excavator suggested they show a link with the numerous crannogs on nearby Lough Gara; there is a late Mesolithic settlement nearby.

Neolithic knives, scrapers and arrows. These are common items found in most of the excavated tombs and were normally made from flint or chert. Many show signs of use and could be described as ‘domestic’ articles and are difficult to date more accurately than ‘Neolithic’. At Poul nbrone the small arrowhead found embedded into a male hip bone indicates another possible usage. The fact that this particular bone was selected for inclusion among the varied human deposits may have been deliberate; it could indicate that the owner of the hip, or of the arrow, was in some way special.

Scrapers, the ubiquitous tools of the Irish Neolithic, were found in all the tombs with lithic evidence. Concave scrapers appear to be unique to Ireland and Bergh has speculated that their function and role may have been linked to ‘certain ideology or ritual behaviour’ (Bergh 2009, 111) confined to the Irish Middle and late Neolithic (Chapter 2.2). He believes that they may have been used for defleshing. They disappear from the record abruptly at the end of the Neolithic, coinciding with major changes in religious practice as demonstrated by the change in monumentality. Concave scrapers were found in Tirnony, Ballyrenan, Poul nabrone, Kiltiernan, Melkagh, and Aghnaskeagh portal tombs and are also commonly found in court tombs; Herity (1987, 135) examined 93 concave scrapers from 21 sites.
6. Rituals of construction and use.

The reasons for including mundane everyday tools in a ritual deposit are difficult to understand. Each worked stone tool does represent hours of skilled work and Pollard (2000) feels that ‘Seemingly ‘dead’ artefacts, the potency of these materials may well have derived from their intricate involvement in daily social life, being redolent of the network of relationships between kin and other, places and agents in the landscape, and the roles and responsibilities of people, animals and things.’ Thomas (1991a, 94) points out that in a pre-literate society material objects were needed as mnemonic devices to maintain traditions and ritual, while Bradley (2007b, 353) suggests that the fact that in the Irish Neolithic domestic articles accompanied the dead reflects the increasing evidence of substantial contemporary houses. Van Gijn (2010, 129) during her painstaking use-wear analysis of flint artefacts in the Netherlands, found that some harvesting implements were first burnt and then rubbed with red ochre along the ‘blade’ before deposition.

Fig. 189. Lithic deposits from portal tombs (Herity 1964) (Poul nabrone, Melkagh and Tirnony not included).
6. Rituals of construction and use.

Although the lithics are part of the suite of everyday domestic tools there may have been an element of selection of individual items of particular significance. An interesting or particularly attractive appearance might have seemed important. As with the polished axes considered above the source of the stone used may have been exotic and important. Flint outcrops are located in Ireland only in the northeast Antrim coast and on Rathlin Island, yet a large proportion of the deposited tools are of this stone, which is not only very suitable for working but also of a very attractive appearance. Even sites like Poulnabrone and Melkagh, far from Antrim, include artefacts of flint.

Individual tools may have had significant usage in ritual rites, as suggested by Bergh for the hollow scrapers (Bergh 2009, 111). Stone knives or blades appear in four portal tombs. Their exact usage is unknown; they may have been simple everyday items, but the intricacy of their workmanship and elegant shape might indicate a greater significance. In this regard the location of three such knives in Tirnony is interesting (McSparron 2011, 2013). Each of the implements was associated with one of the three clusters of pottery deposition, within the chamber, and the excavator suggests that both the form and placement may have been significant. Two straight knives were placed at either side of the chamber, while the curved blade was found at the threshold, suggesting a structured opposition, perhaps with the straight knives signifying masculinity and the curved blades femaleness (McSparron 2013, 32). An alternative interpretation might be that all three flint knives were associated with males and were deposited on the cluster of ‘female’ pottery sherds, honouring and remembering the skills of both sexes. The fact that the two polished axes were miniature may also have been significant; they would have been used in a domestic context for small-scale woodworking rather than for felling trees in the uncultivated forest.

The importance of lithic tools in a ritual may have been their narrative, what Van Gijn (2010, 128) describes as their life and death. A reminder of their extraction, of the intricacies of exchange, their working and polishing, material qualities and applied materiality, occasions of use and perceived significance, may have seemed of such importance that their place in the ritual monument was not merely justified but necessary, highlighting the elements of domestic life in a kind of performance.
6. Rituals of construction and use.

An interesting piece of worked sandstone was found in the cairn of Poulnabrone. It measures c. 20 x 15 cm and has a pecked oval depression, which the excavator suggests may have been a cupmark (Lynch, 2014, 122). This has some similarities to a ‘faceted’ stone found by Evans (1937, 247) in the cairn at Kilfeaghan.

![Fig. 190. Worked sandstone from Poulnabrone.](image1)

![Fig. 191. 'Faceted' stone from Kilfeaghan (Evans 1937, 247).](image2)

6.7.3.3 Quartz. Quartz is silica, called rock-crystal when clear, and quartz when white or pinkish (rose-quartz). Quartzite is the rock made from metamorphosed quartz fragments (Darvill 2002, 86). Quartz is a visually attractive and widely distributed stone, common throughout most of Ireland and is found in pure white veins running through darker rocks, in boulders consisting of pure quartz, and in pebbles, both chips and rounded. It can be worked but not with ease. It is also found in its pure silica form as rock-crystal, colourless and glass-like. The significance of quartz in ritual contexts in the Neolithic is well documented (eg. Darvill 2002, Bergh 1995) and its use is so frequent that it is widely accepted as an intentional ritual deposit. Its importance in the Neolithic is discussed in this thesis in Chapter 2.4.2.
6. Rituals of construction and use.

Fig. 192. Quartz pebbles from Poulnabrone. The piece on the right has been worked.

Quartz stones or pebbles have been found as deposits in court tombs. Writing in 1987, Herity lists eight court tombs with deposits of quartz crystals (Herity 1987, 145). They were also found in passage tombs (e.g. Carrowmore Co. Sligo, Bergh 1995, 153), and wedge tombs (e.g. Toormore Co. Cork, O’Brien 1999, 216). Quartz pebbles were occasionally found in Neolithic houses (Mulligan 2010), for example at Lough Gur site A (ibid. 139) and Thornhill Co. Derry (ibid. 74), but they are strikingly rare in these domestic contexts compared with deposits of pottery, charcoal and lithics.

Quartz deposits are minimal in portal tombs, but they do exist and appear to have been intentional. It is quite possible that other quartz depositions were overlooked in earlier excavations.

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aghnaskeagh</td>
<td>'2 water-worn pebbles, one of quartzite'. In primary deposition layer in chamber.</td>
<td>Evans 1936.</td>
</tr>
<tr>
<td>Drumanone</td>
<td>1 piece of rose quartz 50 cm below surface of chamber in layer of burnt stone and cremated bone.</td>
<td>Topp 1962</td>
</tr>
<tr>
<td>Poulnabrone</td>
<td>2 quartz crystals, one worked. In chamber.</td>
<td>Lynch &amp; Ó Donnabhain 1994</td>
</tr>
<tr>
<td>Tirmony</td>
<td>1 pebble and two fragments of struck quartz. In tomb entrance.</td>
<td>McSparron 2013, 34.</td>
</tr>
</tbody>
</table>

Table 13. Quartz deposits in portal tombs.
6. Rituals of construction and use.

In many early societies around the world quartz appears to have been used as a substance with ritual significance (Chapter 2.4.4) and may have been associated with death and the human spirit, or with celestial bodies. The use of quartz as a deposit in portal tombs might have demonstrated the importance of the colour white, especially as quartz will produce a spark when two stones are rubbed together, thus producing light. In California, for example, the presence of quartz in a patterned deposit at a ritualised site in the Mojave Desert is taken as evidence of shamanic practice (Whitley & Hays-Gilpin 1999, 221); the writers believe that cognitive systems of beliefs may have been founded on natural, ecologically-based observations. The presence of quartz deposits in portal tombs might indicate that shamans were involved in the practices which took place. This association of quartz deposits with Neolithic monuments, as well as its shiny, attractive appearance and piezoelectric property, has led Bergh (1995, 153) to suggest that in Neolithic Ireland it has a certain meaning in relation to the dead. He feels that the quartz ‘can be seen as giving the dead the power to undertake the journey to the otherworld. (It) …can also have symbolized life, an assurance of re-birth.’ Darvill (2002, 114) also suggests that quartz pebbles symbolise the soul, and may have had the idea of a passport into another world.

The main evidence of quartz deposition in portal tombs is in deposition of pebbles within the chambers, possibly as talismans or symbolic tokens. Quartz deposits are slight in portal tombs. There are none of the surface spreads evident at, for example, Toormore wedge tomb (O’Brien 1999) or clustering around the entrance to passage tombs, for example Newgrange. The portal tomb deposits seem to be only tokens, and perhaps are indicative of the earliest use of this ritual symbol. It is striking that quartzite appears to have been avoided as a building stone for portal tombs (Chapter 5.2). The location of the quartz deposits might be significant, but it varies from one site to another. At Tírnoyne the quartz pebbles were found between the two portal stones, at the threshold (McSparron et al. 34). At Poulnabrone they were simply described as being in the chamber (Sternke 2014, 128) and at Drumanone the single piece of quartz was located in the very disturbed black sticky soil of the chamber, mixed with charcoal fragments, burnt and unburnt bone, a piece of flint and glass, in the eastern (front) half of the chamber (Topp1962,41). At Aghnaskeagh a quartz pebble was found at the base of the chamber - ‘but not in close association with a bone pocket’ (Evans 1935, 239).
6. Rituals of construction and use.

6.7.4 Uncommon Deposits.

Although most artefacts from portal tombs show great similarity and are part of a general pattern there are a few aberrant finds which should be considered separately. Some of these are obviously not linked with primary usage of the tomb, but others probably were and show a distinct difference in ritual deposit - the portal tombs were not homogenous.

6.7.4.1 Animal bone. The only portal tomb with animal bone recorded amongst the finds is Poulnabrone, where the excavator found both domestic (cattle, sheep/goat, pig) and wild fauna (birds, pine marten, hare, woodmouse, stoat), and also a dog bone (McCormick 2014). A small number (five) of the sheep/goat and cattle bones have been dated to the Middle Neolithic, contemporary with the usage period of the tomb (McCormick 2014, 156).

The paucity of animal bone in portal tombs is surprising, given the much larger representation in some contemporary ritual sites. Herity (1987) found records of animal bone at 41% of listed court tombs, and more have been found since then. Jones (2004, 48) found evidence of structured deposition of animal bone at Parknabinnia atypical court tomb where a bovine skull was prominently deposited at the entrance to the front chamber. Other animal bones at this site included cattle, sheep/goat, pig and deer, and there was a large number of animal teeth throughout. Wild animals like fox, hare and stoat were also found. Hare are not burrowing animals so would not have found their own way into the tomb; their deposition appears to have been intentional, and recently obtained radiocarbon dates have confirmed that at least some of the hare bones in the Parknabinnia megalith are contemporary with the Neolithic human bone deposits (Jones pers. comm.). The bones of three hares were also recorded from Poulnabrone, one of which, found within the chamber, dates from the Middle Neolithic, 3340-3027 cal BC (McCormick 2014, 154). McCormick (1985/86), in his review of animal deposits in prehistoric burials, found only one other record at a portal tomb, that of a dog at Aughnaskeagh. He cautions that this may be a later insertion as there is evidence of later deposition in the shape of a blue glass bead. In contrast many more animal bone deposits were recorded from...
6. Rituals of construction and use.

Linkardstown cists, court tombs and passage graves, although McCormick (Ibid.) states that these may not all have been intentional ritual deposits. They could have been discarded food remains, digging implements, or could have been brought to the site by accident. It is possible that taphonomic destruction has destroyed animal bone at other locations, or even that earlier excavators did not deem them to be important enough to record. The most recent excavation at Tirnony has not recorded any animal bone (McSparron 2011).

Although there is some evidence of animal bone contemporary with human bone deposition at Poulnabrone, McCormick (2014, 157) counsels against over-interpreting animal bone in burial sites. The animals were mainly very young individuals and might have died of natural causes within the shelter of the monument. Schulting et al. (2012) were surprised to find no prehistoric dates among the animal bone they investigated in their court tomb survey. It might, in fact, be possible to state that the deposition of animal remains was not a normal practice at portal tombs.

6.7.4.2 Beads.

Eight stone beads were found by Lady Hamilton in her 1907 excavation of Ballyrenan portal tomb. The beads were outside the back chamber of a monument that has two structures, both believed to be portal tombs, and may have been in the cairn. The rest of the site was excavated in 1936 by Davies who believed that although the back chambers were probably secondary very little time elapsed between the two constructions, so the beads can be regarded as part of the continuous primary usage. The beads were polished, made of two different types of local stone and were pierced for threading. Davies noted that the largest, an ovoid bead 6.6 cms long, showed marks that prove it was ‘suspended by a string from a point’ (Davies 1937, 99), in other words worn as a pendant rather than strung as a necklace. One other bead was ovoid, the rest were disc-like. Davies & Evans (1934, 166) recorded a stone bead embedded in a layer of yellow clay within the chamber of Clonlum portal tomb. The clay surface was only visible at each end of the chamber, but the excavators believed it originally formed a complete floor within the chamber. Two pits were evident beneath this clay layer, so the bead was deposited at a later period. The
6. Rituals of construction and use.

Fig. 193. Stone beads from Ballyrenan (Cochrane 1907, 401).

bead was described as a ‘polished perforated pebble, 3 cms long by 2½ wide by 1½ greatest thickness’ (Ibid. 167). The igneous stone of which it was made was probably local.

Two stone disc beads were found in the chamber at Poulnabrone (Lynch 1988, 107; 2014, 119). Similar stone beads were found at Parknabinnia court tomb (Jones 2007, 73), only 9 km from Poulnabrone. At Knockeen portal tomb a cache of 57 polygonal shale discs, of varying sizes, were found under a flagstone just outside the tomb. Kytmannow (2008, 90) suggests that they could be either unfinished beads or V-shaped buttons, and might have been the property of a travelling craftsman, but there seems no reason why they may not have been a ritual deposit.

Fig. 194. Stone beads from Poulnabrone.

Stone beads were noted in eight court tombs in Herity’s study (1987, 155). He notes that those found at Bavan are ‘paralleled’ by those at Ballyrenan, and considers them to be late Neolithic, secondary deposits, but Mulligan (2010) lists similar beads in houses he believes to be early Neolithic, for example rectangular houses at Lough Gur, and at Thornhill Co. Derry. Beads have been found in mortuary contexts all over the world, and for millennia. Pierced shell beads were found in Blombos Cave, South Africa in a site which dates from some 70,000 years ago (Henshilwood 2009). It is
difficult to imagine the beads deposited in portal tombs as anything other than items of personal adornment even though none was directly associated with human remains. Details of their exact placement are not available, so it is not possible to suggest whether they were strung together as a necklace or were worn singly. They could, therefore, have been deposited at the same time or on separate occasions at different ritual occasions.

Blue glass beads, most likely dating from the Early Medieval period, have been found at Tirnony (McSparron 2011) and Aghnaskeagh (Evans 1935), demonstrating the enduring nature of the ritual significance of a site.

6.7.4.3 Bone artefacts.

Two bone items were found at Poulnabrone, part of a mushroom-headed pin and a small pendant. The pin is similar to those found in passage tombs and is probably not from the Early Neolithic. Its use is unknown; it may have been used to fasten clothing or as a personal ornament, but its frequent inclusion in passage tomb deposits suggests a ritual significance. It may, in fact, be part of a ‘toggle’, like Jones (2007) found at the nearby court tomb at Parknabinnia.

The pendant is unique (Fig. 195). It is tiny, only 2 cms long and may have been worn as an ornament. The eleven carefully bored holes may have carried a coded message. Its overall shape strongly suggests that it is a miniature axe, the most potent symbolic artefact of the Neolithic. It could have been an amulet, or a badge of office and is one of the only artefacts to suggest the existence of a distinct personage within society. Perhaps it was the possession of a shaman whose knowledge of the otherworld was symbolised by a tiny axe with its coded message. It was found within the chamber, close to the western portal stone.

The significance of the 11 holes is unclear. The central five are bored right through the bone while the outer three on each side are only hollows, although they are of the same size as the central holes. The impression is of a definite, intentional design rather than a random pattern, but the number 11 has no obvious meaning. Stone pendants which appear to be shaped like miniature axes were found by MacAlister et al. (1911/12, 311) in Cairn G at Creevykeel (Fig. 196).
6. Rituals of construction and use.

The Poultnabraone pendant has not been dated. A recent study on Scottish antler and bone toggles and pins (Sheridan 2007) includes examples of flat, lozenge-shaped variants which bear some resemblance to the Poultnabraone pendant, although they are smaller. The Scottish examples are dated to the middle Bronze Age and are believed to have been fasteners for a funerary garment, with a tendency to association with child burials (Ibid. 175). Although the majority of the bone in Poultnabraone has been dated to the Neolithic the remains of a foetus dating from the Bronze Age, c. 1340 cal BC, was found just outside the portals (Hedges et al. 1990, 106). It could be speculated that the Poultnabraone pendant was associated with the Bronze Age infant burial.

Fig. 195. Bone/horn pendant from Poultnabraone.

Fig. 196. Stone beads and pendants from Carrowkeel (MacAlister et al. 1911).

Fig. 197. Bone/antler toggle from Eweford, Scotland. (Sheridan 2007, 177).
6. Rituals of construction and use.

6.8 Summary.

The study of the sequences of construction and use of portal tombs conveys an impression of continuous ritual practices, changing and evolving over time; portal tombs were not static sites and reveal glimpses of developing ritual practice and meaning. The paucity of excavation and the disturbed nature of many sites convey an impression of mystery, with the structures emerging briefly from past shadows and then receding into mists of incomprehension. It is possible that this is how they were perceived during their period of use. They may have experienced episodes of activity, when they were the centre of group life, sacred and profane, followed by periods when they disappeared into obscurity as attentions were directed elsewhere, but their presence remained constant, physical structures which had become embedded in local mythology. Current interpretation follows a similar path. A fresh interpretive tool or the excitement of a new excavation will briefly illuminate the structures, then the mists of speculation or indifference descend and leaves them in obscurity.

The suggestion that portal tombs were constructed over previously ritualised sites has been made by some excavators since Collins in 1965, and earlier work uncovered pits which could have reinforced the suggestion, but the idea has achieved fresh impetus by the most recent excavation at Tirnony Co. Derry (McSparron et al. 2013). It would be speculative to apply this theory to all portal tombs; for example Poulnabrone and Drumanone, both carefully excavated, revealed no such pre-use. It should, however, be taken into consideration when examining the choice of landscape sitting. The initial decision might have been made by groups who needed a site for excarnation or cremation, or even for formalised deposition rather than for a portal tomb. The site could have been embedded in group memory as a significant ritual site when the time arose for building a megalithic monument. Pre-existing structures might have influenced the orientation of a new monument; it would be natural and physically simple to shadow the long axis of an extant site. Chapter 4 of this thesis strongly suggests that sites may have been selected by early farmers to mark the edge of cultivated land, the boundary between the wild forest and domesticated plots. If, in some cases, the selection was based on pre-monumental requirements, the same criteria would apply. It has been stressed that monuments were built by early, but not the earliest, farmers (Chapter 2.2, 2.3); the earliest farmers may have marked the
6. Rituals of construction and use.

boundaries of forest clearance in a less obvious way which in some cases became monumentalised at a later period. The period between the suggested earlier use of the site and the monument construction is unknown, and may have been minimal; the early dating suggested for portal tombs means that there might be only two generations between the firstcomers and the megalith builders. It is hoped that post-exca
vation study of the Tirmony evidence may clarify this dating (McSparron et al. 2013, 35).

If, in some cases, portal tombs were constructed over pre-existing ritual structures the question arises as to whether they were a natural progression of the ritual intentions of the pit users, or whether they represent an entirely new conceptual framework. It seems most likely that they embody a continuation of beliefs arising from the adoption of agriculture and its introduction into Ireland. The sites seem firmly based on the location of easily worked farmland and monuments were constructed by early farmers along the Atlantic coastline of Western Europe.

There is some slight indication that the actual construction of some portal tombs followed an episodic course, with possible gaps in activity. The possible sequence followed varies from site to site, making this method less likely, or less significant. If the evidence suggested, for example, that in each case the portal stones were first erected, followed by the backstones, then it could be suggested that there was a significant plan, reflecting the varied importance of different parts of the structure, but the sequences revealed seem to suggest convenience, perhaps dictated by the nature of the terrain or the stones used.

The nature of the ritual deposition may also suggest a sequence of events. With regard to human burials the evidence is very limited. An increasing elaboration of ancestral veneration might be indicated at Poulnabrone, and there is the possibility that an increasingly stratified society distinguished certain members of the elite in the region as evidenced by burial in a separate cist at nearby Poulawack, on a prominent hilltop, but these suggestions cannot automatically be extended to other sites. The deposition of material items shows episodes of activity; these cannot be chronologically linked with occasions of human burial but it seems most likely that this is what happened.
7. Discussion.

Chapter 7. Discussion.

7.1 The time of the first farmers.

The question of whether portal tombs were constructed by indigenous people who changed their Mesolithic lifestyle in response to ideas from abroad or by incoming colonists who brought their new ideas and new ways of living with them is still debated; were the ritual concepts revealed in the portal tombs conceived and developed by the people who had lived in Ireland since the last Ice Age, or were they introduced by outsiders who moved, complete with the material, intellectual and metaphysical accoutrements of a European Neolithic lifestyle, to colonise and change the land forever? To this writer it seems likely that some movement of people occurred; the change to a farming lifestyle with imported animals and plants, new technologies, permanent houses and a determination to construct massive stone monuments took place within what is increasingly recognised as a very brief time scale, strongly suggesting an initial inward migration.

There is little evidence that portal tombs were built in areas with a recorded Mesolithic population, and there are indications that the builders actively avoided these areas, perhaps in an attempt to avoid confrontation, perhaps due to specific ritual requirements for monument sites. This avoidance, discussed in chapter 4.2, is noted in specific areas, for example around Lough Neagh and in the Dublin area. Lynch (2014, 174) notes that, in a well-researched area like the Burren, the nearest Mesolithic evidence to Poulnabrone is at Fanore, a coastal midden some 15 kilometres distant. The somewhat surprising absence of portal tombs in the entire central plain area of Ireland might be partially explained by a Mesolithic presence, as evidenced at Lake Boora (Ryan 1980), while the densest concentration of portal tombs in the drumlin area of Co. Tyrone has no Mesolithic evidence. Whether or not these new ideas were later adopted by the indigenous inhabitants is unknown; Mesolithic populations may have lingered on in certain areas avoided by the settlers, or they may have been absorbed into, or been overcome by, the newcomers. The presence of Mesolithic artefacts in three portal tombs (6.4) suggests that the two populations might have been in contact in some areas.
The origin of a colonising population is normally taken to be either northern France (Sheridan 2010a) or western Britain (Whittle et al. 2011, Mallory 2013). In the opinion of this writer the latter is most likely, although the probable early dating for portal tombs might seem to favour Brittany. The difficulties of transporting cattle in a small boat from a distance (north-west France) have been well-documented (Case 1969), and in recent years the present writer has witnessed the transport of cattle by currach for short distances off the coast of Connemara; it is an enterprise not to be lightly undertaken, even for a short distance and with the assistance of an outboard engine. The only historically recorded successful invasion of Ireland came from southwest Wales, in the person of Strongbow and his train of Anglo-Norman knights.

The environment in which the portal tombs were constructed was dominated by forest, and the felling of this forest must have dominated the lives of the portal tomb builders. Small clearings have been located which predate the monuments and it seems most likely that the earliest small-scale farming was the result of tentative experiments by small groups of pioneers. Major clearance episodes are evident from about 3750 BC (Chapter 2.2) suggesting a major increase in farming activity and migration, and coinciding with the sudden onset of rectangular houses and the construction of court tombs (2.2). Poulnabrone may have been built some 50 to 100 years before the Landnam by the near descendants, perhaps the grandchildren, of the earliest colonists. The dates from Poulnabrone are currently the earliest recorded dates for portal tombs but the depositional evidence from other sites could also fall into this period. The unchanging nature of the basic design features indicates that there may have been little chronological variation and it is here suggested that portal tombs were erected by early, but not the very earliest, colonists, who, with a remarkable degree of synchrony, felt the need to construct large stone structures, of a distinctive design, in a prescribed part of the landscape.

Portal tombs therefore may have been amongst the first monuments built in Ireland and were constructed during the very earliest period of the major change from the Mesolithic to the Neolithic lifestyles. In some cases there are indications that the sites they chose had already been marked as significant by the very earliest colonising farmers, the immediate ancestors of the portal tomb builders. Some excavators have suggested this possibility due to the presence of pre-structural pits, or deposits low in the cairn (5.5, 6.2).
Some portal tombs continued in use for hundreds of years, as evidenced by later depositions. The basic structure of the monuments was never altered, but in some cases a new structure was added (5.7), suggesting a change in ritual requirements. Portal tombs were reused at a time when court tombs and early passage tombs were in use; the same communities may have used all three monument types for different ritual needs.

7.2 A pattern of siting – farmland, water and seclusion.

A study of the physical elements of site selection, like altitude, soil profile terrain and natural vegetation (Appendices 1 and 2), have led this writer to the belief that portal tombs were constructed on the boundary between cultivated land and land less suitable for early farming. Mountains and hilltops were avoided, with no tomb located above 300 metres OD, and it is suggested that the preference for lowland sites was most likely due to the placement at the limit of forest clearance and good farmland.

Indications that portal tombs were located in these areas have been identified in approximately 90 portal tombs, discussed in Chapter 4 and Appendix 2. It is here suggested that the reason for this choice of site is that they were conceived as ritual markers, delineating the limits of forest clearance in both material and ritual form, and built to celebrate the point at which the labour involved in tree felling ceased as the underlying land became less productive and more difficult to cultivate, or where the agricultural needs of the society had been met. An association with good agricultural land was described by Renfrew in 1976 in relation to the siting of megaliths in Arran, and it has been suggested for Irish portal tombs (Cooney 1979, 1983, Kytmannow 2008, 122). It is also claimed for other tomb types (for example wedge tombs – O’Brien 1999, 237), but the belief that portal tombs were located at the boundary of newly cleared land has not been examined in detail. Parker Pearson (1999, 134) remarks that Renfrew’s depiction of megaliths as territorial markers in Arran might be ‘more convincing’ if they were boundary markers on edges, and in an examination of the Neolithic monuments of Orkney Sharples (1985) hints at something similar. He believes that there was a chronological development in site
7. Discussion.

Although portal tombs were situated within areas with settlement evidence (4.2) there is no evidence of a shared site or example of a close proximity such as that found at Ballyglass Co Mayo where a court tomb was built on top of a rectangular house. If, as suggested, portal tombs were erected at the edge of farmland then such a close association would not be expected. Mulligan (2010) believes that early Neolithic houses were widely dispersed with a domestic ‘near-territory’ in the immediate vicinity, used for the majority of farming tasks and within an hour’s walk of the house, while the ‘far-territory’ was exploited by family groups where co-operation was needed for larger tasks. In this scenario if the portal tomb marked the limit of collective farmland then the slightly later court tombs with structured spaces for the sacred practitioners and lesser participants may have been built in a more central location, in the ‘near-territory’, visible and easily accessible to all. The close similarity in dating for the construction of court tombs (3715-3550 cal. BC, Schulting et al. 2012) and rectangular houses (3715-3625 cal. BC, McSparron 2008) suggests a link between the two (Whitehouse et al. 2014), and it could be suggested that the earlier portal tomb lingered on at the edge of the agricultural land while successful groups constructed a more complex and multifunctional monument in a more convenient location.

Another aspect of siting identified in this study was the frequent selection of discreet, unobtrusive sites. It might be that this was to avoid drawing the attention of possibly hostile neighbours to the existence of a settled area with its valuable domesticated animals; there is evidence of aggressive injuries in the human bone in Poulnabrone (Lynch, 2014). The simplest explanation for this choice is that the raising of a monument to mark this space may have been a local event, reflecting mainly local participation and concerns.

The suggestion that early megaliths acted as territorial markers, famously made about Neolithic Orkney by Renfrew (1976), and expanded by Chapman (1981, 1995), Darvill (1979) and Bradley (2008, 47), indicates a possible function for portal tombs, but as Bergh (1987, 241) points out the preference for discreet, inconspicuous locations makes this an unlikely function for portal tombs. This study strongly agrees with this point; it is quite uncanny how difficult it can be to see such relatively large structures from a distance. This does not rule out a connection between territoriality
and portal tombs. They may well have marked the boundaries of cultivated land to the insiders, member of the local group, a mark of the limit of farming and forest clearance, a memory of those who first cleared the forest.

Although the onset of the Neolithic was marked by intensive forest clearance, woodland may have retained a major conceptual significance and, as Allen & Gardiner (2012, 101) suggest, the spaces cleared for farming might have been defined by their location within the woodland, rather than as open spaces. In their pollen analysis of the monument sites in south-west Donegal (court and portal tombs) Keeling et al. (1989, 154) demonstrated that the results indicated that the tombs were built ‘in established clearances within this woodland.’ If the emphasis was thus on the location within forest clearings then the inconspicuous nature of their siting would not have been problematic.

The marking of the limits of forest clearance may have been the major factor in site selection but a further refinement of the choice may have been in regard to water. There appears to be a definite patterning in the association with, and avoidance of, certain water features. In particular, this study noted a strange attitude towards the sea; there may have been a conscious decision on the part of the builders to ignore the sea, although in practical terms it must have been an important means of communication. One third of all portal tombs were built near the coast, an unsurprising situation for colonising immigrants, but there is a sense of avoidance, of turning away from the sea, revealed by orientation and a location where the sea is not
visible and/or the tomb is invisible from the shore (Chapter 4.5.1). There are 18 portal
tombs within 4 km of the sea in Co. Donegal, yet none is oriented towards the sea.
The 7 portal tombs clustered around the coast of Cos. Down and Louth are all facing
away from the sea, even though it is to the east, the predominant direction (c. 60%) of
portal tomb orientation. Many coastal portal tombs are situated in such a way that
the sea is invisible, an almost perverse site selection. The reasons for this are unclear
but it is suggested that there may be a connection with the major change in diet from
marine to terrestrial protein identified at the onset of the Neolithic (Schulting 1998,
2002, Schulting et al. 2012). This ‘slighting the sea’ (Schulting 1998) is evident
throughout many areas of western Europe even in coastal districts, and the dietary
change is an indication of changing ritual choices; fish did not become suddenly
unavailable just because beef was present, and a simple preference for the taste of red
meat is unlikely to explain what seems to be a widespread abandonment of fish.

The reasons for this strange and sudden change in eating habits are not
understood. Thomas (2003), pointing out that there is plenty of evidence that
Neolithic people were very familiar with the sea, argues for ‘a positive rejection’ (Ibid.
70) or cultural taboo on the consumption of marine products. Rowley-Conwy (2004)
believes that it provides proof that the adoption of Neolithic was a sudden and
complete event, introduced by incomers, while Milner (2010) discusses some evidence
of marine consumption in Scotland which continued into the Neolithic and may
indicate that the Neolithic was introduced in a ‘complex story of messiness and local
character’ (Ibid. 52). The choice of portal tomb sites with regard to the sea echoes the
dietary choice and might represent a deliberate decision on the part of early settlers to
break the link with their homeland, a ‘burning of the boats’ gesture.

A further patterning of portal tomb location with regard to water features was
identified in the study as the choice of a location near particular or unusual water
features, possibly indicating that water was an important part of belief systems (4.5).
Spring wells, often more than one, were identified within 1 km of portal tombs in 30% of
cases, and many more may have existed. ‘Strange’ features like disappearing
rivers, sinkholes or swallowholes were identified at 22 sites (4.5.5), and discussed in
the case study of Fenagh Beg (4.9). It seems likely that these features were selected
for ritual reasons; portal tombs were not domestic structures so proximity to water
was not a practical necessity. It is possible that these features may have been regarded
as entrances to the underworld, as seen in many ethnographic accounts (4.5.4, 4.5.5).
In his examination of Neolithic sites in Scandinavia Tilley (1999) suggests that in many cases it was believed that these ‘entrances’ were used by the ancestors. A location near a marked ford, identified in 28 sites, may have been a further demonstration of the importance of farming in the vicinity. Shallow crossing points would have been suitable watering places for cattle, whose exotic importance may well have been related to the erection of a stone monument along their route. It is possible that a ford had a perceived ritual significance, regarded as a liminal site, a strange junction between water and earth.

There is a contrast in siting between major rivers flowing directly to the sea which were avoided, and small streams and tributaries which were frequently marked. Likewise, lakes are avoided but small pools are not. This opposition between large and small water features may be an indication that the monuments were sited in accordance with local issues. It is also possible that major water features like lakes and rivers were avoided as they were areas in which Mesolithic populations lingered.

Suggestions that portal tombs were erected as route markers were investigated. As with territorial markers the inconspicuous nature of the preferred sites makes this unlikely in many cases. In a discussion of the Breton megaliths Scarre (2009a, 9) mentions that pollen profiles showed that forest clearance was a gradual process and that many megalithic monuments ‘may have been constructed in landscapes that had not wholly been cleared for agriculture.’ Why place a ‘signpost’ in a place where it cannot be clearly seen? As discussed in 4.3 many portal tombs are not located along likely communication routes like rivers, lakes and eskers, but are numerous in drumlin landscapes where movement is constrained. There are certain areas where they could have functioned as routemarkers, for example in the Burren area of Co. Clare or along certain tributaries in the south-east of the country, but this may not have been their primary meaning. Major communication routes were not marked, perhaps because portal tombs were monuments for insiders, for members of the group who did not wish to advertise the presence of their ritual monument.

Many portal tombs are located near small rivers and streams, but there was a difficulty in quantifying this feature (4.5.3). It seemed impossible to define at what distance a stream is an important feature in site selection, and indeed it is difficult to
decide whether many small streams were present during the Neolithic. Location beside a small river or stream suggests that portal tombs might have marked routeways – a direct contradiction to what is indicated in connection with rivers. Perhaps this apparent opposition can be explained as a difference in scale. Portal tombs were not connected with major communication routes, but may have been markers of small, private pathways through the landscape, known and used by local insiders for everyday tasks. It is possible that agriculture was one of these tasks.

Although a preference for discreet, almost secretive locations is demonstrated in many cases, some writers feel that that this observation needs to be expanded. Cooney (2000, 136) remarks that many portal tombs (and court tombs) display both secret and open aspects of location. From a distance they are sympathetic to the landscape, following the contours with ‘respect’ for the local topography, but when the monument is neared the perspective changes and it becomes a ‘dramatic’ (Ibid. 138) construction in the landscape. During this study many monuments were found which displayed this feature. Many portal tombs are so sympathetically situated in the landscape that they are invisible until within very close range. They then emerge suddenly and dramatically. Examples include Muntermellan and Ballyannan in Co. Donegal, Brennanstown Co. Dublin, Carrickglass Co. Sligo and Aghawee Co. Cavan.

Fig. 200. Carrickglass Co. Sligo – a huge portal tomb, a secluded location.

Powell (2005) does not identify a discreet location as an aspect of portal tomb siting but describes portal tombs as ‘a bold and emphatic statement of the group’s solidarity and its presence in the landscape’ and suggests that they were erected by independent groups moving into new and unappropriated territories. Although in this study most portal tombs did not seem to support this view there are some which might. Poulnabrone Co. Clare is one, sitting on a level karstic pavement with no
7. Discussion.

apparent effort at concealment, although Lynch (2014, 177) points out that the presence of extensive woodland in the area at the time would have concealed the monument from a distance. Even today, with no surrounding woodland, the structure is ‘quite inconspicuous’ (Ibid.) when viewed from the roadway, as its limestone slab structure blends in with the karstic bedrock. The location of some portal tombs in the southeastern area could support Powell’s contention, with impressive structures situated in open, very visible sites, although others in the same region are quite concealed (Kilgreaney Figs. 198, 199, Whitestown Co. Waterford, Figs. 201, 202). Massive Kernanstown (Fig.203), just outside Carlow town, is sited on virtually level pasture, and Kilmogue in Kilkenny, a strikingly tall monument, is unconcealed on a smooth, very gently sloping valley side (Fig.204). It is possible that there is a chronological difference. Fraser (1998, 216), discussing the placement of the passage tombs at Loughcrew, believes that the small, earlier tombs were sited ‘sympathetically’ with the landscape features, intensifying the existing landscape, while the complex, later passage tombs were ‘constructive’, and harnessed the landscape features to create new vistas and landscapes. This interpretation might be applied to portal tombs. Initially, sites may have been chosen due to their importance as natural ritual places, to be enhanced by the building of a monument in a discreet location, but perhaps open sites were acceptable to portal tomb builders at a later period when concealment became less important and groups were more confident of their presence in the landscape.
An examination of the orientation of portal tombs, and of their intentional siting with regards to features of the landscape, failed to identify a significant patterning. Although some 60% of tombs faced in a vaguely easterly direction no conclusions of cosmological significance were drawn. It was not possible to prove that any natural feature in the landscape was the focus of any portal tomb, and nor did any portal tomb have a view of any court tomb, although many shared the same distribution pattern (4.4.1, 4.6.2). Suggestions that monuments were sited in relation to views of mountains, or of rock outcrops, were not sustained (4.4.2). The overall impression was that portal tombs were in close harmony with their intimate landscapes. If there were mountains nearby then these were visible; if the terrain included rocky outcrops they were not avoided; if the locality consisted of smooth, rolling parkland then that is where the portal tombs were situated. The use of local stone in the construction increased the impression of a man-made structure which was at total accord with its landscape.

There are indications that the landscape requirements of portal tombs in the southeastern area, although still following the basic norms of siting, were somewhat less restricted than elsewhere. In the southwest portal tombs are found closer to major rivers and beside tributaries which may have been navigable, they avoid hillsides and rocky terrain, they do not huddle up to outcrops or cliffs. Some of this is due to the terrain which is for the most part smooth and open, but they do seem to be sited in more obvious, less discreet locations as discussed above. In this part of the country the foothills of mountains, a popular site in other areas, were totally avoided. A chronological change in ritual and social requirements might explain these differences, but in the absence of excavation and secure dating this remains
speculative. The portal tombs in the Dublin area, although close by, are sited in a very similar way to those in the rest of the country.

7.3 The ritual of construction.

Ritual practice normally includes an element of theatricality, with, as Fleming (1972) explains, suitable locales for the principals (performers) and spectators. The location of many portal tombs does not appear to have been selected on this basis, suggesting that they were designed for single use only. Although a later ritual would have been possible, particularly if restricted to a small number, many tombs are sited in areas where viewing and movement were particularly limited. The typically sloping nature of the site would not have lent itself to a formalised ritual procession up to or around the monument and would also have restricted viewing. A division between performer(s) and spectators is not evident in the landscape in most cases, and most do not seem to have been specifically located with continuing ritual occasions in mind (4.3, 4.7).

Fig. 205. Altadrumman Co. Tyrone – oriented directly into an outcrop – little room for ritual performance

Fig. 206. Adreoarwinny Co. Cork. Facing a cliff, inhibiting active performance.

The morphology of portal tombs is also strongly suggestive of a single use monument. The chambers were typically small and difficult to enter, and doorstones, where present, were part of the original monument, not later additions (5.3, 5.4); the structure of the portal tomb inhibits movement. Although they are strong, attention-focussing structures, with a well-emphasised front providing a frame for a single
individual, the entrance and interior in many cases prevents bodily movement entirely and never encourages it. In many chambers there is no space for ritual postures like kneeling or prostration. Deposits in some portal tombs indicate that in some cases at least the tombs were used on more than one occasion, but this may have been unplanned by the original builders; some initial deposits could only have been made at the time of construction. Changing beliefs and practices, an evolving social structure or farming intensification could have led to reuse of a monument which had been intended as a single celebration.

It is suggested in this study that the actual construction of the monument may have been the intended ritual occasion. As discussed in 3.3.2 this interpretation has been suggested for other monument types, for example Richards (2004a, 2004b), C.Evans (1988), and Whittle (2004), and the evidence suggests that this was likely in the case of portal tombs. The ritual importance of the construction occasion may have been stressed by foundation deposits, as found in some excavated examples and the suggestion considered in this study that some portal tombs were sited in areas already marked as being of ritual significance may indicate a sequence of rituals, celebrating each stage of the construction (6.2, 6.3).
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7.4 Ritual aspects – indications of religion and ideology?

The advent of the Neolithic way of life is marked throughout many regions of Europe by the construction of stone monuments, probably representing a similar response to the adoption of agriculture with new forms of belief and community lifestyle.

The structural material of the portal tombs was exclusively stone. The decision to use it was a conscious one; there were other options. The material properties of stone may have directed this selection; its enduring nature and essential hardness ensured that the concepts and concerns of the builders were preserved unchanged for future generations, while its geological structure dictated the form of the monument and preserved the essential nature of its landscape. The first clearance of the forest would have revealed stones in many places hitherto concealed, and may have contributed to an appreciation of its symbolic significance, as suggested by Scarre (2009a). It seems to have been important that the stones used for portal tombs were unaltered; the builders could have shaped them to make construction less difficult but chose not to. The perceived significance of stone may thus have been a reflection of its material properties – unchanging truths presented for future generations (5.2).

The structural form of a ritual monument reflects and dictates the nature of the ritual practised there; the ritual may in itself reflect or have been dictated by elements of supernatural beliefs or religions. The structural similarity of the main features of all portal tombs is striking and indicates a conscious choice; whether large or small, complex or simple, the basic three-cornered structure was the same, divided into three levels. It is difficult to avoid interpreting this as indicative of a belief in a three-fold cosmology, representing the three zones of sky, earth and underground, with corresponding division between the world of the spirit, the world of the living and the world of the dead. The forest clearance required for agriculture would have revealed a new, uncluttered view of the cosmos, and may well have given rise to a belief system based on this three-tiered view. There are many ethnographic examples of such beliefs. Helskog (1999) describes the recorded beliefs of Sami people linking the natural zones of sea, land and sky with the cosmological worlds of the spirit, the human and the dead. Lewis-Williams and Pearce (2005), who maintain that the
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The concept of a three-fold cosmology is universally ‘hard-wired’ into the human brain, discuss three-tiered cosmological belief systems amongst recorded people in different parts of the world and interpret the Newgrange passage tomb in this way. Their observations regarding the expressed beliefs of the pre-Columban inhabitants of Mesoamerica seem particularly apposite as a comparison with the portal tomb builders (Fig. 209). They describe the three-tiered cosmos with a tree linking the upper, central and lower layers of the world (the portal stones linking the capstone, the chamber and the underground). Although this cosmology was common and expressed in similar ways throughout the region, ‘each town or region had its own version .... that incorporated local mountains, caves, springs and rivers’ (Ibid. 65). This could be an interpretation of portal tombs with their repetitive patterning of portal stones, capstones and backstones, and selective variations of doorstones, sidestones, secondary capstones and cairns. The lack of artwork and of an overriding celestial orientation on portal tombs may raise questions as to whether these beliefs were displayed, but the repetitive nature of the strongly three-layered, three-cornered architecture seems to make it likely. The chosen location of many portal tombs close to springs, wells, sinkholes and underground water features identified during this study (4.5, 7.3) may be a further illustration of a belief that the underground was an important cosmological realm, perhaps as the domain of the dead.

Fig.209. Mesoamerican cosmos. Lewis-Williams and Pearce 2005, 65.
7. Discussion.

A study of mythology, displaying long-lived concepts of group memory, is considered in 3.4.1. Ethnographic studies have illustrated the strong likelihood that mythology can shed light on the beliefs of past societies and that it is an acceptable aid to interpretation. Whitley’s suggestion (2002) that the evocative names and respect accorded to monuments in Ireland until recent times may indicate that they commemorated mythical beings is interesting, but these mythical associations may have been attached to the monuments at a later date. Whittle (2004) applies the widely-held mythical explanations of creation to portal tombs in Wales (3.4.1) and suggests that the capstone represents the creation of the world as a primeval being emerging from the earth to the sky via the mountains.

A suggestion of another mythical nature regarding the morphology or architecture of portal tombs is made in this thesis (5.9.1); that the design might represent or symbolise the shape of a bull. The importance of bulls to people of the Early Neolithic in Brittany is shown by the carvings on menhirs of Brittany (Patton 1993); the animals would have been even more significant and noticeable in Ireland with its lack of native large mammals, and, as noted, pictorial representation are absent from portal tombs. Bulls, as discussed in 5.9, achieved almost cultic status in later periods in Ireland; it is possible that their importance was celebrated in ritual form from their first arrival in the country.

Beliefs that ancestors were significant, and should be venerated, petitioned or appeased are common in early societies (3.4.2), and were probably part of the beliefs of the portal tomb builders. It is suggested here that these early monuments initially celebrated recent, known ancestors, whose bones and possessions may have been included in the portal tomb at the time of its construction. The introduction of agriculture would have made such veneration likely and explicable. The ancestors had felled the forests and cleared the fields; they had imported the animals and the first seeds; they were the first to possess the knowledge of how to grow crops and husband animals, and how to create pottery containers. It may be that a memory of these pioneering ancestors was built into the portal tombs, in an effort to ensure that their knowledge and abilities would not be lost, nor the land they had cleared with such effort. With the now accepted early dating for Poulnabrone, and the possible extension to other portal tombs, these ancestors may have been named and remembered individuals, perhaps only two generations past. Later, these ancestors probably became part of a generalised group memory; when the court tombs were
built the ancestral remains were placed in the gallery, separate from the court area where the living observed the rite. At this later stage portal tomb ancestors may have been venerated by removal of some bones from the chamber to be passed among the living, and they may have changed from named individuals to nebulous group ancestors. This 'reuse' of bones may demonstrate changing ritual practices and/or beliefs, or perhaps occasions of communal stress or danger.

Portal tombs may have carried messages of social, rather than cosmological, significance. The special significance given to the capstone might have emphasised the importance of the spirit world over the living one, or it may have had a more practical function. It certainly drew attention to the monument and might have conveyed a message about the strength and prestige of the builders and users as suggested by Sherratt (1995), broadcasting the superior power and insight of newcomers and their agricultural economy. Powell (2005, 20), emphasising the 'highly conspicuous architecture' suggests that the monuments demonstrated the strength of a territorial claim with the 'bravado' of the tilted capstone 'reflecting the group's display of physical strength and collective self-confidence'. The inconspicuous location of many portal tombs does not, however, support this interpretation. There is no point in sending a message of strength and confidence which is visible only by the group concerned. The striking architecture may have resulted from the triumph of achievement, a celebration of successful establishment of a new way of life.

The occasion of construction needed the contribution of many members of the group; the joint effort would then have strengthened tribal cohesion and unity. A ritual construction would thus have had social consequences, and the concepts represented by the monument would have been strengthened by their material expression and would have shaped the society that produced them. Although the basic elements of design were common throughout there were differences in less important parts of the structure, revealing an overarching similarity with localised differences needing to be expressed.

The construction of a portal tomb may have provided a unifying focus for the scattered members of the group involved, as suggested by Sherratt (1990). The longhouses of central Europe provided such a focus to the Linearbandkeramik villages, but in Ireland it is accepted that early Neolithic settlement had a dispersed rural pattern. In this situation the monument could have fulfilled the necessary
unifying function to a society which needed substantial numbers of individuals at certain periods of the agricultural year.

Even within the local group the monuments may have meant different things to different individuals. Men and women may not have had similar understandings of the tombs and their relative positions in society may have been reflected in the structure and contents. It is possible that a concept of male superiority emerged from, or was strengthened by, the construction of megaliths; the movement of heavy stones would have favoured the superiority of physical strength. Different attitudes to the aged and to children, to members of the group and outsiders may also have influenced the finer points of the structure, and may have left traces in the evidence. Changing ritual practices shown in the deposits could have resulted from changes in the social structure of the tribe, or from different agricultural practices resulting in lifestyle changes.

The earliest deposits were made either before or during the construction phase, and it seems possible that there was no intention of later additions. The deposits, although sometimes numerous, were small, mundane and domestic in nature, and most showed signs of use. They were similar in all the portal tombs which have been investigated, stressing the similarity in beliefs and ritual practice throughout most of the country at the time, and displaying the existence of widespread communication networks. They may have been included as mnemonic devices to commemorate the narratives of their creation and transformation, to enrich the ritual nature of the monument by the addition of examples of technology new to the Neolithic lifestyle and to celebrate the achievements of those who made them. The inclusion of mundane, everyday objects in a ritual site may demonstrate the lack of a distinction between the sacred and the profane. Cooney & Grogan (1998, 457) suggest that the sacred and ceremonial became more effective and influential by this link with everyday living.

Portal tombs flourished during the early and middle Neolithic and seem to have lost their significance during the late Neolithic – a period when farming activity throughout Ireland was reduced. After about 3200 cal BC less land was cultivated and forest growth resumed in certain areas (O’Connell & Molloy 2001). There may have been an unhelpful climate change, or perhaps over-farming had reduced
fertility; the portal tombs, situated at the edge of cultivated land, may have been engulfed by new forest growth and become even less visible in the landscape.
Chapter 8. Conclusions.

‘And to make an end is to make a beginning. The end is where we start from.’

T.S. Eliot. Little Gidding V, Four Quartets.

This study of the portal tombs of Ireland has involved a search deep into the past, far beyond the limits of certainty, necessitating an alteration in perception from the present to the distant past, and an attempt to link the enigmatic stone remains of today with the glimpses of life almost 6000 years ago as revealed in the fragmentary archaeological record. The search has been undertaken with optimism and frustration, expectation and disappointment, but always with enthusiasm and belief. Much of the evidence is fragmentary and seemingly unrevealing, but when all the small pieces are added together a possible picture emerges. The resulting conclusions are of necessity somewhat tentative but are supported by evidence: the study may be regarded as contributing to our knowledge rather than providing definitive answers. Based on all the evidence a proposed model is suggested – this is how it could have been.

Portal tombs were built by early farmers who, like early farmers in many areas of western Europe, exhibited a compulsion to raise large stone monuments in chosen places in the landscape. These pioneering people lived in a different way than their Mesolithic forebears, and probably had different beliefs and ideologies, but this study appears to demonstrate that the most important element of the lives of portal tomb builders was farming.

The sites chosen for their monuments, similar throughout the country, may have celebrated the boundary between cultivated farmland, painstakingly created, and the untouched forest, marking the division between the domestic and the wild. The site selected was further refined by referencing important water features, springs, sinkholes and waterfalls, and may have been influenced by the availability of suitable stone. The choice of stone, unaltered, as the building material may have had a symbolic significance; longevity and strength in the material may have represented endurance and truth in the concepts.

Portal tombs seem to have been erected to serve the needs of the immediate community. The selected sites were often inconspicuous and may have had an
element of exclusiveness; their rituals were for local needs and not for broadcasting. The involvement of many in a group project would have strengthened local cohesion and created a sense of group identity, and the contribution of different people may have been celebrated by the nature of the deposited items.

A strong impression that portal tombs were initially intended for one use only was gained from consideration of the morphology and the chosen landscape sites. The intended ritual may have been the ritual of construction, a celebration of the laborious clearance of forest and the promise of future farming. Later, unintended use may have resulted from a change in beliefs or ideology. Ancestral veneration is suggested by the ordering and manipulation of human bone within some tombs.

The repetitive design of the main features of these enigmatic monuments must have embedded concepts of beliefs; they had no functional explanation. A strong impression was gained that they displayed a belief, widely held in simple societies, in a three-fold cosmological structure, a division into the realm of the spirits, the realm of the living and the realm of the dead.

In this thesis it is also suggested that an entwined concept celebrated in portal tombs architecture, displayed in the repetitive architectural design, is the depiction of a bull. This suggestion is strengthened by the fact that in Ireland there are no native large mammals and thus cattle must have been particularly significant, and also by evidence of bull cults throughout prehistoric Europe, including Ireland.

At the beginning of this study (1.5) the opinion was expressed that portal tombs were somewhat neglected compared with the other great monuments of the Neolithic. Excavations are limited in number and references and discussions about these mysterious monuments in the academic literature are often brief and dismissive. A desire to place them to the forefront of study of a period which is both significant and ‘stubbornly and frustratingly unclear’ (Whittle 2003, 150) was expressed as the main aim of this thesis with the possibility that such a study might clarify aspects of the time. The enigma of the portal tombs has not been solved, and perhaps never will be. It is hoped, however, that this thesis has contributed some small additions to what is known, and has made suggestions, which, while they cannot be directly verified, could fit the available evidence.
Suggested future research.

The most pressing need in the future is for further excavation. The full results from Tirnony are awaited with great interest, but there was no bone preservation there, and no trace of a cairn was found. It is likely that bone dating from the Early Neolithic will be found only in sites on a limestone bedrock, so future excavations should concentrate on these areas. The other portal tombs in the Burren are not as suitable for excavation as Poulnabrone, being either very large (Moyree Commons, Ballynacloghy), very decayed (Ballycasheen), or inaccessible (Crannagh), but some sites in Co. Leitrim would seem very suitable. Fenagh Beg (as suggested in Chapter 4.9) or nearby Druman O’Brien are well-preserved, accessible, medium-sized portal tombs erected on limestone bedrock. Any future excavations should pay particular attention to possible pre-construction ritual evidence, and/or to possible sequential stages of construction. The perceived need for a cairn and the selection of either a long or sub-circular design might become more explicable with further excavation.

The portal tombs in the southeastern area appear to display subtle differences in their average size, preferred locations and slight morphological variations, all of which could be neatly explained by a chronological difference. An excavation in this area would be revealing, but unfortunately none of these portal tombs are sited on limestone, so exact dating could be very difficult.

The perceived preference for siting with regard to water features (selection or avoidance) could be further examined as it is suggested that this may reveal aspects of beliefs. Ethnographic analogy might prove helpful.

A more detailed examination of the agricultural aspects of portal tomb sites might strengthen the suggestion that sites were located at the boundary between farmland and unfelled forest. Detailed pollen cores and soil analysis in the vicinity of selected sites could prove helpful. The two locations in Co. Leitrim suggested above as being suitable for excavation are both situated within one kilometre of a small lake (or two in the case of Fenagh Beg) which might prove a suitable site for a pollen core.
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325
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*An Foras Talúntais (now Teagaisc)* General Soil Map Ireland. [www.agresearch.teagaisc.ie](http://www.agresearch.teagaisc.ie)
Appendix 1. Location and underlying soil.

Appendix 1.

Location of portal tombs in relation to underlying soil types.

Soil maps from the National Soil Survey, An Foras Talúntais.

(www.agresearch.teagasc.ie/johnstown/soil_maps.asp)
Appendix 1. Location and underlying soil.

Antrim.

SOIL TYPE.

<p>| | |</p>
<table>
<thead>
<tr>
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<td>3</td>
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<tr>
<td>7</td>
<td>Rendzinas with outcropping rock</td>
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<tr>
<td>26</td>
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</tr>
<tr>
<td>42</td>
<td>Gleys</td>
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Appendix 1. Location and underlying soil.

ARMAGH.

SOIL TYPE.

<table>
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<tbody>
<tr>
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<tr>
<td>12</td>
<td>Acid brown earth (coarse)</td>
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<tr>
<td>14</td>
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<td>25</td>
<td>Gleys</td>
</tr>
<tr>
<td>29</td>
<td>Acid brown earths</td>
</tr>
</tbody>
</table>
Appendix 1. Location and underlying soil.

Carlow/Kilkenny.

Kernanstown  Ballynoe  Haroldstown

Kilgraney  Ballygraney  Ballynasilloge

Ballylowra  Newmarket  Glencloghlea  Kilmogue

Killonerry  Ballyhenebery  Owning  Raheen

SOIL TYPES.

<table>
<thead>
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<tr>
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</tr>
<tr>
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<tr>
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<tr>
<td>40</td>
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SOIL TYPES.

2  Blanket peat
25 Gleys
29 Acid brown earths.

5  Blanket peat (high level)
27 Gleys
Appendix 1. Location and underlying soil.

CLARE.

SOIL TYPES

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<tr>
<td>28</td>
<td>Grey brown podzolics.</td>
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<tr>
<td>33</td>
<td>Shallow brown earths and rendzinas</td>
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<tr>
<td>43</td>
<td>Gleys</td>
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<tr>
<td>44</td>
<td>Basin peat.</td>
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Appendix 1. Location and underlying soil.

CORK.

SOIL TYPES

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<tr>
<td>21</td>
<td>Gleys</td>
</tr>
<tr>
<td>23</td>
<td>Lithosols</td>
</tr>
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</table>

Aderawinny  
Ahaglasin.
Appendix 1. Location and underlying soil.

DERRY.

SOIL TYPES

<p>| | | | | |</p>
<table>
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<tr>
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<td>6</td>
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<td>12</td>
<td>Acid brown earths (coarse)</td>
<td>26</td>
<td>Gleys</td>
<td></td>
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</tbody>
</table>
Appendix 1. Location and underlying soil.

DONEGAL EAST.

Gortnavern  Bin  Carnaghan  Ballyannan  Eskaheen  Templemoyle

SOIL TYPES

1  peaty podzols  23  lithosols  20  brown podzolics.
2  peaty gleys.  24  blanket peat.
11  gleys  43  gleys (alluvian)
Appendix 1. Location and underlying soil.

DONEGAL WEST.

SOIL TYPES

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<td>16</td>
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<td>Blanket peat (low)</td>
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<td>27</td>
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Appendix - 10 -
Appendix 1. Location and underlying soil.

DOWN.

SOIL TYPES

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<td>Acid brown earths.</td>
</tr>
<tr>
<td>20</td>
<td>Gleys</td>
</tr>
<tr>
<td>25</td>
<td>Acid brown earths.</td>
</tr>
</tbody>
</table>
Appendix 1. Location and underlying soil.

DUHLIN.

Woodtown  Kilmashogue  Taylorsgrange  Howth.

Cunard  Kiltiernan  Brennanstown  Ballybrack.

SOIL TYPES

1  Peaty podzols.
4  Lithosols and outcropping rock.
8, 9  Brown podzolics.
30  Grey brown podzolics.
38  Gleys.
Appendix 1. Location and underlying soil.

FERMANAGH.

SOIL TYPES

- 2 Peaty gleys
- 5 Blanket peat
- 21 Gleys
- 27 Gleys

Glengesh

Kilrooskagh
Appendix 1. Location and underlying soil.

GALWAY EAST.

SOIL TYPES

<table>
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<td>5</td>
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<tr>
<td>7</td>
<td>Rendzinas with outcropping rock</td>
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<tr>
<td>21</td>
<td>Gleys</td>
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<tr>
<td>33</td>
<td>Shallow brown earths and rendzinas</td>
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Appendix 1. Location and underlying soil.

GALWAY WEST.

SOIL TYPES

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**Kerry not included – Killacloghane portal tomb not close to soil boundary.
Appendix 1. Location and underlying soil.

LEITRIM.

SOIL TYPES

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Appendix 1. Location and underlying soil.

LONGFORD.

SOIL TYPES

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<td>27</td>
<td>Gleys</td>
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<tr>
<td>44</td>
<td>Basin peat</td>
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</table>
Appendix 1. Location and underlying soil.

LOUTH.

SOIL TYPES

4 Lithosols and outcropping rocks
12 Acid brown earths (coarse texture).
14 Acid brown earths
43 Gleys
Appendix 1. Location and underlying soil.

MAYO.

SOIL TYPE

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<tr>
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Appendix 1. Location and underlying soil.

MEATH

SOIL TYPES

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<td>Gleys</td>
<td>40</td>
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Ervey  Rathkenny
Appendix 1. Location and underlying soil.

MONAGHAN.

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SOIL TYPE

25 Gleys
27 Gleys
28 Acid brown earths
29 Acid brown earths
Appendix 1. Location and underlying soil.

ROSCOMMON.

SOIL TYPE

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Appendix 1. Location and underlying soil.

SLIGO.

SOIL TYPE

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Appendix 1. Location and underlying soil.

TYRONE EAST.

Letterbrat 20 Altdrumman Cashel Keerin

SOIL TYPE

1 Peaty podzolics
2 Peaty gleys
6 Brown podzolics
20 Brown podzolics
25 Gleys
27 Gleys
Appendix 1. Location and underlying soil.

TYRONE WEST.

SOIL TYPE

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Appendix 1. Location and underlying soil.

WATERFORD, WEXFORD.

SOIL TYPE

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<tr>
<td>13</td>
<td>Acid brown earths/gleys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Acid brown earths</td>
<td>Acid brown earths</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Gleys</td>
<td>Gleys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>Gleys, alluvium</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 1. Location and underlying soil.

WICKLOW.

SOIL TYPE

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Peaty podzols</td>
</tr>
<tr>
<td>9</td>
<td>Brown podzolic</td>
</tr>
<tr>
<td>14</td>
<td>Acid brown earth</td>
</tr>
<tr>
<td>42</td>
<td>Gleys</td>
</tr>
<tr>
<td>8</td>
<td>Brown podzolic</td>
</tr>
<tr>
<td>10</td>
<td>Grey brown podzolics</td>
</tr>
<tr>
<td>30</td>
<td>Grey brown podzolics</td>
</tr>
</tbody>
</table>

Appendix - 27 -
Appendix 1. Location and underlying soil.
Portal tombs which appear to be sited at the edge of cultivable land.

Portal tombs discussed in the text: (sites which appear to lie on the boundary between different soil types are marked)

Ballybrittas Co. Wexford, page 150. ‘..on a furze knoll, never been disturbed by a ploughshare’ (Flood 1912, 120).

Ballyknock A and B Co. Mayo, page 107. ‘the tomb stands near the western edge of the cultivated land of the valley. Immediately beyond the tomb the sharp slope of the mountain begins. The lower slopes provide rough pasture but further up this gives way to gorse-grown bog’ De Valera & Ó Nualláin 1964.


Moyree Commons Co. Clare, page 159. At the edge of a small area of farmland, within a karst limestone landscape.

Poulnabrone Co. Clare, page 119. On bare limestone rock, at the edge of an area of glacial till, providing pasture.

Straleel Co. Donegal, page 160. On a rough, rocky hillside, adjoining a patch of farmland.

All photographs of portal tombs are the author’s own. Satellite imagery and map diagrams for those portal tombs within Republic of Ireland are from www.archaeology.ie. Portal tombs in Northern Ireland are displayed on Google Earth, Bing (http://www.worldmapfinder.com/BingMaps/En_Europe_Ireland.html) and OSI Historic 6 inch map series.
Appendix 2. Portal tombs and farmland.

Aderawinny Co. Cork.

PT is in an area of rough stony ground; farmland to the south (bottom of image).

Aghaglaslin, Co. Cork.

PT is on very small level platform on a steep valley side. ‘...the valley sides provide rough grazing but the more level ground in the area is under cultivation.’ De Valera & Ó Nualláin 1982.
Aghavas Co. Leitrim.

Portal tomb lies at the northern edge of a steep rocky hill, site of modern church, and close to the steep, clifffy edge of hill to the east.

Aghawee Co. Cavan.

Area of untilled land to north west of PT.

Aghnakane Co. Armagh.

PT forms part of a cashel wall. On reasonable farmland, just south of very rough hillside.
### Appendix 2. Portal tombs and farmland.

<table>
<thead>
<tr>
<th>Location</th>
<th>Notes</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aghnaskeagh Co. Louth.</td>
<td>PT lies in fertile ground to the east of uncultivated patch.</td>
<td><img src="image1.jpg" alt="Map" /></td>
</tr>
<tr>
<td>Altdrumman Co. Tyrone.</td>
<td>The PT lies in pasture, just south of area of very rough, unfarmed land.</td>
<td><img src="image2.jpg" alt="Map" /></td>
</tr>
<tr>
<td>Ballindud Co. Waterford.</td>
<td>PT avoids damp marshy ground along river.</td>
<td><img src="image3.jpg" alt="Map" /></td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>Ballyannan Co. Donegal.</td>
<td>Portal tomb in the foothills overlooking coastal lowlands.</td>
<td></td>
</tr>
<tr>
<td>Ballycasheen Co. Clare.</td>
<td>PT lies in rough ground to the east of a small area with fields and pasture, marked by later ring forts.</td>
<td></td>
</tr>
<tr>
<td>Ballynasilloge Co. Waterford.</td>
<td>PT is at the edge of a small area of poor ground, in the midst of good pastureland.</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix 2. Portal tombs and farmland.

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballynoe Co. Carlow.</td>
<td><img src="image" alt="Map" /> In good farmland, beside areas of rough, poor land.</td>
</tr>
<tr>
<td>Ballyquin Co. Waterford.</td>
<td><img src="image" alt="Map" /> PT is in good pasture, but an area of poorer ground abuts to the northwest.</td>
</tr>
<tr>
<td>Ballyrenan Co. Tyrone.</td>
<td><img src="image" alt="Map" /> PT avoids poor quality land to the west and bogland to the east.</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ballywholan Co. Tyrone.</td>
<td>PT lies within modern forestry, planted on land unsuited to farming.</td>
</tr>
<tr>
<td>Brittas Co. Wicklow.</td>
<td>PT lies at the edge of a cultivated valley.</td>
</tr>
<tr>
<td>Broomfields Co. Wicklow.</td>
<td>PT lies to the north of poor land.</td>
</tr>
</tbody>
</table>
### Appendix 2. Portal tombs and farmland.

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carncorran Glebe Co. Tyrone.</td>
<td>PT, in present day field boundary, appears to lie at boundary between good pasture and rough land.</td>
</tr>
<tr>
<td>Carricklevan Co.Cavan.</td>
<td>PT is at the edge of rough, untilled land. Still visible in land usage today.</td>
</tr>
<tr>
<td>Cashel Co. Tyrone.</td>
<td>Beside pasture, in area with much rough ground. ‘Ground rises steeply to the NW and SE’ N.Ireland Sites &amp; Monuments Record.</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Churchtown Co. Tyrone.</td>
<td>PT marks the edge of a small patch of uncultivated land.</td>
</tr>
<tr>
<td>Claggan Co. Mayo.</td>
<td>‘The monument stands in a sheltered position near the western base of Claggan Hill’ (De Valera &amp; Ó Nuallain 1964). Land to the west (left) is good pasture, rough and unfarmed to the east.</td>
</tr>
<tr>
<td>Clenragh Co. Longford.</td>
<td>‘On a low rocky ridge’. At the edge of a piece of uncultivated land.</td>
</tr>
</tbody>
</table>
### Appendix 2. Portal tombs and farmland.

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloghfin Co. Tyrone</td>
<td>On pastureland, on the edge of very poor land.</td>
</tr>
<tr>
<td>Cloonlooaun Co. Galway</td>
<td>PT lies on rough hillside, just outside the cultivated area with small fields.</td>
</tr>
<tr>
<td>Crannagh Co. Galway</td>
<td>The PT is situated on a crag surrounded by a seasonal turlough lake, making it unsuitable for farming. Farms with small fields surround the craggy area.</td>
</tr>
</tbody>
</table>
Appendix 2. Portal tombs and farmland.

Creggandevsky Co. Tyrone.


Crosh and Glenknock Co. Tyrone. (500m apart).

PTs avoid rough hillside to west (left).

‘Twinned’ PTs on either side of a fertile valley, just where the land changes to rough and uncultivated.

Cunard Co. Dublin.

PT lies at the very tip of a valley in the Dublin Mountains. Farmland in the valley to the northwest.
Appendix 2. Portal tombs and farmland.

Doogort Co. Mayo.

‘It stands at the upper edge of the arable land on the lower slopes of Slievemore. To the north the land gives way to a tract of summer pasturage beyond which the steeper slopes of the mountain commence.’

de Valera & Ó Nualláin 1964.

Drumanone Co. Roscommon.

Near the edge of a fertile valley, rough hillside to the north (top of image)

Drumany O’Brien, Co. Leitrim.

Situated on a rough, uncultivated hillside, close to pasture
### Appendix 2. Portal tombs and farmland.

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drumhownagh Co. Cavan.</td>
<td>PT at the edge of uncultivated land.</td>
</tr>
<tr>
<td>Dunhill Co. Waterford.</td>
<td>Dunhill PT is sited on the slope just above the marshy river valley.</td>
</tr>
<tr>
<td>Errarooey Beg Co. Donegal.</td>
<td>‘...the site is at the end of a low ridge ... and overlooks an extensive level tract of farmland to the west.’ (Cody 2002). Similar land use shown in 1st ed. Ord.Survey map.</td>
</tr>
</tbody>
</table>
### Appendix 2. Portal tombs and farmland.

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garran Co. Monaghan</td>
<td>On farmland, beside area of poor uncultivated land.</td>
</tr>
<tr>
<td>Gilbertstown Co. Donegal.</td>
<td>Portal tomb at edge of pastureland, bordering a rough, steeply sloping river valley to the west (left).</td>
</tr>
<tr>
<td>Glenclochlea Co. Kilkenny.</td>
<td>Uncultivated patch of land immediately to the south.</td>
</tr>
</tbody>
</table>
### Glengesh Co. Fermanagh.

The PT lies on the lower slopes of Knockennis Hill, just where the land becomes steeply sloping.

### Glenroan Co. Tyrone.

PT is situated just to the south of the rough hillside – *on pasture terrace high on Mallaghgreenan Hill* (Ó Nuaíín 1983, 101).

### Gortnavern Co. Donegal.

Portal tomb at the edge of rough, unfarmed land.
Appendix 2. Portal tombs and farmland.

Goward Co. Down.

‘On sloping pasture at foot of ridge’ (Ó Nualláin 1983, 95). Ridge to the north west of monument seems unsuitable for farming.

Gurteen Lower, Co. Waterford.

PT lies immediately to the east of farmland.

Howth Co. Dublin

PT stands adjacent to the cliffs of Muck Rock. It is now surrounded by a golf course, previously good pasture.
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Killacloghane Co. Kerry</td>
<td>PT is in a mixed area of good and bad farmland, and may mark boundary between these different land types.</td>
</tr>
<tr>
<td>Kilmashogue (Larch Hill) Co. Dublin</td>
<td>Larch Hill PT lies at the foot of Mount Kilmashogue, just where pasture changes to rough hillside.</td>
</tr>
</tbody>
</table>
### Knockatobair Co. Sligo.

PT lies at the edge of a patch of rough uncultivated land, contrasting with an area of good pasture.

### Knockavalley Co. Galway.

Even today this PT stands in an area of rough pasture – on the far side of the wall is unfarmed hillside.

On the edge of rough hillside, close to area of better farmland.

### Leitrim Co. Tyrone.

‘On flat ground on lower slopes of Leitrim Hill’ (Ó Nualláin 1983, 102). Avoids rough upland and demarks valley edge.
### Appendix 2. Portal tombs and farmland.

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letterbrat Co. Tyrone.</td>
<td>Good farmland to the south and east, rough hillside to north west.</td>
</tr>
<tr>
<td>Lissava Co. Tipperary.</td>
<td>PT lies in rough woodland, to the west of farmland. Similar landscape conditions today.</td>
</tr>
<tr>
<td>Malin Mór Co. Donegal.</td>
<td>4 portal tombs along edges of valley, where pasture gives way to rough grazing.</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Marblehill Co. Galway.</td>
<td>The PT is situated on meadow in an area surrounded by forestry and areas of poor ground. Many</td>
</tr>
<tr>
<td></td>
<td>later monuments in the same area.</td>
</tr>
<tr>
<td>Mayo Co. Cavan.</td>
<td>Area of rough uncultivated land immediately to the east (right) of PT.</td>
</tr>
<tr>
<td>Mihanboy Co. Roscommon.</td>
<td>At the edge of land depicted as rough and unsuited for farming.</td>
</tr>
</tbody>
</table>
Moneygashel Co. Cavan.

At the edge of valley with pastureland, surrounded by rough uncultivated hillside.

Murnells Co. Tyrone.

Present-day land use seems to indicate that the PT lies at the edge of unsuitable farmland. ‘...in a patch of uncut bog, on broad pasture ridge’ Ó Nualláin 1983, 102.

Newbaun Co. Wexford.

PT close to area of rough uncultivated land.
Appendix 2. Portal tombs and farmland.

Onagh/Glaskenny Co. Wicklow.  
PT lies to the east of area of uncultivated land. ‘Situated on the SE facing lower slopes of Knocknee’ (Archaeological Inventory of Co. Wicklow).

Owning Co. Kilkenny.  
PT lies at the edge of a fertile valley, avoiding the marshy river valley to the north and rough land to northwest and east.

Prebaun Co. Mayo  
PT is sited at one end of fertile valley, surrounded by rough land.
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raheen Co. Kilkenny.</td>
<td>Raheen PT is at the very edge of a small patch of uncultivated land, beside fields.</td>
</tr>
<tr>
<td>Savagetown Co. Waterford.</td>
<td>Portal tomb is immediately to the east of area of rough land.</td>
</tr>
<tr>
<td>Scraghy Co. Tyrone.</td>
<td>‘on a ridge of rough pasture near head of valley opening to SW’ (Ó Nualláin 1983, 102). PT appears at the edge of fertile valley land.</td>
</tr>
<tr>
<td>Appendix 2. Portal tombs and farmland.</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Savagetown Co. Waterford.</strong></td>
<td></td>
</tr>
<tr>
<td><img src="image1.png" alt="" /></td>
<td></td>
</tr>
<tr>
<td>Portal tomb is immediately to the east of area of rough land.</td>
<td></td>
</tr>
<tr>
<td><strong>Sheskin Co. Waterford.</strong></td>
<td></td>
</tr>
<tr>
<td><img src="image2.png" alt="" /></td>
<td></td>
</tr>
<tr>
<td>In prime farmland, close to forested area with less agricultural potential.</td>
<td></td>
</tr>
<tr>
<td><strong>Tawnatruffaun Co. Sligo.</strong></td>
<td></td>
</tr>
<tr>
<td><img src="image3.png" alt="" /></td>
<td></td>
</tr>
<tr>
<td>PT is located on poor ground, overlooking pastureland to the west (right in image).</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2. Portal tombs and farmland.

Taylorsgrange Co. Dublin.

PT is in a housing estate, close to rough land at the foothills of the Dublin mountains.

Templemoyle Co. Donegal.

‘...towards the end of a boggy ridge .. a fall to lower ground to the south and east mainly devoted to pasture’. (Cody 2002)

Tuaim Co. Donegal.

Tuaim portal tomb at the edge of a fertile valley.

View of steep hillside to the north, from the portal tomb.
### Whitestown East, Co. Waterford.

PT is in good farmland today, but lies not far from large area of rough, uncultivated land.

### Woodtown (Mount Venus) Co. Dublin.

This PT is almost invisible today in a thick tangle of vegetation. It is sited at the edge of smooth grassland.