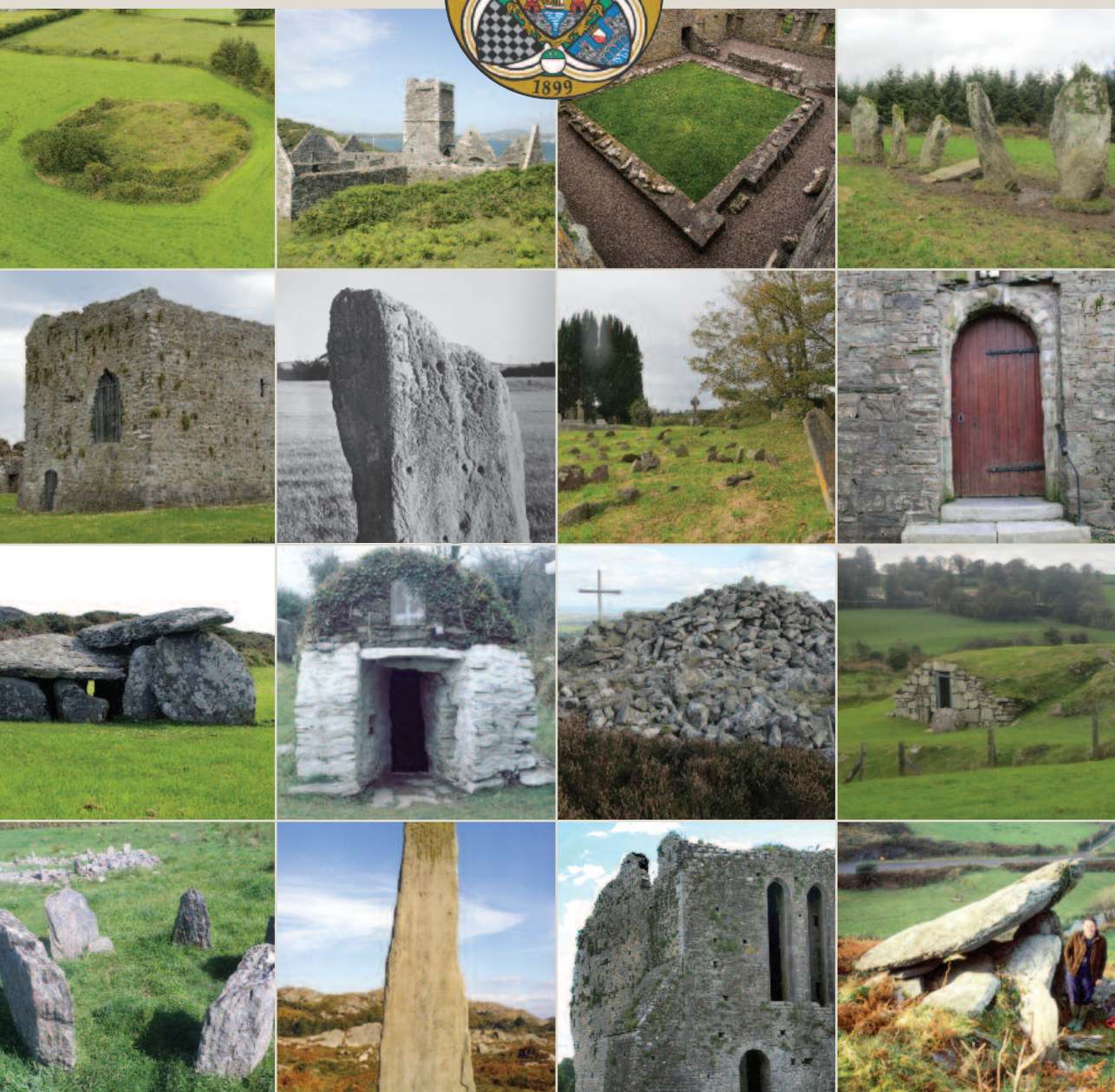
ARCHAEOLOGICAL HERITAGE

of County Cork



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Message from **Cllr. Mary Linehan Foley**, Mayor of the County of Cork and **Tim Lucey**, Chief Executive, Cork County Council

Cllr. Mary Linehan Foley
Mayor of the County of Cork

Tim Lucey
Chief Executive, Cork County Council

Did you know that County Cork contains close to 20,000 archaeological monuments?

This publication, the Archaeological Heritage of County Cork, is the eighth release in the Heritage of County Cork publication series; a series that has been supported by the Heritage Council since inception and a series that has met with acclaim far and wide.

Archaeological sites occur far and wide throughout the county of Cork and there is hardly a parish that does not contain a treasure trove of sites from the past, ranging from stone circles and standing stones to ringforts, castles, lime kilns and so much more. This publication takes the reader on a journey through the past of County Cork as told through the archaeological record - those sites that are still with us today that inform how people lived in this wonderful county over many thousands of years.

In keeping with previous publications in the series, a number of sites that can be visited is also presented, reminding us that so much of our heritage is openly accessible and waiting to be explored by people young and old.

This latest publication by the Heritage Unit of Cork County Council will encourage a greater appreciation and sense of pride in the County's unrivalled archaeological heritage – another wonderful addition to the Heritage of County Cork Publication Series.

Preamble and Acknowledgements

This publication is an action of the County Cork Heritage Plan, which has gratefully received funding from the Heritage Council and through the heritage budget of Cork County Council. For more information on the effortless work and support of the Heritage Council, visit www.heritagecouncil.ie.

The Heritage Unit of Cork County Council (**www.corkcoco.ie/arts-heritage**) wishes to sincerely thank a number of people without whom this publication would not have been possible. First and foremost is Denis Power, primary author of this publication and former Director of the Cork Archaeological Survey, who has written an incredible text that spans generations of life in the county of Cork in a most informative and engaging manner. Denis' knowledge of archaeology has made this book what it is – an incredible resource in itself and overview of archaeology within the county of Cork. Additional text, images and overall editing was carried out by Cork County Council's Heritage Unit (Mary Sleeman, Mona Hallinan and Conor Nelligan, with special thank you also to Emma Moir and Rachel O'Callaghan).

The project process from commencement to completion was managed by County Heritage Officer, Commemorations and Creative Ireland Coordinator, Conor Nelligan and County Archaeologist Mary Sleeman with the backing and support of Tom Watt, Senior Planner and Michael Lynch, Director of Planning and Development. A special thank you also to Beatrice Kelly, Head of Policy and Research, Heritage Council, for her advice and support.

As part of this project, numerous Heritage Groups and individuals throughout the County were asked to make submissions on the publication and a wonderful variety of information was submitted, from photographs to stories and local accounts. This wider engagement is a mainstay of the Heritage of County Cork Publication Series and a sincere thank you to everyone who engaged in the undertaking.

There are many aspects to the production of a book but two of the most critical ones relate to the design and printing of the publication itself. A very special thank you in this regard to Ian Barry for his creativity in design and a most sincere thank you as well to all at Carraig Print, who have produced a most delightful end product.

Lastly, thanks to you, the reader, for your interest in the shared Heritage of County Cork, and in particular the archaeological heritage that abounds.

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Chapter 1
Introduction

People have been living in the area of County Cork for at least the past ten thousand years. In all that time the passing generations have left their mark on that landscape, and have left a little bit of themselves behind for us to discover, appreciate and understand today. History tells much of that story over the past fifteen hundred years but deeper into the past we are relying on the physical things left behind to tell their own story. Even during the historic period not all the story is told by examining the written word. A ruined church or an old disused mill or an abandoned railway station all have their own story to tell if we allow them to do so in their own words. This is the task of archaeology, to let the "mute stones speak".

Three elements are brought together by the study of archaeology. The first is *the past*, the second is *people in the past*, and the third is the study of *people in the past from the physical remains* they have left behind. For convenience these "remains" are divided into two categories: *field monuments and artefacts*. Field monuments are those things which survive in the landscape, and artefacts are things from the past that are portable and can, if possible, be kept in a museum. In this book we examine the archaeological *field monuments* of County Cork. Previous books in this series have looked in detail at certain categories of field monuments: churches; bridges; castles; houses; industrial archaeology. This book will attempt an overall review covering a wider range of archaeological monuments to see what they tell us about how people lived in Cork since the first people arrived, up to the recent past.

One of the ironies of archaeology is that the further into the future we go the more we are finding out about the past. This is because of the ever-more sophisticated scientific methods, notably radiocarbon dating, that are now used to analyse and date objects from the past. Also the techniques used in archaeological excavations are continually being refined to extract more precise information from the ground. New discoveries by geophysical survey, aerial photography and field-walking are also filling out the picture, often in the context of archaeological work in advance of development. But there is still a lot that remains unknown and that can only be guessed at from the vaguest of clues.

Archaeologists often use the term *material culture* to express the concept of trying to understand a past culture by looking at the physical remains of that culture. This might often seem like guess work and often indeed it is just that. For example, different forms of *burial practices* can be very telling about how people differed in what they believed about life and its end. If a precious bronze axe is placed in a grave what does that tell us about those who put it there and then covered it over never to be used again? And what if one form of burial monument is found in one area of the county and not in another- how much of a cultural difference does this represent?

The number of known archaeological monuments in County Cork presently stands at around 20,000 with the number increasing all the time as new discoveries come to light. The bulk of new discoveries are being made through infrastructural developments. This began with the gas pipelines in the late 1970s and is now most prolifically represented by Roads, for example, the M8 motorway schemes, the Ballincollig and Youghal bypasses and other such road schemes.

The production by the State of the Sites and Monuments (SMR) record in the 1980s and 1990s identified all the known archaeological sites enabling Cork County Council to protect them in development management. All these efforts, which are ongoing, are adding greatly to the known archaeological record in the county and hence to our understanding of Cork's past.

The book is divided into chapters representing the passage of time from the end of the last Ice Age through to the recent past. In each section the most typical archaeological monuments of the period are highlighted. Of course not all of these are now upstanding on today's landscape; some like *cist burials* and *souterrains* are by their very nature subterranean. Others were discovered during excavations and never had any above-ground profile since shortly after they were abandoned; a wooden house built five thousand years ago is only detectible now in the subsoil.

Intuitively one thinks that the further back in time you go the rarer it is for evidence to survive. This is especially true before the arrival of farming about 4,000 BC. Farmers had resources and were settled in one place over generations so they could build things like megalithic tombs (*mega*- large/ *lithic*- stone) that survive to this day. But before that people were hunters and foragers, moving across the landscape as the resources of the season demanded. One thing they did make and use which does survive is their stone tools. The keen eye of an archaeologist can spot these walking a freshly ploughed field and they sometimes are found on archaeological excavations. It has always been suspected that hunters were in Ireland during the warmer stages of the last Ice Age. Certainly the animals were there for them to hunt and people were in Britain which probably at stages had a land bridge to Ireland- how else did large animals arrive here. But finding that evidence has proved very elusive; the best bet is from cave excavations and recently the knuckle bone of a bear that had been found in a Sligo cave, showed clear signs of butchery scars from a stone tool. The bone was radiocarbon dated to around 10,000 BC and this is the earliest evidence yet found for human activity in Ireland.

Judging by the distribution of megalithic tombs one would have thought that the southern third of Ireland was very sparsely populated during the Neolithic period. But recent discoveries on gas pipelines, roadway schemes and development sites have changed that picture. In this way the foundation trenches and postholes representing eight Neolithic houses have now been found in County Cork. But none of these are located anywhere near the five known megalithic tombs of the same period, showing that the tombs are not the only indicators of where our first farming communities lived.

Two periods stand out as Golden Ages in Cork's past. The first of these is the Bronze Age when

the population appears to have increased dramatically and large parts of the county previously wooded were now under agriculture. This brought an increase in trade and wealth as well as social sophistication as witnessed by artefacts like the Midleton gold lunulae and monuments like Drombeg stone circle. This is also a period that is well represented in a variety of monument types across the County, especially in West Cork. The second Golden Age comes in the Early Christian Period when again we see an increase in population and agricultural activity. Emblematic of this period is the Garrydyuff gold bird and the intricately carved cross slab at Tullylease. But the period between these two, the Iron Age, is something of a mystery. After around 500 BC and for the next thousand years or so we see a great dearth in material culture with few datable artefacts or monuments. This is reflected in the pollen counts for the period. Woodland regenerates, farmland turns back to scrub and blanket bog begins to grow where previously there were field boundaries and habitations. The arrival of Christianity in the 5th century coincides with a dramatic change in population and activity. The Cork countryside is once again a busy place. Farmsteads defended by encircling banks (*ringforts*) or walls (*cashels*) are being built in great numbers along with the monasteries that are an integral part of the religious life of the countryside. But the story doesn't end there and this book continues through the medieval and into the post-medieval periods to give as full a picture as possible of the county's rich archaeological heritage.

Throughout the book references will be made to archaeological excavations and this can be a difficult process to fully understand. People see archaeologists down on their hands and knees in all kinds of weather and wonder what on earth they are doing. The essence of the process is to find things "in context" whether they be the remains of a pit or a spread of charcoal or post hole with a coin. This is the main reason archaeologists object so strongly to metal detection, because that is a process of finding things "out of context" by just digging them straight out of the ground.

If the excavation is taking place in a field that was ploughed many times over then there may be little of interest in the soil that has been repeatedly churned up by the plough. For that reason this is often removed by a mechanical excavator. Beneath that, hopefully, is undisturbed ground where careful excavation might find the plan of a house or a place where some craft or industrial process had taken place, and hopefully also some man-made objects that have survived "in context" in the undisturbed ground. A lot of excavation deals with features that were originally dug into the sub-soil, like a pit or a *posthole* to hold a wooden upright. All that survives of a wooden house may be the postholes dug into the sub-soil to take the posts that supported its roof. But if enough of these survive the plan of the house can be reconstructed and from that an idea gained of how people lived at the time. The best scenario is if the soil has never been ploughed or likewise disturbed. That is why earthwork enclosures, like ringforts, are so important to preserve, where the interior is likely not to have been much disturbed by such activity.

The first great record of archaeological monuments in County Cork is the first edition of the Ordnance Survey's six-inch maps; 153 of these maps cover the entire county and were published between 1840 and 1842. Not alone do they show the larger earthwork enclosures

like *ringforts* and *moated sites* but they also show and name religious sites like *holy wells* and informal burial grounds like *killeens* (*children's burial grounds*). As well these maps show the richness of the late 18th/early 19th century landscape in terms of rural buildings, which it names, like corn and tuck mills, coastguard stations, police and military barracks, country houses, etc. They also depict a wide range of urban buildings like court houses, market houses, and a variety of industrial buildings. Fortunately, these maps are now available to view on various web sites. Another invaluable source in finding and locating archaeological monuments in Cork is the recent Discovery Maps series from the Ordnance Survey.

The standard work on the archaeological field monuments of County Cork is the five volumes of the Archaeological Inventory of County Cork [1]. This work was carried out by the Department of Archaeology, University College Cork on contract from the National Monuments Service (part of various Departments of State over the years). Starting in 1982 this project, known as the Cork Archaeological Survey, visited and recorded some 20,000 individual monuments. Of course, not all of these had evident remains on the ground when visited, for whatever reason. Other monuments were completely unknown before their discovery by the Cork Archaeological Survey, some through using local knowledge, others found using techniques like aerial photography and historic research. All of this information is now available free online by visiting **www.archaeology.ie** and following the link to the Archaeological Survey - wherever possible the monument reference number (SMR) has been quoted in this book. Also featured on **www.archaeology.ie** is the work of the National Inventory of Architectural Heritage.

An excellent introduction to the prehistoric archaeology of County Cork has been published by Professor William O'Brien of UCC [2] – a publication that received support from Cork County Council's Heritage Unit. Other books and essays covering the archaeology of the county are listed in the footnotes to the various chapters of this book. An important source is the *Journal of the Cork Historical and Archaeological Society (JCJHAS)* which has been publishing articles on Cork archaeology since the first edition in 1892. All of its articles up to recent editions are now free to download from the Society's website. Most branches of the County Council's Library Service contain a local history section and if you are a library member you can order any book from any library in the country for free from your local branch or online. Another excellent illustrated educational resource is Archaeology in the Classroom (**www.itsabouittime.ie**) developed by Limerick Education Centre and the National Monuments Service for both Primary and Secondary Schools. A number of their illustrations are used in this book.

The legal status of the various types of field monuments is described in a later chapter as well as an explanation of how and by whom they are looked after and preserved.

Finally, a word needs to be said about public access to archaeological monuments. The State owns some 58 monuments in the county designated as *national monuments* and most of these are accessible to the public. These include monuments like Kanturk Castle, Kilcrea Friary, James' Fort and Charles' Fort in Kinsale, Altar wedge tomb, but some are temporarily closed due to ongoing conservation works. The County Council also owns a number of *national monuments*, notably Bridgetown Priory near Castletownroche, and the fortification on Spike

Island and Camden Fort Meagher in Crosshaven. Other monuments are accessible to the public because they are located in areas in public ownership like forests and parks and most numerously in old graveyards. Other monuments are accessible by custom like *holy wells* and some of these and similar monuments are maintained and made accessible by local community groups.

However, the vast majority of archaeological monuments in County Cork are located on privately owned land, most commonly on agricultural land. In nearly all of these cases there is no public right-of-way so that permission of the owner should always be sought if one intends to visit these monuments. These landowners are the custodians of the vast bulk of our built heritage and prospective visitors to any of these monuments should be cognisant of that fact.

Three Age System

In the 19th century the museum in Copenhagen came up with a novel way of classifying the prehistoric objects in their collection. They realised that, in general, objects made of stone were the oldest, and those made of bronze more recent and finally those of iron more recent again. This led to a classification of the periods these objects belonged to respectively as Stone Age, Bronze Age and Iron Age. This system has survived, with some modification, to this day. The main modification is to the Stone Age. This is now divided into three eras: Palaeolithic (Old Stone Age); Mesolithic (Middle Stone Age) and Neolithic (New Stone Age). Palaeolithic stretches back to the dawn of humankind and continues up to the end of the last Ice Age, in Ireland that is to 8,000 BC. Mesolithic in Ireland runs from c. 8,000 BC up to the establishment of farming around 4,000 BC and the Neolithic. Though often sub-divided into earlier and later phases, Bronze Age and Iron Age are still in current usage.

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[1] Power, D *et al, Archaeological Inventory of County Cork*, vol. 1 (1992), vol. 2 (1994), vol. 3 (1997), vol. 4 (2000), vol. 5 (2009), Stationary Office, Dublin

[2] O'Brien, W. (2012) *Iverni: A Prehistory of Cork*, The Collins Press, Cork

Chapter 2

The Old Stone Age

Palaeolithic (Old Stone Age: palaios= old; lithos= stone)

This is the longest period in prehistory lasting about two and a half million years from the first appearance of stone tools up to the end of the last ice age around 10,000 BC. The earliest evidence for hominoids in Northern Europe goes back half a million years. At that stage what is now the island of Britain was attached to mainland Europe and it was across this land-bridge that the first humans arrived there about 30,000 BC. But as yet there is no evidence for any human presence in Ireland at that time. The earliest evidence for human activity in Ireland is the knuckle bone of a bear from a cave in Sligo. This bone, radiocarbon dated to 10,000 BC, has cut marks that were done by a stone tool during butchery [1]. There is then a gap of around two thousand years before the next evidence of a human presence here at about 8,000 BC.

If humans were in Cork during the Palaeolithic period the excavation of a cave system in North Cork should have provided this evidence. This is Castlepook Cave, located just north of Doneraile. Here, from 1904 until his death in 1914, Richard Ussher excavated a great collection of animal bones from the cave floor. Ussher was a member of a landed Waterford family and lived in Cappagh House on the family estate near Dungarvan. There is a contemporary picture of this activity showing Richard Ussher casually seated to one side, holding a measuring stick, whilst two workmen emerge from the cave entrance holding a stretcher containing the excavated bones [2]. Though Ussher reported finding some 34,000 bones in the cave less than 2,000 survive to this day. The bones have been identified as including reindeer, arctic fox, wolf, lemming, brown bear, mammoth, hyena and giant deer.

A recent programme of radiocarbon dates for these bones shows that the majority of them date to around 30,000 BC when there was a period of relatively mild weather during the last ice age [3]. There is ample evidence to show that as animals moved into the warming areas of Northern Europe they were followed by human hunters. But did these hunters get as far as Ireland as many of the animals did?

What is clear from the Castlepook bone collection and the excavation is the absence of any trace of human activity at the cave, no stone tools, no butcher marks on bones, not even a gnawed human bone.

The emblematic animal of the latter stages of the last Ice Age in Ireland is the Giant Irish Deer. If ever an animal would tempt Stone Age hunters it was this great deer that stood over 2 meters high, and whose stags had extraordinary antlers with a spread of 3 meters. The statue on the Cork-Mallow road gives a vivid image of its appearance. It survived up to about 10,000 BC but the last cold snap of the Ice Age wiped it out. But did humans ever hunt this animal? At the moment there is no evidence that they did.

Richard Ussher with workmen investigating Castlepook Cave in 1905. Photo by Grove White.

Radiocarbon Dating

All living things, both plant and animal, contain carbon atoms. Amongst these atoms is a radioactive isotope of carbon called C^{14}. Whilst the organism is alive the amount of this isotope amongst the normal carbon atoms is constant. But when the plant or animal dies, because the isotope is radioactive, the amount of C^{14} in the dead organism begins to reduce. This happens at a constant rate so that if the amount of C^{14} can be calculated it is possible to estimate how long it is since the plant or animal has died. C^{14} dates are not exact to a calendar year but give an approximated date, often just within a few hundred years. Nonetheless, this ability to know approximately how old something is has revolutionised archaeology and radiocarbon dates are the core facts of what we know about the distant past. Most radiocarbon dates obtained in Ireland today came from the *14Chrono Centre Lab* in Queens University Belfast.

Giant Irish Deer on the Cork-Mallow road (N20), sculpture by Kevin Holland.
Image courtesy of Ian McDonagh (Cork County Council).

[1] Dowd, M. (2016) 'A remarkable cave discovery; first evidence for a late Palaeolithic human presence in Ireland', *Archaeology Ireland* 30(2), 21-25

[2] Grove White, J. (1911) *Historical and Topographical Notes vol. 2*, Guy and Co., opp. p 123

[3] Woodman, P., McCarthy, M. And Monaghan, N. (1997) 'The Irish Quaternary Fauna Project', *Quaternary Science Review* 16, 129-159

Chapter 3

The Middle Stone Age

Mesolithic (Middle Stone Age: mesos= middle; lithos= stone)

Early Mesolithic (8,000 BC – 5,500 BC)

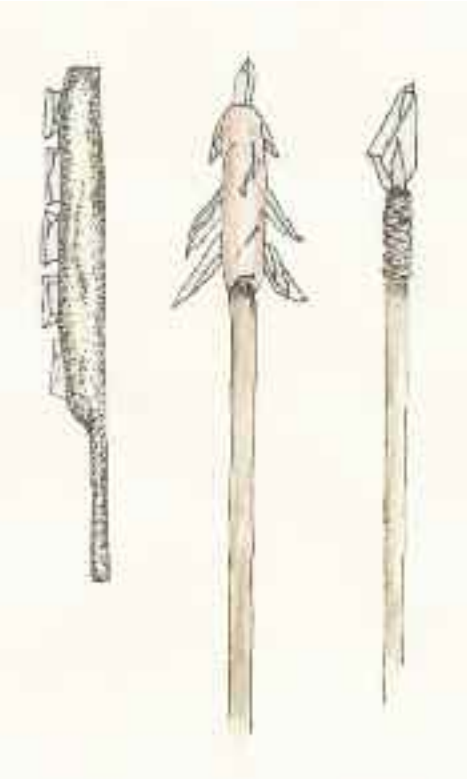
By 8,000 BC the Cork landscape had changed from tundra to great woods of oak and elm. Gone were the large animals of the Ice Age to be replaced by smaller woodland animals like wild boar, and by mountain hare on the less wooded uplands. But where life was most abundant was in the river systems, in lakes and along the coastline especially in the estuaries. Here fish, birds and marine mammals thrived in great numbers. Into this environment, around 8,000 BC, comes man, the great hunter and forager.

Finding evidence for these Mesolithic hunter-gatherers is difficult. What survives and is most readily identified is their discarded stone tools. The stone most widely used in the Stone Age for tool-making was flint. This is a hard rock that when fractured has a razor-sharp edge. Skilled knappers were able to produce a range of ingenious tools from flint that were used in a variety of ways from arrow points for hunting and fishing to scrapers used in food and clothes production. The hunters who came into the south of Ireland around 7,500 BC would have been disappointed by the scarcity of flint. There was some flint on the beaches of East Cork and Waterford in the form of washed-up nodules but the general scarcity of flint must have inhibited human movement into the area.

Microliths from Kilcummer lower Cork.
Courtesy of Cork Public Museum.

Flint

Flint is a stone that occurs as nodules in sedimentary rocks, especially in chalk. When fractured it produces a razor-sharp edge and has been used by humans to make tools from the dawn of prehistory. Archaeologists describe the technique of creating a stone tool from a nodule of flint as knapping. A person skilled in knapping could produce a range of tools from arrowheads to knives to scrapers, all essential to Stone Age people. In Ireland flint is most plentiful in the north-east but there is no reliable source in Munster. However, nodules of flint are occasionally washed up on the beaches of East Cork and Waterford and this is probably where most of the flint used in prehistoric Cork was sourced.



Weapons and tools made from microliths hafted onto bone or wood.

Close up of flint nodule

A signal implement of early Mesolithic activity are very small flakes of flint, known as microliths. They were used as barbs on their arrows and spears, attached by resin to the wooden shafts. These tiny flints are what archaeologists are especially looking for when they walk across ploughed fields looking for evidence of early Mesolithic sites - one needs keen eyesight and a lot of patience to find microliths in freshly ploughed fields.

In the 1980s, Peter Woodman, professor of archaeology in U.C.C., and his assistant Elizabeth Anderson carried out a fieldwork survey looking for Mesolithic sites in Cork [1]. Up to then no such sites were known in the county. They selected the upper Blackwater Valley between Mallow and Fermoy as a likely area for such settlements and did identify early Mesolithic flints field-walking ploughed fields at three locations. Of these the most promising site was in Kilcummer Upper, near Ballyhooly.

Elizabeth Anderson conducted an archaeological excavation at this location in 1984. The place selected was a hollow in the field on a bluff overlooking the river.

This was similar in setting to the site at Mount Sandle, Co Derry, which was excavated by Peter Woodman in the 1970s. Here he found the sub-surface remains of a series of huts that were the remains of a base camp of early Mesolithic hunter-gatherers located on a bluff overlooking the River Bann. The huts were circular and made by saplings inserted into the ground and then bent over and tied together at the top. In the centre of each hut was a sunken hearth. The remains of animal bones at the site revealed much about the diet and lifestyle of these people. They were exploiting a wide range of the marine resource, netting salmon and eel in the river as well as fishing for sea bass and flounder at the river's mouth. Oyster, mussels and limpets were gathered from the foreshore where they were also hunting sea birds and collecting their eggs. In terms of animals the hunters had a preference for wild boar but also hare. An important source of protein was hazel nuts that were gathered in great numbers. Unfortunately nothing like this was found at Kilcummer Upper, the site largely destroyed by repeated ploughing over the millennia [2]. But there was enough evidence to suggest that in its day a seasonal camp site was located here around 6,000 BC by people exploiting the fish runs in the river below and living a lifestyle very similar to those who occupied Mount Sandle.

Archaeological work in advance of roadwork has added to our knowledge of early Mesolithic activity in the county. The earliest evidence for human activity in Munster is a piece of Giant Irish Deer antler that had been worked on by an axe. It was found in association with a brushwood layer that was radiocarbon dated to c. 8,000 BC. The antler does not mean these hunters were after Giant Irish Deer as that animal was extinct for over two thousand years by then, but the discarded antler was probably found in a nearby bog or marsh.

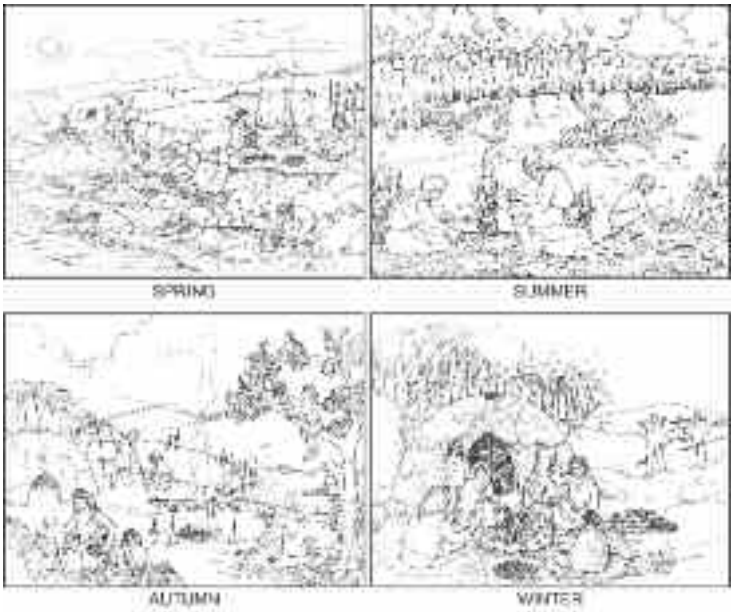
Rhoda Cronin drawings from Archaeology in the Classroom of seasonal camps:

SPRING: Collecting food along foreshore; fishing in log boat; curing fish and animal skins; weaving basket

SUMMER: Fishing in river; knapping flint to make tools; making spears for fishing

AUTUMN: Collecting fruit and berries; curing animal skins; building temporary camp site

WINTER: Hunting wild boar and cooking on spit; roasting hazelnuts and other stored nuts



Mesolithic polished stone axe. Photo by John Sunderland (after Johnston & Kiely 2019, 97, illus. 2.18.2). Image courtesy of Transport Infrastructure Ireland (TII).

Further evidence for early Mesolithic activity along the greater Blackwater Valley area has come from recent excavations in conjunction with the construction of the M8 motorway [3]. In the townland of Gortore, near Kilworth, 29 early Mesolithic stone tools were found - the location was in the floodplain of the Funcheon River and the finds were all in the topsoil so presumably had been moved downhill by erosion and ploughing over time from a campsite on higher ground.

As well as flint blades and other fragments of flint tools, a polished mudstone axehead was found. Polished stone axeheads are more typical of the Neolithic period but this find shows that these axes were being manufactured in the Cork area much earlier than had previously been thought. A similar polished axe was found on the Ballincollig bypass and another on the Youghal bypass; both likely to be Mesolithic in date as well. Another early Mesolithic site was found on the M8 route just north of Fermoy at Rathhealy. This was a collection of some 30 flint fragments that indicated an area where flint was being knapped for the production of tools.

All these finds show that people were in the Cork area from 8,000 BC but probably not in great numbers. They were hunting and gathering foodstuffs along the Blackwater Valley and its tributaries with temporary camp sites located along the banks of these rivers. If they were operating along the river system they must also have been active in areas like the Blackwater Estuary and around Cork Harbour but solid evidence for this has yet to be found.

Later Mesolithic (5,500 BC- 4,000 BC)

Sometime around 5,500 BC there is a noticeable change in the type of flint tools being produced in Ireland. Whilst the microliths and other tools of the earlier Mesolithic period are similar to contemporary types in Britain and the Continent, there is a noticeable change in the type of tools being produced here in the later Mesolithic period. These are larger and "chunkier" than those of the previous era and do not have many parallels outside the country. The reasons for this change are not clear but it does indicate less contact across the Irish Sea.

There isn't a great deal of evidence for activity in Cork during the later Mesolithic period (5,500-4,000). Some flint tools of this period were found during field-walking by archaeologists in the coastal area of east Cork, between Roches Point and Power Head [4]. This is an area of the county where flint can be found as pebbles washed up on local beaches and so this area would have been attractive to Stone Age hunters.

A pit found during excavations in advance of a gas pipeline, near Fermoy, produced a radiocarbon date of around 5,100 BC [5]. Some stone tools associated with a pit, found near Caherdrinny during excavations on the M8, were radiocarbon dated to around 4,500 BC [6]. The most interesting site of this period was found at Gortore, on the banks of the Funcheon River near Kilworth, during archaeological excavations prior to the construction of the M8 motorway [7]. Six pits were found along with some flint points and burnt hazelnut shells. These flint points were probably spear tips and used for fishing for salmon, trout and eel in the nearby river. Hazelnuts were a popular food at this period and it seems they were roasted in pits before consumption. Sometimes the nuts were inadvertently burnt during this process

Flint tools found in excavation at Gortore by TII on route of M8. On left and 2nd from right spear points used in fishing in river; on right and 2nd from left are hand-held blades.
Photos by John Sunderland: provided courtesy of TII.

and thus discarded. These burnt shells are very useful for radiocarbon dating. These pits at Gortore are evidence of a temporary encampment by hunters fishing in the river and collecting hazelnuts and probably a lot of other wild foodstuffs. Radiocarbon dates for the pits date the encampment to c. 4,000 BC. This is the tail end of the Mesolithic period and shortly something very new would arrive into the Cork area and change everything.

Reconstruction of flint knapping and hafting at Gortore. Drawing by Rhoda Cronin (After Johnston & Kiely 2019, 99, illus. 2.18.5). Image courtesy of TII.

Ireland at the time was covered by mature deciduous forests. The margins of the forest along rivers, lakes and along the coast would have been suitable locations for camp sites as a source of food and route ways. Much of the deciduous forest survived until the 17th century when Ireland was stripped of its woodland to fuel English industry.

[1] Woodman, P. (1984) 'The early prehistory of Munster', *Journal of the Cork Historical and Archaeological Journal* 89, 1-11.

[2] Anderson, E. (1993) 'The Mesolithic: fishing for answers', in Shee-Twohig, E. and Roynane, M. (eds), *Past perceptions: The Prehistoric Archaeology of south-west Ireland*, Cork University Press, 16-24.

[3] Johnston, P and Kiely, J. (eds), *Hidden Voices: the archaeology of the M8*, TII Heritage 7; Hanley, K. and Hurley, M.F. (2013) *Generations: The archaeology of five national road schemes in Co. Cork*, NRA Monograph 13.

[4] Woodman, P. (1984) 'The early prehistory of Munster', *Journal of the Cork Historical and Archaeological Journal* 89, 1-11.

[5] Mollot, B. (2010) 'Final Monitoring Report, Midleton Gas Pipeline', unpublished report.

[6] Johnston, P and Kiely, J. (eds), *Hidden Voices: the archaeology of the M8*, TII Heritage 7, 62-63

[7] Johnston, P and Kiely, J. (eds), *Hidden Voices: the archaeology of the M8*, TII Heritage 7, 97-100

Chapter 4

The Farming Revolution (4,000 BC- 2,000 BC)

Neolithic (New Stone Age: neos=new; lithos= stone)

What is the greatest technological invention in terms of the advancement of human society? In today's world we might be inclined to say the internal-combustion engine or the microchip. But whatever the impact of these technologies, none of them had as deep-lasting an effect on human life as something invented in the Middle East about eleven thousand years ago. In this area, at that time, people began to realise that they could domesticate animals like sheep, goats and cattle as well as plants like wheat and barley. By controlling these plants and animals they were able to create a sustainable food supply and so were no longer dependant on hunting and gathering whatever was available, as their ancestors had done for millennia. These communities could now control food production to suit their own need and could do so throughout the year.

Thus, the invention of farming changed human society completely in what is known as the Neolithic Revolution. Firstly, instead of moving around following the seasonal availability of nature, people could now settle in one place year-round and build permanent residences. It was no longer necessary for everybody in society to be engaged in food production, this became a specialised activity. So people were available to engage in other specialised activities, notably craft production of both utilitarian things like pottery and luxury items like jewellery. Before long the population has increased and with trade between permanent settlements possible wealth was created and with wealth came a whole new range of human activity and interaction.

The dynamic in human development brought about by farming began to spread out from the Middle East across Europe and by 4,000 BC had arrived into Ireland. Before long the landscape had changed profoundly. In places the great post-glacial deciduous forests of oak and elm were cut down to create farmland. Under the bogs of North Mayo a vast network of dry-stone field boundaries has been mapped; these are now known as the *Ceide Fields*. These are Neolithic in date and indicate a complex and settled society thriving five thousand years ago in an area now covered by peat. There must have been similar networks of fields in County Cork and possibly some of the pre-bog field systems on the Beara Peninsula may be of that date though those excavated so far are Bronze Age in date.

The arrival of the Neolithic is also signalled by the appearance of a new range of stone tools. Flint was still the basic raw material for sharp tools and weapons and we see a new variety of arrowheads in use that are different from those of the Mesolithic. A typical Neolithic arrow has a single arrowhead with a concave base where the wooden shaft was attached. Farming is represented by the saddle querns for grinding corn. But perhaps the most emblematic Neolithic implement is the polished stone axe. We have already noted that these were present

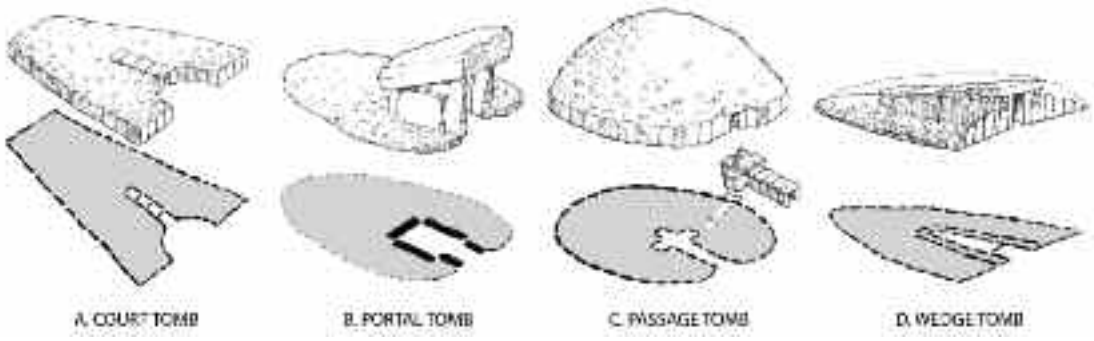
in the Mesolithic period but their numbers greatly increase in the Neolithic. They were probably general purpose tools but must have played an important role in the felling of native woodland for the creation of farmland.

Neolithic arrow head from Gortnahown, near Mitchelstown. Photo by John Sunderland (After Johnston and Kiely 2019, 82, illus. 2.16.4). Image courtesy of TII.

Polished stone axes from left to right: Clondrohid; Galley Head (top), Little Island (bottom), Carrigtwohill, Ballinard and Mitchelstown. Image courtesy of Cork Public Museum.

Megalithic Tombs (mega=large; lithos= stone)

Neolithic societies also started to build structures that stand to this day. These megalithic tombs are being built along the western coast of Europe: in Portugal and north-western Spain, Brittany, Britain, the Low Countries, Denmark, South Sweden and of course Ireland. Behind their construction was a strong and controlled belief system judging by the fact that of the hundreds of megalithic tombs that survive in Ireland from the Neolithic nearly all can be placed in one of four groupings, each with its own architectural framework, namely *passage tombs, court tombs, portal tombs* and the later *wedge tombs*.



The four types of megalithic tombs built in Ireland: court tomb; portal tomb; passage tomb and wedge tomb. In Cork there are two passage tombs, no court tombs, three portal tombs and one hundred and fourteen wedge tombs. **Drawings by Rhoda Cronin (Archaeology in the Classroom).**

The distribution of these tombs in Ireland is interesting. The vast majority occur north of a line from Dublin to Galway, and there are particular concentrations, notably of passage tombs as on the Bend of the Boyne- Brú na Bóine. But when it comes to the south-west the situation is very different. In county Cork we have just two passage tombs and three portal tombs and no court tombs. All five examples in Cork are in coastal locations, four in West Cork and one in Cork Harbour. Does this show that the Neolithic people who built megalithic tombs had a small colony along the Cork coast but never penetrated inland? Or could one say that the belief-system that created these tombs was only practiced in coastal locations and that belief never penetrated inland? This is the eternal problem of prehistoric archaeology- do different monuments represent new people or just new ideas coming into an area?

Either one of Cork's five megalithic tombs has the claim on being the oldest standing man-made structure in the county. None of them has been archaeologically excavated but either of the three portal tombs have probably the strongest claim as this type of tomb dates back to around 3,800 BC, very early in the Neolithic period. The characteristic form of a portal tomb is a large flattish *capstone* supported by two tall *portal stones* at one end and a lower

backstone at the other whereby the *capstone* leans down from front to back. The chamber is then completed by two *sidestones*. This is precisely the architecture we see at the three Cork examples, though each has suffered some damage over the millennia since first constructed.

The best know example of this type of tomb in Ireland is Poulnabrone in the Burren, Co. Clare. This was excavated by Anne Lynch in the 1980s and the results give an intriguing insight into the use of these tombs. The tomb was more a repository for human remains than an actual burial place; of the 33 individuals identified only their de-fleshed bones were placed in the tomb and these were jumbled together in no particular order. This is a recurring theme in megalithic tombs- that they were not so much burial places but sacred tombs that people came back to repeatedly for sacred purposes to do with the revered dead.

Overlooking the main road from Clonakilty to Skibbereen, a couple of miles east of Rosscarbery, the portal tomb at Aghaglashlin (CO143-034----) [1] can be seen on a narrow ledge on ground sloping down steeply to the Owenahinchy River. The Ordnance Survey records the name "Callaheencladdig" for the tomb; this roughly translates as "little hag of the seashore". Folktales and legends often attached themselves to ancient monuments like this. The antiquarians John Windele and William Borlase both visited this site in the 19th century and recorded similar stories related to the tomb and its name [2]. The "little hag" had the nasty habit of "inveigling young fellows to the rock whence they never returned". This shows how ancient

Arderrawinny portal tomb (CO148-011----)

Rostellan portal tomb (CO088-010----)

monuments, long after their original function and purpose are lost, can still attract attention as places different from the everyday and somehow related to the supernatural mythical past.

Further west, on the Mizen Peninsula, is Arderrawinny portal tomb (CO148-011----). The site, on a rocky hillside, overlooks Toormore Bay to the south-west. As in the case of Aghaglashlin the tomb is built of slabs of the stone that outcrops in its immediate vicinity. The third site is a little different. Though the typical location for a portal tomb is close to the shore, the example at Rostellan (CO088-010----) now stands in water in an inlet of Cork Harbour close to Midleton[3]. As the ice retreated at the end of the last ice age, sea levels around the coastline changed. Along the East Cork coastline the early coastline flooded. We can see the result of this today where bogs with the stumps of trees embedded in it are evident at low tide on beaches like Garryvoe. Therefore, it is possible that a portal tomb built close to the shoreline in the Neolithic now stands in water below the high tide line. The antiquarian, John Windele, writing in 1860 about Rostellan, reported that "its existence was unknown until Dr Wise discovered it, the uprights erect but the table stone fallen. With excellent taste he caused the latter to be re-erected." Some doubt has therefore been expressed about the authenticity of the Rostellan structure, but who knows its true status until the site is archaeologically excavated?

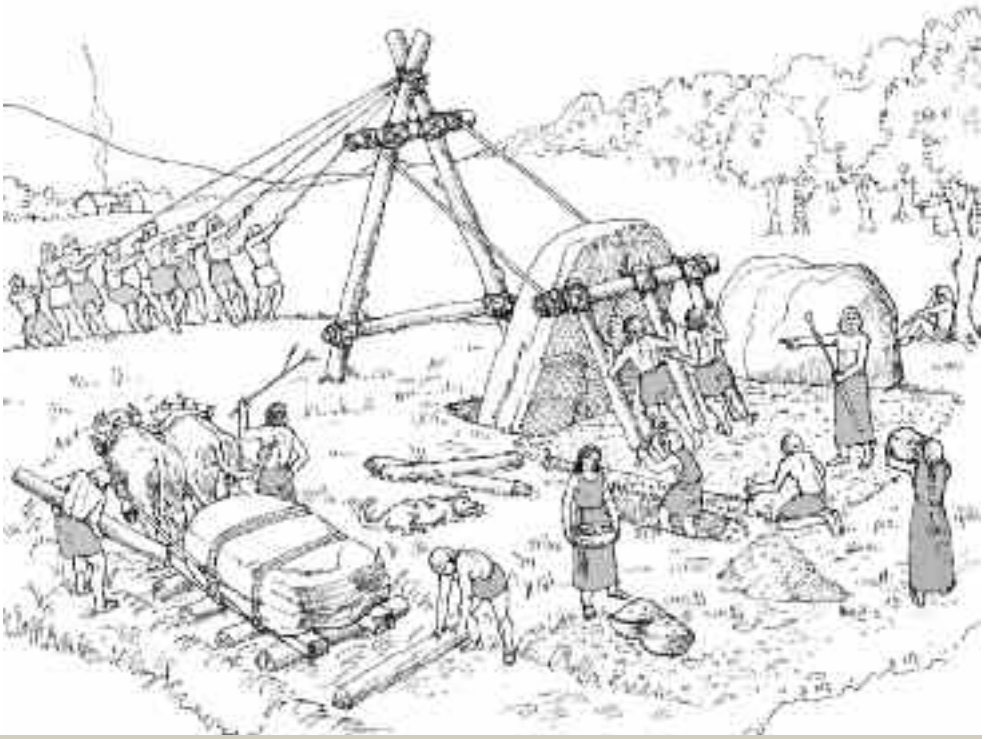
John Windele (1801-1865)

The term *antiquarian* is used to describe those who visited, recorded and published information about the past, particularly regarding ancient monuments and artefacts, before the advent of modern scholarship and the universities. The leading antiquarian in County Cork in the 19th century is John Windele. His assemblage of ogham stones are now part of the collection in UCC and the 130 volumes of his unpublished notes are now in the Royal Irish Academy. Included in these manuscript notes are the earliest descriptions and drawings of many of the county's archaeological monuments. He died at his house on Blair's Hill, Sundays Well in 1865.

In 1984 an archaeological survey of Oileán Chléire (Cape Clear Island) identified a collection of stones on the highest point of the island as the much-ruined remains of a passage tomb (CO153-010----) [4]. This probably solves the problem of where a decorated stone found a few hundred yards away in 1880 had come from. The stone was discovered by workmen clearing stones from a field. The owner of the land then decided to present the stone to the parish priest, who lived on Sherkin Island, as a gift. The stone languished in the presbytery grounds on Sherkin until 1954 when its significance was realised. It was then presented to the Archaeology Department in UCC where Prof O'Kelly identified it as containing the same type of carved art as that on the great passage tomb at Newgrange, Co Meath [5]. The stone then found its present home in Cork Public Museum.

Like the decorated stones in other passage tombs the art appears to be both deliberate and random at the same time. The full design is lost because part of the decorated surface is broken off. Centrally placed

Cape Clear stone courtesy of Cork Public Museum



The construction of a megalithic tomb required a great deal of community organisation and cooperation. These were the only structures built by these people using large stones and show the importance they placed on building *houses for the dead*, as opposed to houses for the living that were built just of wood and thatch. Drawing by Rhoda Cronin (Archaeology in the Classroom).

on the decorated surface are three spirals, one above the other- half of the lowest is missing because of the break. These are flanked by wavy zigzag lines; a single one on top, a double line on one side, and three separate chevrons on the other. Like all the carved art on passage tombs the pattern appears abstract though one feels it has a meaning but one that is now beyond our comprehension.

The other example in Cork is also a recent discovery. A number of large upright stones standing on a small rocky outcrop in the estuary of the Illen River near Baltimore were identified by archaeologist Elizabeth Shee Twohig as the remains of a passage tomb (CO150-057----) [6]. As with the tomb at Rostellan this site is also inundated at high tide - just the tip of the stones remain above water level and the entire site is covered by seaweed.

Whoever built these tombs at these coastal locations had, in some fundamental way, to be different from the inland inhabitants of the county area who did not build such tombs for their revered dead. But what form of burial did they practice? There is a strong hint of this with a discovery at Lisduggan North townland in 1946 during quarrying operations [7]. Here were

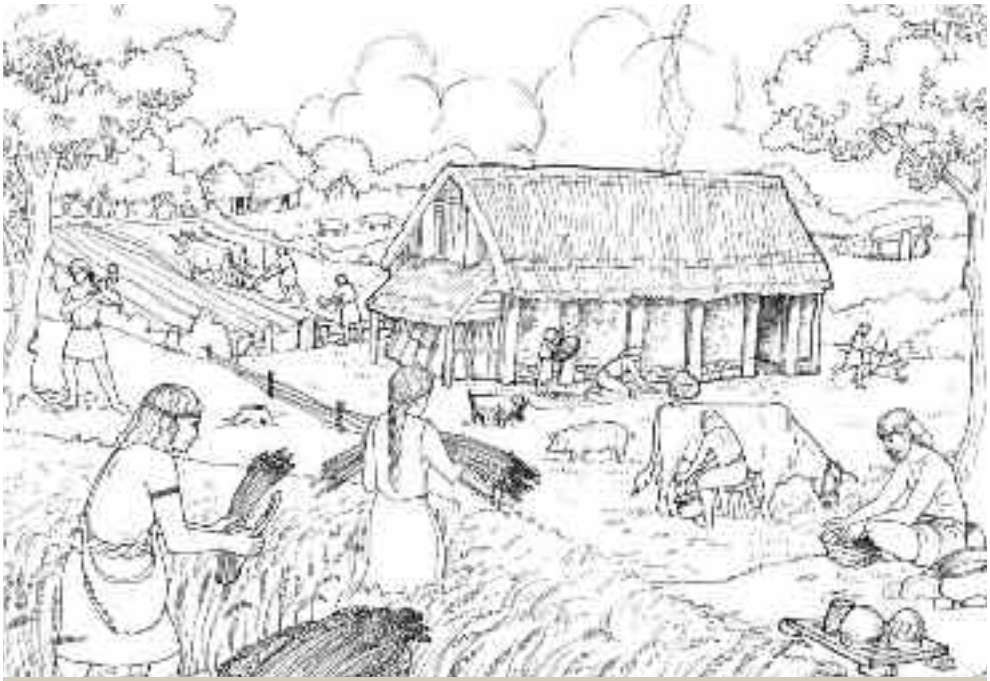
discovered the skeletal remains of two adults and some sherds of pottery. Not much is known of the exact circumstances of the find but the pottery is Neolithic in style and the bones have been radiocarbon dated to c. 3,300 BC. This represents an isolated example but indicates that burial of the dead was probably more informal over much of the county in Neolithic times and so much more difficult to find today.

Stone Age Houses

Judging solely by the presence of *megalithic tombs* alone one would have surmised that Cork was very sparsely populated in the Neolithic. However, evidence of Neolithic settlement has now been discovered in different parts of the county during archaeological excavations in advance of the various road and motorway schemes, gas pipelines and other infrastructural developments. Most telling of this evidence is the identification of the sub-surface foundations of some eight Neolithic houses: one on the Mallow-Bruff gas pipeline; six on the M8 route north of Fermoy; and one on the Ballincollig bypass.

Neolithic farmers were great house builders using wood, thatch and other perishable materials. But these materials disappeared from the landscape shortly after the houses were abandoned. So how do we know about these houses, how they were built and what age they are?

The excavation of Barnagore Neolithic house discovered during construction of the Ballincollig Bypass (N 22). **Image courtesy of Ken Hanley and Archaeological Management Systems, inset by John Murphy.**



Neolithic house with thatched roof supported by wooden posts; cereal crop reaped by sickles with flint cutting edge; corn being winnowed and then ground in a saddle quern; farm animals- cows, pigs, sheep and goats; cutting down tree with hafted polished stone axe; making pots with local clay; hunting with bow and arrow; ploughing with oxen; building dry-stone field walls; in background tribal megalithic tomb. Drawing by Rhoda Cronin (Archaeology in the Classroom).

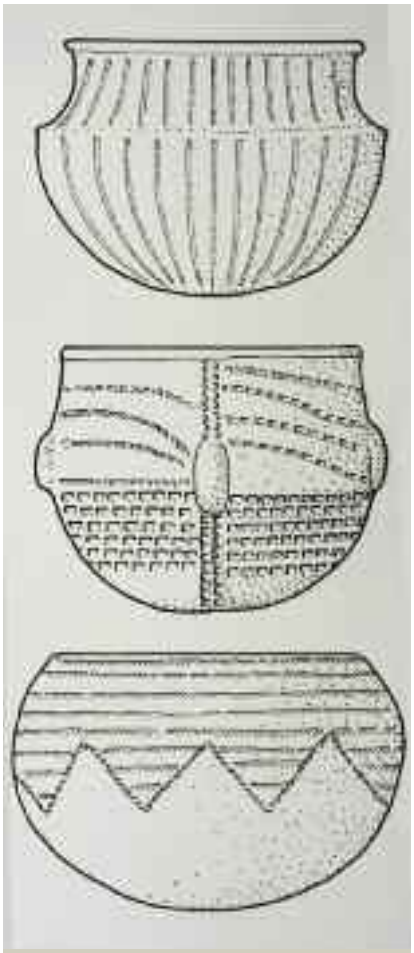
The evidence comes from the way these houses were constructed. In order to support the roof deep circular pits, known as postholes, were dug in which the upright timbers were set. Also, walls of upright planking were set into deep trenches, leaving a gap for the doorway. Over time these postholes and trenches filled with humic material so that when the topsoil is stripped back the outline of these is evident as dark stains against the lighter coloured subsoil. It takes the trained eye of a keen archaeologist to recognise these features for what they are during this process. Any artefacts found in context of these features are the key to dating not only the feature but often the entire site.

The first of these houses was discovered in 1986 at Pepper Hill (CO016-226001-), near Buttevant, during construction of the Bruff – Mallow gas pipeline [8]. More recently, Neolithic Houses have been found on the Ballincollig by-pass at Barnagore (CO073-120----), [9] and on the M8 motorway: at Ballinglanna North (two houses); Caherdrinny and Gortore (two houses) (CO027-198----), all near Kilworth [10].

These houses were typically rectangular with an area of around 20ft by 14ft. In some examples the remains of burnt planking was found in the foundation trench, in other cases traces of clay daub indicates the wall covering. Fragments of re-deposited boulder clay in the interior area

indicate a beaten clay floor. Piecing these bits of evidence together to establish them as the remains of a house is not always easy as agricultural and erosion forces have often removed parts of the jigsaw puzzle.

Associated with these houses was evidence of domestic activity in the form of charred grains of emmer wheat, hazelnuts and apple as well as the bones of domestic animals, notably cattle, pig and sheep. Two crafts were particularly important to the people who lived in these houses: pottery and flint knapping. The pottery was of a distinct type found throughout Western Europe at this time. These were large round-bottomed bowls with a distinctive shoulder and used chiefly for cooking.



Drawing of Neolithic pots by Rhoda Cronin (Archaeology in the Classroom)

What survives in the soil for thousands of years depends on the material it is made of and how it was manufactured. Stone is virtually indestructible so a stone tool will survive. Fired pottery, even poorly fired pottery, also survives though usually just broken fragments (*sherds*). Unless the soil is particularly acidic animal bones are fairly resilient as are some foodstuffs like hazelnuts. Generally what archaeologists find at domestic sites like a house are things that were thrown away, like a broken stone tool, a shattered cooking pot. Fortunately, it is these things that tell us much about lifestyle especially what people were eating and consequently how they were farming or hunting. Excavated soil is often kept and then sieved to recover things not that evident to the human eye during excavation. Things like tiny bird bones, grain and seeds are recovered in this way and can tell even more about diet and food production.

Radiocarbon dates for the eight excavated houses places their use around the middle of the 4th millennium BC. This tells us that around this time farmers were settled along the river valleys of the county on the richer soils suitable for growing cereal crops like wheat and barley and fattening cattle, pigs and sheep. These people have left little for us to see in today's landscape and it is largely through the detection and excavations of archaeology that we now know of their existence.

Interpretation of a Neolithic house found at Gortore near Fermoy.
Image by Digitale Archaologie courtesy of TII.

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[1] de Velara, R. and Ō Nualláin, S (1982) *Survey of the Megalithic Tombs of Ireland, Vol. 4*, Stationary Office, 37-38

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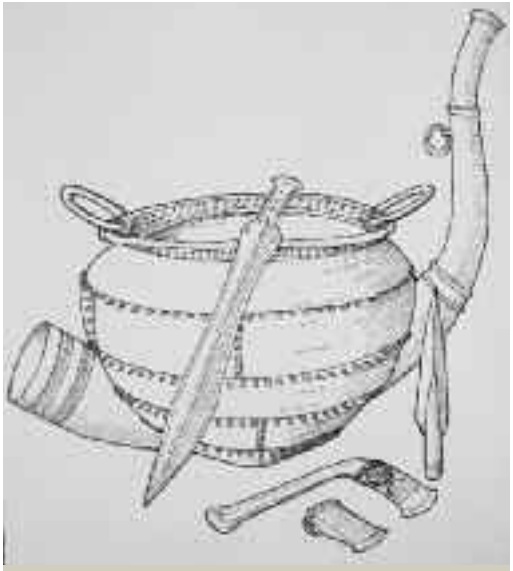
Chapter 5
The New Age of Metal: Early Bronze Age (2,500 BC- 1,500 BC)

From 2,500 BC to 2,000 BC there is a noticeable change in the *material culture* of Cork but one that reflects more a gradual change than a sudden abrupt difference. People are still building megalithic tombs as was done in the Neolithic though in a new style- the *wedge tomb*. But the people who built these tombs had also started to use metal, pure copper at first and then bronze- the alloy of copper and tin. This change is not just happening in Cork and Ireland but throughout much of Northern and Atlantic Europe at around this time. Eventually a new type of society emerges that is distinctly different from the Neolithic - this is the Bronze Age proper and that change comes in the Cork area after about 2,000 BC.

In 1911 a remarkable discovery was made by a man cutting turf in Raheen Bog near Cappeen[1]. At the bottom of the bog, some 12 feet deep, he found a cache of 25 axe heads. What is important about these axe heads is they are made of metal, a nearly pure copper. For whatever reason, this hoard was deposited here around 2,500 BC and thus marks a period of profound change in prehistoric Cork. These primitive copper axes were amongst the first metal objects anybody there had seen; up to then all tools had been made of stone or wood or bone. But here is something completely different. A metal that is extracted from a certain rock type and when melted, then poured into a mould and when cool is an axe head. But not a very good axe head because copper is a soft metal- but still an exotic object that can be traded and valued for its unique character. Of the 25 copper axe heads found in Raheen Bog, two are now preserved in the National Museum of Ireland- the rest have disappeared having been sold at the time to "a collector in Cork".

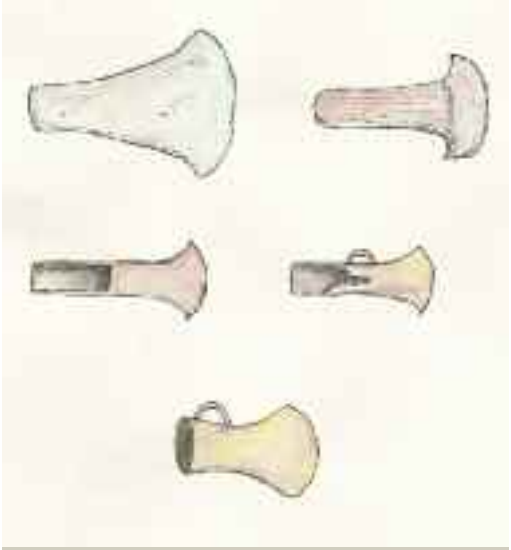


Selection of Bronze Age artefacts: cauldron, sword, trumpet, spearhead and axes. Image by Rhoda Cronin, courtesy of Limerick Education Centre.

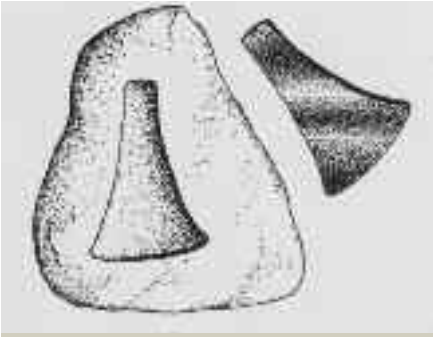
However exotic a copper axe was it wasn't going to change the world. But alloy copper with tin and you had something that would change the world- bronze. Bronze is a hard metal but can be moulded into a shape like copper. But when sharp a bronze implement keeps its edge and will not dent easily when used as an axe or hammer. When

Under the National Monuments Acts (1930-2014) the Director of the National Museum of Ireland has the right to decide the ownership of any archaeological object that is found in the State. Therefore, today whenever and however an archaeological object is found it should immediately be reported to the National Museum of Ireland. It is also illegal under the Acts to use a detection device, like a metal detector, at or in the vicinity of an archaeological monument or to use one to deliberately search for archaeological objects. These devices can be used for archaeological purposes but only under licence from the State.

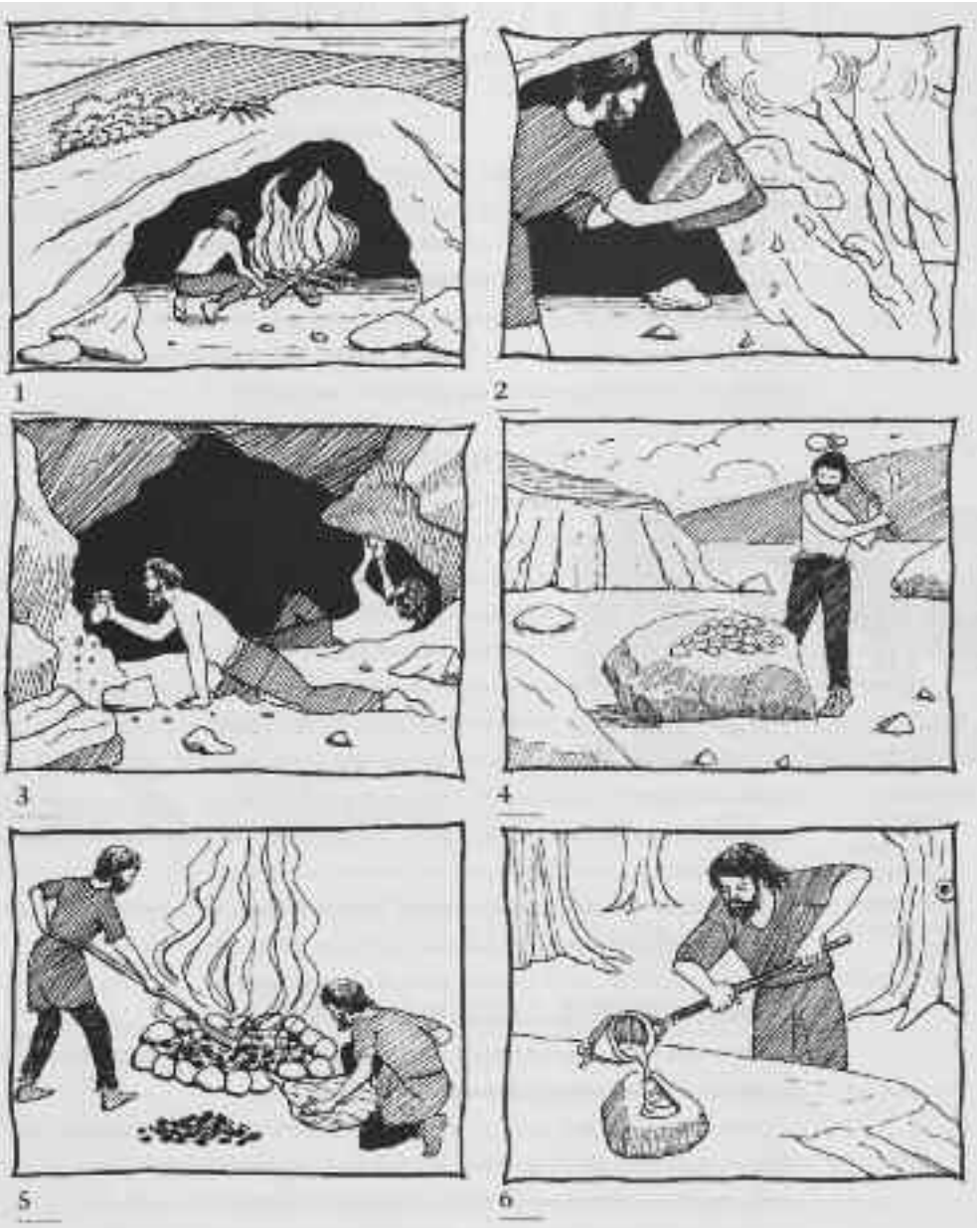
polished bronze has an attractive sheen and thus a weapon or tool produced in this way is not only a very useful but also attractive thing to possess. Metals also introduced "mass production"; each tool or weapon of the old materials had to be individually crafted whereas with metal a mould can produce tool after tool to the same pattern without that need for individual crafting. We can see this in a stone from the Sheep's Head Peninsula. This is a rectangular block and on each of its six faces is a mould for a different size axehead [2].



As the Bronze Age progressed the design of axes changed. The simple form of the early Bronze Age axe (top) developed over time into a socketed axe head which was easier and more secure to haft. Image courtesy of Cork Public Museum.



Stone mould and axe cast from the mould. Image courtesy of The Discovery Programme.



▲ *The various stages in mining and processing metal.*
1. Fire-setting. 2. Rocks crack as cold water is thrown at them. 3. Extracting the rock using a mattock. 4. Crushing the rock. 5. Smelting separates metal from the rock. 6. Casting.

The process of making a bronze axe. Image courtesy of The Discovery Programme.

Copper Mining in West Cork

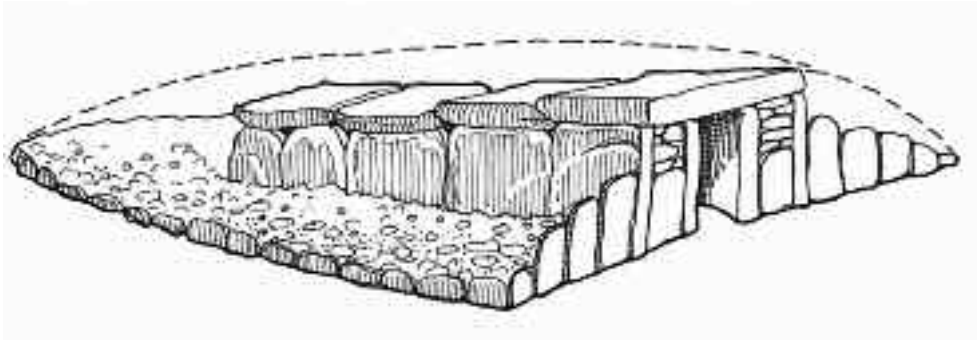
The south-west of Ireland was soon attracting attention from Copper miners. By around 2,500 BC copper mining was underway at various places along the Atlantic coasts of France and Iberia. It was probably miners from these areas who began exploring the south-west of Ireland looking for the distinctive green staining of a copper seam. In fact copper was plentiful along the West Cork coast and before long miners were extracting this precious ore from shallow mines on both the Mizen and Beara peninsulas. Most of what we know about Bronze Age copper mining in West Cork is derived from archaeological excavations carried out by Professor William O'Brien of UCC in the 1980s [3]. The radiocarbon dates for these mines lies between 1700 and 1400 BC. The largest preserved collection of these primitive mines is on the eastern slopes of Mount Gabriel *(CO139-050---- to CO139-059----)*; elsewhere later mining in the 19th century has largely obliterated the earlier workings.

Once a source of mineralised copper was identified a fire of wooden logs was set against the rock face. The heat from the fire eventually made the rock face brittle. This was then attacked with stone hammers to dislodge as much of the rock as possible. It has been estimated that from one fire setting the rock face could be broken back about 5 centimetres. The fragments of mineralised rock were then pounded into smaller pieces, again using stone hammers. These hammers were just handy sized water-rolled stones collected from the local beaches. The small fragments were then ready for the smelting furnace to extract the copper. This was then combined with tin to produce the alloy bronze. There was no ready source of tin in Ireland but there was in Cornwall, thus further enhancing the maritime trade and interaction that characterises the Early Bronze Age in Western Europe.

Wedge Tombs

The great period of building *megalithic tombs* is over by 2,500 BC but in any case this is a phenomenon of the northern half of the country and only a handful were ever built in the south-west. But now, in the closing centuries of the third millennium BC is the great period of tomb building in Cork. These are the wedge tombs, of which some 114 examples have been identified in the county [4]. These are found in the sheltered valleys between the Shehy and Boggera mountains and extend from here out along the Beara and Mizen peninsulas. There are three in the north-east of the county but they are absent from the north-west and the south-east and from the coastal area as far west as Glandore.

As the name suggests *wedge tombs* are characterised by having a wedge-shape plan with the open front wider and higher than the closed back. A curious feature is that the side walls are formed of two close-set lines of upright stones but only the innermost line supports the covering *capstones*. These are communal burial places to which people return from time to time to honour the revered ancestors, probably at particular times in the year associated with celestial events like the solstice and equinox.



Wedge tomb. **Image by Rhoda Cronin courtesy of Limerick Education Centre.**

Four of the county's *wedge tombs* have been archaeologically excavated and much of what is known about *wedge tombs* in Ireland comes from what was discovered during these excavations. These excavations confirm that these are primarily burial places with both cremation and inhumation practiced but the excavations also give us glimpses of the wider world to which they belong, particularly the two most recent excavations which excavated the ground beyond just the tomb interior.

Labbacallee *(CO027-086----)* in North Cork near Glanworth was excavated in 1934 as part of a conservation programme as the tomb is a national monument in the ownership of the State[5]. The excavators were an unlikely pair: Harold Leask and Liam Price; Leask is better known as an authority on medieval architecture though was Inspector of National Monuments at the time; Price was a District Justice with an interest in archaeology though best known for his work on placenames in Co Wicklow. But for its time the excavation was well up-to-date with the best standards of the time and is often cited as the first scientific excavation of a megalithic tomb in the county.

Doire Mhic Coirnín (Derryvacorneen) wedge tomb (CO080-019----) on Shehy Mountains near Ballingeary.

Labbacallee wedge tomb (CO027-086----), roadside near Glanworth, is a National Monument.

Labbacallee has the typical wedge shape with the wider and higher front facing south west. The excavation found the interior divided into two compartments, the smaller one at the eastern end cut off by a stone slab and was undisturbed when excavated. Here an intriguing find was made: a female skull was placed upright on the ground and beneath it was a pit containing a headless female skeleton- and they matched each other. The find is intriguing because of the local name of the monument- *leaba caillighe- the hag's bed*. We have seen already in the case of Ahaglashlin how legends relating to a hag or a witch are often associated with megalithic tombs. Recent radiocarbon dates for the bones of the skeleton date to about 2,200 BC. Another interesting point about Labbacallee is its size which is larger and more solidly built than most other *wedge tombs* and especially those examples further west in the county, some of which are relatively small in size. Because of its size and form Labbacallee has been compared with the *allées couvertes* tombs found in Brittany. For this reason, and because the dates for Labbacallee and the Brittany tombs are earlier than those for most other excavated Irish wedge tombs, it has been suggested that Labbacallee is a prototype and that there was a strong French element in those who constructed it. On the other hand there is no clear similarity between the French tombs and the majority of *wedge tombs* in Ireland; the French tombs have parallel sides and face east whereas *wedge tombs* are wedge shaped and face to the south-west and are much smaller in size.

Labbacallee wedge tomb, interior looking towards rear of chamber (CO027-086----).

The next wedge tomb to be archaeologically excavated in the county is in Island townland *(CO042-056001--)*, near Burnfort. This was dug by Professor O'Kelly of UCC in 1957 [6]. Island was not as well preserved as Labbacallee with most of its covering stones missing but O'Kelly did find a pit in the ground towards the back of the chamber containing cremated human bones and a further cremated burial towards the front end. This latter was the remains of a female aged around 65 years. This of course is similar to the elderly female skeleton at Labbacallee; who these women were we will never know but it is interesting that there is such a strong female element in both the original burials in these tombs and the folklore attached to them as recorded in the 18th and 19th centuries.

The two other excavations of *wedge tomb* are more recent and both were carried out by Prof. William O'Brien of UCC in 1989 and 1990 [7]. These were part of a programme of excavations on the Mizen Peninsula tied in with his excavations of the copper mines on Mount Gabriel. The first of these was at Altar *(CO148-005----)*, on the eastern side of Toormore Bay. The tomb sits on a short promontory with a good view across the bay. On the far side of the bay is the pointed tip of Mizen Peak and the tomb is deliberately set to face in that direction; this peak has been identified as the *Carn Uí Néid* of early Irish legend. These tombs continued to fascinate people long after their initial use, both as places of burial but also entwined into the myths and legends of later peoples.

The interior of the tomb had been reused for ritual purposes for up to two thousand years after it was built so little of the original burials were left. But some cremated human bone

M. J. (Brian) O'Kelly (1916-1982)

A native of Co Limerick, O'Kelly entered UCC as an engineering student in 1934 but his experience as a surveyor on Seán P. Ríordáin's excavation at Garranes ringfort in 1937 changed the course of his studies. In 1944 he was appointed curator of Cork Public Museum which he set up with the help of his colleague and collaborator Edward Fahy. O'Kelly then succeeds his mentor Ó Ríordáin as Professor of Archaeology, University College Cork, when the latter moved to Dublin in 1946. O'Kelly was the foremost field archaeologist of his generation in Ireland conducting and publishing many important excavations in Cork, including the wedge tomb at Island, fulacht fia at Ballyvourney, and two ringforts at Garryduff. His best known excavation was at the great passage tomb of Newgrange in Co. Meath which is now one of the country's main tourist attractions.

found just inside the entrance produced a radiocarbon date of around 2,100 BC and this seems to date to the construction of the tomb. A very unusual find here was an arc of stones across the entrance as if defining the limit of the tomb's *sacred space*. Included in the arc are some white quartz stones and lumps of whale/dolphin bones which must have had a sacred meaning. Quartz has continued to have a "sacred" aspect right down to recent times and continues to be used for grave decoration.

The *wedge tomb* at Toormore *(CO148-001----)* is a short distance from Altar and was even more damaged over time so that little of the original burial deposits were found. The most interesting find was the deliberate placing of a bronze axehead and two lumps of copper at the entrance to the tomb. These must have been a votive offering to whatever deity these people believed in and shows that the whole process of building and using the tomb was framed in a "sacred space" where everything had a special meaning.

The finds from the excavation were radiocarbon dated to around 1,900 BC and show that by this date metallurgy was more than just a useful utility but was part of the very identity of these tomb builders. It took a number of centuries for the *material culture* of the Neolithic to be left behind but by the time this tomb is built we are in the Bronze Age proper where metallurgy is part of not just everyday life but woven into the spiritual life of these people.

Judging by upstanding monuments like *wedge tombs* one would think that the eastern half of the county was very scantily populated during the Bronze Age. As is the case with the Neolithic period, discoveries made during archaeological excavations in advance of pipelines, road improvements and other infrastructural developments have greatly widened our picture of what was going on during the Early Bronze Age. And again as for the Neolithic period it is the discovery of house foundations that gives us the clearest glimpse into how people lived during that period.

Glantane East Wedge tomb (CO048-92) situated at the west end of Boggeragh mountains south of Millstreet and in an area rich in Bronze Age monuments.

Bronze Age Houses

As with their predecessors during the Neolithic, Bronze Age houses were also made of perishable materials that have long since rotted into the ground. In order to support these structures postholes and trenches were dug into the ground, essentially into the boulder clay that underlies the humic topsoil. When the topsoil is stripped away the pattern of postholes,

Artist's reconstruction of a Bronze Age house. Image courtesy of The Discovery Programme.

Ballybrowney Lower - digital reconstruction of Middle Bronze Age settlement.
Image by Digitale Archaologie courtesy of TII.

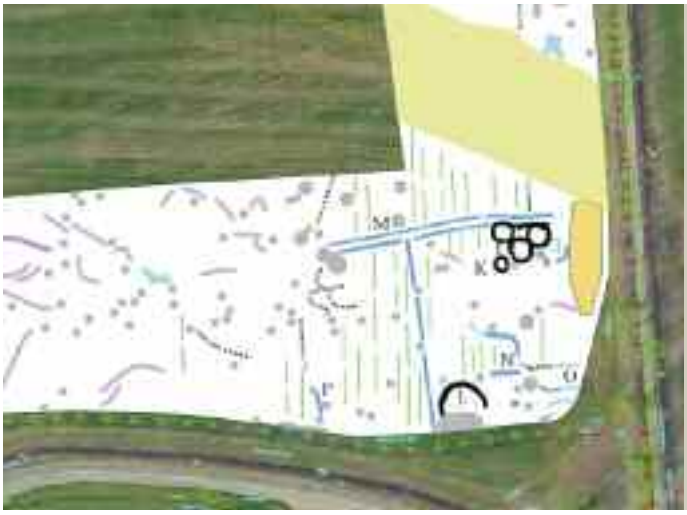
pits and trenches is revealed as dark stains against the light brown/ orange background colour of the underlying clay. Thus in the construction of the M8 motorway, the Youghal bypass (N25) and the Ballincollig bypass (N22) a wealth of evidence has been found for settlements dating to the Bronze Age. Important finds of Bronze Age settlements have also been made during pipeline construction and large-scale developments like the golf course on Fota Island [8] and in the developments around Carrigaline where Bronze Age people also liked to live given the extensive range of Bronze Age monuments in the area. Recent excavations in advance of development have identified fulacht fia, ring barrows and a recent excavation at the new Carrigaline Campus (Ardnacloghy, Carrigaline) identified an extensive settlement site including evidence of a log boat used as the wooden trough for the fulacht fia.

The most spectacular of these sites was at Ballybrowney Lower, near Rathcormac, on the M8[9]. Here the foundations of three enclosure and four unenclosed houses were found in close association forming a nucleated settlement. Three of the houses were close together and almost identical in design. The postholes to support the roof consisted of a central posthole and a series of spaced postholes in a wide circle around it which bore the weight of the roof. The house diameter was around seven meters so was quite spacious. The wall was

Kilmichael hut site (CO126-007----) on Dursey Island.

represented by a shallow trench running in a circle just outside the postholes. Some form of wattle wall was set into this. A gap in the encircling trench gives us the evidence of a door way which was flanked by two further postholes presumably to hold the door frame. Only one of the enclosures was fully excavated and this had a diameter of 20 meters. It was defined by a shallow trench so the enclosing element was more a fence that anything defensive. At the centre was a circular house similar to those described above. Subsequent to the excavation a geophysics survey was carried out of the surrounding area that show this was a sizeable settlement with several other enclosure and unenclosed sites covering an area of about 500 meters by 200 meters. Other settlements like this have been found elsewhere in Munster and show the complexity of Bronze Age settlement in the south-west of the country.

These discoveries demonstrate a developing sophistication in social organisation during the Bronze Age based on extended family groups. The lack of a serious defensive enclosure



A geophysical survey carried out in 2019 at the Munster show grounds at Curraheen identified (in black) new hut sites and a circular enclosure which will be accommodated as an interesting feature within the new development.
Image by John Nicholls, TARGET Archaeological Geophysics GCV Target, courtesy of Avril Purcell LANE Purcell Archaeology and Munster Agricultural Society.

around the settlements suggests these people were more concerned with building pens for their animals rather than to protect themselves from enemies. The *material culture* found at Ballybrowney Lower, a few fragments of saddle querns and some sherds of pottery, indicates the inhabitants were a farming community without any degree of disposable wealth.

The other monument type that deserves mention in this context is the *hut sites* that are found in the upland areas of the west of the county. These can be of any date from Bronze Age through to the later medieval period and the only survey of these areas and features like these was that undertaken on the Beara Peninsula by UCC which brings us on to the next section.

A Bronze Age Landscape

We get a fascinating glimpse of a Bronze Age farming landscape on the Beara Penninsula where uniquely preserved are tumbled field walls, hut sites, and enclosures. These survive in

Copper, Tin and Bronze

Copper (CU) is a chemical element and one of the few metals that is available in nature as an easily identifiable and extracted ore. It has had a long association with humanity being the first metal to be smelted, the first to be cast in a mould and the first to be alloyed with another metal, tin, to create bronze - a material that had a vital contribution to the development of civilization. The presence of copper ore is detectable by a distinct greenish colour on rock outcrops. It was mined in West Cork and South Kerry in the Bronze Age.

Tin (SN) is another chemical element. When in the Early Bronze Age it was discovered that a small amount of tin (around 12%) was added to molten copper a new alloy metal, bronze, was produced, tin became a much sought after metal. There was no useful source of tin in Ireland but there was an abundant supply in the South-west of England in Devon and Cornwall. There can be no doubt that this created a trade route across the St George's Channel at that time.

Bronze is an alloy of copper and tin and has a massive advantage over both as a useful metal. Bronze is less brittle than tin and far harder that copper. It is also far easier to cast with a low melting point and can be cast into elaborate moulds enabling metalworkers to create an elaborate range of tools, weapons and ornaments. Bronze also has an attractive colour and sheen when polished.

upland areas where the ravages of modern agricultural improvements have not removed them. Two things have combined to reveal this prehistoric landscape. The first is increased sheep grazing post EU subsidies. This has removed much of the overgrowth, especially gorse thickets that previously had obscured these features. And the second was the pioneering work of field archaeologist Connie Murphy, a native of the peninsula, whose intimate knowledge of remote areas has brought these systems to light. Their antiquity can often be gauged by the blanked bog that covers the tumbled walls and enclosures, the peat having grown over them since they went out of use. Archaeological Assessment in advance of developments has also added to the corpus of Bronze Age sites with numerous previously unrecorded sites identified such as fulachtaí fia, ring barrows, standing stones, enclosures, field systems and hut sites.

In the 1990s a team from the Department of Archaeology, UCC, led by Prof. William O'Brien, conducted a detailed survey of three separate areas at the western end of the Beara peninsula

Section of the geophysical survey carried out in advance of solar farm development at Ballyroe near Charleville which identified (in black) an incredible new archaeological landscape including circular enclosures, hut sites, fulacht fia and field systems. Image by John Nicholls, TARGET Archaeological Geophysics GCV, courtesy Courtney Deery Heritage Consultancy Ltd and Soleire.

Pre-bog field wall, part of a network of relict stone field boundaries protruding intermittently above the surface of the bog on north side of Slieve Miskish mountains to east of Eyeries village.

and recorded what survives of the prehistoric landscape there [10]. O'Brien also archaeologically excavated a number of monuments here including a small copper mine, two *fulacht fia* and a *stone pair*. He found two main phases of settlement in these remote valleys. The initial establishment of farming communities in the Early Bronze Age was signalled by the building of wedge tombs. O'Brien sees these tombs as establishing a group's rights to a particular territory by linear descent from those first buried in the tombs. There is then a secondary expansion in the Late Bronze Age represented by an expansion of the field systems and the building of stone circles, stone rows and boulder burials.

Fulacht Fia: Cooking in the Bronze Age

Without doubt the most numerous Bronze Age archaeological monuments in the county and in the country are the *fulachtaí fia*. The Archaeological Inventories for the county records 3,382 examples and the number has grown since their publication [11]. The reason they are so numerous is a result of their physical nature but also because they were extremely popular at the time and created in vast numbers. They survive when undisturbed as low kidney-shaped mounds, usually found in marshy un-reclaimed ground or beside a stream. These mounds consist of many fragments of heat-shattered stone in a charcoal-enriched matrix. On reclaimed land they are evident as distinctive black spreads in ploughed fields.

Fulacht Fia (CO087-108), Ballynametagh near Carrigaline, it is clearly visible from N28 when field is freshly ploughed.

Gortnaglogh fulacht fia (CO022-030002-) adjacent to well, typical horseshoe shaped mound, another Fulacht fia adjacent to north.

Fulacht fia (CO073-161) identified in 2019 during archaeological testing in advance of a housing development in Ballincollig. The distinctive black charcoal enriched soil and heat shattered stones are clearly visible. Image taken by Avril Purcell Lane Purcell Archaeology, courtesy of Stonecrest Construction.

These mounds were created by a process whereby a rectangular pit was dug into the ground. This was sometimes lined by stone planks. Then, either by using a nearby stream or just by natural seepage, the trough is filled with water. On one side a fire is built up and in the fire are hand-sized stones. When the fire has heated the stones sufficiently they are transferred into the trough. Experiments have shown that a large quantity of water can be brought to the boil in about twenty minutes. Experiments have also shown that joints of meat can be cooked in the trough using the standard formula of twenty minutes to the pound and twenty minutes over.

The pioneer of *fulachtaí fia* studies in Ireland was Prof. Michael O'Kelly who conducted the first scientific excavation of one at Ballyvourney *(CO058-033----)* in 1951 [12] (this process has been replicated many times since then). The excavation found a trough dug in waterlogged ground that was lined with oak planking as stone slabs. Moss was packed between the planking and the slabs and may have acted as a filter of water seeping into the trough. Beside the trough was a hearth where the stones were heated and on the off-side was the dump of heat-shattered stones. Each cooking will produce a handful of these stones- the hot stone will shatter when placed in cold water. The size of the mound (there was 27 cubic meters of material in this mound) shows repeated use of the site over a prolonged period of time.

Artists impression of joint of meat being boiled at a fulacht fia. Hot stones from the fire are boiling the water in the trough. A pile of discarded burnt stones piling up on the back and either side of the trough is leaving a horse shoe shaped mound of material. **Image by Rhoda Cronin courtesy of Limerick Education Centre.**

In one of the first examples of experimental archaeology in Ireland, O'Kelly replicated the process of cooking meat in the *fulacht fia* based on a description of how this was carried out contained in Geoffrey Keating's book Foras Feasa ar Éirinn published in the 17th century. His description is as follows:

"And it was their custom with whatever they had killed to kindle ranging fires theron, and put into them a large number of emery stone; and to dig two pits in the yellow clay put some of the meat on spits to roast before the fire; and to bind another portion of it with suga´ns in dry bundles, and to set it to boil in the larger of two pits, and keep plying them with the stones that were in the fire until they were cooked."

A short time after O'Kelly's excavation at Ballyvourney another *fulacht fia* was excavated by Edward Fahy at Drombeg *(CO143-051003-; CO143-051001-)* near Glandore [13]. This occurred in 1959 and whilst Fahy's work was concentrated primarily on the stone circle 30 meters away. The *fulacht fia* consisted of a stone lined trough beside which was a hearth where the stones were heated. Beside this is a spring-fed well which fills the trough with water. These are enclosed by a stone-faced bank, an unusual feature, but this fulacht fia was not your normal run-of-the-mill one, being associated with an important *stone circle* and reused more often than the others. A few meters north of this arrangement, and linked to it by a paved path, is a pair of conjoined huts. Fahy interpreted this as a food preparation area. Recent radiocarbon dates for the site date its main period of use at around 900 BC.

Since those early excavations in the 1950s over a 1,000 *fulacht fia* have now been archaeologically excavated [14]. Nearly every pipeline, motorway, by-pass, and large-scale development in the county that is archaeologically investigated has produced one of these cooking sites. Whilst the many radiocarbon dates for these sites range from the Neolithic through to the Iron Age the bulk of them centre on the Bronze Age and it is clear then the millennia from 2,000 BC to 1,000 BC was the age of the *fulachtaí fia*.

Experimental Archaeology

This is a method whereby theories about ancient cultures and especially their technologies are tested by replicating the technology as close as possible to its original conditions. The pioneer of this in Ireland was Prof O'Kelly at Ballyvourney in the 1950s where he replicated the cooking process in a fulacht fia as outlined in early literary sources. That experiment has been replicated many times since in a variety of settings. In the 1960s the interior of a crannog at Craggaunowen in Co. Clare was reconstructed using authentic materials. A similar experiment was carried out in the late 1980s at Lisnagun (Lios na gCon) on the grounds of Darrara Agriculture College outside Clonakilty. After the interior was archaeologically excavated the houses and other features of the interior were reconstructed based on the findings of the excavation. Lisnagun operated as a visitor attraction and educational facility for a number of years.

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The Magic Circle

As well as building stone tombs for the revered dead, the Bronze Age peoples of Mid Cork and West Cork also built structures using upright stones arranged in a circle, now referred to as *stone circles*. The circle is a universal symbol of renewal and perfection and in ancient mythology is often used to represent God, particularly the Sun God. As we will see below there is evidence that the *stone circles* of this region had a ceremonial function associated with celestial worship and particularly with that of the sun. These early farming communities did not have access to weather forecasts and all the other information available to farmers today. They still needed to understand the changing seasons, when was a good time to plant crops and put cattle out to pasture. They were relying on a close study of the heavenly bodies for this information, and particularly important were the solstice and equinox events that mark the changing seasons. The worship of these heavenly bodies and rituals to encourage their favourable behaviour is a natural consequence of that knowledge. In the later Bronze Age these beliefs manifest themselves in the construction of these "magical" places.

Drombeg Stone Circle (CO143-051002-) is located between Rosscarbery and Glandore. It is nestled on a natural rock terrace with extensive views to the west and is Cork's best known Stone Circle. It is a National Monument and a very popular place to visit.

West Cork Stone Circle with the two tall portal stones or entrance in front and flat topped axil stone to rear. Drawing by Rhoda Cronin courtesy of Limerick Education Centre.

A striking feature of these stone circles, and one particular to this region, is their layout according to standard rules. The number of stones in the circle is always uneven, from five up to the largest with nineteen. Uneven numbers have traditionally been attributed with innate or superstitious values and must have had some meaning like this to those who built the circles. The circles also have an orientation, always on a south-west/north-east axis. This is attained by placing a low broad stone (termed the *axial* or *recumbent* stone) at the south-west sector of the circle and directly opposite it the two tallest stones (*portal stones*) at the north-east. Thus a line drawn from between the two *portal stones* and the centre of the *axial stone* gives the *stone circle* its orientation. It is extremely difficult if not impossible to reconstruct what type of ceremony took place at these sites but it seems likely that the *portal stones* formed an entrance into the circle and that the flat-topped axial stone had some form of "altar" function. We can also surmise that the ceremonies were related to celestial events especially relating to the Winter solstice and the equinoxes. These occasions were important dates for all ancient farming communities marking the turning points of the year and determining the

Orientation

Nearly all the ritual and burial monuments of the Bronze Age in Cork have one thing in common, they face towards the south-west. In some cases like Drombeg stone circle this is because it was deliberately designed so that the mid-winter sunset at the solstice, the shortest day of the year, was directly in line with a line drawn between the two portal stones and the axial stone of the circle. In other cases, like Altar wedge tomb, the structure is aligned on a distant peak, but one to the south-west of the tomb. Today it is not always possible to detect the exact alignment of a monument but whatever the particular case they all face or are aligned towards the south-west. These monuments span a period of over a thousand years, from a few centuries before 2,000 BC to a few centuries after 1,000 BC. But the tradition of facing the south-west persisted so it must have been a very strong part of all these people's belief systems.

hope and promise of a bountiful growing season. Christmas and Easter are the modern equivalent of these ancient celebrations.

Some 100 stone circles have been recorded in the county and their distribution mirrors closely that of *wedge tombs* with concentrations in the mid-west, the Beara Peninsula, along the south coast between the Timoleague and Rosscarbery estuaries and inland from there towards Dunmanway [1]. Four of the stone circles in the county have been archaeologically excavated. The first was excavated by Seán P Ō Ríordáin in 1938 at Kealkil [2] and the other three by Edward Fahy at Drombeg in 1957 [3], Bohonagh in 1959 [4] and Reenascreena South in 1960 [5].

The stone circle at Kealkil (CO106-006001-) is small with just five stones and a diameter of less than 2.3 meters. However it is spectacularly located on a narrow natural terrace that overlooks the valley of the Owvane River to the north. The excavation was disappointing in terms of finds - no datable objects were found associated with the circle. The one intriguing feature was two shallow trenches that intersected in the centre of the circle forming a cross. Ō Ríordáin suggested that these held wooden beams that supported some form of upright post. This post would be in direct line with the centre of the axial stone and the mid-point between the two portal stones. It also lined up with the two side stones. Sharing the terrace with the stone circle is a pair of *standing stones* and a *radial-stone cairn* - we will come to these monument types later in the book. The close association of these three monuments shows that this is a special place; we don't know if the three were built at the same time or over a period of time but they are clearly an indication of an important spiritual space for the people of that time.

We have already discussed Fahy's excavation of the fulacht fia at Drombeg but of course the main focus of his work there was the stone circle itself (CO143-051002-). This is a larger and impressive circle of seventeen stones and has a diameter of 9.3 meters. Like Kealkil, it is located on a natural terrace overlooking lower ground to the south and beyond it the sea about a mile away. The circle had already been brought to prominence by Boyle Somerville who had observed its orientation on the mid-winter sunset [6]. On this occasion the sun sets into a notch in the nearby hills that lines up with a line drawn through the *axial stone* and between the two portal stones.

The excavation revealed a 10 centimetre deep gravel floor covering the inside of the circle. This floor was compact enough to have prevented any undergrowth penetrating it over the millennia. There was also evidence just outside the portal stones that the old ground surface had been trampled repeatedly indicating that this was indeed the entrance into the circle.

Fahy discovered a pit in the centre of the circle, underneath the flooring, that contained the remains of a cremation in the form of flecks of burnt human bone. He also found a pottery vessel that had been carefully placed in the pit but with its upper and lower parts broken off. He concluded that this burial was of a "dedicatory nature and that the carrying out of the burial itself was accompanied by certain ceremonies of a ritual nature." This implies that not alone was the stone circle the site of ceremony during the winter solstice but that its very construction was also a ritual event involving the placing of cremated human remains in the

centre of the circle underneath the gravel flooring. Whoever's remains these were must have been a special person, presumably with some power or significance relating to these people's culture. Recently charcoal from the burial deposit was radiocarbon dated and dates the construction of the stone circle to around 1,000 BC [7].

Another indication of the ritual nature of the circle is a carving on the upper surface of the axial stone. This is the shallow form of an "axe" and a cup-mark depression; these carvings of *rock art* are probably significant in the use of this flat-topped, altar-like, stone during the ceremonies that took place at the circle.

Drombeg was clearly a very important place during the Bronze Age where people gathered at the mid-winter solstice to perform rituals focused on the setting sun at the shortest day of the year. Their lives were intimately tied into the production of food during the year ahead, the success of which was dependant on the weather ahead and the sun determined this. The winter solstice is and was celebrated in many social and cultural settings - in our world today it is called *Christmas*.

Drombeg stone circle is a national monument in the care of the Office of Public Works and has become one of the main tourist attractions in West Cork and on the Wild Atlantic Way. Whilst Fahy described the circle at Drombeg as built with "great precision and refinement" the circle at Bohonagh (CO143-032001-) was less sophisticated. This stone circle is located in a prominent position, just to the east of Rosscarbery Bay, so that it can be seen from the surrounding countryside. There was no paved floor and the central dedicatory burial was a much less organised affair than that at Drombeg. The circle is also smaller with 13 stones - only six of which still stood at the time of the excavation, and with an internal diameter of 8.5 meters.

As with Kealkil and Drombeg the stone circle at Bohonagh shared its location with other monuments. In this case a *boulder burial* and a *cup-marked stone*. Through observation, Fahy also showed that Bohonagh is orientated, through the *axial* and *portal stones*, on the spring and autumnal equinoxes.

The third stone circle excavated by Fahy is at Reenascreena South (CO134-032----), about three miles inland of Rosscarbery. It is located on a rise of ground with extensive views to the

Bohonagh stone circle (CO143-032001-), near Rosscarbery. Photograph taken from east looking through portal stones towards the axial stone to rear.

Reenascreena South stone circle (CO134-032----), looking through portal stones towards the axial stone. Bank of surrounding ring barrow in foreground.

west as far as the sea. There are thirteen stones in the circle with a diameter of 9.25 meters. As with the other circles there was a dedicatory cremated burial in a central pit. No significant finds were made during the excavation. A characteristic feature of this circle is the earthwork that immediately surrounds it on the outside. This takes the form of a shallow depression with a low mound on its outside. This site is therefore a combination of two characteristic Bronze Age monuments: the *stone circle* and a *ring barrow*.

Fahy was unable to determine any specific orientation of the Reenascreena South stone circle, unlike at Drombeg and Bohonagh. A study of some thirty stone circles in the Cork/Kerry area in the 1970s could only find a definite orientation for twelve of them [8]. This would seem to reinforce the theory that they were not strictly observatories but were built for a purpose that showed an awareness of the major cycles of the heavenly bodies, particularly those of the sun and the moon.

An interesting aspect of Fahy's excavations at these stone circles is the experiments he undertook in trying to recreate how the stones were originally erected. This was done using wooden levers and a manila rope; Fahy's elegant drawing of the process [9] shows how this works. He estimated that once the socket was dug and the stone dragged into position beside it, it would take three men approximately two hours to set the stone firmly upright in the socket.

These one hundred stone circles in Mid Cork and West Cork, together with another eighteen stone circles in the Kenmare Bay area of South Kerry, form a distinct group of structures built

Templebryan Stone Circle (CO122-076), near Clonakilty.

Kilmartin Lower Stone circle (CO050-061001-) near Rylane. Photograph courtesy of Gerard O' Rourke.

to a precise architecture and presumably having a similar ritual function. This function is reflected in their design with a deliberate orientation, through the *portal stones*, the centre of the circle and the *axial stone*, generally to the south-west. This has to be related to the movement of the heavenly bodies, the setting mid-winter sun particularly at Drombeg, but probably to other celestial events at other circles. This has to be tied in to subsistence farming where the vagaries of the weather, and the factors that influence it, are vital to survival. This requires a special relationship being established between these communities and the divine in which *stone circles* have an important role to play.

Magic Rows and Pairs

In the same milieu as stone circles are *stone rows* and *stone pairs*. These also occur in the same areas as the *wedge tombs* and *stone circles*, namely in the mid-west and south-west of the county. The vast majority of examples of these types of monuments in Ireland occur in the south-western counties of Cork (total: 104) and Kerry (total: 6).

Stone rows are defined as three or more standing stones set closely together in a straight line on a general south-west/north-east axis; the longest row has just six stones [10]. In many cases the stones are graded in height with the tallest at one end of the line. Though normally

classified separately the *stone pairs* are probably just an abbreviated version of the row with just two stones in the line.

Archaeological excavations at *stone rows* are often not very informative finding little more than the sockets for the stones themselves. This is not surprising as these are neither primarily places of burial or habitation but are part of the "ritual" world where whatever took place there has left little evidence for us to find today.

In 1977 as part of a postgraduate research programme, Ann Lynch excavated the *stone row* at Maughnasilly [11] which is situated 2.5km north of Kealkil (CO092-019----). The row is situated on a low ridge with a commanding view west overlooking Lough Atooreen and along the Maughnasilly valley. The five sandstone uprights are not very tall; the tallest stands at 1.3 meters and the shortest at 0.5 meters; the total length of the row is 5.8 meters. Very little evidence of prehistoric activity was recovered during the excavation and just two small flint objects were found. One of these is what is called a *thumb scraper*; it is small enough to be held between thumb and forefinger and appears to have been used as a scraper, perhaps for cleaning fat from animal skins. The main purpose of the excavation was to find material suitable for radiocarbon dating. Charcoal from burning activity at the site some time before the row was erected, produced a date of around 1,500 BC. This places the *stone rows* in the same date range as *stone circles* in the last centuries of the second millennium BC.

Farrannahineeny Stone row (CO093-043----) between Kealkill and Coppeen. It consists of four stones aligned NE-SW, the stone lying in foreground may be a fallen fifth stone.

Meenahony stone pair (CO050-073001-) near Donoughmore. The Stones are aligned NE-SW, taller stone at NE end. **Images courtesy of Gerard O'Rourke.**

Two excavated *stone pairs* have introduced a funerary element to these monuments. In 2013 the local community in Cloghane near Timoleague (CO123-008----) approached the Archaeology Department in UCC regarding the re-erection of two standing stones that had been removed during field clearance [12]. Prof William O'Brien excavated the site and not only was the original sockets for the two stones discovered but close by were three pits containing cremated human bones. Earlier, in 1989, O'Brien [13] had also excavated a stone pair in Ballycommane, near Bantry (CO131-005001-). Though no human remains were found here there was a small stone box or cist in the ground beside one of the stones and its form suggested to the excavator that it may have contained cremated human remains that had not survived. Right beside this *stone pair* is a *boulder burial* that was also excavated by O'Brien. Again no human remains were found during the excavation but these monuments are usually found to mark burials.

The Gallán

The single stone standing in a field is a feature of the Irish countryside and these traditionally have been called a variety of names: gallán; dallán; leacht; Lia; Liagán; pillar stone; the long stone, etc. Over 1,000 of these have been recorded in County Cork, making them the third most numerous archaeological monuments in the county after *fulacht fia* and *ringforts*. A single stone standing on its own, and because there are so many of them in the county, is difficult to place in a particular context. But where they occur in proximity to other monuments like *stone circles, stone pairs* and *rows*, and the form they take is very similar to stones in those settings, we have to place them in that context. This is particularly the case if the stone is *aligned* on a north-east /south-west axis - that is it is roughly rectangular in plan and that the long-axis is set on a south-west/north-east orientation. Another clue to antiquity is the presence of *packing stones* around the base - this method of keeping a stone upright is common in stone circles, rows and pairs. Of course, some may just be the last remaining stone of one of those monuments but standing stones are numerous enough to suggest they form a monument type of their own.

A few are decorated with *cup marks* (see rock art section later in this chapter), which is a definite proof of antiquity. A fine example of this is the standing stone in Burgatia (CO143-025----) which has twenty four *cup marks* and one *cup-and-circle* on its north-west face; the stone is clearly visible from the N71, just before the road, travelling west, dips down to Rosscarbery estuary. A stone located in a prominent position like this has to be important in that context. When Bronze Age people saw this stone standing on the horizon above them it must have conveyed a special meaning or message to them.

Two individual standing stones in Cork have burials closely associated with them. In 1993 during the clearance of scrub in Killountain, 4km west of Bandon, a standing stone (CO110-005----) and a burial pit beside it were discovered [14]. The stone was not known about before the clearance and what was found there was reconstructed later from the memory of those involved. Directly beside the stone was a small pit covered by a flag stone. In the pit were fragments of cremated human bone. There seemed little doubt that the stone and the burial were directly associated.

Tooreennaguppoge Standing stone (CO014-002001-) near Meelin.

Inchinlinane standing stone (CO070-079----) near Macroom. Photograph courtesy of Bernice Corcoran.

In 2001 another standing stone was damaged during works; this was located in Moneyreague (CO093-033----), 7 km north-west of Dunmanway [15]. An archaeological excavation was carried out before the stone was reinstated. The excavation discovered a substantial pit containing cremated human bone adjacent to the stone. This stone is exceptionally high at 2.6 meters.

However, other excavations of standing stones in the county and elsewhere have found no evidence for burials and it seems unlikely therefore that the primary functions of all Bronze Age standing stones were to mark a burial though some certainly had a funerary context. Explanations for why standing stones were erected are numerous. They may have been boundary or route markers; in a heavily wooded landscape without recognisable roads, markers like these would be very useful. They may be memorials to important events; there is a tradition that stones were erected to mark the killing of the last wolf in an area. A standing stone (CO009-004002-) near Kildorrery is in a pass through the Ballyhoura hills but it also occurs in a field where Brian Boru's brother, Mahon, was reputed to have been killed. Some may be no more that scratching stones for cattle erected in the recent past. However, the larger stones with the typical north-east/south-west orientation along their long axis must be seen as part of the ritual landscape so prevalent in parts of Bronze Age Cork.

Burial under a Boulder

Undoubtedly one of the most distinctive Bronze Age monuments in the Cork/Kerry area is the *boulder burial* [16] and 96 examples have been identified in Cork to-date. They are a uniquely Irish monument type and were only recognised as such in the 1970s. In some respect they can be seen as the very end of the *megalithic tomb* tradition in that they are burial monuments built of large stones, though in the case of *boulder burials* just the one large stone. And whilst an important aspect of *megalithic tombs* was the creation of a chamber or chambers that were accessible, this was never the case with *bounder burials*. These have a single capstone, often quite a sizeable boulder that is just raised above the ground by three or four support stones- sometimes barely above the ground. This suggests a single burial event rather than a tomb that people came back to on occasions with extra burials as seems to have been the case with *megalithic tombs*. But as we will see below the dominant burial form in the Bronze Age is the *single-burial tradition*, which is single in terms of a single burial event.

Garranes Boulder burial (CO096-009----) near Castlenalacht, Bandon.

Burgatia boulder burial (CO143-028001-) near Rosscarbery.

The first example to come to archaeological attention was in 1959 when Edward Fahy excavated one at Bohonagh (CO143-032003-) [17] - we have previously mentioned his excavation of the *stone circle* here. The *boulder burial* lies just 20 meters from the circle. It consisted of a large rounded stone, approximately 5 tonnes in weight, which is supported by three low support stones - the boulder is just 20 centimetres clear of the ground. Fahy's excavation found a shallow pit under the boulder which contained cremated human bones. This finding naturally led to the assumption that *boulder burials* were grave markers but two more recent excavations by William O'Brien failed to find any evidence of human remains or any other artefacts under the boulder. These excavations were at Cooradarrigan, near Schull (CO139-031001- & 002-) in 1988 [18] and the following year at Ballycommane, near Bantry (CO131-005002-) [19]. This absence of burial remains led the excavator to speculate that the interment may have just been a token sprinkling of cremated bone that had not survived or that the burial was a body organ that had long since been dissolved by the acidic soil.

As well as being found close to a stone circle, as at Bohonagh above, there are also examples where the boulder burials are placed within the *stone circle*. The most impressive example of this is at Breeny More (CO106-005002-), near Kealkill, where four boulder burials are placed centrally within the circle. None of these examples have been excavated so the relationship between the two types of monument is not known. If the boulder burials were a late addition to the stone circle at Breeny More rather than part of its original design, then it can't have been long before they were inserted as both monument types have the same general date range.

Whether boulder burials are the tail end of the megalithic tomb tradition or something novel that first appeared in the later Bronze Age we don't know. Some doubt has also been expressed as to whether they should be seen primarily as burial monuments. But whatever the case they do fit snugly into what has been called the *West Cork/South Kerry stone circle complex*.

Radial Stones

Concluding the later Bronze Age "ritual" collection of monuments are two rarities: *radial-stone cairns* (14 examples) and *radial-stone enclosures* (8 examples) [20]. The only one of these to be archaeologically excavated was the radial-stone cairn at Kealkill [21]; we have already mentioned O Riordain's excavation of the *stone circle* and *stone pair* at the site.

The *radial-stone cairn* at Kealkill consists of a ring of loose stones, 2.5 meters in width and 0.5 meters in height surrounding a level area 3 meters in diameter, the outer diameter of the ring is 8 meters. The ring of loose stones is set around 18 small stones, height about 0.5 meters, which are set with their long axis facing the centre of the ring. There were no datable finds recovered but the close association with the other two monuments strongly suggests they are of the same general date and function.

Radial-stone enclosures are more or less the same arrangement of a ring of loose stones but in this case the stones are set in two concentric lines defining the edges of the stone ring.

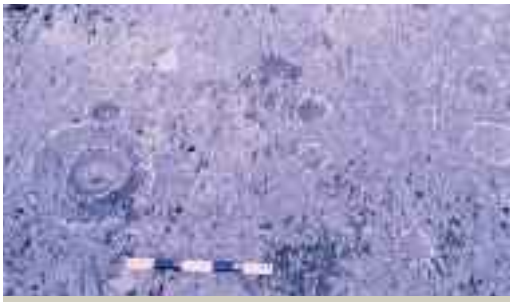
Kealkil radial-stone cairn in foreground; stone pair adjacent and stone circle in background (CO106-006003-).

Rock Art

Perhaps the most enigmatic of all Bronze Age monuments are the stone carvings now termed rock art. We have already met Stone Age rock carvings with the Cape Clear stone that belongs to a distinct passage grave tradition. But well over a thousand years after that tradition of stone carving we meet another in the form of *rock art*. This art occurs in certain parts of the country, in Donegal, Wicklow but particularly in Kerry where the largest and most impressive collection of carved stones occur on the Iveragh and Dingle peninsulas [22]. Similar decorated stones are found in Scotland and Northern England as well as in the Galicia region of north-west Spain; this has led to the term *Gallego-Atlantic* being used to identify this art. The art can be found carved on rock outcrops or on stones that form part of an archaeological monument, as seen above at the Burgatia *standing stone* and Drombeg *stone circle*.

County Cork also has its share of these stones with a notable concentration in West Cork along the coastline from Rosscarbery west to the end of the Mizen peninsula.

The carving was done with a hard stone point hammered against the rock face. This might be done directly onto a rock outcrop but the art also appears on stones that form part of a monument, like the designs on the top of the *axial stone* at Drombeg stone circle or the *cup marks* on the Burgatia *standing stone*, both mentioned above. A limited number of motifs were used, the most common being a circular round-bottomed depression known as a *cup mark*. In many cases this is the only decoration applied; in Cork, stones with just cup marks are three times more numerous (65 examples) than those with more complicated arrangements (22 examples).



Rathruane More rock art (CO140-008---) near Ballydehob. Detail outlined in chalk of cup mark surrounded by two concentric circles and a cup-and-ring motif. The flat rock is extensively decorated with numerous cup marks.

Glansallagh rock art (CO131-055----) east of Durrus, two cup-and-ring motifs carved on a rock outcrop.

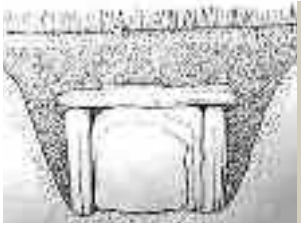
Where the decoration is more elaborate we often see the cup mark with a ring around it, but the ring usually has a gap and where there is more that one ring around the *cup mark* each ring is gapped and the gaps line up. It should be said that the art can be difficult to see on the stone's surface, especially in bright daylight, as the markings are shallow on an uneven surface. It is often only when the markings are recorded and transcribed onto paper that their true elaboration is evident. A good example of this art is a stone at Glansallagh East of Durrus and at Clearagh (CO083-042----) townland near Kilmurry [23]. The decoration on the Clearagh stone is in two sections divided by a natural crack in the stone. The focus on either side is ringed *cup marks* some with lines running out from them through the gap in the ring. Linking these is an irregular network of lines. One distinct motif that is typical of rock art is an equal-armed cross with a small *cup mark* at the end of each arm and between the angles of the cross.

There are many ideas about what art like this meant to those who made it, like its predecessor in the Stone Age, but a convincing explanation or solution to what it means has not been agreed by those who study it. However, most agree that there must be some magical or religious significance to the symbols. A recent suggestion regarding the Iveragh examples noted a favoured location near the source of river systems and with a view of the sea [24]. This implies a connection with the veneration of water, a tradition that later manifests itself with *holy wells* and interestingly some of these have cup marked stones. We have seen already the interest of Bronze Age farmers with celestial bodies and it would seem likely that the other important element in farming- plentiful water- would also attract their attention as something worth venerating. But some are so random are they just the earliest examples we have of a doodle?

The Single-Burial Tradition

By analogy we can compare the megalithic tomb burial tradition to the large family vaults used by landed families in 18th and 19th century Ireland. These were built for repeated use; whenever a member of the family died the tomb was opened and the coffin placed inside beside the coffins of other family members. But the new burial fashion that dominates the Bronze Age, the single-burial tradition, is more like the regular burials in a graveyard that we are familiar with today. A grave is dug; the coffin placed in the ground and covered over, as a single event.

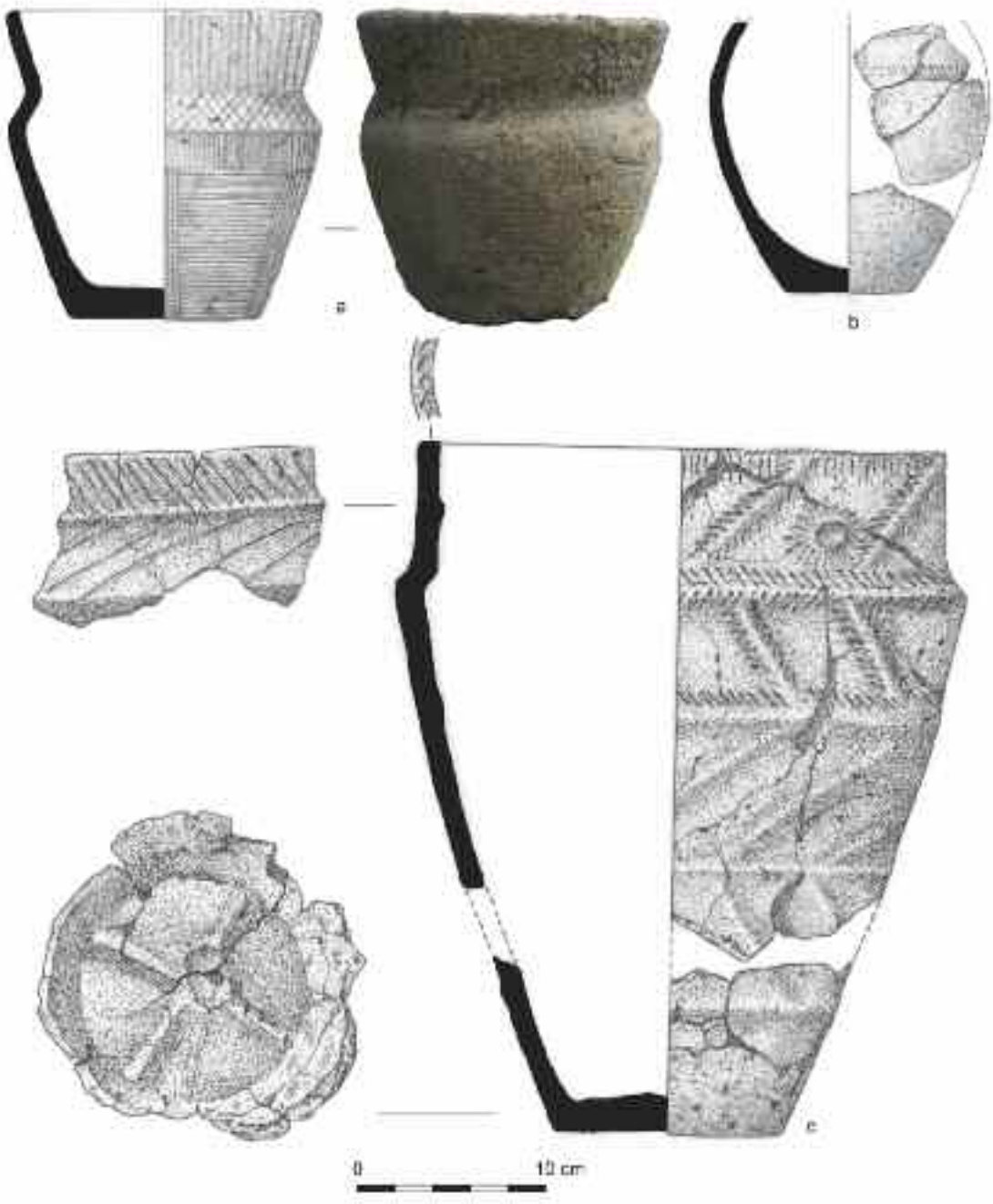
Some of these underground burials were marked by a *cairn*, a mound of stones, especially those on hill-tops, others by a *tumulus*, a mound of earth, and others by a *ring barrow*, a low circular earthwork, but many others do not appear to have had any marker above ground. These latter unmarked burials are normally found by accident during agricultural work or during quarry activity.



Cist burial.

Drawing by Rhoda Cronin courtesy of Limerick Education Centre.

Also instead of the multiple-burial tradition of *megalithic tombs* the



Bronze Age funerary pottery found on the M8 route by archaeologists in Coolnahane townland. On top food vessel vases, at bottom an encrusted urn. Drawings by Malgorzata, photo by John Sunderland. Image courtesy of TII.

practice now is a single burial event, mostly of an individual but sometimes two or three - probably close family members. This change in burial practice does seem to tie in with an overall change in the nature of society itself; Neolithic society is often portrayed as tribal or community based whereas the Bronze Age sees the emergence of a more elitist system with a greater emphasis on personal wealth and power. We can also see this change in the appearance of personal ornaments that show obvious wealth, like the gold lunulae and gold discs.

There are two strands to the single-burial tradition: in the earlier phase the body is placed in a cist, a box formed of stone slabs, constructed in a pit in the ground. This eventually gives way to a simple *pit burial* without the enclosing *cist*.

The burial is usually a cremation but some *cists* contain a body laid in a crouched position - *cists* are too small to take a prone body. We get a glimpse into the beliefs of these people by the *grave goods* placed in the *cist* with the body. The most typical *grave good* is an earthenware pot. At an early stage the pot is placed upright beside the remains and probably contained sustenance for that person's journey to the otherworld. This evolves to a stage where the pot is more a container for the cremated remains or just inverted over the remains. A remarkable factor about all these pots found with burials throughout Ireland is that nearly all belong to four distinct groups, each with a distinct shape and decorative pattern: *food vessel vase; food vessel bowl; collared urn* and *cordoned urn* [25]. In some cases a valuable object is placed with the remains like the bronze dagger at Ballyenahan North (see below). Again this is telling us something about the status of that individual and the beliefs of the society to which they belonged.

In 1832 a group of workmen, working for whom we don't know, dug a trench across the cairn on top of Carntigherna (Corrin Hill) (CO035-049003-), the hill that overlooks Fermoy, looking for treasure; this act would be illegal today but not back then. According to Samuel Lewis, writing a few years later, they discovered "after removing an immense heap of stones and a large flag-stone, two antique urns, containing ashes. One was broken by the workmen, to ascertain whether it contained money; the other is in the possession of Rev. J. B. Ryder" [26]. Ryder was the Church of Ireland rector of Castlelyons. He passed the urn on to Abraham Abell, a Cork merchant and a collector of antiquities. It was Abell who showed the vessel to John Windele who made a drawing of it. Windele also made the following note about what was found in the cairn: "a chamber was discovered, formed of rude flags. In an adjoining chamber another urn was found containing "a small amount of ashes" [27].

A recent LIDAR image appears to show where the workmen dug a trench across the cairn; the cairn is now oblong in plan (40m east-west; 26m north-south) but was probably originally circular with a diameter around 25 meters [28]. The cairn also suffered having a concrete bunker built into it during World War 2 and stones were also robbed from it to build adjacent dry-stone boundary walls.

Windele's drawing of the "urn" found at Carntigherna tells us a great deal about the burials there. This appears to be what archaeologists now refer to as a *food vessel vase*. From this we

can surmise that the original burial here was a double *cist* and dates to the Bronze Age. Carntigherna is at the eastern end of the Nagle Mountains and the importance of high places at this time is further emphasised by the other eight *cairns* that mark the peaks of this range (CO034-049----; CO034-050----; CO034-051----; CO034-052----; CO034-053----; CO034-056----; CO033-079----; CO034-085002-). Building burial cairns on top of mountains goes back to the earliest megalithic tombs; Maeve's Cairn on top of Knocknarea in Co. Sligo being a classic example. We know that prehistoric people in Ireland were fascinated by the celestial realm and mountain tops, being the nearest points they could get to the heavens, must have been special places. This is one tradition that lasts from the earliest Neolithic right through to the end of the Bronze Age.

A very similar vessel to the Carntigherna vase was found in 1938 some 7 km to the north in Ballynahow (CO027-101----) [29]. A tractor-plough was being used for the first time when it hit a large obstruction. This turned out to be the covering stone of a *cist* burial in which the workmen found the vase plus some cremated bone. Some years later, in 1946, the site was archaeologically excavated by O'Kelly who found the cist formed of a stone on each side and another stone at the base (1 meter by 0.7 meter in plan and 0.75 meters deep); the covering capstone had been broken up in 1938. The vase had survived (18 centimetres high and the same in diameter) but not the cremated bones that it had contained; also lost was the bundle of cremated bones that lay on the base stone. There was a second vessel in the grave but only fragments of it survived. This was a tiny version of the *vase*, known as a *pygmy cup*, and is just three-and-a-half inches in height. These tiny vessels, seldom more than 5 centimetres in height, are something of a mystery. It has been suggested that they may have been incense burners or had some similar function in the burial ceremony but the truth is their exact nature is unknown.

Even closer to Carntigerna is Castle Hyde demesne (CO035-125----), where two cist burials with *food vessel vases* have been discovered. The first was discovered during ploughing in the early years of the 20th century. The second was found much more recently during renovations to Castle Hyde house in 2003. The earlier find was a rectangular cist with a paved floor (0.8 meter x 0.9 meter) and the vase was reportedly half-filled with cremated bone [30]. A note on this discovery was published in 1905 by Robert Day, the most notable Cork antiquarian of his day, who reported that "the urn has fallen into the appreciative hands of the owner of Castle Hyde, who has placed it in the National Museum, Kildare Street, Dublin." The more recent find was made during works at the country house (CO035-064----) [31]. This was a rare double-cist though covered by a single capstone and floored by a single base stone. In one compartment were two food vessel vases, in the other side fragments of a pygmy cup. No human remains were found but this may be because adverse soil conditions had eroded them over time.

In 1948, two years after his excavation of the *cist* in Ballynahow, O'Kelly was back in North Cork to investigate another discovery. This one was further north close to the Limerick border in Labbamolaga (CO010-004002-) [32]. In this case the discovery was made during work in a sand pit. The cist was the usual form with a slab forming each of its four sides, a covering by another slab and a sixth forming the base of the compartment. In one corner was a *food vessel vase*

Mounthillary Cairn, known as Money's Castle (CO031-059----). Photograph courtesy of Donie O'Sullivan.

and piled on the base stone was a quantity of cremated bone. The bones were identified as those of an adult male and female and a young child- probably a family group. With the bones were two burnt objects: a bone pin and a small pendant made of a bird's leg bone. These must have been with the bodies when they were cremated.

Occasionally a number of cist burials are found close together in what are termed *flat cemeteries*. These are the equivalent of a later graveyard but the fact that most cist burials are found in isolation suggests that formal burial places were not the norm in the Bronze Age but rather an occasional thing, perhaps used only in certain circumstances.

One of these was discovered in a gravel quarry in 1951, on the east bank of the Funcheon River in Ballyenahan North (CO018-051----) just under 2 km south-east of Kildorrery [33]. The site was recorded by Edward Fahy and whilst a bulldozer had removed much evidence he was still able to record six separate burials, only one of which was not to some extent disturbed. Four of the burials were typical cists but the other two were just in unlined pits. All the burials were of cremated bones except one which was a crouched (i.e. the foetal position) body. Two of the graves contained an adult male (including the inhumation), one an adult female, another had a child but another had two children (one just under 10 years, the other just under 5 years). Two pottery vessels were recovered, a *food vessel vase* and a *food vessel bowl*. But two of the graves contained grave goods: in one a bronze dagger and in another a series of bronze rivets. The rivets are all that remains of some object which otherwise eroded away completely in the grave.

A unique burial monument is located at Moneen (CO027-069----), just outside Glanworth [34]. This monument was excavated by O'Kelly in 1948 and was shown to be a complex burial site in use over a long period of time. The main element was a circular cairn (diameter 13.7 meters; max. Height 1.4 meters) defined by a kerb of large stones. In the centre was a *cist* covered by a large roof stone enclosing a small rectangular space (1.4 meters x 1.2 meters). Packed into the cist were the un-burnt bones of an adult male and female; to fit these inside the space it appeared that the bodies were dismembered first. The best known example of this practise in the country is at the portal tomb of Poulnabrone, Co. Clare. This tomb was excavated by Ann Lynch in the 1980s where she found human bones packed into the tomb long after the bodies themselves had decomposed.

Recent radiocarbon dates for these bones at Moneen date the tomb to around 2,200 BC so very early in the Bronze Age [35]. Three further cists were placed within the cairn but none were well preserved; fragments of human bones were found in two of them. The site continued to be used for burials into the later Bronze Age; at some stage a pit was dug into the main cist to take the cremated remains of a youth. We see this throughout the Bronze Age where an existing burial monument is used again in a later age - its sacred nature still venerated.

Over time during the second millennium BC the practice of placing human remains, whether cremated or not, in a stone-lined cist accompanied by a food vessel gives way to a new tradition where the burial, now always cremated, is placed in an unlined pit with the pottery vessel inverted over the burnt remains. The pots are now larger and decorated in a different fashion with applied cords of clay - hence the term *cordoned urn*; or with a collar projection near the rim - hence the term *collared urn*.

Pit burial (Urn burial) at Coolnahane (CO031-023002-) east of Kanturk was discovered in 1975 during drainage works. The inverted urn is visible at bottom left beside the measuring stick, its top broken.

Artists impression of a pit burial. Drawing by Rhoda Cronin courtesy of Limerick Education Centre.

Mostly these burials are accidental discoveries found during agricultural or quarrying activity. An example is the burial at Coolnahane (CO031-023002-) near Kanturk. In 1975 during the digging of a drainage ditch an urn burial was uncovered. Fortunately the find was reported and Prof O'Kelly had the opportunity to record the burial *in situ* [36]. The pit had near vertical sides and was 0.95 meters in depth with a circumference of 0.85 meters. The base of it was roughly paved and into it was placed the urn face down. O'Kelly found all the cremated bone still under the urn so presumably it had some form of covering at the time - probably skin or cloth that had long since rotted away. The cremated bones were of a single adult but too fragmentary to say any more. One item with the bones was a bone pin which had been burnt. As with the Ballynahow burial, mentioned earlier, it is presumed this pin held some form of shroud around the body when it was cremated.

That there is overlap between the cist burial and the pit burial traditions is evident from the burial at Ballinvoher (CO026-061001-), near Castletownroche, discovered in 1974 during land reclamation [37]. Here an *urn burial* is placed in a cist covering the cremated bones of an adult and a child. The urn itself is also a hybrid and is termed a *vase urn*.

Ring Barrows and Tumuli

We have already noted that some Bronze Age burials were marked by a mound of stones - a *cairn* - but there were other forms of burial marker at this time. *Barrow* is an Old English word meaning burial, and a *ring barrow* is just that, a ring marking a burial. In this case the ring is formed by digging a trench around in a circle and mounding the excavated material all around on the outside to form a bank. The rings are not large with an average diameter of around twelve meters and the height of the surrounding bank rarely exceeds a meter. As a monument they are difficult to detect given their low profile.

At Reenascreena South we saw that the stone circle itself was surrounded by a ring composed of a slight depression with a rise on its outside all around. If you take away the upright stones this leaves us with a typical *ring barrow*. There are several types of barrows, the Ring barrow is the predominant type in Cork with some 112 of these identified in the County, but their distribution contrasts strongly with the *wedge tomb/stone circle* complex. *Ring barrows* are largely a feature of the north of the county with a particular concentration in south Duhallow [38].

Knocknanagh East ring barrow (CO021-020----) occurs between Kishkeam and Ballydesmond.

Ring barrows are generally regarded as burial monuments, as explained, but not all excavations of these sites have produced evidence for a burial. One of these was Jane O'Shaughnessy's excavation of an example at Leckaneen (CO060-161----) [39], near Aghabullogue, in 1990. The overall diameter of the site was 30 meters and a level central area (diameter 13.5 meters) was surrounded by a ditch (depth 3 meters) outside of which was a gap of 2.5 meters before the encircling bank occurred. A radiocarbon date from the excavation places the construction of the *ring barrow* to around 1,400 BC.

But a central burial deposit was found at another *ring barrow* excavated by William O'Brian at Knockarreenane (CO084-062----), near Killumney, in 2007 [40]. Here, in the centre of the monument were the cremated bones of an adult male in a pit that was marked by quartz stone; white quartz stones are regularly found associated with burial during the Bronze Age.

Tumuli or Mound Barrows

We have already mentioned *flat cemeteries* where a group of *cist* burials are grouped close together but without any surface markers. But we also have cemeteries where the *cist* burials are marked by an earthen mound - called a *tumulus* or *Mound Barrow*. There are 22 examples across the county of Cork and they usually occur in isolation like this example at Annagh North in Duhallow.

A notable example is a cluster of Tumuli in the area around Knockane Cross Roads about a mile east of Castlemartyr. Here six *tumuli* were located over an area c. 0.8 km east-west by 0.6 km north-south. Unfortunately all six were attacked and largely destroyed by treasure hunters in the 19th century in what O'Kelly calls "a story of ruthless destruction" [41]. Though located

Annagh North tumulus (CO007-073----) between Churchtown and Charleville.

Arrowheads

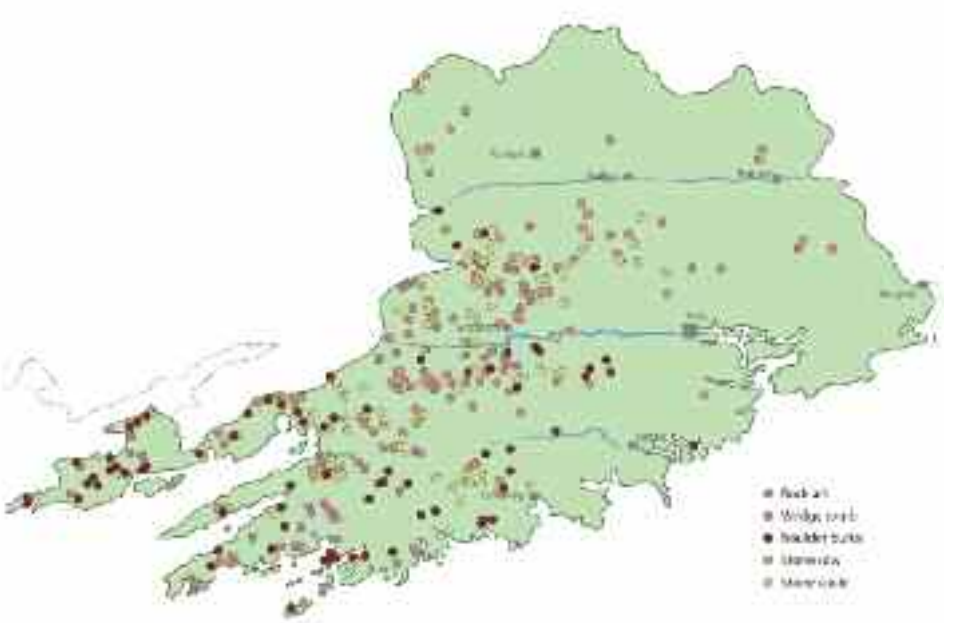
Although bronze was used to make numerous weapons and tools, flint continued to be used during the Bronze Age. The arrowheads have become more sophisticated with tangs (central stump) and barbs making them quite effective and distinctive.

close together the mounds are situated in four different townlands: three in Ballyvorisheen (CO077-008001-; CO077-009001-& CO077-010----) and one each in Ballindinis (CO077-012001-); Knockane (CO077-013----) and Clasharinka (CO077-011----). From what little information survives of their looting the mounds covered *cist* burials. Fortunately, the pot from the Ballindinis burial survives, as it was acquired by the collector Robin Day [42] and is now in the collection of the National Museum of Ireland [43].

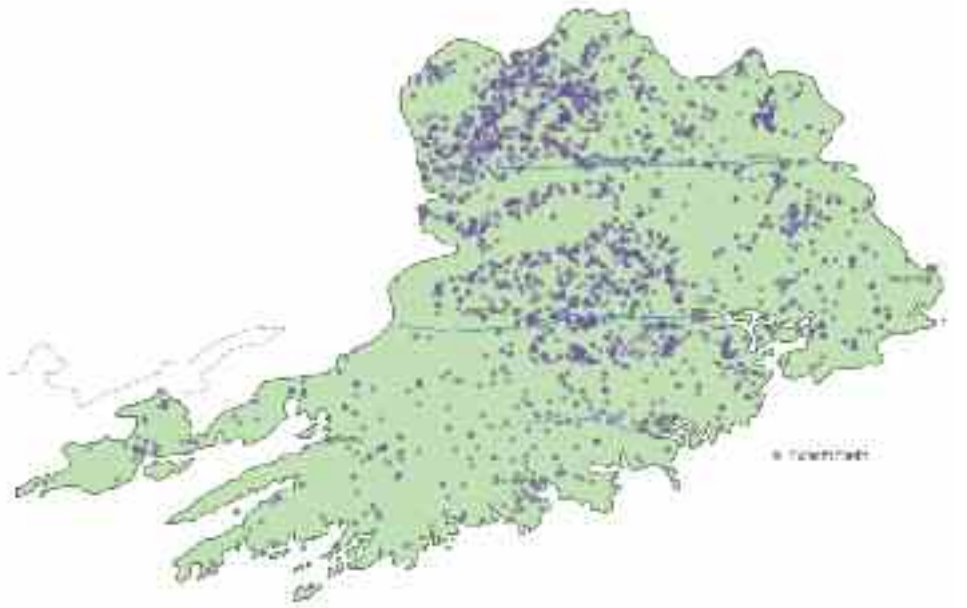
This area was clearly a very sacred burial place in the Bronze Age and a remarkable discovery made by a quarryman in 1805 further emphasises this with the discovery of a very unusual cave burial (CO077-077----). In a quarry close to the Knockane Tumulus, the workman found "a cavern, where he was not a little surprised to behold a human skeleton, partially covered with exceedingly thin plates of stamped or embossed gold, connected by bits of wire; he also found several amber beads" [44]. All of these plates were sold to nearby jewellers who melted them down but fortunately one of the plates has survived and is now in the collection of the National Museum of Ireland [45]. The plate is decorated with zigzag lines, very similar to the pattern on the food vessel bowl found in the nearby Ballindinnis tumulus and so is dated similarly to the Bronze Age. Whatever form this gold-plated covering took we do not know but if it had been preserved intact it would surely now be one of the great treasures of Cork. Such a sumptuous object gives us a vivid image of the wealth of Bronze Age society and the fact that it was placed in a cave burial shows their reverence for the dead. It is also likely that this discovery was the catalyst for the looting of the nearby *tumuli* mentioned above.

Mapping Cork in the Bronze Age

What is evident from the above is that the Bronze Age in Cork was a period of intense activity reflected in the number of fulacht fia, burial and ritual monuments from the period. When we look at a map showing the distribution of these monument types a striking pattern emerges.



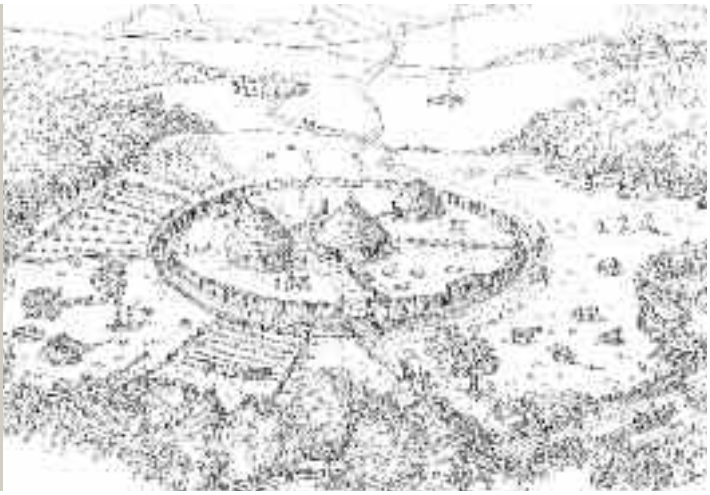
Distribution map of wedge tombs, stone circles, stone rows, rock art and boulder burials.
Image by Elena Turk



Distribution map of Fulacht fia identified to date in Cork. **Image by Elena Turk**

With some notable exceptions, the concentration of *wedge tombs, stone circles* and the variety of monuments associated with them like *stone rows, rock art* and *boulder burials* are concentrated in the south-western third of the county. On the other hand, burials in the single-grave tradition like *cist* and *urn burials* are confined, by-and-large, to the eastern third of the county. Are these two very distinct cultural groups with different beliefs and social organisations? An argument against this type of dichotomy is the ever-presence of fulacht fia throughout the county. The distribution of Fulacht fia across the county suggests a common practice of heating water for whatever reason – bathing, cooking or even ritual. There is a strong concentration of sites in North Cork suggesting it was a particularly popular activity in this area.

This is the eternal problem of prehistory; when does a new monument type represent a new people coming into an area or the arrival of a new idea being adopted by the indigenous population? and whether new people or new ideas, where did they come from? Although stone circles occur across Britain and coastal mainland Europe, those that we find in West Cork and South Kerry have their own unique character. On the other hand the type of pottery found in *cist* and *pit burials* in East and North Cork are not particular to those areas and are very similar to pots found elsewhere in Ireland and Britain. But what does all this mean? As Prof. Brian O'Kelly was apt to remark to his students - "will we ever know?"



Artist reconstruction of a Bronze Age landscape. Through the work of the archaeological survey, archaeological investigations and excavations we can build up a picture of a Bronze Age landscape that may have looked like this.

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Chapter 7

The Iron Age: Warfare and Warrior Elites (800 BC- 400 AD)

From about 1,000 BC and perhaps a little earlier we see a change in the *material culture* of Cork and the rest of Ireland. Putting even an approximate date on the transition from Bronze Age to Iron Age is still very speculative. Hillforts were once seen as the classic Iron Age monuments, dating to around 500 BC or later, but as we will see below the earliest dates for hillforts now goes back to around 1,200 BC - well within the time frame for the later Bronze Age.

In the popular imagination the start of the Iron Age is marked by the arrival of *Celtic* tribes from Britain and Gaul. In fact there is no concrete evidence for this in the archaeological record. We do have some *Celtic* artefacts like the *Cork Horns* but these are rare and exotic. If *Celtic* tribes did settle in Ireland during the Iron Age they have left scant traces in the archaeological record. What we do have that is distinctly *Celtic* is the Irish language and when the country first emerges into the light of history this is the language of the people.

The change that we do see in the archaeological record is earlier and it does seem to be a profound social change. The Trojan Wars, described by Homer in his great epic *The Illiad*, is set sometime around 1,500 BC. This world of hierarchical societies dominated by warrior elites becomes a dominant characteristic of European society from that time and this is reflected in the *material culture* of later Bronze Age Europe. High status gold ornaments and a proliferation of bronze weaponry indicate an increase in wealth and trade but also warfare and social conflict. In Ireland this world becomes apparent from about 1,200 BC. Swords, spearheads, shields and axes tell the story of an increase in warfare, whilst gold ornaments like gorgets, rings and bracelets are obvious displays of wealth. And now for the first time we meet serious defensive enclosures – *hillforts* – appearing on the landscape.

Hillforts

The advent of an increase in warfare is most clearly displayed by the construction of hillforts from around 1,200 BC. Cork has just five hillforts but each one dominates its surrounding landscape.

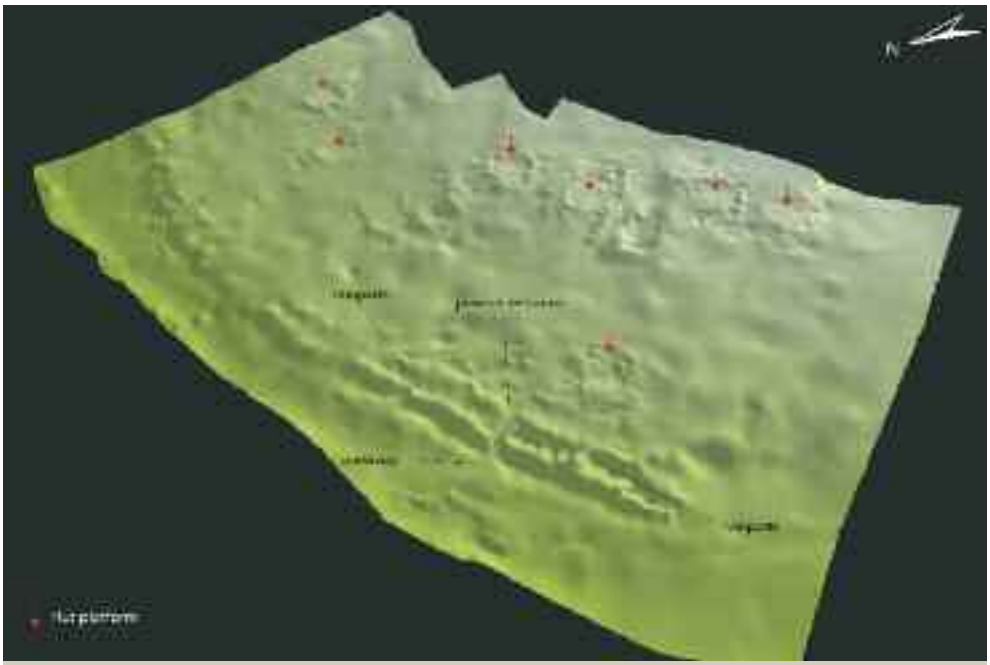
The fact that this was a period of turmoil is amply indicated by William O'Brien's excavation at Cashel hillfort at Clashanimud (CO096-034----), a monument located near Upton, 3km due west of Cross Barry [1]. This is an area of rolling hills and though this hillfort is not at a very high elevation it has a commanding view over much of this area of Mid Cork. The defences consist of two rings enclosing the hilltop, set about 80 meters apart. The inner line encloses an oval area of about 8 acres, 230 meters east-west by 170 meters north-south. The overall area of the hillfort is some 28 acres, 350 meters east-west by 300 meters north-south.

The excavation, conducted between 2004 and 2006, was disappointing in terms of finds or any evidence for habitation at the site. But the evidence for the fortification itself was remarkable. The inner ring was very formidable with a deep rock-cut ditch on the outside. The material from this was piled up on its inside behind a retaining stone revetment. On top of this was a palisade of strong oak uprights with a timber revetment on the inside. In all this presented a 7 meters high barricade. The outer ring was similarly built but on a slightly smaller scale. The construction of this fortification was a massive undertaking involving several thousand large oak posts and the effort of digging a rock-cut ditch over a length of 1.04 kilometres. And yet, in spite of this enormous expenditure of resources, the hillfort was burnt to the ground almost as soon as it was built. Clear evidence for this was found in charred timbers where the fortifications were sectioned during the excavation. This charcoal provided material for radiocarbon dates that place the construction of Clashanimid hillfort at around 1,100 BC.

There are four other hillforts in Co Cork but none of these have been archaeologically excavated. We have already discussed the Bronze Age burial cairn atop Carntigherna, the hill that overlooks Fermoy otherwise known as Corrin Hill. Surrounding the top of this hill are the

Cashel Hillfort, Clashanumid near Bandon (CO096-034----).

Plan of Carntigherna Hillfort (CO037-049001-) on Corrin Hill near Fermoy showing the enclosing defences or ramparts with the elaborate entrance on the north-west side. In the centre is the earlier Bronze Age cairn. Image courtesy of The Discovery Programme.



EDM derived image of double rampart and hut platforms at Caherdrinny hillfort (CO019-097003-).
Image courtesy of The Discovery Programme.

remains of a hillfort (CO037-049001-) enclosing an area of 7.2 acres [2]. For most of its circuit the enclosing element is a dry-stone bank but the defences become more elaborate in the north-western quadrant and appear to be the remains of a defended entrance. Carntigherna is a very strategic location with a commanding view from north-west clockwise around to the south-west. The M8 motorway that crosses close to the foot of Carntigherna is following an ancient routeway crossing the Blackwater by a ford somewhere in the region of Fermoy; the hillfort is in an ideal location to oversee this traffic. Carntigherna is a national monument in the care of the Office of Public Works and accessible via a forest track from a public car park at the foot of the hill. The earthworks that form the entrance feature are on the left of the track just before it reaches the top of the hill.

Some of this traffic would have been heading due north towards the gap between the Ballyhoura and Galtee mountains and in so doing pass very close to the second hillfort in North Cork. This is Caherdrinny (CO019-097003-) [3] where the westernmost hilltop of the Kilworth Hills is enclosed by a double dump-stone rampart.

The area enclosed is roughly oval, 470 meters east-west by 350 meters north-south; an exceptionally large area for a hillfort. There is another smaller enclosure (CO019-097001-) at the top of the hill within which stands the last standing portion a medieval tower house. Caherdrinny hill is visible from a wide area of the eastern part of the upper Blackwater Valley and likewise the view from the hill is very extensive from south-east clockwise around to north-

east. A recent survey of the hillfort, part of a wider survey by the Discovery Programme into later prehistoric monuments in the Ballyhoura region (see below), recorded a series of fourteen hut-platforms on its northern side. Their date is unknown but if contemporary with the hillfort it would be exciting as they might contain important clues as to who built this impressive monument and add to our understanding of this enigmatic period.

Much further west is another hillfort (CO039-052002-), this example enclosed by a single dump-construction rubble bank. This is on the summit of Claragh Mountain, overlooking Millstreet [4]. Here the enclosed area is roughly circular (diameter 120 meters). The fifth example is at Rath (CO067-001001-) near Youghal. Here there is a ringfort (CO067-001002-) on top of a hill but the hill itself has an outer encircling earthen bank enclosing an area with a diameter of 150 meters.

The burning of the hillfort at Clashanimud shortly after its construction tells its own story. Though a great deal of effort and resources went into building its defences this was not enough to prevent its destruction. Nor did the people who built it come back, repair it and continue to live there. None of the other hillforts in Cork have been excavated so we don't know if that story was replicated at these sites or even if they were built at the same time and served the same function. Hillforts remain one of the most enigmatic monuments in prehistoric Ireland.

Coastal and Inland Promontory Forts

All along the coastline of county Cork, from Knockadoon Head in the east (CO078-042----) to Dursey Island in the west (CO126-050----) is a series of 131 *coastal promontory forts*. The headlands chosen for these fortifications typically have a narrow neck and widen out on the seaward side. Across the narrow neck the fortification was built consisting of at least one earthen bank, the material dug from a ditch on its landward side. Though the profile of many of these does not seem remarkable today due to centuries of erosion, in their original form

National Monuments

In legal terms a *national monument* is any archaeological monument whose preservation the Minister of the *Department of Housing, Local Government and Heritage* decides is of national importance. In a narrower sense *national monuments* are all those monuments which are in the ownership or guardianship of the Minister. In this context there are some 800 *national monuments* in the State of which 58 are in County Cork. It should be said that the Department responsible for *national monuments* tends to change from one election to the next. All the conservation works at, and the management of, *national monuments*, is the responsibility of the Office of Public Works, but carried out with the Department's consent.

Old Head of Kinsale showing the external ditch (fosse) defences with the later medieval bawn wall and Tower house on top of ramparts. Image courtesy of Connie Kelleher.

they were formidable with a deep ditch and a high bank probably topped by a wooden palisade fence. Nearly always the headland chosen has a steep cliff face on the seaward sides. A feature of many of these monuments is that the name of the headland incorporates the term *dún*, a Gaelic term meaning a fortified place.

The best known coastal promontory fort in Cork is at the Old Head of Kinsale (Dún Cermna) (CO137-007----). Professor O'Kelly had a favourite exam question in the 1970s that asked "if you found a sherd of duck-stamped pottery on the Old Head of Kinsale why would you shout *Eureka*". This question encapsulates one of the great puzzles of Irish archaeology - were the tribes that Julius Caesar encountered in Brittany and the South-West of England who had coastal fortifications on promontory headlands the same people that built similar coastal fortifications in Ireland? Those tribes in Britain and Brittany were what we now term "Celts" and they were great producers of pottery, typically with a stamp decoration that resembles a duck's profile. So finding that pottery on the Old Head would be - at last- evidence of a Celtic tribe in Ireland.

Extensive archaeological monitoring by Rose Cleary, UCC, during the construction of the golf course on the Old Head in the 1990s sadly produced very little by way of archaeological material [5] so the mystery remains about the origin of the promontory fort on the headland.

Michael O'Kelly excavated three coastal promontory forts in West Cork in the 1940s but the

Carrigillihy Coastal Promontory Fort (CO142-093----).

results were disappointing in terms of resolving the problems of who built these coastal sites and the date and purpose for their construction. At Carrigillihy (CO142-093----) [6] he found the interior "archaeologically sterile" but showed that the defences were constructed of a dry-stone faced earthen bank with a vertical-sided ditch in front of it. He found no entrance but surmised that it was at one end and had been swept away by coastal erosion. His excavations at Scobaun (*Poradoona*) (CO151-032----) and Toehead (*Dooneendermormore*) CO151-040----) were equally unsuccessful in finding any trace of habitation in the interior of the forts [7]. One of the best preserved defensive banks and ditches cutting off a headland is at a remote Promontory Fort (CO137-002----) at Rochestown which projects south into Courtmacsherry Bay. Many like this example, given their location, are very vulnerable to the constant battering

Rochestown Promontory Fort CO137-002----) projecting into Courtmacsherry Bay.

of the sea and suffer from constant coastal erosion and weathering and are often not accessible or safe.

In later medieval times a number of these coastal promontory forts were refortified; at the Old Head a fortified gate tower and a curtain wall were built on top of the older line of earthwork defences and there is a similar arrangement at Galley Head (CO145-003----). There is an interesting comment about this practice in an unlikely place. Sir Richard Cox, an ardent advocate of the Protestant interest in 17th century Cork, wrote his *Hibernia Anglicana* to promote that interest. Regarding native Gaelic customs he noted the building of *"Castles on Isthmus's and other inaccessible Places, purposely to secure such Prey and Plunder as they could get, and he was esteemed the bravest Man that was most dextrous at this Sport of Plundering and Cow-Stealing."* Whether this practice was a later medieval innovation or, like *cow-stealing* itself, was a much older practice we don't know. But it does make practical sense that a large headland like the Old Head could accommodate a large herd of cattle whilst protecting them behind a narrow fortified neck of land.

The Black Dyke

Linear earthwork is a term archaeologists use for long lengths of earthworks composed of banks and ditches that occur in various parts of Ireland. Many of these have suggestive names like *The Worm Ditch, The Dane's Cast*, and most famously *The Black Pig's Dyke*. These are not original names but derived from the folklore and legends that attached to these features long after they went out of use. Theories abound as to their original form and function and who built them and when they were built. Even the exact extent of their length can be difficult to establish. For example, the *Black Pig's Dyke* is a composite of a dozen or so separate linear earthworks spread across the north Midlands and southern Ulster that may or may not once have been linked together as a single continuous earthwork. It has been suggested that the *Black Pig's Dyke* is a boundary around the ancient territory of *Ulaid* (Ulster) but this remains just a theory. Archaeological excavation of one of its sections in Monaghan yielded radiocarbon dates of around 450 BC placing its construction firmly in the Iron Age.

The longest example in Cork is the *Cliadh Dubh* (CO018-001----). According to tradition it stretched from sea-to-sea across Munster but Patrick Power traced its line from the Nagle Mountains, near Ballyhooly, northwards to the Ballyhoura Mountains, a distance of some 22.5 kilometers [8]. For most of this length it forms a townland boundary but a study along its line found no appreciable difference between it and other field boundaries in the area.

In 1993, as part of the Discovery Programme's *Ballyhoura Hills Project,* Martin Doody excavated two sections across the earthwork, at a location about 2 miles south-west of Ballyhooly, in the Nagle Mountains [9]. The excavation revealed a complex structure consisting of an earthen bank topped with a wooden palisade. On its western side was a V-shaped ditch so that the earthwork presented a formidable obstruction facing west. Inside the earthwork Doody found the remains of a rough stone-paved trackway running along its line.

Plan showing route of Cliadh Dubh (CO018-001----) from the Nagle Hill to the south to the Ballyhoura Hills to the north. Image courtesy of The Discovery Programme.

Matin Doody's excavation of the Cliadh Dubh for the Discovery Programme Ballyhoura Hills Project 2008.

If this profile was stretched across the valley to the Ballyhouras, then "the scale of the monument across the Blackwater Valley is far greater than was previously thought." There was no direct datable evidence for the construction of the earthwork from the excavation but a radiocarbon date for peat growing over the trackway was c. 100 AD so the *Cliadh Dubh* is older than that, so probably dates, like other excavated linear earthworks in the country, to the early centuries BC.

The Ordnance Survey maps mark another Cliadh Dubh extending some 1.6 miles along the Cork-Limerick county boundary [10], and there is another Cliadh Dubh between Carrigtwohill and Midleton; the townland name Clyduff preserves the name [11]. Neither of these has been

La Tene Art

This art form developed in the 5th century BC amongst the *Celtic* tribes in what is now the border area between France and Germany. As these tribes expanded across Europe they brought their art with them. This is the first great non-Classical art in Europe and is especially notable for the quality of its metalwork. It is an art of curves and scrolls and spirals that twist and curl into each other in a graceful yet dynamic fashion. By the second century BC metal workshops in Ireland are producing objects in this style. A very fine example of the work these workshops produced is the Cork Horns. This local version of La Tene develops through time to give us the masterpieces of the Early Christian period like the Tara Brooch, The Ardagh Chalice and The Book of Kells.

archaeologically excavated but they remind us of the tradition of an extensive boundary crossing the eastern part of the county.

Doody's excavation shows that the *Cliadh Dubh* is a serious obstacle facing west but one that doesn't make a lot of sense in pure military terms. A recent study of linear earthworks concluded that *"the enormous resources required to erect them were out of all proportion to any role they might have had for defence or control or as boundaries ... their siting was militarily irrational, their circuits had little or no logic, their defensibility was extremely suspect ... in fact, they appear to have had little or no practical purpose."* [12]

As with *coastal promontory forts*, are we looking for something built in the context of cattle raiding where the well-healed Iron Age farmers of the Golden Vale built a barrier to hinder raids on their stock from their wilder neighbours to the west?

The Enigma of the Iron Age

The enigma, from an archaeological point of view, of the Iron Age in Ireland can be summarised in one word - *Celtic*. From the viewpoint of philology, early Irish history, art history, folklore and tradition the Ireland that emerges into the light of history from the 4th century is a *Celtic* country. And certainly we have plenty of *Celtic* archaeology but nearly all of it in the form of *artefacts*. A great example is the *Cork Horns*, now on display in Cork Public Museum. The three horns were found in slobland in Cork Harbour in 1909 attached to the remains of a leather helmet but was more likely to have been worn by a shaman than a warrior. The ornament on the bronze cones is pure *La Tene*, i.e. Iron Age *Celtic*. They belong to an array of *La Tene* iron objects from Ireland that include swords, scabbards, horse bits, spear butts, pendants, pins, brooches etc. We also have objects like the *Turoe Stone* in Co. Galway that are not so readily portable. But beyond these, archaeology runs into a problem - where is the evidence for a *Celtic* people in Ireland? The two great indicators we should have in some

The Cork Horns, found in Cork Harbour 1909, attached to a leather helmet, is finely decorated with La Tene art and is now on display in the Cork Public Museum. Image courtesy of Cork Public Museum.

numbers are pottery and burials. The *Celts* were great potters and everywhere they went they left masses of broken pottery sherds behind them in the ground for archaeologists to dig up later on. But not a single sherd of *Celtic* pottery has ever been found in Ireland. They also had a distinct way of burying their warriors, with shield and sword and sometimes a complete chariot. These burials are found everywhere the *Celts* lived - not a single burial of this type has ever been found in Ireland. The other great candidate for finding the *Celts* in Ireland is *hillforts*. But as we have seen above those that have been archaeologically excavated here are either too early in date to be considered *Celtic* or their *material culture* i.e. the finds from the excavations, are far more related to the previous later Bronze Age than of any incoming influence. As that great student of the Iron Age Ireland, the late Professor Barry Raftery puts it *"it seems almost heretical to insist that a Celtic invasion of Ireland never happened ... the only problem is, archaeology cannot prove it"*. [13]

Iron

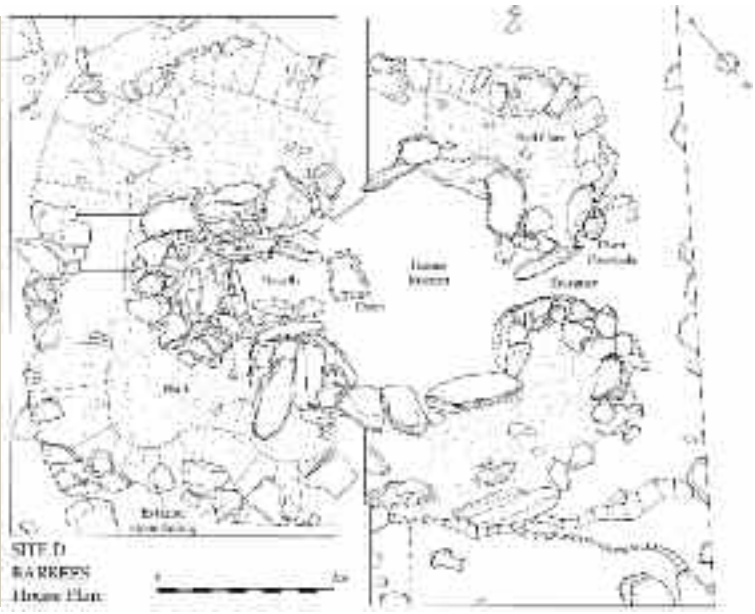
Iron is a chemical element (Fe) long used in the production of tools and weapons. The technology of iron production travels across Europe from the Middle East around 1,000 BC reaching Ireland around 500 BC. As well as producing harder and more enduring implements than bronze it was also cheaper to produce. Iron ore, in the form of *bog iron*, did not have to be mined but collected from the ground. This ore was then smelted in a furnace to produce solid iron ingots. These were then forged by a blacksmith into the required form. The waste product from the smelting process, iron slag, occurs frequently in archaeological excavations showing how widespread iron production became. Because iron production did not require very specialised skills, the raw material was readily available, and it produced excellent tools and weapons - it soon replaced bronze as the metal of choice.

Recent Discoveries

Because we have so little upstanding Iron Age field monuments it is through discoveries being made by archaeologists working on development projects or through research excavations that we are opening the picture on this invisible age. But the more archaeologists are finding through these new discoveries the more the *material culture* of the Iron Age here is looking back to the Later Bronze Age and not showing any evidence for an influx of new peoples.

For a while it looked like the county was almost devoid of people in the Iron Age but this picture is enhanced by two recent projects. As part of a study into prehistoric landscapes on the Beara Peninsula, a team from UCC led by Professor William O'Brien excavated a *hut-site* (CO102-030009-) and an *enclosure*, in 2002 and 2003, both of which produced Iron Age radiocarbon dates [14]. The *hut-site* was a very comfortable little house with a small interior (2.35 meters x 2.15 meters) surrounded by very thick earthen walls. There was a single door facing away from the prevailing wind. Heat was provided by an open hearth at the rear of the room. No evidence for the roof survived but was probably thatched or covered by sods. An interesting fact was the complete absence of any finds from the excavation; either the inhabitants were very tidy or very frugal. The enclosure was circular in plan (diameter 15.5 meters) and defined by a wall consisting of two lines of boulders with a rubble core; the enclosing wall was low, just 1 meter high and 1.5 meters wide. There was a small entrance in the south-east quadrant. There was evidence that at various times fires had been lit in the

Interior of Early iron age house (site D) in Barrees Valley on the Bearhaven Peninsula. **Image courtesy of Prof. William O Brien.**



Plan of Early Iron Age house (site D) Barrees.
Image courtesy of Prof. William O Brien.

interior bur otherwise its use was not evident and the excavator described it as an open-air enclosure. The two sites were not contemporary, the hut produced a radiocarbon date of c. 650 BC but the enclosure dated to between 70 BC and 340 AD.

The second source of information about Iron Age activity comes from archaeological work in advance of recent road construction works. Between the M8 motorway and the Ballincollig and Youghal bypasses some twenty sites were identified that produced some evidence of Iron Age activity [15]. Apart from a miscellany of pit and postholes, some indicative of settlement, the evidence for iron-smelting furnaces was the most diagnostic. Knowledge of iron working arrived into Ireland around 700 BC and the presence of bog iron ore in many places facilitated the growth of this industry. A couple of *fulacht fia* produced Iron Age dates and there was one burial of that date. This was found in Ballybrowney Lower, north of Glanmire. A shallow ditch enclosed a circular area of 4.24 metres. This was cut by a slot-trench that contained remains of a single adult. The burial produced a radiocarbon date of around 350 BC.

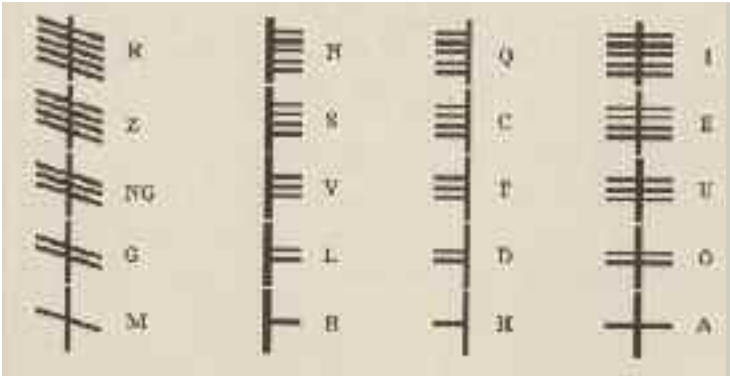
In summarising all this evidence William O'Brien concluded that "there is no obvious "Celtic" component in the material culture, settlement, economy or religious expression of these iron Age people living in mid and north Cork. This supports the idea that the distinctive character of the Iron Age in Munster derives from a Bronze Age cultural substrata." [16] At the dawn of history the people of Cork are speaking a *Celtic* language and have a *Celtic* culture but how this arrived here we do not know - it seems likely it was not brought by a large influx of people coming from either Southern Britain or the Continent.

Two Arrivals That Changed Everything

The two arrivals that changed everything were not invading tribes or armies but a concept and a belief: literacy and Christianity. Literacy arrived first, possibly as early as the 4th century AD, and it was a profound factor in the establishment of the second from the 5th century AD. Though Ireland was never part of the Roman world, it certainly interacted with and was influenced by that civilisation, no more so than acquiring from its literacy and Christianity. Because *ogham stones* bridge the gap from prehistory to Early Christianity they will be dealt with here and Christianity in the next chapter.

Ogham Stones

History begins in Cork along the edges of upright stones- *ogham stones*. Ogham is a script, not a language - the language of its inscriptions is Old Irish and these inscriptions are the start of our history, though a very oblique and difficult-to-interpret history. It is also unclear how old the earliest ogham stones are. These appear to pre-date the arrival of Christianity so a date in the early 4th century AD is sometimes postulated for the earliest.



Letters of the ogham script.

Ogham is a script in which groups of between one and five incised long or short lines cut along the edge of a stone that represent letters of the Roman alphabet [17]. The language of these inscriptions is Old Irish and the earliest examples of that language we have. The letters are read upwards along one edge of the stone and sometimes continue down another side. The inscriptions follow a fairly rigid formula, taking the form of a person's full name, starting with a first name, then the father's name (after the word MAQI- the ancient form of Mac). Sometimes this is followed by the word MUCOI introducing an ancestral or tribal name. The name is usually in the genitive form implying the inscription should be read as: (this is the stone of) X the son of Y of the tribe Z.

There is no universal agreement amongst scholars regarding the purpose of ogham stones. Amongst the suggestions are that they are burial markers; commemorate an important event,

Old Irish

Old Irish is the term used for the language we first meet on ogham inscriptions, from perhaps as early as the 4th century AD, and then in written form from about 600 AD. This is one of a group of Celtic languages that includes Welsh, Breton, Cornish, Manx and Scots Gaelic. These are the remnants of a much wider language group in north-western Europe that otherwise had died out by about 500 AD. Old Irish is the oldest written vernacular language in Europe north of the Alps. How and when this language came to Ireland is an unknown but it is the country's strongest link to the pre-Christian *Celtic* world.

Stone Corridor University College, Cork.
Image courtesy of Mick Monk.

Faunkill-and-the-Woods ogham stone (CO102-013----).

declare ownership of land or act as tribal boundary markers. Their relationship with Christianity is also problematic, especially in the early phase of the religion's introduction. There are ogham stones to which a cross has been added but also cross-inscribed stones to which an ogham inscription has been added.

By the 8th century the erection of ogham stones was a thing of the past but then something very strange takes place. This is the period when *ringforts* are being built throughout the county to protect farmsteads and many of these had underground refuges called *souterrains*. Of the 101 ogham stones known from Co Cork, 51 of these were found built into souterrains as lintel stones. In one case, at Ballyknock North, no less that 15 ogham stones were reused in the *souterrains* (CO055-007002- to 018-) at this *ringfort* [18]. Again there is no obvious reason why this should be the case. It seems unlikely that they were just handy sized stones easily available because so many were used in this way. Perhaps they were seen as heirlooms from the distant past but still held some protective power; *souterrains* were, after all, places of refuge.

These certainly intrigued 19th century antiquarians like John Windele and it became something of a hobby to find these re-used ogham stones and dig them out for their collections. Many of these made their way into museum collections but the largest display of ogham stones in the country is in the Stone Corridor, UCC. Of the 28 ogham stones on display all but two are from Co Cork, including the 15 stones from the souterrains in Ballyknock North, Ballynoe [19].

St Olan's Cap and Ogham stone (CO061-080005-) in Aghabulloge Graveyard.
Image courtesy of Sheila Fitzgerald.

Three ogham stones in the county are national monuments and still stand at their original locations. In the townland of Faunkill-and-the-Woods (CO102-013----), overlooking Ballycrovane Harbour on the Beara Peninsula is a very tall stone, nearly 5 meters in height. On the North-west edge of the stone is the ogham inscription: "MAQI DECCEDDAS AVI TURANIS" (AVI means grandson of ..) [20].

Further north at Greenhills, Burnfort, are two stones bearing ogham inscriptions (CO049-052---- & CO050-155----) [21]. One of these stands in its original position and stands 2.5 meters high. A recent archaeological excavation by Con Manning around the base

of the stone, to facilitate the insertion of a cattle grid for its protection, produced no evidence of a burial which the excavator surmised shows the stones were more likely territorial markers than grave markers. The inscription of this stone reads: "TRENU MAQI MUCOI QRITTI". The other stone was found nearby in 1906 and now sits against a field boundary. Its inscription reads "CATTUBUTTAS MAQ..." (this final word is broken at the end but probably had an "I" at the end for MAQI).

Ogham stones are sometimes found at early Christian sites. An example of this is Aghabullogue where there is an ogham stone standing in the old graveyard and another nearby beside the holy well [22]. The stone in the graveyard (CO061-080005-) is known as *St Olan's Cap*, the *cap* being a quartz stone now cemented onto the top of the stone. The inscription reads "ANM CORRE MAQVI UDD ... METT". The second stone (CO061-089001-) was found in the 1840s when a flour mill was being demolished and was later stood in its current location beside St Olan's holy well. The inscription reads "MADORA MAQI DEGO".

Ptolemy's Map

The Romans never made Ireland part of their empire and so we don't have that glimpse into the pagan past that classical writers like Caesar and Tacitus give us for Southern Britain and Gaul. The nearest we have is a map - it's actually a series of tables from which a map can be composed - made by an Egyptian geographer called Ptolemy who lived in the second century AD [23]. He never visited Ireland but was using information from earlier sources that in turn had probably been collected from mariners familiar with Ireland. The map is intriguingly accurate in some respects; it locates and names the mouths of the rivers Shannon, Boyne, Lagan, and either the Lee or the Blackwater (*Dabrona*). The interior has a number of regional names - probably tribal names. There are two tribes named in the south-west: Iverni and Usdiae. But that's all the history we have of Iron Age Cork - two possible tribal names.

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[2] Doody, M. (2008) *The Ballyhoura Hills Project*, Wordwell, Bray, 548-555

[3] ibid., 541-548

[4] Power, D. et al. (1992) *Archaeological Inventory of County Cork*, vol. 4- North Cork, Stationary Office, Dublin, 205

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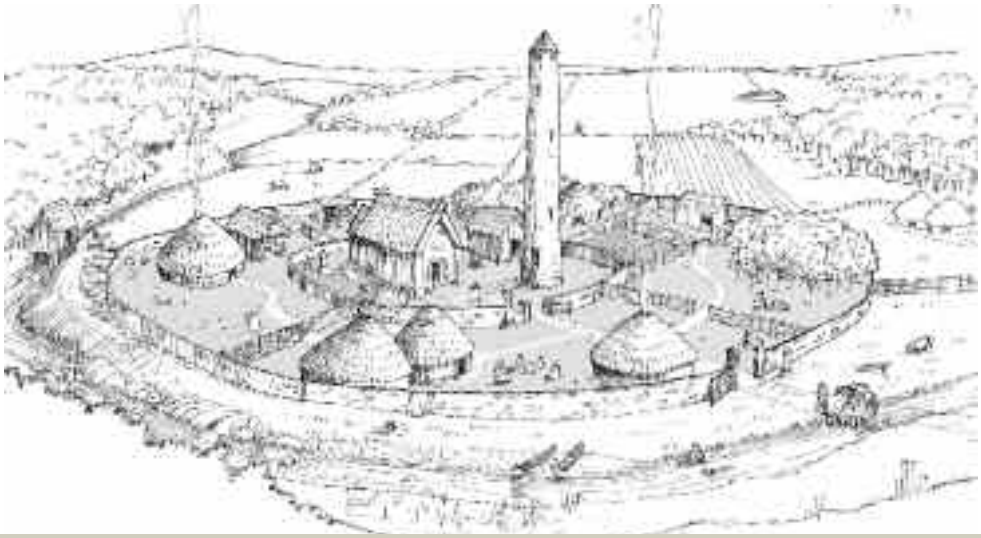
Chapter 8
A New Religion, A New Golden Age

The early Christian mission to Cork is impossible to reconstruct from surviving historic documentation but there were probably Christian missionaries, like Saint Ciarán of Cape Clear, operating in the county by the 380s AD. By the sixth century the church is growing rapidly and begins to establish centres throughout the county. A notable example is *Cluain Uama* (Cloyne) where Saint Colmán established a monastery on a new site around 570 AD. Foundations like this are generally called *monasteries* but they also had a pastoral role and many were the seats of bishops; however, it was not until the 12th century that Ireland had a formal diocesan structure.

These early monasteries were busy places and even played an important role in the commercial life of a country that had no urban centres and no coinage. The central building was the church; these were all wooden buildings in the early centuries of the church in Ireland. The burial place of the founding saint was often a focal point of pilgrimage, an important source of income for many of these monasteries. Unlike the cloistral plan of later medieval monasteries the arrangement of domestic buildings was not regimented, in fact very little is known of these arrangements. The monasteries were often famed for their schools, such as



Artist impression of early monastery showing enclosing vallum, wooden church at centre with round tower and graveyard. Also note informal arrangement of buildings within the enclosure. Surrounding the monastery is the land it farmed including its mill on a nearby stream. Drawing by Rhoda Cronin courtesy of Limerick Education Centre.

Rosscarbery, and larger ones must have had accommodation and classrooms for this purpose as well as a scriptorium where religious books were produced. Most monasteries also had a kitchen, a refectory and a guest house. But these were also farming and craftwork centres. They practised both arable and dairy farming and were known for their vegetable and herb gardens. The smithy was an important craft producing a wide range of iron tools like ploughshares, axes and sickles and more refined workshops for the making of domestic and religious paraphernalia.

To a population that was tribal, illiterate and living in dispersed centres these monasteries, with their learned and skilled monks, made a very important contribution to the general wellbeing and outlook of the people.

The Monastic Vallum

The great continuity of ecclesiastical location throughout the medieval period enables us to identify some of these early centres. These are often called *monasteries* though many had a wider pastoral and Episcopal role. By examining the surrounding landscape of graveyards that contain a medieval church, the circular form of a *vallum* can sometimes be identified, often fossilised in the surrounding field boundary system. Because these church establishments were exempt from secular law it was necessary to define their extent in a physical manner. So a circular enclosing earthwork was built to make this distinction and this is the *vallum* of the monastery. A good example of this is Killeenemer in north Cork (CO019-092001-). The enclosure here had been removed a long time ago but was recognised in an aerial photograph when a low sun cast a long shadow across the landscape. Its size, 190m in diameter, indicates its importance as the chief church of a powerful tribe. Enclosures have also been identified at Aghabullogue (CO061-080001-), Kilmacoo (CO015-046001-), Templebryan (CO122-075001-) and at other places in the county with known early church connections [1]. A similar enclosure has also been identified by Pochin Mould from the air at Kilnaruane (CO118-031001-) near Bantry [2].

Ordnance Survey six-inch map of area around Templebryan church and Graveyard (CO122-075001 & 2) showing the outline of the circular monastic vallum fossilised in the surrounding field boundaries.

Bawnnatemple Ecclesiastical Complex (CO071-108001-6) near Carrigadrohid. In centre is (a) grave yard with site of the ancient parish church Cannaaway (b) surrounded by the ecclesiastical enclosure or vallum (c) and the two souterrains (d), bullaun stone (e) occurs outside enclosure to the west and is said to cure toothaches.

Even when the monastic enclosure, or part of it, has long been ploughed, the circular pattern can still be seen in old maps or it can be recognised as a *crop-mark* by *aerial photography*. To-date 81 of these have been recognised in the county though the original number must be greater- at a number of known early monasteries, like St Finbarr's in Cork and St Colmán's in Cloyne, urban expansion has long since erased the enclosure.

Holy Wells

However the Christianisation of the Cork area came about it seems in little doubt that some of the indigenous belief-system was adopted by the new religion. An example of this is the conversion of ritual pagan springs into *holy wells* where the water was taken to venerate the curative power of a local saint. It is no surprise that a majority of sites identified as early ecclesiastical centres have a holy well nearby dedicated to a local saint.

Aerial Photography

How do archaeologists see beneath the ground and make new discoveries before ever putting a trowel into the soil? In certain conditions, especially in a drought, crops react differently according to the amount of moisture in the ground. Where a trench or a pit or a posthole was dug in antiquity into the subsoil this area will have extra moisture and so the crop reflects this in its colour. This creates a difference in the colour of the crop which when seen from the air can reveal the presence of a levelled archaeological monument like a *ringfort*. A low shadow cast by a setting sun can also emphasise the subtle contours of the landscape. These shadows can reveal the presence of archaeological monuments when seen from the air.

Holy Wells (CO072-048001&2), Walshestown, Ovens. A pair of roadside wells occur on either side of grotto. Rounds are said to cure toothaches, earaches and other affections to the head. According to tradition a trout was seen in Mary's well to north and an eel in Sundays well to south.

Some 357 *holy wells* have been identified in county Cork though not all are still evident on the ground. Some fell out of use some time ago and were filled in or drained. At other sites the spring is still there but there is now no sign of any structure or votive offerings. Other wells were enclosed by stone-built structures in the 18th and 19th centuries to protect the spring and facilitate pilgrims and many of these are still visited and venerated to this day right across the county.

Most holy wells in Cork have a number of things in common. Most are dedicated to a local saint and bear his or her name; popular in Cork are wells dedicated to St Bartholomew, St Bridget and St Lachtain. Others have the more generic name like Sunday's Well or *Tobar Muire* (Mary's Well). *Rounds*, a series of prayers said at particular stations around the well, were performed at the well most especially on the saint's feast day. The water from the well has an attributed curative power for a specific ailment. This cure for the ailment is achieved by drinking water from the well. Popular cures at holy wells were for sore eyes, toothache and warts. A votive offering was then left at the well as a token for the cure.

St Abigail's Well (CO0410031002-) near Glantane. Inscribed on a slab over the entrance is "St Abigail expelling the plague 1872." Rounds are made on the saint's feast day- 11th February.

An example of a well that is still venerated is St Gobnait's holy well at Ballyvourney (CO058-034011-). This is the final *station* in the local popular pilgrimage on the saint's feast day of the 11th February [3]. Another special activity also takes place on the feast day and on Whit Sunday – a 13th century wooden statue of St Gobnait that is kept by the local parish priest is made available to pilgrims. They bring a blue ribbon which is measured against the statue and then taken - hope as a protection against illness. Hundreds of people still make this pilgrimage every year and is a special day in the area.

The holy well at Ballyvourney is located a short distance c. 60m from the medieval church and graveyard and this is a typical arrangement where the well is adjacent to but outside the monastic precinct. The water from this well is considered to have great healing powers and it is believed Gobnait could cure the plague too. In woodland nearby is another well that is still venerated, St Abbán's Well (CO058-037004-), and close by is another venerated site known as St Abbán's Grave (CO058-039002-). If there is an example in Cork of a pagan shrine converted to Christian use this is a strong candidate. Flanking a low cairn of loose stones are three ogham stones and on top of the cairn is a *bullaun stone*. The excavation of Gobnait's House (a circular stone enclosure (CO058-034001-) located immediately outside the graveyard in Ballyvourney), in the 1950s by O'Kelly showed evidence that the structure was an iron workshop and this may indicate that "the cult of Gobnait is that of a female version of the ancient god Gobniu ... the male Celtic god of metalworking" [4]. At Ballyvourney we see continuity in belief and pilgrimage from pre-Christian times through to today showing the enduring power of a local tradition.

St. Olan's Well and relocated Ogham Stone (CO061-089001&2-).

Another example of a holy well located just outside the precinct of an early ecclesiastical enclosure is St Olan's well (CO061089002-), located 450 meters from Aghabullogue graveyard [5]. The spring is enclosed by a circular dry-stone domed structure with a small opening allowing access to the water inside. The well was venerated on St Olan's day, 5th September, when *rounds* were made at the site. Standing beside the well is an *ogham stone* (CO061-089001-). The inscription reads MADORA MAQI DEGO [6]. This was placed here in 1851 having been recovered from a mill that was being demolished. The well and the ogham stone are now located within an enclosed area set aside on the side of a public road and *stations-of-the-cross* plaques have been erected around the area. Another *ogham stone*, now known as St Olan's Cap (CO061-080005-), stands in the nearby graveyard, its inscription reads "ANM CORRE MAQVI UDD ... METT". The *cap* is a round stone placed on top of the ogham stone; this stone had curative power for pregnant women according to local tradition [7].

Carved Stone Crosses

Christianity was well established by the 8th century and we see this in the art being produced at that time, particularly in some of the stone carving. The cross was a familiar symbol, often carved in outline on a stone's surface but also shaped crosses were produced, most notably the tall high crosses that were a feature of the larger wealthier monasteries. At Kilnaruane, near Bantry is a remarkable carved stone - the shaft of a broken *high cross*, which is the only surviving example of a high cross in Cork.

This ancient church site is located on the crest of a low hill from which there are magnificent views across Bantry Bay. The name of the site, Cill na Rómhán, 'Church of the Romans', may refer to a church that adopted the Roman method of calculating Easter some time before AD 630. The church itself is long gone and the main feature at the site is a monument known as the 'The Bantry Pillar Stone' (SMR CO118-031003- a national monument). This stone is probably the shaft of a high cross, perhaps dating to the 8th or 9th century [8]. On the northwest face is a depiction of St Paul's visit to St Antony in the Egyptian desert. In the panel above is a cross with squares at its crossing and terminals. Next there is a figure wearing a long robe with his hands raised in prayer. The uppermost panel is decorated with ribbon interlace. The southwest face is dominated by the famous 'Bantry Boat'. Within the boat is an individual manning the steering oar, four oarsmen and the boat is being rowed across a sea of crosses. The boat itself is probably a skin-covered currach similar to those still in use along the west coast. This linkage of Christian symbolism with maritime endeavour shows the importance of sea travel to the early church. This is the earliest depiction of a native Irish boat and was one of the prototypes used by Tim Severin for his St. Brendan voyages and the site is traditionally linked to that saint.

Near the high cross shaft are four short stone pillars that once formed the corner-posts of a shrine (CO118-031005-), which probably marked the grave of the founder of this church or some other individual who was revered as a saint. There are also two *bullaun stones* (see below) at the site (CO118-031004- and CO118-031006-). Aerial photography has revealed

Northwest face of The Bantry Pillar Stone (SMR CO118-031003-) showing four panels: from top: an interlace pattern; figure with hands raised in prayer; an equal-armed cross; St Paul's visit to St Antony in the desert." Image © Photographic Archive, National Monuments Service, Government of Ireland.

Detail of carved panel on southeast face of Bantry Pillar Stone showing earliest known depiction of a native Irish boat sailing in a sea of crosses. Image courtesy of Connie Kelleher.

The Brendan Voyage

Using the boat depicted on the Kilnaruane pillar stone as a model, Tim Severin built a boat using traditional material - the hull was made of 50 ox hides, to recreate the voyage made by St Brendan in the 6th century and described in the 9th century manuscript *The Voyage of St Brendan*. With a small crew he sailed the boat some 4,500 miles from Ireland to Newfoundland via Iceland in 1976-1977. The boat is now on display at Cragganowen heritage centre in Co. Clare.

Detail of cross.

the remains of a *vallum* around the site so this was once an important monastery but one that probably didn't survive the Viking raids.

Though there are no other high cross in Cork there are a number of carved stone crosses. Amongst these is the ringed cross at Ballymacrown (CO150-053----), as well as the plain Latin cross at Cahervart (CO102-024003-) and another at Kilcatherine, (CO101-005003-).

The other remarkable example of stone carving in the county from the Early Christian period is a carved cross-slab at Tullylease, in North Cork, known as St Berichert's Stone (CO006-006007-) [9]. It has been described as "possibly the finest Early Christian decorated cross-slab" in Ireland. The stone is a rectangular slab (0.95m x 0.65m) decorated with a framed shafted Greek cross that contains frets, spirals and interlaced patterns. This is flanked by four medallions similarly patterned. The carpet page on the Lindisfarne Gospel has a near-identical cross pattern and there is also comparison with details on the Ardagh Chalice. These comparisons date the cross to the mid-8th century. There is an inscription on the stone in Hiberno Latin, which reads in translation "whoever will read this inscription let him/her pray for Berechtuine" [10]; though the earliest reference to the site comes in the 11th century, it had long been associated with St Berichtar, a seventh century Saxon saint.

Apart from the very elaborately carved cross at Tullylease there are over 30 other stones in the county on which a cross is carved and that date to the Early Christian period. One of the most interesting of these is in Killeen townland, about half a kilometre north-east of Ballyvourney and is called St Gobnet's stone (CO058-013002-). This now stands in a small walled enclosure but this is not its original location according to the antiquarian John Windele. He recounted a story of the stone originally standing on top of a mound in an adjacent field until the landowner decided to level the mound and plough over the site but during its removal "many bones were found buried underneath". [11] Of course, not only did ill luck befall

Ringed cross at Ballymacrown (CO150-053----) in burial ground (CO150-044) to east of Baltimore.

Stone cross at Kilcatherine graveyard (CO101-005001-) on Bearhaven Peninsula.

Tullylease cross (CO006-006007-) St Berichert's Stone.

St Gobnet's Stone (CO058-013002-) Ballyvourney.

Durrus Cross Slab c 4.5km east of Durrus in the ancient parish Church graveyard. Simple linear ringed cross incised, the arms extend outside ring and the shaft terminates in crosslets. Many grooves on west face suggesting used for sharpening (CO0131-00702).

Labbamolaga cross slab (CO010-003011).

those responsible for this desecration but "the horses employed in ploughing over the levelled mound expired three months afterwards." The decoration on the stone consists of a maltese cross within a double circle. Above this is the simply-drawn outline of a bishop carrying a crozier and "busily striding forward." [12] Though located a mile from the church there is no doubt that this stone marked a *station* in the pilgrimage of *rounds* at Ballyvourney.

The most obvious reason for erecting cross-inscribed stones would seem to be as grave markers but few are found in graveyards serving this purpose. But they are often found in association with important pilgrimage sites, often marking stations on the pilgrim's round. Some may also have served as marking the boundary of church land or have been the focus of outdoor religious services.

Bullaun Stones

The Gaelic word *bullán* means a bowl, a small pool or a round hollow in a stone and it is this latter meaning that best describes the stones that occur at or near many early ecclesiastical sites and are termed *bullaun stones*. These stones, some are natural outcrops of rock, have a circular bowl-shaped depression carved onto the surface. There can be more than one depression; there is no hard and fast rule as to the exact form of a *bullaun stone*.

Their exact purpose remains unclear but traditionally many had the same function in the same way as *holy wells* in that the water collected in the hollow was considered to have curative powers. An example of this tradition is the "wart well" in Timoleague Friary (CO123-050002-) [13].

There is also a tradition that a round stone placed in the hollow and turned granted a favour or a curse as wished for. Some 100 *bullaun stones* have been recorded in the county; many are associated with early ecclesiastical sites like Killeenemer (CO027-023----), Aghacross (CO019-002005-) and Tullylease (CO006-006010-) and Labbamolaga (CO010-003-). Other theories regarding their use suggest that some functioned as mortars for crushing plants or other materials and are entirely utilitarian in origin. But the fact that so many are found at or associated with early ecclesiastical sites would suggest that most belong in that context.

Horse Island bullaun stone (CO0149-004002).

Bullaun stone at Labbamolaga Early Ecclesiastical complex (CO010-003008).

Early Churches

The church is the most important building at any ecclesiastical site and often the one that saw the most resource and effort put into its construction. The churches built in Cork and throughout Ireland in the early centuries of Christianity were built of wood and none of these survive. We have some idea of what they look like from an illustration of one in the Book of Kells and from the carved churches that formed the top of some *high crosses*. The larger monasteries had these big wooden churches but no trace of any of them has yet been found by archaeological excavation; the continued use of the same location for church rebuilding and burial makes it unlikely any such remains have survived.

Changes in building style were often influenced by pilgrims returning from abroad where they had witnessed the latest style in church architecture. Church dignitaries were known to travel as far as Rome bringing back with them not just the latest ideas of church decrees and spirituality, but also how a church itself should function and how its architecture played a part in expressing these ideas.

But there was also a later tradition of building in stone and we do have the remains of some of these early stone churches in Cork. These are small single-cell buildings with the doorway in the west end-wall and a window in the centre of the east wall overlooking the altar. A characteristic feature of all these churches is the presence of *antae* [14]. These are short square projections of the long side walls beyond the end walls and this projection is sometimes carried up the gable and topped by a *finial*. Here the stone masons are building in imitation

The antae are clearly visible at Labbamolaga Church (CO010-003004-).

of a familiar feature they will have seen on wooden churches where the end timbers project to give the structure extra stability. There is no need for these projections in a stone structure so they are building purely in imitation of a timber church.

Two of Cork's earliest surviving churches with *antae* are Coole (the smaller of the two churches), near Castlelyons (CO036-019002-), and Britway, which is located 7 kilometres to the south (CO045-088002-). This proximity and the similarities in their size and design led Leask to surmise they may be the work of the same builder [15]. Both probably date to the early 12th century. But the earliest church building in the county may be the tiny structure at Labbamolaga known as *St Molaga's Bed* (CO010-003004-); Leask suggested a 9th or 10th century date for this building. Like Coole and Britway it has *antae* but the interior is just 6.3 meters by 4.5 meters. Ō Carragáin has suggested this is one of just a handful of shrine chapels in the country [16]; small structures built over the grave of a revered saint and the focus of pilgrimage to venerate that saint at the site.

By the middle of the 12th century a new style of architecture was influencing church building in Ireland, this was the *Romanesque* and some churches in Cork display features of this style. The larger church at Coole (CO036-019004-) is a mixture of styles and dates but a rosette carved in relief on one of its stones is a *Romanesque* feature and dates that phase of the church to the 1130's. This church has undergone consolidation conservation works which was carried out by Cork County Council's Conservation team who have been doing valuable work in the county over the last 20 years. Another church with *Romanesque* features is Ballyhay, near Charleville (CO008-001002-). Unusually this church has its main doorway in the south rather than the west wall. The door is framed by a sandstone gable-shaped projection which is plain except for two beast heads that project just above the top of the arched doorway opening. Aghacross (CO019-002002-), near Kildorrery, is another *Romanesque* church at which Cork County Council have undertaken restoration works. The doorway here ornamented with chevron decoration is the finest piece of *Romanesque* decoration in the county. The church dates to around 1150 but has been heavily remodelled and rebuilt over the centuries.

Round Towers

Another signature of an important ecclesiastical centre was the *round tower*. The contemporary name for these was *cloichteach*, a bell tower, and this appears to have been their primary function. Though the round tower is particular to Ireland they bear a striking resemblance to the tall narrow staircase turrets - a feature of French and German churches of the ninth, tenth and eleventh centuries, roughly the same period as the round towers. We know that Irish monks were present in the court of Charlemagne and would have known such churches so the idea of a tall circular structure may have come from there. The presence of a round tower at many of the most important religious sites of the day suggests they were signature buildings marking the monastery as a prestigious site.

Kinneigh round tower (CO094-104002-). **Image © Photographic Archive, National Monuments Service, Government of Ireland.**

Two round towers still stand in county Cork though there were also once round towers at the monastery at St Finbarrs' Cork (CO074-038003-) and at Brigown (CO019-030002-) near Mitchelstown. The round tower at Cloyne (CO088-019004-) stands across the road from the medieval cathedral and shows that the original monastery was much larger in area than the present graveyard here. St Colmán of Cloyne is one of the most important early saints of the county and his foundation at Cloyne remained a high-status church throughout the medieval period [17]. The round tower of Cloyne stands to a height of c. 30m and has seven floors above a basement. The original conical cap was destroyed by lightening in the 18th century and was then replaced by the current crenulated parapet. The other surviving round tower is at Kinneigh, (CO094-104002-) near Cappeen (a national monument). It has a unique hexagonal base below but the usual circular plan higher up; it now stands 20 meters high but was originally higher [18]. Con Manning noted that the type of diagonal dressing on the stones of this round tower is comparable with similar dressing on the stone-built entrance to the ringfort at nearby Cahirvaglier (see below) that he dates to around 1,000 AD [19].

Enclosed Farmsteads and Underground Refuges

Ringforts

The most characteristic archaeological field monument in the Irish landscape is the *ringfort*, or as they are still referred to in the countryside- *fairy forts*. They are also uniquely Irish; there

Artists impression of a ringfort showing the enclosing banks topped by a post-and-wattle palisade. Image by Rhoda Cronin.

are comparable circular earthed and stone-built enclosures elsewhere in Britain and on the Continent but they are either earlier or later in date and so not directly comparable. The earliest ringforts are being constructed around the same time as the arrival of Christianity in the 5th century and continue in use up to the 10th century and probably slightly later in some places.

The proper Gaelic term is *ráth* or *lios*, a common element in placenames throughout the country. A ringfort is basically a circular area, with a diameter of around 30 meters, enclosed by an earthen bank formed of material cast up from a trench (*fosse*) dug all around on its outside. Most examples have a single enclosing bank but there are examples with two and even rarer three concentric banks; the number of banks has no obvious defensive function and is therefore thought to be a mark of status. The original entrance is detectible where a gap in the bank(s) corresponds with a causeway across the *fosse*.

Ringfort in Ballyhoolihan West (CO022-129001-). Image courtesy of Tim Murphy.

Woodstock Ringfort (CO065-059) north of Carrigtwohill.

Ringfort at Curraghcloonabro East (CO007-021) near Dromina. Ranging rods mark the entrance into the enclosure where the figure is standing."

A staggering number of 3,687 examples are on record for Cork but not all of these survive intact. The first great record of ringforts in the county is their depiction on the first edition of the Ordnance Survey's six-inch maps, published in the early 1840s. Not all of these survived as features of the landscape to be depicted on the second and third editions of the six-inch maps; tillage areas in the east of the county account for most of these disappearances. Traditional beliefs were important in their preservation until the introduction of mechanisation onto farmland in the 1970s. Thankfully the bulldozing of a ringfort has now become a very rare event and since the *Record of Monuments and Places (RMP)*, under the 1994 *National Monuments Act*, has become an illegal act.

The survival of so many *ringforts* and *cashels* give us a unique insight into the social organisation of the entire country at a given period in time. Essentially a *ringfort* is an enclosed farmstead where a family group engaged mostly in pastoral farming lived. But they were not

Geophysical Survey

Buried features in the ground react differently when electronic or magnetic pulses are passed through the ground. When these pulses are measured and plotted on a graph they can show the pattern of a buried structure or feature. These techniques are often used in advance of a development where there is no evident archaeology on the ground but it is suspected there may be features buried in the ground. The survey is done by passing a machine that sends the pulses into the ground across the area to be surveyed and this data is then fed into a computer.

Laser pulses are also used in this way. Ground-penetrating radar is used for a wide variety of purposes in advance of development, including in the detection of buried archaeological features. Laser pulses can also be used from the air using special cameras attached to the underside of an aeroplane - this technique is known as LIDAR.

Two levelled ringforts, in Ballymacpierce townland (CO024-013---- & CO024-012----), near Kanturk, are clearly evident as cropmarks in the cereal crop, one with three rings the other with two; the darker colour is where the fosse was dug into the subsoil. Note the gap in the rings where the entrance causeway occurs. The linear cropmarks are probably the remains of field boundaries contemporary with the enclosures. The sites were revealed during the dry summer of 1989.

just farming and as most ringfort excavations produce evidence of iron working in the form of slag (waste from the smelting process) so a smithy and a forge were a common feature of life in the enclosure. Nor did ringforts sit alone in an empty landscape. Aerial photography and geophysical surveys have shown evidence of fields and trackways surrounding the enclosures; in areas not affected by land clearance the tumbled field walls of these field systems can still be made out.

A number of the most important ringfort excavations have taken place in Cork. Sean P. O'Riordan pioneered the study of ringforts with his excavations in the 1930s at Garranes near Bandon, and at Ballycatteen, near Ballinspittle. Michael O'Kelly continued this work with his excavation of the two ringforts at Garryduff, near Dungourney, in the 1950s. More recently Michael Monk also excavated two ringforts at Lisleagh, near Kilworth in North Cork.

The ringfort at Garranes (CO084-084----) was excavated by Seán P. Ó Ríordáin in 1937 [20]. The enclosure had already been identified as *Ráth Raithleann*, a royal seat of the Uí Eachach branch of the powerful *Eóganacht* tribe, and the fact that it was enclosed by three banks confirmed this status. The people who lived in *ringforts* were part of a society that was tribal and hierarchical. Each local tribal area had its own king or Rí who in turn was subject to a king of higher status right up to the *high king* or *Ard Rí*. It has been estimated that at any one time there were as many as 150 kings of various grades in the country. It seems that one way of indicating status was to live in a ringfort with more than one encircling ring of defences.

Ó Ríordáin found that the entrance into the interior was defended by a series of stout wooden gates. The interior contained a scattering of post holes and pits but no definitive structures as you might expect at a royal residence. However, there was ample evidence that craft activity was taking place here and also that the owners were importing high-status goods from the Roman world. Debris from a fine metal-working workshop included unfinished brooch and pin fragments, lumps of tin, ingot moulds made of stone and crucibles. Beads of millefiori glass were also being produced here; these beads were produced by heating and then twisting thin rods of different coloured glass around each other- this combination was then

Archaeological research excavation at Garranes Ringfort (CO084-084) in 1990-91.

chopped up into sections and a bead fashioned from each section. Other evidence of the production of luxury goods included debris from enamelling and amber working. Shards of amphorae showed that these people were trading with merchants who could source wine and olive oil from the eastern Mediterranean. On the basis of these finds Ó Ríordáin dated the occupation of the ringfort to the late 5th/early 6th century AD. Recent excavation at the site produced radiocarbon dates of around 500 AD confirming Ó Ríordáin's estimate [21].

In 1941 and 1942 Ó Ríordáin and Paddy Hartnett excavated another ringfort with a triple ring of banks at Ballycatteen (CO124-034001-), near Ballinspittle [22]. The results were very similar to those at Garranes, again the entrance was stoutly defended by a series of wooden gates and there was no evidence for large structures in the interior. And again the debris from metalworking workshops and imported Mediterranean pottery confirmed it was a high-status site producing luxury goods and trading with the outside world.

Garryduff Bird - The gold bird, probably a wren, found at Garryduff ringfort (CO055-002----), one of the finest pieces of intricate gold work from the Early Christian Ireland.
Image courtesy of the Cork Public Museum.

In 1945 Michael O'Kelly began the excavation of two ringforts in the townland of Garryduff (CO055-002---- and CO055-001----), located in East Cork between Clonmult and Ballynoe [23]. One of these produced no evidence of either structures or any form of human activity in its interior and it may just have been used for corralling cattle; at this time a person's wealth was measured by the number of cattle, particularly cows, that they possessed and as cattle raiding was rife their protection was a necessity. But the second enclosure was certainly lived in as evident by the remains of two sub-rectangular houses in the interior. This must also have been a high-status site as it produced evidence of extensive craft production, particularly ironworking but also glass manufacturing - not for window glass but for vessels and beads. And again imported Mediterranean pottery showed the inhabitants of this ringfort had trading links with the Roman world. Perhaps the most remarkable finds from any ringfort excavation was made here- the Garryduff Bird [24]. This is a tiny object made of gold foil, just 1.2 centimetres long, depicting a bird, probably a wren. The bird's features are picked out in fine gold wire that was expertly applied to the foil, a technique known as filigree work. Precious objects like this were not left lying around so it was either lost by the craftsman making whatever object it was to decorate or became loose and fell from it at some stage. In any case it links the craftsman who produced it with Anglo-Saxon, Frankish and Lombardic ideas of workmanship. The bird dates to around 500 AD which is also the probable date for the building of the ringfort after whom it is named. This object is on display in Cork Public Museum and it is one of the great treasures of Early Christian Munster.

Two excavated Early Christian circular houses at Gortnahown, near Mitchelstown, on the M8 route.
Image courtesy of TII.

Reconstructed circular house found though archaeological excavation at Lios na gCon (CO135-031001).

Another important excavation of a pair of ringforts (CO027-029---- and CO027-030001-) is Michael Monk's at Lisleagh, a site near Kilworth in North Cork [25]. These excavations took place between 1981 and 1993 and trained a generation of archaeological students in the techniques of archaeological excavation. These were not high-status ringforts like those mentioned above but represent a more general social context for these sites. Both enclosures had a number of houses within, conjoined circular houses in one case and individual round houses in the other. Both had a complex history of changes and alterations to their form and organisation. For example, over a period of about 200 years (c. 650-850 AD) we see changes in how strong or neglected the enclosures were, reflecting a dynamic rather than a stable social context. The craftwork at both enclosures was predominantly ironworking resulting in a great deal of dumped slag and furnace bottoms. Sometime late in the life of one of the forts a *souterrain* (see below) was built in the interior and these underground refuges are a feature of many ringforts such as Lios na gCon at Darragh near Clonakilty.

Cashels

A cashel is essentially a ringfort where instead of the enclosing element being an earthen construction of bank and ditch, the enclosing element is a stone construction. The location of cashels tells its own story - they are predominantly found along the western seaboard where topsoil is shallow and stone abundant. Where well-made, cashels are impressive structures with the wall up to 6 meters wide and 3 meters high. They are also less likely to be covered in trees, bushes and overgrowth as the banks of most ringforts tend to be.

By contrast with the thousands of ringforts, just 123 cashels have been recorded in County Cork and nearly all of these occur in the south-western third of the county. One of the best known examples in the county is Knockdrum, near Castletownsend (CO142-070001-) [26]. This

Fairy Forts and Tunnels

Two strong traditions attached to ringforts is that they are inhabited by *fairies* who will bring bad luck to anyone who interferes with the monument, and also that there are tunnels linking one to another or with some other prominent feature on the landscape. Certainly the former is part of the explanation of why so many have escaped the ravages of agricultural improvements; many landowners have stories of unfortunate events befalling those who have interfered with ringforts. The latter story may have been encouraged by the presence of souterrains in so many ringforts though it has to be said that these underground features are self-contained with one entrance and don't lead anywhere.

Knockdrum cashel (CO142-070001-), Castletownsend, West Cork, a national monument. Image © Photographic Archive, National Monuments Service, Government of Ireland.

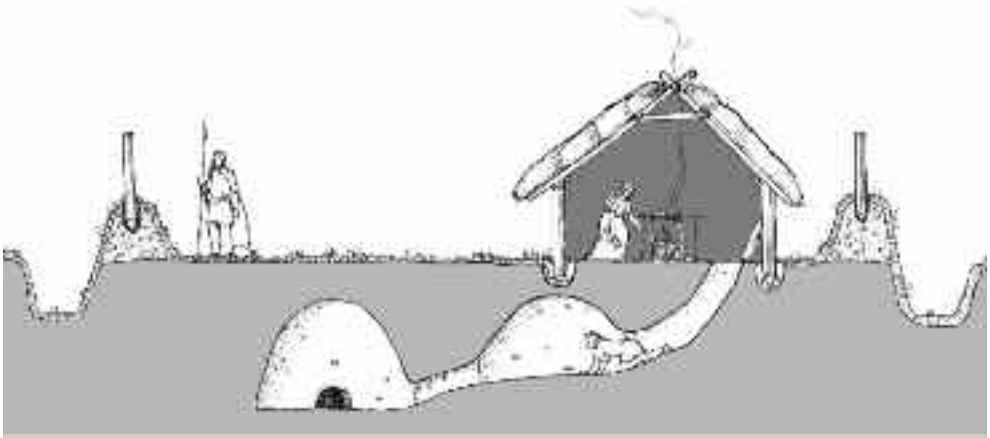
cashel sits atop a rocky ridge with extensive views south towards the sea and inland to the north. The dry-stone wall (2 meters high and 3 meters wide) encloses a circular area 22.5 meters in diameter. In 1875 three schoolchildren, probably including the novelist Edith Somerville and her brother Boyle Somerville - their home Drishane House is located nearby - dug out a mound in the interior and revealed the foundations of a rectangular house in the corner of which they found the entrance into a *souterrain* (see below) (CO142-070002-). The monument was taken into State care in 1930 and is maintained as a National Monument by the OPW. Also at the site are two large boulders with Bronze Age rock art (CO142-070004- and CO142-070005-) and an upright stone inscribed with a Greek cross (CO142-070003-) that dates to the Early Christian period.

Souterrains

These are man-made underground structures that date to the Early Christian period. Some 1,050 examples are on record for County Cork, a lot of them discovered accidentally during agricultural activity or just revealed by a collapse in the ground. The record of many of these is tradition or cartographic and nothing else but their location is known but some information about the shape and form of around 500 is known [27]. The word is borrowed from the French (*sous* (under) *ierre* (ground) and similar features though of an earlier age are found in Brittany. The vast majority of souterrains in the county that have been recorded were accidental finds. Usually the ground collapses unexpectedly under a machine during agricultural activity like harvesting or ploughing.

The usual place to find a souterrains is inside a ringfort or cashel (see Knockdrum above) but they are also associated with ecclesiastical sites. Of course those found unexpectedly away from any known archaeological monument may be associated with one of these enclosures or a house long since erased from any surface trace.

Souterrains were built in either one of two different techniques. In one case a trench was dug in the ground, the souterrains built in the trench and the trench then backfilled. In the other technique a circular shaft was sunk into the ground. Then the souterrains was excavated out from the shaft. When completed the shaft was backfilled. In both cases the entrance into the souterrains was the only surface indication of its existence and these entrances were small so the structures were built with an eye to their concealment.



Artist's impression of souterrains in ringfort. If the ringfort was attacked people hid in these underground hide-outs. Note the low and narrow creepway linking the chambers and at the entrance. **Drawing by Rhoda Cronin courtesy of Limerick Education Centre.**

Souterrain under excavation in Ballynacarriga, near Kilworth on the route of the M8. This had a single chamber with a corbelled roof - the chamber is the circular feature in the foreground. Image courtesy of TII.

Entrance to creepway visible (marked by 0.5 meter measuring stick) in wall of collapsed chamber, at Conva (CO034-033002-), near Ballyhooly. This souterrain was discovered in 1986 when the roof collapsed when the crop in the field was being harvested.

The main component of a souterrains is its chambers, which vary in number from just one up to seven but two or three is the more usual number. The form that the chamber takes depends on how the souterrains is constructed. In the case of those constructed in a trench the chamber can be long and narrow if covered by lintels - the width determined by the length of the lintel. But they can also be built in a domed fashion like a beehive-hut with corbelled sides. In the case of tunnelled or earth-cut chambers the form is usually domed but much depends on the nature of the soil being burrowed through. Within these parameters the chambers are as roomy as possible; a typical chamber might be 3.5 meters by 1.5 meters in area and with a maximum head height of 1.5 meters.

Where there is more than one chamber in a souterrains they are linked by *creepways*. These are constricted passageways, seldom very long but clearly designed to make it difficult for an adult to get from one chamber to the next, even by crawling. A very interesting feature of many examples is the provision of an air-vent - a narrow shaft leading up to the surface. These show that people were meant to stay in the souterrains for some period of time after the entrance was blocked.

It is generally agreed now that the primary function of souterrains was a place of refuge. They may have had a secondary use for storage; the even temperature inside souterrains would be ideal for storing dairy produce in the summer months. In the time of their construction and use, 600-900 AD, local hit-and-run warfare was rife. The main object of these raids was cattle but humans were also probably targeted as hostages and slaves. It may have been sufficient

to keep the vulnerable members of a family safe to have them hidden from view in a concealed place during these hit-and-run raids for so many of these refuges to have been built around the county at the time.

As mentioned above they drew the attention of antiquarians in the 19th century who were interested in recovering ogham stones that had been inserted as lintels. Why *ogham stones* were re-used in this way is a mystery but so many were - they have been found in 18 souterrains in County Cork. Their re-use in this way must have held some significance.

By their very nature very few souterrains are accessible to the public. Once discovered and recorded they are backfilled to prevent further collapse. Recording a newly discovered souterrains can be an interesting experience for archaeologists. The collapse usually occurs through the roof of a chamber so the opening in the ground can be reasonably large. But to get further into the souterrains the recorder has to drag him- or her-self, face first on their stomach through the creephole into the next chamber. The chambers are roomy enough but can be claustrophobic and of course the fear of further collapse is ever-present. The risks archaeologists took in recording these in the past would never pass present-day health and safety regulations.

The Vikings

The first Viking raid on Ireland was in 795 AD and these raids focused on the monasteries, primarily because of their wealth in precious religious objects. Particularly vulnerable were those located along the coast and in 820 AD they raided the monastery at Cork, easily accessible by sea on the south bank of the River Lee. By the 9th century the Vikings were establishing permanent bases that would evolve by the early 12th century into trading ports. Recent excavations in South Main Street in Cork City show land reclamation going on in the 1100s related to the expansion of the Viking settlement there. This is the first true urban settlement in the south-west of the country.

Elsewhere in the county physical evidence for Viking activity is difficult to find. However, in Lonehort Harbour on Bere Island is the remains of a *longphort*, a defended ship-base from which Viking raids were launched. One of the features of this harbour is a *naust* which was archaeologically excavated in 1995 to reveal an artificial boat shelter used for the repair and storage of Viking boats [28].

The Vikings settled in their trading ports along the coast and changed Ireland but the next group of invaders came in far greater numbers and changed the country and the county to a far greater extent.

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Chapter 9
Medieval Times

12th Century Reforms

The winds of change were blowing through political, religious and social life in Ireland by the early 12th century. This is most marked in ecclesiastical reforms and particularly by the Synod of Ráith Bressail in 1111 whose location may have been in County Cork [1]. The context of this Synod was the realisation that the Irish church with its old dispersed monastic system was out of step with the contemporary church in Western Europe. Ráith Bressail divided Ireland into two provinces, Cashel and Armagh, each headed by an archbishop, and these in turn divided into twelve dioceses, headed by a bishop. This centralisation of control is reflected in the political world where power is becoming concentrated in the hands of dominant groups like the Ua Brian (O'Brien) of Thomond and the Mac Carthaig (MacCarthy) of Desmond. The Viking ports, like Cork, were also drawing Ireland into the wider world of trade and commerce.

Ireland was certainly changing before the arrival of the Normans and even if they hadn't arrived in such great numbers from the late 12th century, the old order was going to change profoundly in any case.

Feudalism

In the Gaelic system of kingship when a king died his replacement was a contest between his sons, his brothers and even his nephews - whoever was strongest took the throne. The same was true in the wider context; although there was a King of Munster and a High King of Ireland these were contested positions and whoever held these titles did so by enforcing that right through military force. Also ownership of land was not individual but clan-based and dependant on loyalty within that group.

The feudal system that the Normans brought with them to Ireland was entirely different. A kingdom had just one king and when he died, was succeeded by his eldest son as a right. Beneath the king was a descending network of noblemen, from Dukes and Earls down to knights, who all owed their position to those directly above them in the pyramid and ultimately to the king. And this system, which was also the basis of land ownership, was enshrined in written laws defining rights and privileges.

Coming of the Normans into County Cork

In 1169 a group of Norman mercenaries from South Wales landed at Bannow Bay in Co. Wexford initiating a partial invasion of the country with far-reaching consequences. In 1177

King Henry II granted two of his faithful knights Robert fitz Stephen and Milo de Cogan a half each of the kingdom of Cork, that kingdom defined as stretching from Brandon Head in Kerry to the Blackwater River near Lismore. This was typical of the way the Normans operated in Ireland; the king granted land that was still in native hands to favoured knights but it was then up to them, from their own resources, to make good that land grab. Historian Paul MacCotter has described this process of Norman Conquest in the county as 'an incremental affair, being spread over several decades … still ongoing into the 1240s and perhaps later' [2].

In the end the Normans were only able to take control of approximately the eastern half of the county. This was partially due to the strength of the Gaelic clans to the west, particularly the Mac Carthys. Another inhibiting factor was the line of succession of fitz Stephen and de Cogan as neither left a son to inherit their lands. Succession to their lands was complicated and this dilution meant that none of their successors became the dominant force in Norman Cork. Instead a patchwork of Norman families establish themselves as prominent landowners, including the Barrys, Condons, Roches, Nagles, Cogans, Courceys, Barretts and Fitzgeralds.

Early Norman Castles

However it took place and in whatever manner, the surviving evidence suggests that castle-building did not play a dominant role in the Norman colonisation in Cork. In the early incursion phase we would expect the construction of what are now called timber castles, which is a basic earthwork construction topped by a timber superstructure. These now survive as conical mounds with an attached enclosure defined by an earthen bank, a *motte* and *bailey*. These are noticeably absent from the Cork landscape. The two mounds that have been identified as *mottes* are right up on the Limerick border (CO008-010---- and CO002-034----) and there is probably a third in Ballynacorra (CO076-042001-) near Midleton [3].

In the case of early stone castles the evidence is equally sparse. Around the time of the Norman incursion into Cork the standard stone castle was a *keep*, that is a tower of three or four storeys stoutly built and well defended. We have no castle in Cork that compares with that classic example of a keep at Trim in Co. Meath. To build something on that scale was probably beyond the means of local Norman lords.

There is an intriguing cylindrical tower at Inchiquin in East Cork (CO067-021----) [4] which though now much reduced in height and condition must have been a very impressive castle in its day. It has thick walls and a noticeable base *batter* (outward incline of the base of the wall). There are the remains of another cylindrical tower at Buttevant Castle but this is so heavily masked by later rebuilding it is even more difficult to imagine its original appearance [5].

The county does have a number of two-storey rectangular towers that were certainly built by the Normans but which lack some of the usual armoury of defensive features like arrow loops and machicolations - the one thing defensive about them is the thickness of their walls, narrow window openings and the door at first-floor level. Modern scholars have used different terms

Artist reconstruction of Glanworth Castle. Illustration by Rhoda Cronin.

for these structures, from *hall house* to *hall-keep* to *chamber-tower*. Examples in County Cork include Castle Barrett (CO042-009002-) near Mourneabbey, Licklash Castle (CO036-001----) near Fermoy, Ballyderown Castle (CO028-016----) east of Fermoy, and Ballymacphilip Castle (CO035-032----) south of Ballyhooley.

There is a fine example of a Norman castle at Glanworth Castle in North Cork (CO027-042001-). This castle was the subject of a major archaeological excavation by Con Manning in the early 1980s as part of a conservation programme by the State as this site is a National Monument. The excavation revealed a complex history of construction over several centuries [6]. The earliest phase was around 1200 AD, probably built by Raymond le Gros, a prominent knight in the conquest of Cork and the nephew of Robert fitz Stephen. This is located on a triangular promontory which was cut off by a deep ditch; the promontory overlooks an important crossing point on the Funcheon River that still retains its medieval bridge. Inside the fortification were two buildings, which Manning describes as a *hall-keep* and a *hall*. Life in the castle changed over time from its initial military role to catering for a wider variety of needs. As well as providing adequate private accommodation for the lord's family within the castle, a suitable place was needed to conduct the legal and administrative responsibilities of the lord's lands and property. Glanworth Castle is a complex of buildings designed to cater for a variety of needs over a number of centuries.

Castle architecture changed in the 13th century from an emphasis on single stout buildings to a concept where the centre of the castle was an open space and all structural emphasis was now placed on the surrounding curtain wall and its corner towers. The best surviving example of this in Cork is Liscarroll Castle in North Cork (CO016-015001-) [7]. Here the central

area is rectangular, roughly 60 meters by 40 meters. This is now under grass but probably originally contained a number of timber buildings. At each of the four corners is a circular tower. These stand to full height, two storeys over a basement, except the south-east tower of which little survives. Each of the surviving towers has three openings on the main floor that are purposely built arrow loops. A large arched open area on the inside accommodates the archer whilst the narrow slit opening in the wall face both allows the archer to aim at a target but also protects him from an attacker. The weakest point in these castles was the entrance gateway - the largest opening in its walls. Extra precautions were taken to protect gateways and we can see this at Liscarroll. The entrance itself is a vaulted passage through a tower that is located in the middle of the south curtain wall. The passage was protected by a stout timber gate at either end, by a drawbridge, and by a portcullis. This latter was a framework barrier that was lowered or raised by a winding mechanism located in the room above the passageway. There were also openings in the vault through which defenders could aim missiles on attackers below- these are called *murder holes*. This castle was built by the Barrys, a Norman family who dominated this part of North Cork in the medieval period. It is very much a frontier castle and was probably built in the mid-13th century to protect the Norman town of Buttevant and the area around it from the resurgent native clans to the west.

For more information on the castles of County Cork the reader is recommended to read the *Heritage Castles of County Cork* in this series.

Liscarroll Castle (CO016-015 01)

Walled Towns

One of the greatest contributions the Normans made in Ireland was the introduction of towns. Before their arrival urban centres were essentially those port towns established by the Vikings, including Cork City. By and large Gaelic life was rural and pastoral but the Normans placed a great emphasis on market towns as a lynchpin of their economy. These towns operated under a charter that nearly always granted the town the right to hold a market. This encouraged the growth of a merchant class who organised the importation and exportation of goods in a regulated manner. Through their contacts in the Norman world these merchants had access to a wider market in Britain and the Continent than was previously the case for Ireland. Also important was a range of improvements in agricultural practices in the 13th century, particularly in grain production, that created greater wealth and more goods for the market.

Section of the medieval Town walls, Youghal.

These towns operated under a charter granted to them by either the king or a local lord whom gave them rights and privileges to operate largely in their own self-interest. As well as taking over the existing settlement at Cork the Normans also founded chartered towns at Kinsale (CO112-034001-), Buttevant (CO017-053001-) and Youghal (CO067-029001-). Like the Early Christian monastic *vallum*, these towns were surrounded by a wall with mural towers and fortified gates, inside which the town operated its own rules and regulations according to its charter. One of the best surviving lengths of medieval town wall in the country is in Youghal (CO067-029002-) [8]. The earliest record of Youghal's town walls is a grant in 1275 for their construction but this was probably for a stone wall to replace an earlier bank and ditch earthwork defence. A stretch of some 450 meters of wall survives along its southern run; this is on the highest point overlooking the medieval town and its port. There are three circular mural towers along this stretch of wall. There is a further length of town wall on the north side running steeply downhill towards the river over some 275 meters. The surviving town walls in Youghal are one of the best preserved medieval town walls in Ireland. Small manorial villages also developed around the castle, parish church and mill with a cluster of thatched houses along the approach road.

Norman Churches

St Marys Church, Youghal (CO067-029003).

As well as being a formidable military force the Normans were also very devout and great patrons of the church. As was their way the Normans adopted the native diocesan system rather than invent a new one but problems arose as to authority in the Irish church; was it ultimately responsible to Armagh or to Canterbury? One thing that the Norman church did bring in was a new architectural style - the Gothic. This style evolved on the Continent; was brought to England by the Normans and thence to Ireland by about 1220 AD.

There are very few surviving parish churches in Cork of 13th century date, even in areas heavily settled by the Normans. Most must have been swept aside by the great rebuilding of churches in the 15th/16th century and may not have been very impressive buildings in the first place to have been replaced in such numbers.

It is to the walled towns we must turn to find churches of this date. St Mary's in Youghal (CO067-029003-) is one of the best preserved and largest medieval churches in Ireland [9]. The church has a cruciform plan with the chancel at the east end, a nave at the west end and a transept or wing projecting either side from the junction of chancel and nave. In medieval times each section of the church had a very different function and this is reflected in the layout.

The chancel is where mass is celebrated by a priest with two deacons; this is why in many medieval churches there is a built-in seat or sedilia in the south wall of the chancel. In St Mary's the three seat sedilia is combined with a piscine - this is a basin in which the water used to wash the sacred vessels during mass is poured away. The south side of the church was regarded as the sacred side and hence the water is poured away on this side; burial on the south side of the church was always favoured in medieval times - it was bad luck to have the shadow of the church pass over a grave.

A typical medieval graveyard was an unenclosed space around the parish church; there were no family plots as we know them today so burial was fairly haphazard in term of a grave's location. The local nobility had the right to be buried inside the church and some even had the resources to make a tomb and cover it with a recumbent image of the dead person. The tradition continued into the 17th century with the elaborate tomb of Richard Boyle in St Mary's Church in Youghal and the 17th century Tynte's effigy's at Kilcredon Church (CO077-043-02) near Garryvoe. Headstones marking personal graves only begin to appear in the early 18th century and the oldest headstones in graveyards are usually congregated close to the south wall of the old church.

The other 13th century parish church in Cork is St. Multose in Kinsale (CO112-034005-). Here the church has a chancel and a nave that were once separated by a chancel arch but this was taken down in 1730. The nave has aisles and a tower stands at the west end of the north aisle. During the replacement of the floor of the nave in 1858 many burials were found in roughly formed stone coffins. Though this church was heavily remodelled in the 18th century it still retains much of its medieval character and is one of the few medieval parish churches in Ireland still in use.

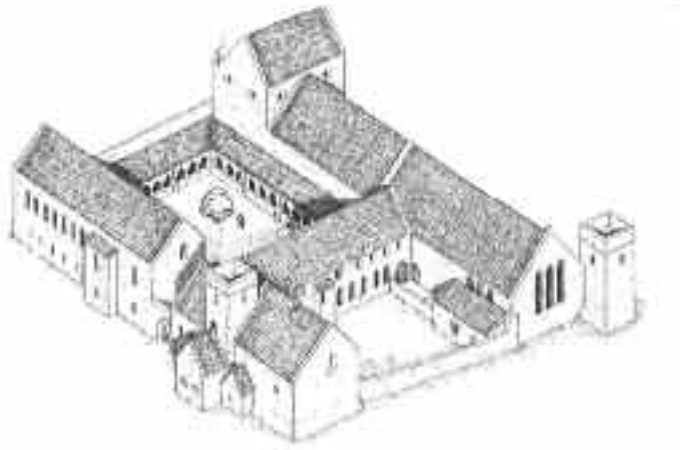
A notable Gothic building from the 13th century in Cork is Cloyne cathedral (CO088-019006-). This is a very ancient site going back to St Colmán and the early days of Christianity in the county. When the diocesan system was established in Ireland at the Synod of Rath Breasil in 1111 AD, there were three diocesan centres in the county at Cork, Rosscarbery and Cloyne. Though later buildings now stand on the site of the cathedrals at Cork and Rosscarbery the medieval church survives largely intact at Cloyne. The cathedral is cruciform in plan and a notable feature is its aisled nave whose severed unadorned pointed-arch aisle arcade is more reminiscent of the strict architecture conservatism of the Cistercian order than the usual Gothic flourishes of the time.

The Monastic Orders

One of the greatest developments of medieval Christianity was the foundation of monastic orders and particularly the Cistercian. Developing in France in the late 11th century around the abbey of Cîteaux, from which it gets its name, this order quickly spread through Western Europe. St. Malachy of Armagh was so impressed by their monastery at Clairvaux, which he visited on his way to Rome in 1139, he persuaded them to establish a daughter house in

Mellifont in 1142 - the first Cistercian house in Ireland. Mellifont in turn would found a number of daughter houses and thus the order spread throughout Ireland. The Normans were also great patrons of the Cistercians and set up their own monasteries in the country. At its peak in the 13th century there were 34 Cistercian abbeys in Ireland.

What they all had in common was the *cloistral plan*. This was pioneered in France by the Cistercians and, as the name suggests, the core of the plan was an open space - the cloister, surrounded by a covered walkway - the ambulatory. On the south side is the tallest and most impressive building in the complex, the church. Cistercian churches were always cruciform and planned according to a strict use of space. The nave was occupied by lay brothers; the public were not allowed into their churches. The monks were accommodated in stalls in the choir of the church and the main altar was under the east window. The arms of the cruciform accommodated a number of side chapels. The chief building in the east range of buildings around the cloister was the chapter house; this was the chief meeting place for the monks where the business of the abbey was conducted. Other buildings, each with a specific function were arranged around the cloister at ground-floor level and upstairs were the dormitories of the monks and the lay brothers.



Monastery built on a cloistral plan.

These Cistercian abbeys were a world within a world but also a powerful force in the medieval world at large. Because of their prestige the Cistercians were granted great tracts of land by their wealthy patrons. This suited them in two ways. It gave them enough room to remove themselves and their monasteries from the outside secular world. And it also gave them enough resources to become self-reliant and in many cases very wealthy. These resources were developed from their farms, their *granges*, in which they practiced a developed agriculture advanced in its technology and organisation beyond that of the outside world.

Cork had its great 12th century Cistercian abbeys but hardly a stone upon a stone survives of these today. The Cistercian abbey of *St. Mary of Chore* (CO076-063003-) lies somewhere beneath the Church of Ireland graveyard in Midleton, and likewise whatever is left of their

Church in Bridgetown abbey CO034-02702), near Castletownroche.

abbey of *Castrum Dei* now lies beneath the town of Fermoy on the south bank of the River Blackwater (CO035-024----).

The other great order to come into Ireland in the 12th century, the Augustinians, fare better in Cork in terms of standing remains. The most complete of their foundations in the county is Bridgetown Priory (CO034-027002-), near Castletownroche on the north bank of the Blackwater River. This was founded by Alexander fitzHugh around 1200 AD but by the end of the 13th century had become the chief burial place of the Roches whose chief castle was nearby at what is now called Blackwater Castle. Bridgetown is now owned by Cork County Council who has carried out conservation and consolidation works to the buildings which are now a popular place for people to visit. Under their auspices a major study of the priory was published by Tadhg O'Keeffe in 1999 [10].

At Ballybeg near Buttevant are the remains of another Augustinian Priory (CO017-059001-). This monastery is in the care of the State and is maintained by the Office of Public Works. The remains of cloister buildings is not as extensive as at Bridgetown but a unique survival here is the priory's columbarium. Pigeon was an important part of the medieval diet and this circular custom-built structure is near complete. The inside walls are lined with nesting boxes and there is an opening in the domed roof to allow the birds fly in and out of the building. This house was founded in 1229 by Philip de Barry and dedicated to St. Thomas Beckett of Canterbury.

The Cistercian Plan

The cloister (from the Latin *claustrum*, an enclosure) is an open space around which the formal layout of a medieval monastery is based. The plan was perfected by the Cistercians in 11th century France and its first use in Ireland is at their monastery in Mellifont, Co. Louth, founded in 1142. The cloister is divided into two spaces. In the centre is a square *garth*, an area open to the sky. Surrounding it on all four sides is a passageway which is roofed. Facing into the garth the passageway is lined by a continuous open arcade. On the inside wall of the passageway are a series of doorways, each giving access to a separate part of the monastery. Thus the cloister was the central core of movement through the monastery. On its North side was the largest and tallest building, the church, cruciform in plan. The main building along the east side of the cloister was the chapter house. Here the monks gathered to discuss the business of the monastery. On the south side of the central building is the monk's refectory. Along the west side is the main entrance way into the monastery and the lay brother's refectory. The first floor of the cloister ranges were dormitories but access to these was via a stairs directly from the church. The other main orders to build religious houses in medieval Ireland, Augustinians, Dominicans and Franciscans, all used the cloister as the core of their monasteries but none of them stuck as rigidly to the plan as the Cistercian did.

Largely in reaction to orders like the Cistercians which isolated themselves from the outside world, a new revolution in the monastic ideal took place in the early 13th century. Two figures were instrumental in this development – St. Francis of Assisi and St. Dominic, who respectively founded the Franciscan and Dominican orders. This new idea was that instead of being monks sequestered in their cloister, the members of the congregation would now be friars out in the community preaching to the general population and instead of running great farms to support themselves would beg for alms. By the middle of the 14th century there were 32 Franciscan and 24 Dominican foundations in Ireland, at this time there were 4 Franciscan (Cork, Timoleague, Youghal and Buttevant) and 3 Dominican (Cork, Youghal and Glanworth) foundations in Cork.

In spite of their intentions to be itinerant preachers living hand-to-mouth the realities of Franciscan foundations tell a different story. They were living in community in buildings that follow to a certain extent the Cistercian cloistral plan. They were also endowed with land and financial support by the local nobility.

Just the church now stands of the Franciscan Friary in Buttevant town (CO017-053004-), founded by David de Barry around 1251 [11]. This is built on the steeply-sloping west bank of the Awbeg River so that beneath the east end of the church is a crypt of two storeys. As happened to many of these 13th century friaries it was heavily rebuilt in the 15th century

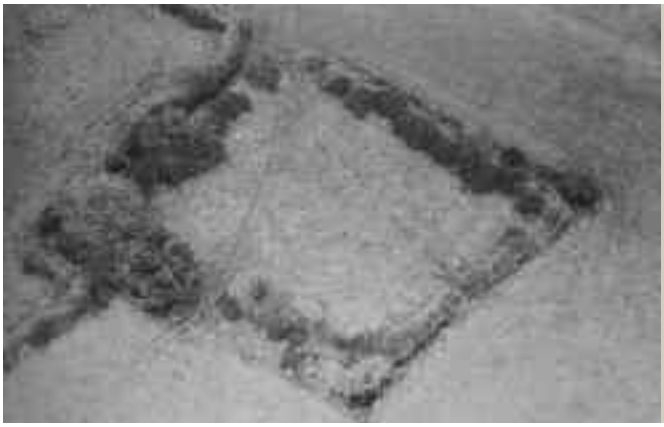
including the insertion of new windows in the east gable and a tower at the junction of nave and chancel. This tower later fell and only the stump now survives inside the church. This is also a national monument and in the care of the Office of Public Works.

The only standing remains of a 13th century Dominican's foundation in the county is at the North Abbey in Youghal (CO067-030002-) where just the west gable of the church and the stump of a pier survive. For more information on the medieval churches and monasteries of County Cork the reader is recommended the *Heritage Churches of County Cork* in this series.

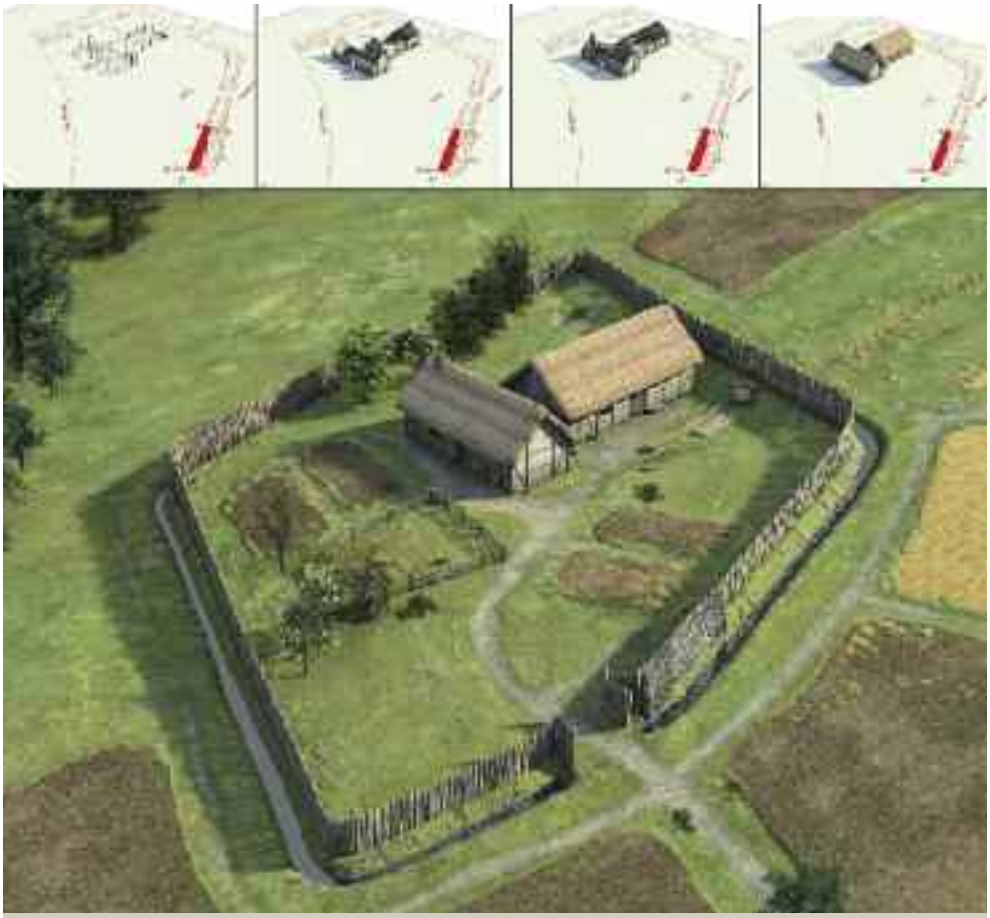
Square Norman Forts

Very similar in appearance to ringforts but instead of being circular in plan *moated sites* are square or rectangular. The enclosed area is usually between 40 and 50 meters across so they are roughly similar in scale to ringforts, although the enclosing bank and ditch often seem more pronounced - this may be because they are around 500 years younger and therefore have endured less erosion over the years. There was also a greater effort to get water into the fosse of these enclosures as witnessed by the *leats* that survive at a number of examples.

Moated sites are strongly associated with Norman settlement in Ireland with their densest distribution in east Munster and south Leinster, areas heavily settled by the newcomers. Some 138 examples have been recorded in County Cork and their distribution in the county is noteworthy. They congregate along the line of the Cork-Limerick road and extend from the city area south-west towards Clonakilty. This area represents the border between Norman east and Gaelic west in the 13th century and may give a clue as to why they were constructed. As the 13th century progressed and into the early 14th century the Norman colony came under increased pressure from the west with groups like the Mac Carthy Mór attacking the frontier areas of the colony. It would therefore seem like a good idea that farmsteads on the border area would need protection by building an entrenchment around the settlement. On the other hand moated sites could represent a secondary push by the Normans into more marginal areas on their frontier, and again these forward settlements would need protection.



Gorteenatarriff Moated site (CO010-015), north west of Mitchelstown.



Ballinvinny South - digital interpretation of the later medieval moated settlement. Image courtesy of TII.

In 1977 and 1978 David Sweetman excavated a *moated site* at Rigsdale, near Innishannon (CO097-023----) [12]. The enclosure had a stone gatehouse built for its protection. A penny of Edward was found under the bank - probably lost during the construction - and suggests a date of around 1280 AD for the site. Otherwise the interior appears to have been only temporarily occupied before abandonment.

More recently Eamonn Cotter excavated another *moated site* at Ballinvinny South (CO064-156001-), about 7 kilometres north of the city, as part of the archaeological works on the M8 motorway [13]. This was a rectangular enclosure some 40 meters by 30 meters in extent. The enclosing element consisted of an earthen bank topped by a wooden palisade. A timber gate gave access to the interior where Cotter found the foundations of two rectangular buildings. These were not substantial buildings but more what you might expect in a farmstead than a heavily fortified site; indeed Cotter was not impressed by the enclosure's defences describing

them as "intended more to protect livestock that to perform any military defensive function." The main dating evidence from the excavation was 30 sherds of pottery of a late 13th/early 14th century date. Amongst these broken pieces were sherds of Saintonge polychrome pottery; some sherds of Saintonge were also found at Rigsdale. Saintonge is a province on the west coast of France and throughout the medieval period was exporting Bordeaux wines to Ireland; the Normans had extensive trade relationships with the area. With the wine came pottery jugs of a distinct shape and decoration. Sherds of this pottery occur in great quantity in the excavations of medieval towns in Ireland, including those in Cork City.

The Great Rebuilding

The 14th century was a period of much change for the Norman colony in Cork and throughout the country. The Bruce Invasion (1316-1318), though ultimately unsuccessful, was a serious disruption. The arrival of the Black Death in 1348 was devastating, particularly for the walled towns which saw very high mortality rates in the following years. And in Munster the defeat of a Norman force by Mac Carthys at the Battle of Callan, near Kenmare, in 1261 was another serious blow. And apart from Richard II who made two expeditions to Ireland in the 1390s, neither particularly successful, most late-medieval kings of England showed little if any interest in Ireland.

Cloughleigh Tower House (CO027-113---) near Kilworth.

By the 15th century a new order is emerging whereby certain Gaelic and Norman groups were becoming dominant and effectively ruling their own territories as autonomous lords. The most powerful lordship in Munster was the Fitzgerald Earls of Desmond whose home territory was in West Limerick. But they also had large holdings in Cork particularly in Imokilly and the lower Blackwater valley.

The Barry lordship of Barrymore and the Roche lordship of Fermoy were the two most powerful Old English (Norman) families whose territories lay entirely within the county. To the west three great Gaelic lordships emerged: Mac Carthy Riabhach in the south-west, Mac Carthy Muskerry in the Lee Valley and Mac Carthy Mac Donagh in the north-west. There was also a plethora of smaller lordships like the Condons, Nagles and Cogans in the east, and the O'Sullivans, O'Mahonys and O'Driscolls in West Cork.

As this new order in Cork of independent and semi-independent lordships settled down from about 1420 onwards there was enough stability and accrued wealth for a thriving building industry to emerge. In nearly every parish in the county a new parish church was built, none very large in size or elaborately decorated but still substantially built in a confident though modest Gothic style. And close to these new parish churches was the lord's castle, a tall multi-storey tower, not unlike in appearance the keeps of the late 12th century which they are sometimes confused with. These are now called *tower houses*.

The four walled towns continued as the main urban centres in the county but now past their glory days of the 13th century. Certainly there was no expansion of these towns beyond their walls, and probably not until the 17th /early 18th century.

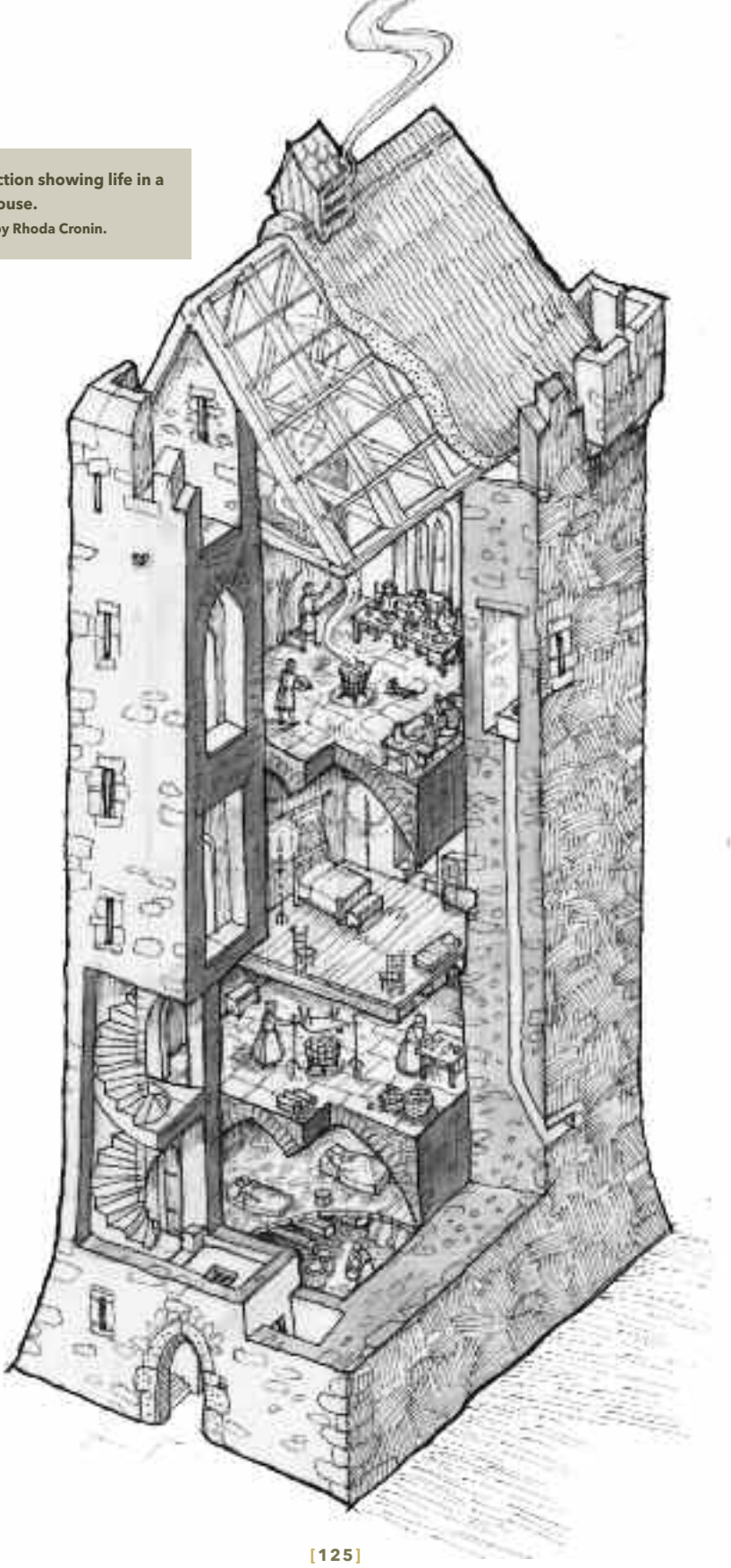
Lordship Towers

Some 133 *tower houses* survive in Cork in various states of preservation from those standing to full height and in good nick to just a stump of masonry covered in ivy and overgrowth.

A typical Cork *tower house* is three to four stories in height and rectangular in plan (averaging about 12 meters by 8.5 meters). Many Cork examples are built of local stone, particularly in limestone where available, in random courses set in a lime mortar. The outside base of the walls is gently sloped outwards in a *batter* and originally the wall face was plastered and finished with a wash.

Most examples have a single ground-floor door though in West Cork ground and first floor doors occur. Inside the door is a lobby covered by a vault with a *murder hole* opening. Off this lobby are three further doors, one leading straight through to the main ground-floor room, one on the side leading to the foot of the main stairs and opposite it a door into a small room where the door-keeper was lodged.

The mural stairs rises in one corner and is formed of stone steps arranged in a rising spiral. Typically there are two rooms at each level; the main room above that on the ground floor

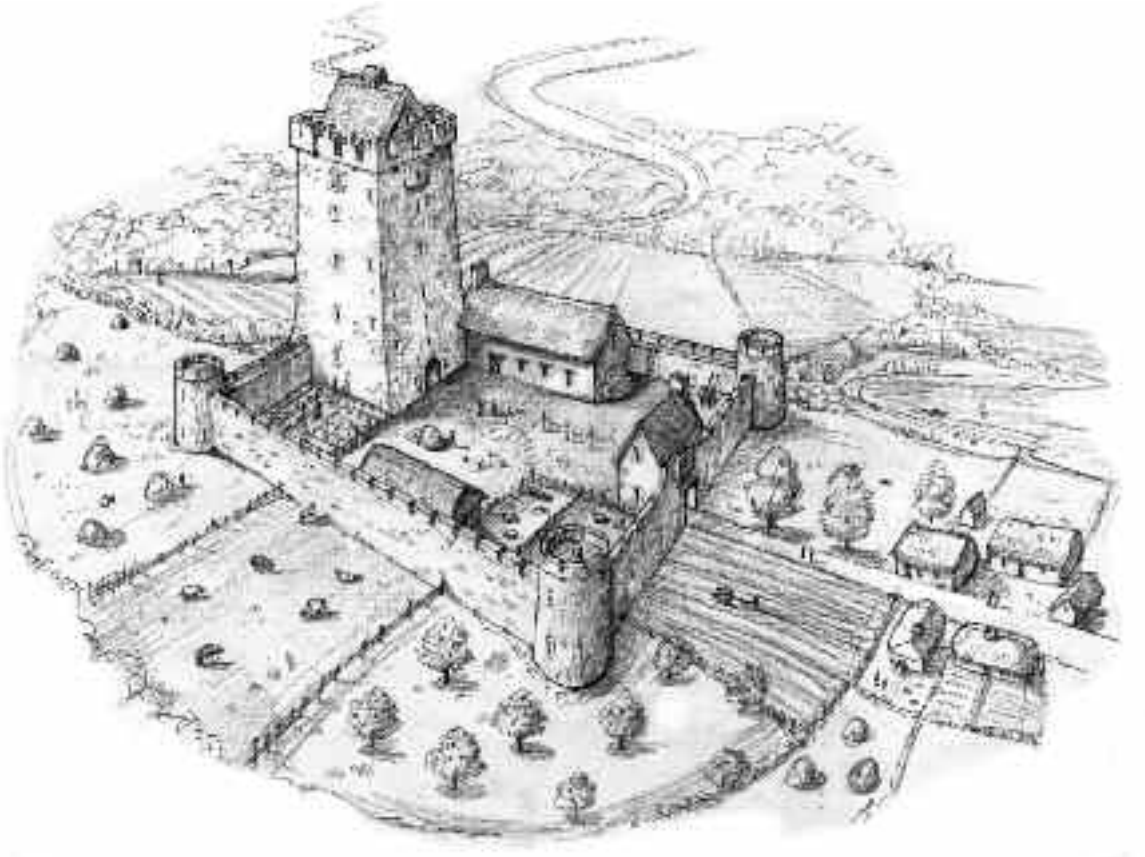


Cross section showing life in a Tower House.
Drawing by Rhoda Cronin.

and a smaller room above the space at ground level occupied by lobby, the foot of the stairs and the door-keeper's room. Usually these are all entered separately from the spiral stairs. The top of the stairs then gives entry to the main room at the highest floor of the tower.

The floors at all levels are either wooden or a stone vault; there is often two main vaults say over the first floor and the third floor with the main living room above the higher vault. The vaults are typically bluntly pointed and serve both to tie the structure of the castle together and to fire-proof it; they are always wicker-centred and in some towers fragments of the wicker survives in sheltered corners of the vault. Where the wooden floors, and none survive, were situated, the recess to take the wall plates can be identified in opposite corners and the corbels to support it are often present as well.

The tower was crowned by a battlement, which is the up-and-down crenellations that allow a defender to shoot out in the space between but shelter behind the upright. Typical of Irish crenellations of this period they are stepped upwards towards the centre. Inside the battlements is the wall walk allowing access along the wall tops.



Artist illustration of Tower house and bawn. Drawing by Rhoda Cronin.

Machicolations are another frequent feature of *tower houses*. These are projections from the wall face that have an opening at the base. These allow defenders to cover the base of the tower's walls without exposing themselves to enemy fire. There is frequently one at battlement level directly above the main door and over opposite corners half-way up the tower.

Fireplaces can tell a lot about the history of a tower. The very early ones probably had none or if there was a fire it was probably in a brazier in the middle of the floor (directly above a vaulted floor, of course). However, these austere early towers sometimes had fireplaces inserted at a later stage. But the later towers have built-in fireplaces in their original design and some of these, particularly those in the main room, can be very large and have carved arch surrounds.

In general, windows get larger the higher in the tower they are placed. At ground level the opening is very narrow - too small for somebody to creep through. But at the top level, where the main room of the tower is located, the opening is large and the stone frame divided by vertical mullions and horizontal transoms. The top of these window lights are often formed of ogee arched heads, some quite elaborate in form, and bearing decoration on the outside face. On the outside, carved hood mouldings cover the window light and help prevent water ingress.

Nobody who lived in a tower house has left us a written description of what life was like as lived in these tall narrow buildings. There are some brief accounts of visits by foreign guests but we are largely left to imagine life in a typical tower house from the surviving structures themselves.

What we see most evident in their architecture is an evolving compromise over competing needs. First and foremost is security, both for the lord's family but also his tangible wealth and possessions. The provision of security is evident from the defensive features described above. At the time they were built and lived-in warfare in Ireland was by hand-held weapons, with firearms becoming prevalent over the course of the 16th century. In later tower houses clever openings and projections were devised to allow defenders shoot out at attackers. But once cannon were available the tower house was immediately obsolete; a tall building was the perfect target for a cannonball and most tower houses capitulated in the face of artillery.

The second need we see catered for in tower house design is comfort and privacy. The top room was the main chamber or *hall* where public meetings and feasts are held and access to this room is allowed via the spiral stairs without the need to pass through any other part of the interior. In some cases, particularly the larger tower houses, a *garderobe* is accessible from the *hall*. The *garderobe* is a medieval toilet where wooden seats are situated above an open drop down through the thickness of the tower's outer wall. But *garderobes* are also located in more concealed places; every opportunity was taken by the builders to provide narrow rooms in wall thicknesses and this is often where a *garderobe* is located.

The best known tower house in Cork, and probably in the whole of Ireland, is Blarney Castle (CO062-177----) where the world-famous *Blarney Stone* is located [14]. This was built by the Muskerry MacCarthys in land they had recovered from the Norman Cogans in the 15th century.

The tower house itself is a composite of two separate constructions. The original tower, built sometime around 1480, was a small but tall structure. With the growth of their power and influence sometime in the early 1500s- we don't have historical records for the buildings at Blarney castle - the ninth lord of Muskerry, Cormac Ōg Láidir Mac Carthy, built a much bigger tower house up against and linked directly with the existing tower. This new building is massive in scale and has been described as "remarkable for the graceful batter of its walls and the galaxy of Irish battlements which crowns its parapets". These battlements have a continuous machicolation "borne by tapering corbels as high as a tall man"; the *Blarney Stone* is a lintel between two of these corbels.

These tall towers did not stand alone but had a walled enclosure, called a *bawn*, as well. The *bawn* did not surround the tower but was attached to the side; the ground-floor entrance door of the tower is always inside the *bawn* but the exit for the *garderobe* always outside (for sanitary purposes!).

Barryscourt Castle and Bawn Wall. Image © Photographic Archive, National Monuments Service, Government of Ireland.

There is a fine example of a bawn at Barryscourt Castle, Carrigtwohill (CO075-018001-). This tower house is a national monument is State guardianship. As part of a major conservation programme by the Office of Public Works, the interior of the bawn was excavated by Dave Pollock in the 1990s [15]. As is often the case a *hall* was built inside the bawn with two of its walls forming part of the bawn wall itself. But the most remarkable discovery was an extensive garden laid out over most of the open space within the bawn, an indicator that life in a tower house was perhaps more sophisticated than was expected. With very few reliable dates for tower house construction a radiocarbon date placing the tower's construction of between 1392 and 1420 was much earlier than expected and opens the possibility that the building of tower houses may go back into the late 14th century.

There are other tower houses in Cork in the care of the State at Castle Donovan (CO119-017002-), near Drimoleague, Conna Castle (CO 046-001----) in Conna, Carrigaphooca Castle (CO072-034----) near Macroom, Ballinacarriga Castle (CO108-051003-) in West Cork and

Drishane Castle (CO039-078001-) in Millstreet. For more information on the castles of County Cork the reader is again recommended the *Heritage Castles of County Cork* in this series.

The New Parish Churches

As with tower houses, the new spate of parish church building that took place throughout the county from the middle of the 15th century, was in a restrained Gothic style. Most of these churches are small and just rectangular in plan. Like all medieval Christian churches the building is aligned on an east-west axis with the altar at the east end in the chancel, and the congregation at the west end in the nave. The entrance doorway is located in the south wall of the nave, about a third of the way along from the west gable. The western end of the church has a loft, lit by a window high up on the west gable, where the resident priest lived. In all medieval churches a division or rood screen separated the nave form the chancel. Where plaster survives on the side walls this division can be detected by a vertical gap in the plaster where once a wooden partition formed the screen. The largest window is that in the centre of the east wall overlooking the altar. The favoured form is an ogee-arched light, just what is seen on the upper floor of a tower house. Another frequent feature is a piscina in the south wall beside the altar.

A typical example of a late medieval parish church is Garryvoe Church (CO077-037002-) near Shanagarry in east Cork [16]. The plan is rectangular (16.9 meters by 7.8 meters) and the walls stand to near full height though the ruin is now roofless; it was *in repair* in 1615 but described as a ruin by 1774. It has all the features described above and with remains of the stone altar under the east window.

The vast majority of these rural late medieval parish churches fell into ruins in the 17th century. The transfer of medieval church land, including these churches, to the Church of Ireland after the Reformation made most of them redundant. In some cases the Church of Ireland built a new church in the graveyard but most were left abandoned in the old graveyard.

For more information on the churches of County Cork the reader is again recommended to read the *Heritage Churches of County Cork* in this series.

Garryvoe Church is a 15th/16th century church.

Ogee Headed window at Garryvoe church.

Friaries on a Grand Scale

We have already met the Franciscans and Dominicans in 13th century Cork. After a lull in the 14th century these orders revived in the 15th century with much rebuilding of the old friaries and a spate of new foundations. If the earlier foundations were mostly Norman foundations it was the opposite in the later medieval period with Gaelic lords their main benefactors.

The prowess and skills of builders in 15th century Cork is nowhere more on display that at three Franciscan friaries: Kilcrea Friary (CO084-024002-), near Ballincollig; Sherkin Friary (CO149-019002-) on Sherkin Island and Timoleague Friary (CO123-050002-). All three are national monuments in the care of the State and maintained by the Office of Public Works.

Kilcrea was founded in 1465 by Cormac Mac Carthy, Lord of Muskerry for the Franciscans [17]. Most Franciscan friaries in Western Europe were located outside or just inside walled towns, but in Ireland, in the later medieval period, we find them in open countryside as at Kilcrea. Franciscan churches are rarely cruciform in plan and Kilcrea has the typical plan of a rectangular church with an aisle and transept only on the south side. Another typical feature of these friaries we see at Kilcrea is a tall thin tower over the junction of choir and nave. The cloister at Kilcrea is now an open area filled with 18th and 19th century burial plots and has lost its arcading and the lean-too cover of the walkways around its sides. One notable building

Kilcrea Abbey (CO084-024002) near Ballincollig. Image © Photographic Archive, National Monuments Service, Government of Ireland.

at Kilcrea is the *scriptorium*. This is a room lit by multiple large windows located above the sacristy of the church; the lighting was necessary for the painstaking task of reading and transcribing texts by hand. The Irish Franciscans were noted for their scholarship which included the collection of Gaelic material for what is now known as *The Annals of the Four Masters*.

Sherkin Friary was founded in 1449 by Fineen O'Driscoll, chief of the O'Driscoll clan - noted for their piracy. It is smaller in scale that Kilcrea but nonetheless perfect in its own right as a late-medieval rural friary. In conjunction with conservation works at the site by the Office of Public Works, archaeological excavations in the friary were conducted by Ann Lynch and Gerry O'Sullivan [18]. These revealed a great deal about how the friary was constructed and altered over time. An interesting aspect of the building complex was the elaborate system of drains built to keep the site dry in an area with poor natural drainage.

Timoleague Friary was founded some time before the other two, in the 14th century, but the surviving buildings are mostly 15th/16th century in date. Handsomely situated on the shore of Courtmacsherry estuary it is one of the most striking medieval ruins in the county. The church consists of a chancel and nave separated by a tower. The nave has an aisle and a transept on its south side. The cloister buildings are not as well preserved as those at Kilcrea or Sherkin, just the east range survives and that is much altered. Built against the outside wall of this range is a *garderobe* tower; even medieval friars had the need of such necessities.

The Reformation and all that followed

The Act of Supremacy passed by the Irish parliament in 1536 that declared Henry VIII head of the Church of Ireland would have profound consequences for the country but not immediately for much of the country. The Reformation did see the closure of many monasteries and the distribution of their lands into lay hands but it was not really until the late 16th century that the Tudor government began to exert its influence over the country in an overt fashion. In Munster this pressure led to the outbreak of the Desmond Rebellion in 1569 and the ultimate victory of the English in 1583 when the Earl of Desmond was killed. Religion was now a contentious factor in political and social affairs and would remain so throughout the 17th century.

The defeat of the Earl gave the English government the opportunity to confiscate all his lands. The plan was to plant these with Protestant settlers from England in what is called the Munster Plantation. This succeeded to some extent though the Earl's lands were well scattered throughout Munster so the settlement was dispersed and vulnerable to attack from the Earl's old allies.

The defeat of Hugh O'Neill's army at Kinsale in 1601 AD was essentially an Ulster battle fought in Munster and the plantation that followed in consequence was confined to Ulster. O'Neill had received little support in Cork and so most of the lordships in the county survived both that battle and the Munster Plantation with their lands intact.

New Towns and Villages 1610-1640

After the turbulence of the closing of the 16th century the county experienced a period of relative peace and growing prosperity in the early decades of the 17th century. A large part of this increase in economic activity was the arrival of new English settlers, many of whom were skilled craft workers. Most of these settled in the new towns and villages that were established at this time as part of the settlement. Two new towns were established at Bandon and Mallow but there was also a noticeable growth in villages, especially along the Bandon Valley at places like Enniskeane, Newcestown and Kinneigh where weavers and other skilled tradesmen settled. Coastal West Cork also saw urban growth, based on the fishing industry, at centres like Baltimore, Bantry, Skibbereen and Clonakilty. East Cork also sees new villages such as Killeagh, Carrigtwohill and Castlemartyr. An important factor in this establishing of a new urban centre was the granting of a right to hold fairs and markets. These licences were usually granted to the local landlord and urban growth was seen as a way of enhancing land value. Existing towns, particularly Kinsale and Youghal, also grew in population and prosperity at this time. Both had busy ports and Youghal benefited particularly from the patronage of Richard Boyle, first Earl of Cork.

The New English

Despite continuing religious and political anxieties, the period from about 1610 to 1640 was one of rising prosperity in a relatively peaceful period for County Cork. One driving force of this rising tide was the onset of an urban revolution exemplified by the foundations of many new or the expansions of existing settlements. It is in this period that the urban framework which still defines the county was established. This fact is not readily apparent by the existing historic building stock in our towns which is mostly late-18th/early-19th century in date.

This revival of urban development is typified by Bandon, a walled town (CO 110-019014-) that is in many ways was a throwback to Norman times, operating under a royal charter granted by James I in 1613 but owing the patronage of a local magnate for its development [19]. Its chief patron was Richard Boyle, first Earl of Cork and the most powerful and wealthy of the New English in Munster. There are but three vestiges of that town now evident in the town. The town wall itself survives in short stretches but no defensive features are present and the town gates and towers have all disappeared. The only evidence for the 250 houses described in 1622 as "all very convenient and many very fair" is a townhouse on 83 North Main Street (CO110-110----) where some original 17th century timber framing survives incorporated into a later fabric. It is likely, as in this case, that other 17th century houses, in places like Bandon and Mallow, are embedded in what appear from the outside to be later buildings.

A 17th century house at 83 North Main Street, Bandon, concealed behind a 19th century façade

17th century timber frame inside 83 North Main Street, Bandon. The timbers were dated to 1659-1660 by dendrochronology in 2016, funded by the Cork Historical & Archaeological Society.

On the north side of the river in Bandon stands Christ Church (CO110-019008-), the Church of Ireland parish church built in 1610 for the north side of the town. The church is cruciform in plan with a tower and spire at the west end built in 1856. The church was deconsecrated in 1973 and is now a museum (West Cork Heritage Centre) featuring local history.

Richard Boyle was also the patron who built a series of alms houses in Youghal (CO067-029007-), another town that came heavily under his influence. One of these has survived, built in six units, four fronting the Main Street and two around the corner in Church Street. Unfortunately these were gutted and partially demolished in the 1970s without a proper record being made, when converted into houses.

Fortified Houses

By the early 17th century we see a big change in the building of lordship residences. Most of the Gaelic and Old English (Norman) lords retained their lands even when the vast estates of the earl of Desmond were confiscated by the Crown after the collapse of the Desmond rebellion in the 1583. The Munster Plantation that followed these confiscations mostly affected the lower Blackwater Valley and the Youghal region but also Mallow which had been a manor of the Desmonds. Here the new owner, Thomas Norris built a manor house, Mallow Castle (CO033-009001-), in the proposed English style [20]. But what is not *English* about Mallow Castle is that it bristles with gun loops and has a concealed ground-floor door; defence was still important.

We see a new sense of confidence in a group of fortified houses that are being built in the county in the early decades of the 17th century. Some of these were built by established groups like the Mac Donagh Mac Carthys of Duhallow who built on a grand scale at Kanturk Castle (CO023-120----). This building is a mixture of tower house features, notably its impressive machicolations and gun loops, but also new ones; the stone vault is entirely absent

- all floors were of wood and the first-floor entrance doorway shows some influence of *Renaissance* neo-classical style.

Other houses in this context include nearby Dromaneen Castle (CO032-097002-), built by the O'Callaghans, and Ightermurragh Castle (CO 077-024002-) near Castlemartyr built, according to an inscription on one of its fireplaces by *"Edmund Supple and Margaret Gerald, whom love binds as one, built this house in 1642."* Also built in these early decades of the 17th century and in a similar style are houses of wealthy merchants like Walter Coppinger. He built a large fortified house, known as Coppinger's Court (CO143-014----), on land he acquired near Glandore in West Cork.

Mallow Castle showing gun loop under window.

Kanturk castle (CO023-120).

The 1641 Rebellion and all that followed

After four decades of relative peace and prosperity everything changed in Cork in 1641 with the outbreak of a rebellion that started in Ulster but quickly spread throughout the country. The ferocity of this rebellion is attested by the *1641 Depositions* that detail the attacks on Protestant settlers in the county; of course the violence at this time was not one sided.

This rebellion resulted in a bitter conflict with strong religious undertones between the New English and the Gaelic/Old English that dragged on until the Cromwellian/New English were victorious in 1652. In consequence of this came the Cromwellian Settlement when most of the existing Catholic landowners were deposed across the Shannon to Clare and Connaught and a new Protestant land-owning class put in their place. Amongst the new landowning elite were families that would dominate Cork for some time into the future, like the Brodericks in East Cork, the Bowens and Widenhams in North Cork and Townsends, Hoares and Hungerfords in West Cork. But the most powerful of these was Richard Boyle's son Roger Boyle, the Earl of Orrery. He built a great house for himself at Charleville (CO002-061003-) in North Cork but like other great houses of this period it has completely disappeared. All that survives at the site now are garden walls and four square waterlogged fish ponds, which were probably part of an ornamental garden (CO002-061002-) [21].

Charles Fort (CO125-007----).

But Orrery's pet project in Cork was Charles's Fort (CO125-007----) in Kinsale, most of which had been built by the time of his death in 1679 [22]. This is a *star-shaped* bastion artillery fort covering some 10 acres built to cover the entrance into Kinsale Harbour with a battery of guns; the other side of the harbour already had James Fort built after the Battle of Kinsale in 1602. The background to the building of this fort was the Anglo-Dutch Wars that were ongoing at the time. The memory of the Spanish landing at Kinsale eighty years previously was still a strong incentive in terms of defending the south coast.

Charles Fort was designed by the country's leading architect William Robinson with three bastions facing inland and two facing the harbour. These are linked by massive masonry walls to create an ambitious work of military engineering on a massive scale. Its massive ramparts are designed to absorb cannon fire and the angled bastions allow the defenders to cover all approaches to the fort with flanking fire. Most of the gun emplacements survive though all were adopted and changed over time to facilitate changes in gun design. In 1690 the fort came under attack from Williamite forces - it was held by Jacobite sympathisers - and a major flaw in its design became immediately apparent; it was overlooked close-in by higher ground where guns were set-up to fire directly into the fort. Because of this the garrison surrendered after a short siege.

On the other side of the entrance into Kinsale Harbour is an older *star-shaped* fort, James's Fort (CO112-036----). This was built between 1602 and 1604, directly after the Battle of Kinsale, to cover the entrance into the harbour. The outer defences are largely an earthen construction with five bastions on the angles of a pentagon linked by thick curtain walls. Centrally placed within this is a smaller square fort built in stone. The fort is linked by a covered way to a blockhouse battery on the shoreline below (CO112-083----).

Both Charles's Fort and James's Fort are national monuments in the care of the State and maintained by the Office of Public Works. Charles's Fort is at present the only national monument in Cork with a permanent guides' service operated by the Office of Public Works.

The last vestiges of the old order were finally swept aside after the Williamite War (1689-1691). The subsequent confiscation of land left just 14% of the country in Catholic hands by 1700. The next century is the period of the Protestant Ascendency in Ireland with its own parliament in Dublin.

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Chapter 10
The Second Great Rebuilding

Post-Medieval Archaeology

As the modern world drives faster and faster into the future the more the recent past seems remote and left behind. But with progress comes the realisation that redundant or old fashioned things have a heritage value and need some protection before they disappear completely from the landscape. It might not be always apparent why ruined or abandoned buildings or structures should be valued, especially if they seem modest and without much architectural merit, but archaeology makes no such value judgements. Every old building, every old structure, no matter what form it takes or what its condition, is valued equally from an archaeological point of view. What is important is that each has a story to tell and that story requires recording and appraisal to be valued and understood. A ruined vernacular building or an overgrown and neglected rural mill tells the story of ordinary people in the past, a story that is often otherwise unheard.

As archaeology widens its scope into the recent past the greater the number of things considered of archaeological importance. In this chapter it would be impossible to cover the entire range of post-medieval archaeology; a much fuller picture is available in the five volumes of the Archaeological Inventory of County Cork [1]. Therefore what is here is more an indication of the richness and variety of what survives out there in the County Cork landscape. For convenience the chapter is divided under four headings: Military and Coastal; Industrial; Rural and Services; and Religious.

A New Order

As was the case at the start of the 17th century, the start of the 18th century sees the county enter a period of relative peace and prosperity after decades of war and mayhem. By now almost the entire land-owning elite were Protestant, the New English Ascendancy as historians call them. But despite the plantations and the immigrations of New English workers in the 17th century, the vast majority of the general population of the county remained Catholic of Gaelic and Old English (Norman) stock.

By the early 18th century England is well on its way to becoming a dominant power in World affairs with a growing empire and a booming economy based on the Industrial Revolution. Ireland is both a part of this world but also separate from it. The lack of natural resources, particularly coal, inhibits industrial development and the economy remains in essence rural and based on agricultural production.

Nonetheless from about the middle of the 18th century through to the end of the Napoleonic wars in 1815 the county sees a boom in new buildings, from country houses for the nobility to commercial buildings like mills, breweries and distilleries, to a range of military, service and administrative buildings. New townhouses and shops line the streets of growing towns and villages. The general population is building vernacular houses, most with thatched roofs, throughout the rural countryside but also in towns and villages. As a result, the vast bulk of the historic building stock in the county today is of late 18th/early 19th century date.

A model of the change from medieval to post-medieval in terms of building is demonstrated by what happened to the many functions once performed by a castle. As society developed and became more sophisticated, instead of just a castle, we see its military role devolved to military barracks, police stations, jails and artillery fortifications; its legal role devolved to courthouses, its commercial role to market houses, and its social role to the country house. This diversification also means greater specialisation in the various roles, which gives rise to a growing middle class.

This world is demonstrated by all the various buildings that are individually named on the first edition of the Ordnance Survey's six-inch maps of the county, published around 1840. By contrast with this variety the second edition of the six-inch map issued in the late 19th century, adds little to that landscape in terms of new buildings worth naming indicating the economic downturn that happened in the second half of the 19th century.

The world of the Protestant Ascendancy is greatly reduced after the outbreak of rebellion in 1798. In consequence of this the Dublin Parliament was dissolved and Ireland was incorporated into the United Kingdom by the Act of Union in 1800. The economic upturn continued with the demand for goods created by the Napoleonic Wars but with Napoleon's final defeat in 1815 the better times were over with the country heading towards the Great Famine (1845-1849) and the Land Wars of the 1870s and 1880s. The county's economy does not collapse and there is new building and development in the second half of the 19th century but nothing on the scale seen in the late-18th/early-19th century.

(a) Military and Coastal

Throughout much of the 18th and 19th centuries Britain was at war with its Continental rivals, but particularly with the French. The great fear was that Ireland could be used as a backdoor for an invasion of Britain. In the background was a memory of the Spanish landing at Kinsale and the threat that posed. In response to that threat two great forts were built in Kinsale, James's Fort and Charles's Fort but after the French fleet attempted to land at Bantry in 1796 it was realised how poorly defended the coast was. In response a strategic plan was effected which involved the building of static fortifications to defend both Bantry Bay and Cork Harbour from a sea-borne attack [2]. As well as being of military concern the coast was also Cork's window on the outside world with trade in and out of its ports. Infrastructure for shipping was built along the coast and included quays and harbours, piers and slipways as well as lighthouses and coastguard stations.

Camden Fort Meagher (CO099-024) defending the western mouth of Cork Harbour. Image courtesy of Siobhán Russell.

Cork Harbour, the best anchorage on the south coast, had replaced Kinsale both as a naval base and as a port by the 18th century. Haulbowline had become an important naval base during the Napoleonic Wars and the port benefited from growing trans-Atlantic trade and especially providing provisions for same. It was no surprise then that the defence of the harbour became a priority for the government.

By 1812 Cork harbour was bristling with newly-built fortifications [3]. Guarding the entrance to the harbour were the opposite fortifications of Camden Fort (CO099-024----) and Carlisle Fort

Martello Tower (CO075-041-), Rossnaleague. The most easterly of the three Martello Towers guarding the northern approach to Great Island.

(CO087-058----). If a ship got past these two it was then directly facing Westmoreland Fort (CO087-065003-) on Spike Island and beyond it the battery at Cobh Fort (CO087-109----) and another fort on Haulbowline (CO087-059003-). All of these were well armed with a variety of cannon well dug-in on purpose-built artillery fortifications.

Attention was also paid to a possible attack from land so that three Martello Towers were built to cover Belvelly (CO075-026----, CO075-029----, CO075-041----) - the back-door access to the Great Island and the harbour. Two further Martello Towers covered respectively the high ground overlooking Spike at Ringaskiddy (CO087-053----) and on Haulbowline Island (CO087-059002-) covering the anchorage there. Martello Towers are circular in plan, on the roof of which was a 32-pound muzzle-loaded canon mounted on a 360 degree traversing carriage.

Bantry Bay also became a priority for defence in the aftermath of the failed French landing in the bay in 1796. The fortifications built to protect Bantry Bay were placed at three locations: on Bere Island covering the outer entrance to the bay; on Whiddy Island covering the inner harbour; and on Garinish Island covering the anchorage in the inlet there [4]. Originally four Martello Towers were built on Bere Island though only two survive (CO128-014---- & CO128-016----); the other two were demolished later in the 19th century. A number of batteries were also positioned to cover areas where the Martello Towers were blind. A single Martello was built on Garinish (CO104-015001-) and a redoubt on each of the three high points of Whiddy Island (CO118-032----, CO118-077----, and CO118-078----). A *Redoubt* is a small self-contained fortification and that indeed is what the three constructions on Whiddy are. All three are circular in plan and similar in design. A deep fosse surrounds a thick parapet wall where the guns were mounted. Inside were vaulted buildings to provide accommodations for the garrison and house the gunpowder store. The central redoubt is larger than the other two (internal diameter 68 meters; the other two 58 meters) and housed 150 men and mounted 12 canon; the other two housed 100 men and mounted 8 guns. Once Napoleon was finally defeated in 1815 the expense of keeping a large force in such a remote location was a problem and most of these fortifications in Bantry Bay were quickly abandoned or had just a token presence.

Central Redoubt (CO118-078), Whiddy Island, Bantry Bay.

The other element in the defensive scheme was the building of signal towers all along the Irish coast from Dublin clockwise to Malin Head. These are two-storey buildings, lightly defended, whose main purpose was to receive messages from offshore ships and then transfer these from one tower to another to Dublin [5]. The towers were manned by navy personnel who used flags on a tall mast positioned beside the tower to pass on their signals. The idea was that an offshore patrol would spot the approaching French fleet, and then quickly signal this to the nearest signal tower who in turn passed on the signal so that advance warning of the fleet reached the Admiralty. Nineteen signal towers survive along the Cork coastline from Knockadoon Head (CO078-015----) in the east to Dursey Island (CO126-005----) in the west. The signal tower at the Old Head of Kinsale has been refurbished as a visitor attraction (CO137-008----).

Knockdoon Signal tower.

By the 18th century the old practice of quartering troops on the local population had been abandoned and purpose-built barracks for military units were built throughout the country. A large army contingent stationed locally was a boost to the local economy with its need for provisions and services. Because of this the locating of these barracks was often as much a political as a strategic decision. An example of this is Fermoy where John Anderson had acquired land around what was then a small village [6]. He offered to build a barracks for the military on his land which he did in 1797 and then another barracks in 1800. With some 5,000 troops stationed in Fermoy it quickly grew and by 1809 there were 500 houses in the town which had a mill, a brewery and other services. Little remains of the structure of either barracks but their enclosing walls with some ordnance stones survive and the parade grounds are still

open spaces, now used as sports fields (CO035-105---- & CO035-106----). Another large military barracks where its parade ground is now a sports field is Buttevant Barracks (CO017-138----) and again the barrack buildings themselves are largely demolished though the arched entrance gateway does survive.

In 1857 the Admiralty took responsibility for watching the coastline and built some 200 coastguard stations, including a number along the Cork coastline. The *Coastguard* not only dealt with smuggling but also had a role in shipwreck rescue before the lifeguard service was formed. They also watched the movement of foreign warships and shipping in general.

The standard coastguard station was a long rectangular accommodation block with a tower at one or either end. The towers were fortified with gun loops and had a military appearance. An example is a 2-storey, 4-bay roofless building on the east side of Oyster Haven bay (CO125-017----). This has a tower at each end of a rectangular block giving it a Z-shaped plan. A nearby two-storey building was the officer's house and the boat house.

Light houses (CO137A001-002-) on the Old Head of Kinsale. Image courtesy of Colin Rynne.

Cork with its extensive coastline was often treacherous as attested to by the number of ship wrecks recorded along the coast by the Under Water Unit of the National Monument's Service (see Wreck Viewer (www.archaeology.ie/underwater-archaeology/wreck-viewer). Prior to the 19th century highlighting the danger along the coast line was haphazard. Two remarkable early lighthouses (CO137A001-002-) survive on the Old Head of Kinsale. The oldest of these is a *cottage* or *brazier lighthouse*, a one storey building with a stone vaulted roof. On the roof was a brazier fire to warn shipping of the headland. This was replaced in 1814 by a circular tower, 12.8 meters in height, with a light at the top. This in turn was replaced by the present lighthouse out at the tip of the headland, in 1853. Another early lighthouse now abandoned is on Cape Clear Island (CO153-022001-). This was built in 1817 by the Ballast Board beside the signal tower (CO152-022001-). It is circular and stands 3-stories high but is now roofless. The role of building and manning lighthouses passed to the Commissioners of Irish Lights in 1867 who built 15 new lighthouses along the Cork coast including on the Fastnet Rock to replace the one on Cape Clear.

(b) Industrial

Though there is a perception that the Industrial Revolution of the 18th and 19th century largely bypassed county Cork this idea masks the fact that there was industrial development in this time, especially in the late 18th and early 19th centuries. The end of the Napoleonic Wars in 1815, followed by a recession in the 1820s, was a blow to the economy which it never quite recovered from and the Great Famine of the mid-century further stunted industrial development but did not halt it completely. The rich remains of Cork's Industrial past is well illustrated in the Industrial Heritage book of Cork County by Dr. Colin Rynne and this gives a flavour of the interesting industrial buildings in County Cork's historic landscape, many of which now stand in ruins. The historic industries of the county can be divided into four main categories: Manufacturing; Extractive; Transport and Communications; and Utilities.

Agriculture was central to Cork's economy at this time and mills to process the output of that production are a large part of the county's manufacturing output. Water power was the basic source of power to drive the machinery in these mills so they are concentrated along the county's river system. Corn mills were the most numerous but the county also has a number of textile mills processing wool, linen and cotton. Brewing and distilling were also important industries mostly based in the county's towns. Cork also had some specialised producers, like the ironworks at Monard; the gunpowder mills in Ballincollig and the brick works in Youghal.

Corn was an important crop, particularly wheat and barley, in the 18th century and developed particularly in the century when the Irish Parliament subsidised its production. In the end of that century there were 32 corn mills operating in the county but this had grown to over 80 by the 1830s. These mills were driven by water power so are located along the county's river system and towns like Fermoy and Mallow had a substantial mill serving the local areas. But there were also smaller mills scattered throughout the county serving smaller rural communities.

One of the largest abandoned mill buildings in the county is in Buttevant, on the west bank of the Awbeg River (CO017-053006-). This is an L-shaped building 6-storeys high; a curious feature is the fake castellated turrets that stand on its roof. This was built in 1810 and continued in use throughout the 19th century - its machinery being continually upgraded. Another large ruined multi-storied corn mills is Belgooly Mill (CO112-007----). An example of the smaller rural corn mill is Schull Corn Mill (CO139-041001-). This is a small two storey mill with just one set of millstones. The mill has been restored as part of a private dwelling but retains its original character and much of its water-powered machinery including the waterwheel.

Buttevant Corn Mill (CO077-034).

Wool was the most important textile produced in 18th and 19th century Cork. Towns like Midleton, Blarney and Dripsey had large woollen mills producing a range of cloths. The county also had a number of smaller rural *tuck mills* serving local communities. Here the newly woven woollen cloth was pounded in an alkaline solution to produce a stronger and denser material, the pounding machines powered by a waterwheel. The cloth was then dried by stretching it on a tenter frame (hence the expression "on tenter hooks"). The ruins of some 25 of these tuck mills survive in the county. An example of a small rural tuck mill is Inchinagotagh, near Skibbereen (CO132-050001- & 002-). Here a small one storey tuck mill shared its millrace with a three storey corn mill that stands beside it.

In the 18th and 19th century the growing of flax and linen manufacture was an important commercial enterprise in the county, especially in West Cork. The spinning and weaving was mainly a domestic enterprise with the finishing of the cloth, beetling and bleaching taking place in water powered mills. Innishannon had a Bleaching mill (CO097-05401), only the foundations of which survives, but the spacious bleaching green is now used as the local G.A.A. pitch. As the 19th century progressed we see the introducing of large scale spinning and weaving mills especially around Cork City. The production and making of linen cloth was also an important part of the economy.

Most of our historic mills are now roofless and abandoned and face a very uncertain future.

Inchinaghotagh Tuck Mill and Corn Mill (CO132-050001&2).

Some have been renovated and have found a new use. An example of this is the Bridge Mill in Castletownroche (CO026-091----). This is now used as office space by local enterprises. What is important with these schemes is that a full and proper archaeological record of the building and its machinery is made before the alterations are made.

Two important industries in 18th and 19th century Cork were brewing and distilling. Many of the county towns had one or more breweries serving their own distinctive beers and ales. Bandon had five breweries and Midleton four by the middle of the 19th century. Again flowing water was essential to power the machinery so towns located on the banks of a river had an advantage in terms of industrial development. Some of these breweries were large

Deasy's Brewery (CO135-052002) Clonakilty.

establishments with grain stores, a malting and a drying kiln as well as the mill itself. Amongst the brewery building complexes that survive are Cornwall's Brewery (CO110-025001-) in Bandon and Deasy's Brewery (CO135-052002-) in Clonakilty. Deasy's was built in 1807 and Cornwall's in 1843 according to a date stone on its entrance gateway. Both breweries have long since been converted to other purposes.

Distilleries were less common. The largest surviving historic distillery in the county is Midleton Distillery (CO076-025----), which is still producing whiskey and has become one of the county's main tourist attractions. The tour of the complex features much of its historic fabric and machinery.

As we have already seen, mining for copper ore in West Cork goes right back to the Early Bronze Age. The most impressive remains of more recent copper mines are those at Allihies out on the tip of the Beara Peninsula (CO114-027001- to 008-). The engine houses at the Mountain Mine and the Coom Mine are striking memorials to these enterprises. The fascinating story of these mines is well told in the mining museum in Allihies.

Engine Pump House at Allihies Copper Mines.

(c) Rural and Services

The country houses and their demesnes became a dominant feature of the Cork countryside, most of which were built between the early 18th and early-19th centuries. These are named on the first edition of the Ordnance Survey's six inch map of 1840 with their demesne land shown by stippled lines. The archaeological survey of County Cork, carried out in the 1980s and 1990s, recorded all country houses named on the first edition six-inch maps and found that 80% were still occupied, 10% in ruins and 10% had disappeared completely. In terms of size and scale just 10% were houses on a grand scale and the typical country house in the Cork countryside was fairly modest in size, some without a gate lodge or a demesne wall.

Doneraile Court (CO017-087)

Crosshaven house (CO099-021)

The favoured location for country houses was along the river systems; there is almost an unbroken sequence of country house demesnes along the north bank of the Blackwater River between Mallow and Fermoy and up along its tributary the Awbeg. These include such grand houses as Castle Hyde (CO035-016----), Annesgrove (CO026-058----) and Convamore (CO034-034001-). Of course not all country houses are on this scale and some were just one or two stories high and three bays wide in front.

Building a country house allowed the owner to express his social standing and taste by employing an architect conversant with the latest English style. In the 18th century the formal architectural style was neo-Classical, often now called Georgian, a restraint design based on vertical and horizontal symmetry and using motifs from Greek and Roman classical architecture for its decoration. Typical features are a fanlight doorway flanked by ionic columns, sash windows that decrease in height as the building rises, and sometimes a pediment at roof level framing the centre of the front facade. Crosshaven House and Doneraile Court are classic examples of this style [7].

In the 19th century fashion becomes much looser and fancier. This might be expressed by modelling the house in the form of a medieval castle or a Tudor mansion; Mallow Castle House is an example of the latter style reflecting the heritage of its nearby 17th century predecessor (CO033-009002-). But houses like this are less numerous than their Georgian predecessors reflecting the downward fortunes of the county's landed gentry as the 19th century progressed.

The story of the county's houses is told in the book in this series *Heritage Houses of County Cork*.

The country houses were surrounded by a designed landscape called a demesne or private grounds. In most cases the demesne was defined by a high stone wall running along its boundary. North Cork has an amazing array of demesne walls, one of the finest occurs around Annesgrove House. One of the longest must be the demesne wall around Doneraile House,

Mallow Castle house (CO033-009002).

Lodge and demesne wall at Annesgrove house (CO026-028).

enclosing one of the best preserved demesne landscapes in the county. Today, Doneraile Park and the house, which was recently opened to the public, are enjoyed by locals and visitors alike. The entrance into the demesne is a gateway or number of gateways often elaborately constructed to reflect the grandeur of the place inside. Doneraile House's main entrance boasts of a fine classical archway.

There is a very impressive entrance gateway at Creagh Castle, near Doneraile (CO025-040002). This is an "immaculately tooled limestone ashlar tripartite gateway" matched by "an exquisite lodge in similar style with just a hint of Hindu Gothic." [8] Dean's recent book details an extensive range of extraordinary gate lodges and gateways that served the county's country houses [9]. Other demesne features include an open parkland, stands of mature trees, a ha – ha

Moydilliga Tower (CO037-001002).

(sunken ditch), water features and a walled garden. Demesnes were often decorated with follies and ornamental buildings [10]. Some of these are located in prominent positions and acted as "eye-catchers" in the demesne landscape, and many of these have a pseudo-castle appearance. Some of these and others also functioned as venues for tea parties when the drink became fashionable in the 18th century or as the venue for intimate dance parties. There are also towers like the tall example close to Moydilliga House east of Fermoy, which was built by the landowner to view the local hunt (CO037-001002-).

Another feature was what is known as an Ice House. These are a feature of the larger country houses and were used to store ice during the summer months; winters were colder then and ice often formed on ponds, which many demesnes featured. The ice was stored in a "well" under the ground which was covered by a vaulted circular structure in which food was stored, the building acting as a freezer. These went out of use in the late 19th century when commercial ice became available. There is an ice house accessible to the public on the Mitchelstown bypass; this was in the demesne of Mitchelstown House, a very large country house now demolished.

Vernacular houses - those houses built by local builders using traditional materials - were everywhere in 18th and 19th century Cork. They varied in size from tiny one-room cabins up to substantial two-storey "thatched mansions" reflecting the social scale from land-less labourers to substantial tenant farmers. Thatching was the favoured roofing material, especially in the north and east of the county where tillage was most prevalent. There is a wide variety of vernacular building; dwellings range from single roomed houses, of which few survive, to the larger two storey farm houses. The standard farmhouses were built in one of two standard designs: *lobby-entry* and *direct-entry*. Direct entry meant the visitor came directly through the front door into the kitchen, whereas in the other type there is a lobby inside the door allowing access either into the kitchen or into the parlour. The parlour was a room set-aside from the everyday life of the house and reserved for special occasions like *the stations*.

Thatched house, Kiltoohig, Charleville (CO002-113).

Ballysheehan 1985 (CO025-083)

Ballysheehan 2020

These buildings are perhaps the most vulnerable part of our built heritage. Many of those documented in the Archaeological Inventory of County Cork are now either in total ruin or have been removed entirely. An example of the former is the two-storey thatched house in Ballysheehan near Mallow (CO025-083----); a rare example of a *thatched mansion*. This was intact and still lived in when surveyed in 1985 but is now a complete ruin.

The story of the county's thatched houses is told in Cork County Council's booklet *Thatched Houses of County Cork*. This booklet is based on a survey of vernacular houses in the county conducted by Cork County Council in 2001. Some 187 of these had been recorded in the 1980s by the Cork Archaeological Survey allowing a contrast be made in their condition over that time. In the 1980s, 137 of these houses were inhabited and in a state of repair; by 2001 this number had reduced to 70. The loss of 50% of a building stock over fifteen years represents a serious and rapid decline. This underlines the vulnerability of vernacular architecture to abandonment and neglect.

The burning of lime as an agriculture fertilizer became widespread with the agricultural improvements of the 18th century; the 1842 Ordnance Survey maps show hundreds of these

A Limekiln (CO033-047) at Ballymagooly being recorded by a member of the Cork Archaeological survey in 1984.

Killavullen bridge (CO034-00503).

spread throughout the county but particularly in the limestone areas of North, Mid and East Cork with very few in West Cork where limestone is sparse. The kilns were nearly all of a similar design. A square stone-faced structure is built into a steep slope so that the top is at ground level on the upslope. The core of the structure is a circular well and into this layers of fuel and limestone were packed. On the down-slope face is an arched opening; this is where, when the burning is completed, the burnt lime is extracted. This is then spread on the land where it becomes an effective land improver for acidic soil when rained on. A limekiln in Castlelyons (CO045-050----) has been restored by the local community and there is an information panel explaining how the kiln worked.

County cork has a large stock of 18th and 19th century river bridges, many of them still in use. The earlier examples are hump-backed, narrow and have semi-circular arches. They also feature pointed cutwaters on the upstream side. As the 19th century progressed the construction of arches improved notably. The round arch, with its limited span, was replaced by the segmental arch which has a wider span. This reduced the bulk of the bridge and so reduced its chance of being carried away by a flood. An example of this is Mallow Bridge. The original bridge had 15 arches but only 4 of these remain (CO033-094----). The other 11 were replaced by 3 wide elegant segmental arches [11]. The story of Cork's bridges is told in a book in this series: *Heritage Bridges of County Cork*.

The great rebuilding of the late-18th/ early-19th century is nowhere more apparent than in the county's towns. In most cases the core of our towns retain the streetline they had 200 years ago and the buildings that line the streets are still of that age. There is no better introduction

Map of Mitchelstown as per the Historic Town Maps produced by Cork County Council.

to this subject than the Historic Town series of illustrated maps being produced by Cork County Council. Maps are available for Mitchelstown, Skibbereen, Kinsale, Castletownbere, Bantry, Schull, Clonakilty, Charleville, Dunmanway, Blarney and Bandon. These maps are available in local libraries and can be downloaded from www.purecork.ie/map and from the heritage publications section of www.corkcoco.ie.

Not alone are these maps decorated with wonderful colour illustrations of historic buildings of each town but the maps themselves give a vivid picture of town layout and streetscape. For example, the Mitchelstown map shows the two different elements to town's layout. The curving main street follows the line of the old road along which the town first developed. But immediately to its west is the planned layout of Kings Square and George's Street, one of the best examples of historic town planning in the county. Amongst the individual buildings featured in the map are the Market House with its pedimented breakfront, the Bridewell, the Fever Hospital, and a very elegant traditional shopfront on King's Street.

(d) Religious

Though there are a number of 18th century Church of Ireland parish churches in the county the majority of those that survive were built in the early 19th century under the auspices of the Board of First Fruits. Most of these churches are built in ancient graveyards reflecting the transfer of medieval church land to the Established Church during the Reformation. In some cases the Church of Ireland built a new church in the old graveyard but often a new site was sought for the church leaving the old graveyard as just that, its medieval church falling into disuse and ruin.

Castlehyde Church of Ireland (CO035-01702).

Magourney Church of Ireland, Coachford (CO072-00603-).

Reconstruction of a thatched chapel.

St Nichlolas Catholic Church (CO034-065).

The style of a Board of First Fruits Church is distinctive. A rectangular church whose windows have Y-tracery in a modest Gothic style; some of the larger churches have an apse or a transept. At the west end is a tower, sometimes with a spire. The interior is plain with a flat plaster ceiling. Far too many were built for the size of the county's Anglican congregation and many are now abandoned ruins; the dwindling of their congregations was already apparent in the late 19th century but accelerated in the 20th century, post-Independence. Unfortunately there are many examples of these abandoned churches either ruined or falling into ruins.

Many of the county's Church of Ireland parish churches have been abandoned and fallen into ruins or are on the verge of being closed for religious purposes; there simply isn't the congregation to keep them in use and maintained. The fact that many are located in historic graveyards complicates the situation regarding their future use and ownership. The vacated Church in Castle Hyde (CO035-01702) graveyard still retains its roof but not for much longer as weather takes its toll.

Though most of the Catholic churches in the county were built after Catholic Emancipation in 1827, a number of earlier churches survive. During the time when the Penal Laws were enforced mass was celebrated in *mass houses* - ordinary dwellings used occasionally for that purpose. As the enforcement of these laws relaxed somewhat in the 18th century, chapels were built, often in remote locations, for the celebration of mass. At first these were no different from secular vernacular buildings with thatched roofs - hence the term *thatched chapel*, and were located away from the busy thoroughfare. Very few of these physically survive though the location and knowledge of them is strong in local lore. An example of one that does survive is the ruined structure built in a remote location north of Carriganimmy, the chapel of *Carraig na Speireoige* (CO059-097----). Just three of the chapel's low stone walls stand now to a maximum height of 1.5 meters.

As things relaxed further into the 19th century T-plan and rectangular churches known as Barn Churches were built, elegant yet modest in appearance but still obviously religious buildings. They generally have modest bell cotes atop one of the gables as opposed to substantial bell towers as seen in the Church of Ireland churches of the time. St Mary's Church at Ballinrostig, in East Cork, is a fine example of this type (CO088-118----). A date stone on the north transept

reads "Built in 1830. The other part July 1804." St Nicholas' church in Killavullen is a good example of a Barn church in a prominent location in 1839 replacing an earlier chapel on one of its side streets.

After Catholic Emancipation in 1827 church building progresses rapidly and whilst the earlier post-Emancipation churches were built in a restrained neo-Classical style it wasn't long before flamboyant neo-Gothic churches with tall spires built in prominent locations became the norm. The story of the county's churches is told in the book in this series entitled *Heritage Churches of County Cork*.

After the religious wars of the second half of the 17th century and the passing of the penal laws in 1695, the practice of Catholic mass became difficult and dangerous. Isolated locations were therefore selected for worship and so a natural rock or a boulder became a "mass-rock." There are 101 on the archaeological record across the county. Traditions of these places are preserved in place names like *Carrraig an Aifrinn* and *Clais an Aifrin*. The practice was on the wane by the middle of the 18th century when *mass-houses* were allowed and then chapels built for worship. An example of a mass rock is in Carker Middle (CO017-028----), accessible beside a track in a Coillte forest. The altar is a flat-topped conglomerate rock (2 meters x 2 meters and 1.4 meters in height).

The above is just a sample of the County's rich heritage of 18th and 19th century buildings and structures. Each has its own story to tell and the purpose of archaeology is to let that story be told. The more these buildings are allowed to tell their own story the more they will be valued. This is why it is so important to properly record them as archaeological monuments before they are either swept aside by decay, the imperatives of progress or altered and changed for a new use.

Inchigeelagh Mass Rock (CO081-013--).

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[10] Howley, J. *The Follies and Garden Buildings of Ireland*, Yale University Press, New Haven

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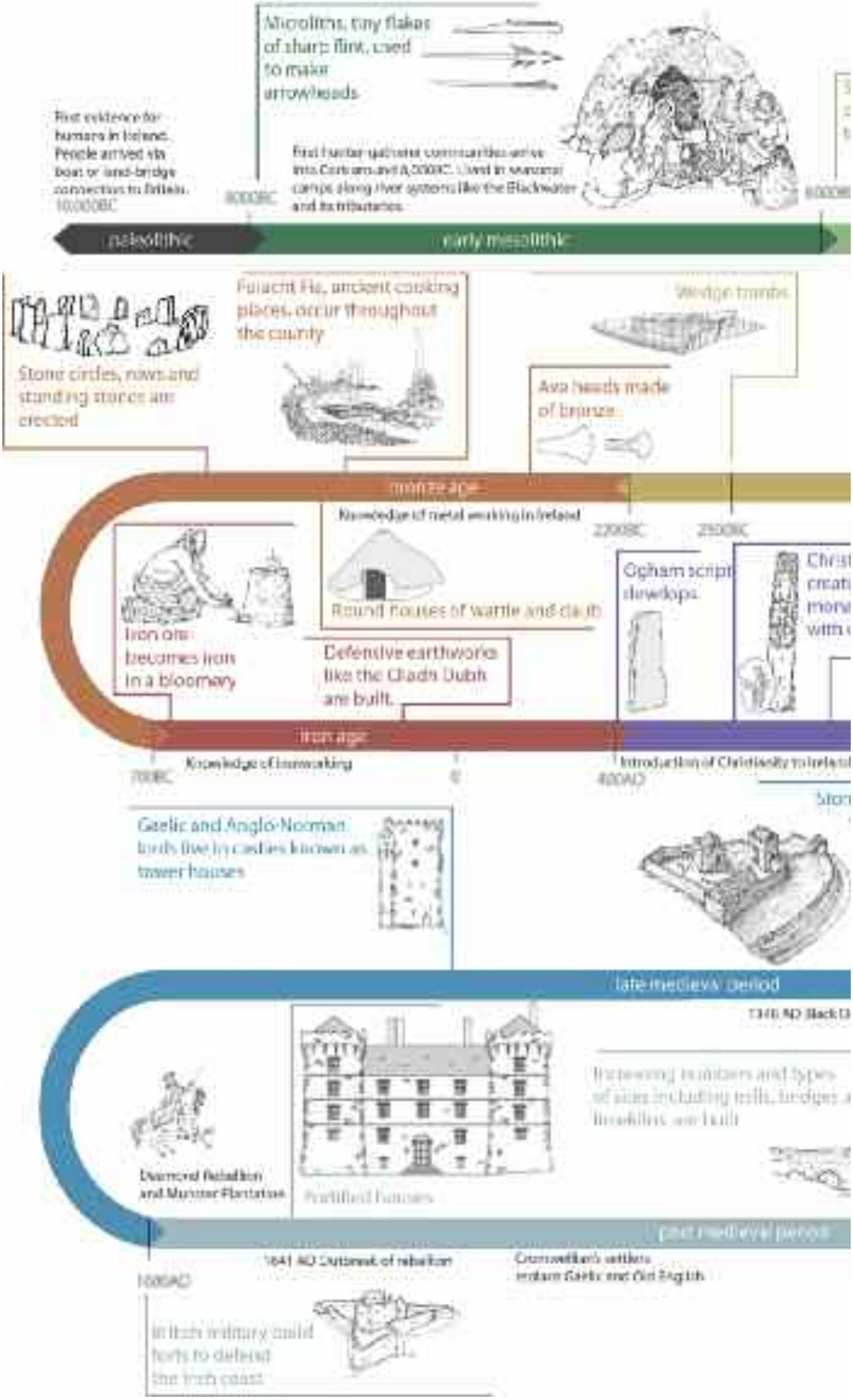
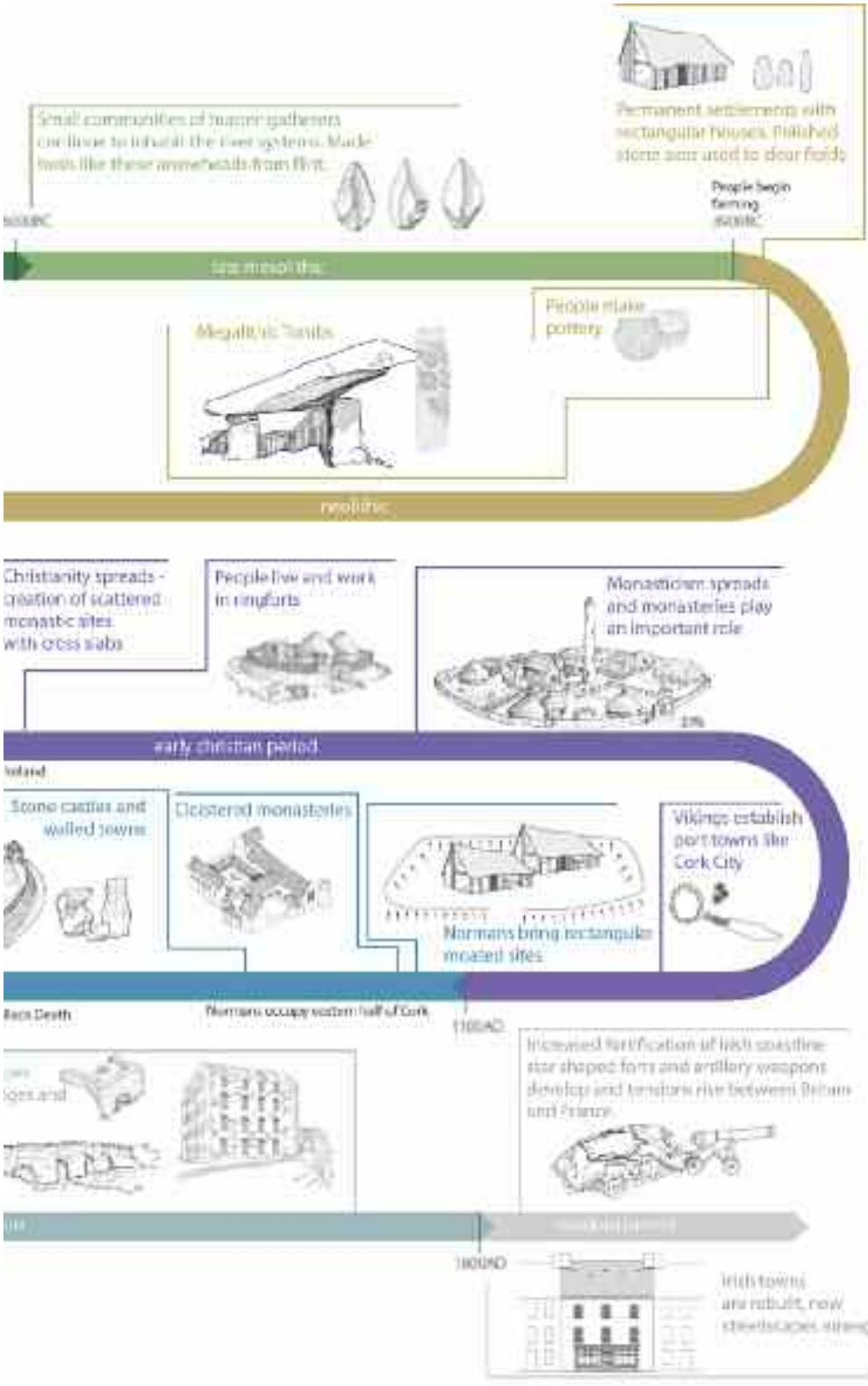
Timeline and Exemplars:
A Timeline of Key Events and a Selection of 30 Sites from County Cork's Archaeological Heritage

As the preceding chapters have conveyed, County Cork's archaeological heritage is not only a fascinating one, but a heritage that nearly every parish can relate to, with so many different field monuments often in the one parish, and sometimes in the one townland.

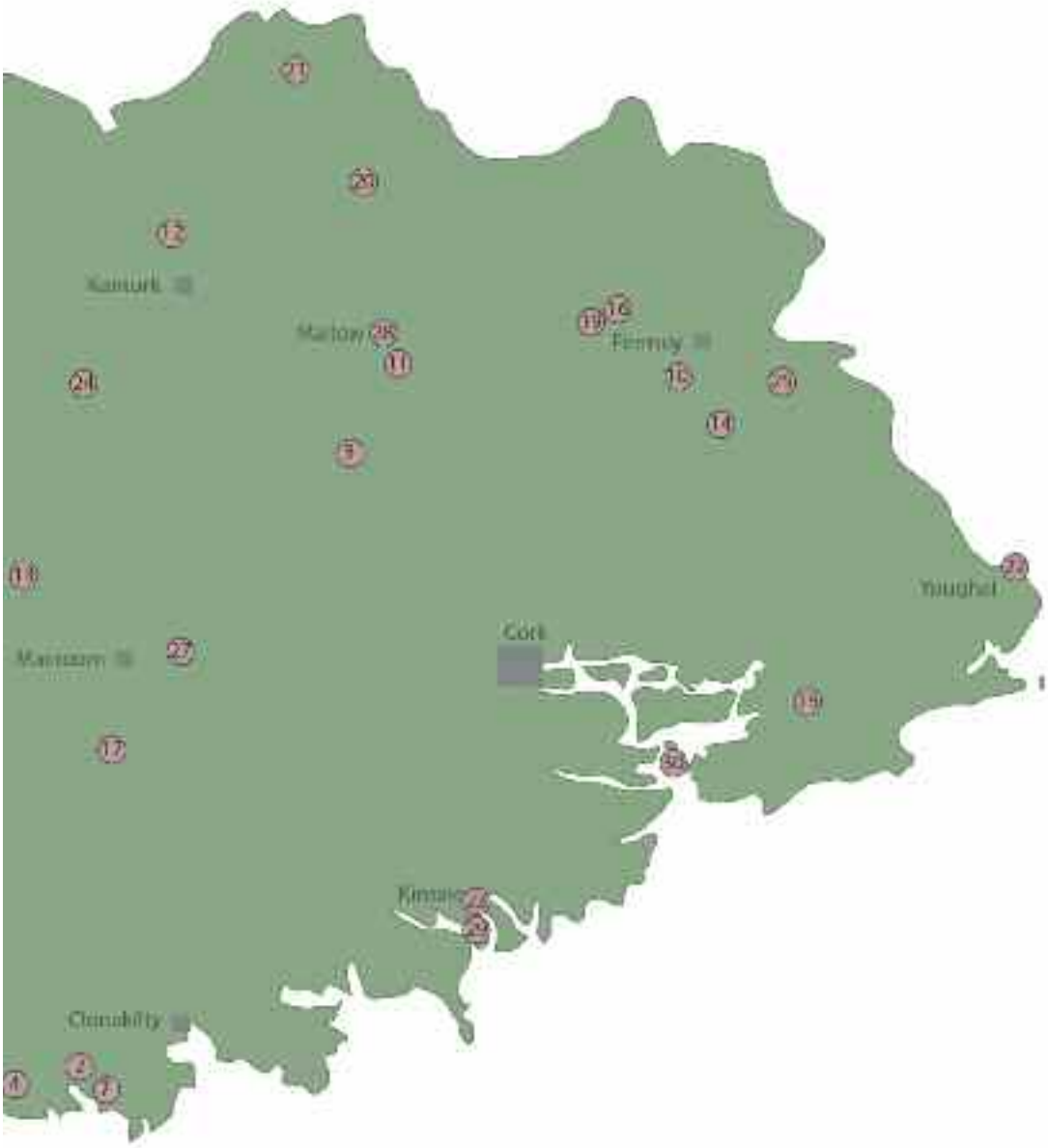
Given the vast range of archaeological sites that exist within the county it would be quite a difficult task to include them all in one chapter. However, a selection of 30 sites has been specifically chosen, to give the reader an informed overview and indeed appreciation, of the county's archaeological heritage. The examples selected, as one can see from the accompanying map (pp. 162-163), give a good geographical account of the county's archaeological heritage and a timeline has also been provided (pp. 160-161), detailing some of the key moments in County Cork's archaeological past over the years. The chapter begins with Cape Clear (Oileán Chléire) Passage Tomb - a unique site in the county of Cork.



Microliths, tiny flakes of sharp flint, used to make arrowheads
First evidence for humans in Ireland. People arrived via boat or land-bridge connection to Britain.
10,000BC
8000BC
paleolithic
early mesolithic
Fulacht Fia, ancient cooking places, occur throughout the county
Stone circles, rows and standing stones are erected
Wedge tombs
Axe heads made of bronze
bronze age
Knowledge of metal working in Ireland
2200BC
2500BC
Round houses of wattle and daub
Ogham script develops
Iron ore becomes iron in a bloomery
Defensive earthworks like the Cladh Dubh are built.
iron age
Knowledge of ironworking
700BC
0
400AD
Gaelic and Anglo-Norman lords live in castles known as tower houses
late medieval period
Desmond Rebellion and Munster Plantation
Fortified houses
post medieval period
1641 AD Outbreak of rebellion
1600AD
British military build forts to defend the Irish coast


Permanent settlements with rectangular houses. Polished stone axes used to clear fields
People begin farming
Megalithic Tombs
People make pottery
Christianity spreads - creation of scattered monastic sites with cross slabs
People live and work in ringforts
Monasticism spreads and monasteries play an important role
Stone castles and walled towns
Cloistered monasteries
Normans bring rectangular moated sites
Vikings establish port towns like Cork City
Increased fortification of Irish coastline
Irish towns are rebuilt, new streetscapes emerge


1 Cape Clear Passage Tomb
2 Ahaglashin Portal Tomb
3 Altar Wedge Tomb
4 Dromberg Fulacht Fia
5 Kealkil Stone Circle
6 Brenny Mór Boulder Burial
7 Burgalia Standing Stone with Rock Art
8 Seisear Stone Row, Beenalaght
9 Standing Stone Cousane Gap
10 Carntierna Hill Fort, Corrin Hill
11 Greenhills Ogham Stone
12 Kilnacow Early Ecclesiastical Complex
13 Baile Bhuirne Monastic Site and Holy Well
14 St. Bridget's Well
15 Cloyne Round Tower
16 Lisleagh Ringfort
17 Cahervagliar Ringfort
18 Knockdrum Stone Fort
19 Glanworth Castle
20 Ballybeg Abbey
21 Glengarriff Moated Site, Newtownshandrum
22 Youghal Town Walls
23 St. Multose Church
24 Drishane Tower House
25 Coole Church
26 Sherkin Friary
27 Bawnatemple Graveyard (Old Canovee)
28 Mallow Castle Fortified House
29 James Fort
30 Cork Harbour Collection


Kanturk
Mallow
Fermoy
Youghal
Cork
Macroom
Kinsale
Clonakilty

Exemplar 1

Cape Clear Decorated Stone and Passage Tomb

Cape Clear Stone. Image courtesy of Cork Public Museum.

This stone is unique in County Cork as it is the only example we have of passage tomb art. It dates to the Neolithic period and was carved sometime around 3,000 BC. The best known passage tomb in the country is Newgrange in Co. Meath and tombs like this are very rare in the South-West of Ireland. Because it is unique it has a particular story to tell about life in Cork some five thousand years ago but that story is as inscrutable as the design on the stone itself.

The stone was discovered on Cape Clear Island in 1880 by workmen clearing stones from a field. The land owner then presented the stone to the parish priest, who lived on Sherkin Island. The stone languished in the presbytery grounds on Sherkin until 1954 when its significance was realised. It was then presented to the Archaeology Department in UCC where Prof O'Kelly identified it as containing the same type of carved art as that on the great *passage tomb* at Newgrange.

Passage tombs are one of the three types of megalithic tomb built in Ireland during the Neolithic period (4,000 BC – 2,500 BC) - the other two are *portal tombs* and *court tombs*. They are called passage tombs because a passage led from an entrance into a chamber in the centre of the tomb. At Newgrange this chamber is famously lit-up by the rising sun at the mid-winter solstice (cloud cover allowing). These are not just burial tombs but places people came back to at certain times of the year to perform ceremonies and to honour the revered dead; they have been called *Houses for the Dead*.

The stone intrigued O'Kelly because there were then no known passage tombs in either Cork or Kerry. How did this stone end up on an island off the Cork coast when the nearest passage tomb was in East Waterford? The problem was partially solved in 1984 when an archaeological survey of Cape Clear identified a collection of stones on the highest point of the island as the much-ruined remains of a passage tomb. And since then another passage tomb has been discovered not far away on a small island in the Illen River near Baltimore (CO150-057----).

The Cape Clear stone is certainly one of the finest pieces of art from the entire prehistoric period in Cork. Like the decorated stones in other passage tombs, the art on the Cape Clear stone appears to be both deliberate and random at the same time. The full design is lost because part of the decorated surface is broken off. Centrally placed on the decorated surface are three spirals, one above the other- half of the lowest is missing because of the break. These are flanked by wavy zigzag lines; a single one on top, a double line on one side, and three separate chevrons on the other. Like all the carved art on passage tombs the pattern appears abstract though one feels it has a meaning but one that is now beyond our comprehension. But this pattern must have meant something to those who carved it some five thousand years ago- if only the stones could speak!

The Cape Clear stone is now on display in Cork Public Museum. The passage tomb on Cape Clear (CO153-010----) is located on privately owned land and is protected under Section 12 of the National Monuments Acts (1930-2004).

Exemplar 2

Ahaglashlin Portal Tomb

Ahaglashlin Portal tomb side view looking west.

Visible from the main Clonakilty-Skibbereen road (N71) on the steeply inclined rocky face rising from the south bank of the Owenahinch River, is a large stone that has a claim to be part of the oldest standing structure in the county. This is the capstone of a *portal tomb* built during the Neolithic period (4,000-2,500 BC). These tombs are never too far from the sea and this example is just 1km north of the beach at Owenahincha and just 1.5km from the mouth of Roscarbery Estuary.

The structure has all the characteristic form of a portal tomb with six large stones forming the burial chamber. The sloping capstone that one can see is the roof of the chamber and the other five are uprights supporting this. Each side is formed of two end-to-end stones and the back is closed by the fifth upright, thus one side is open. The opening faces east and there may have been a forecourt judging by some low stones that angle out from the opening. Over the years the uprights have leaned inwards, but it is a testimony to the builders that despite this movement the basic structure still stands. The tombs were more a repository for human remains than an actual burial place, as shown by the archaeological excavation at Poulnabrone, Co. Clare. Here the remains of 33 individuals were identified by only their de-fleshed bones. These were placed in the tomb in no particular order but in something of a jumble. This is a recurring theme in megalithic tombs - that they were not so much burial places but sacred

tombs that people came back to repeatedly for sacred purposes to do with the revered dead - they have been called *Houses for the Dead*.

The first edition of the Ordnance Survey's six-inch map names the site *Callaheencladdig*. This name, and the legends associated with it, fascinated the antiquarian John Windele when he visited and recorded the tomb in the mid-19th century. He gives the name as *Cailleichin an Chladdig* - the little hag of the seashore. Such an identification of a hag or witch with an ancient monument is common throughout the country. A local legend collected by Windele was that the *Cailleichin* could be heard at the tomb lamenting whenever a person died in the locality. William Brolaise, another 19th century antiquarian, in his monumental study *The Dolmens of Ireland*, identifies Windele's hag with the Cliona of legend and he was told, when he visited the site that she "inveigled young fellows to the rock whence they never returned".

The two other Portal tombs in the County are at Arderrawinny (CO148-011----) on Mizen Peninsula and Rostellan (CO088-010----) near Midleton. These, along with the passage tombs on Cape Clear (CO153-010----) and that on a small island in the Ilen River (CO150-057----) near Baltimore, have a claim on being the oldest standing man-made structures in the county. None of them have been archaeologically excavated but any of the three portal tombs have probably the strongest claim as this type of tomb dates back to around 3,800 BC, very early in the Neolithic period.

Ahaglashlin Portal tomb (SMR No. CO143-034----) is located on privately owned land and is protected under Section 12 of the National Monuments Acts (1930-2004).

Front of Ahaglashlin tomb.

Exemplar 3

Altar Wedge Tomb, Toormore

Altar Wedge Tomb viewed from the west. Image courtesy of Connie Kelleher.

In recent years Altar wedge tomb has become one of the most visited prehistoric monuments in Co. Cork as it is located roadside on the Wild Atlantic Way between Schull and Goleen on the southern shore of the Mizen Peninsula.

Altar is a *megalithic tomb*, literally a tomb built of large stones. One of the most remarkable things about these tombs is that of the hundreds that survive in Ireland nearly all can be classified into four types: *portal tombs, passage tombs, court tombs* and *wedge tombs*. The first three types are Neolithic in date, that is built between 4,000 and 2,500 BC but wedge tombs are later dating to around 2,200 – 1,800 BC, so the earlier part of the Bronze Age. Another big difference is that the earlier tombs are concentrated in the northern half of the country whereas wedge tombs are more numerous in the south and west. In Cork we have three *portal tombs,* two *passage tombs,* no *court tombs* but 114 *wedge tombs*.

As the name suggests the architecture of a wedge tomb is like a wedge in that the front is higher and wider with a gradual reduction in height and width towards the back. The tomb itself is formed of two lines of upright stones on which a number of large capstones or roof stones rest. The front is open and the back closed by another upright stone. Thus a chamber is created where the revered dead are placed; these tombs have been called *houses for the dead*.

Another notable characteristic feature of wedge tombs is their orientation, which is that they

all face towards the south-west. This seems to be tied in with the mid-winter solstice when the sun sets in that direction and there are other indications that Bronze Age people in the general West Cork area were sun worshipers or at least that their religion was tied in with the movement of heavenly bodies and especially the sun.

Altar tomb was archaeologically examined by Prof. William O'Brien of UCC in 1989. He found the interior of the tomb had been reused for ritual purposes for up to two thousand years after it was built so little of the original burials were left. But some cremated human bone found just inside the entrance produced a radiocarbon date of around 2,100 BC and this seems to date to the construction of the tomb. A very unusual find here was an arc of stones across the entrance as if defining the limit of the tomb's *sacred space*. Included in the arc are some white quartz stones and lumps of whale/dolphin bones which must have had a sacred meaning. Quartz has continued to have a "sacred" aspect right down to recent times and continues to be used for grave decoration.

The tomb sits on a short promontory with a good view across the bay. On the far side of the bay is the pointed tip of Mizen Peak and the tomb is deliberately set to face in that direction; this peak has been identified as the *Carn Uí Néid* of early Irish legend. These tombs continued to fascinate people over the millennia since they were built and are often entwined into the myths and legends of much later periods.

Altar Wedge Tomb (CO148-005----) is a national monument and therefore protected under Section 14 of the National Monuments Acts (1930-2004).

Altar Wedge Tomb. Image © Photographic Archive, National Monuments Service, Government of Ireland.

Exemplar 4

Drombeg Fulacht Fia, Drombeg, Glandore

Excavated Fulacht fia with stone lined trough, adjacent well and enclosing stone faced bank with gap for entrance on right.

Whatever we know or don't know about Bronze Age people in Cork we know one thing for sure, they boiled a lot of water. We know this because of the *fulacht fia*, the most numerous archaeological monument in the county. To date there are 3338 examples identified in the county and far exceeding any other county. This example at Drombeg has been selected because it was excavated and is accessible to the public. It is located right beside the well-known and frequently visited stone circle. It seems that those who performed rituals at the stone circle during the mid winter solstice sun set, were also feasting here, hence the nearby fulacht fia.

Prof. Michael O'Kelly, UCC, who excavated a fulacht fia at Ballyvourney in the 1950s was the first to reconstruct what happened at these sites. He based his experiment on a 17th century book, Geoffrey Keating's *Foras Feasa ar Éirinn*. In this book the process at the fulacht fia is described as follows:

"And it was their custom with whatever they had killed to kindle ranging fires theron, and put into them a large number of emery stone; and to dig two pits in the yellow clay put some of the

meat on spits to roast before the fire; and to bind another portion of it with suga´ns in dry bundles, and to set it to boil in the larger of two pits, and keep plying them with the stones that were in the fire until they were cooked."

O'Kelly tried this and proved it to be a very efficient way of cooking a large joint of meat with the most basic of equipment. A pit or trough is dug in the ground and filled with water. Beside it a fire is lit and into it are placed stones. When these are red hot they are transferred into the trough and soon the water is at boiling point. Then the joint of meat - wrapped in straw as Keating suggests - is lowered into the water. At twenty minutes to the pound and twenty minutes over, the meat is cooked.

At the end of each cooking a residue of heat-shattered stones is cast to one side with the embers of the fire. As the trough is used again and again this refuse builds up into a horse shoe shaped mound over time. These survive as low mounds in boggy ground or close to a stream. Many of these were levelled out over the many centuries and can now be recognised as spreads of dark material in a ploughed field.

Typical spread of Fulacht fia material in ploughed field.

Hut sites at Drombeg.

In 1957 archaeologist Edward Fahy excavated the fulacht fia and hut site at Drombeg. The *fulacht fia* consisted of a stone-lined trough beside which was a hearth, where the stones were heated. This was enclosed by a stone-faced bank into which was built a spring-fed well. This is a more sophisticated arrangement than was normal at these sites and probably reflects its frequency of use and its importance as part of the *stone circle* ritual complex. A paved path lead to the arrangement of two conjoined circular huts that were interpreted as a food preparation area. A roasting oven built into the wall of the smaller hut indicates the sophistication of the food preparation at the site.

New examples of *fulacht fia* are being discovered all the time. The current known examples are available on **www.archaeology.ie** but if walking in boggy ground keep an eye out for these low kidney-shaped mounds of heat-shattered stones, or if driving past newly ploughed fields, spot that distinct spread of black soil.

Drombeg Fulacht Fia (CO143-051003) and Hut sites (CO143-051001-) are National Monuments and are protected under the National Monument Act (1930-2004).

Exemplar 5

Keallkill Stone Circle, Keallkill, West Cork

Keallkill Stone Circle from south.

Stone circles were erected by people during the later Bronze Age (1,500-800BC). There are 100 stone circles in County Cork, and these are mainly found in West Cork and the upper reaches of the Lee Valley in Mid Cork. They are all built to a similar design and tell us a lot about the beliefs of people in this part of the world during the Bronze Age. Keallkill is selected not because it is one of the more impressive examples, some of the large circles have up to nineteen stones, but because, having just five stones, it is more typical of the majority in the county that also have just the five stones.

Keallkill stone circle occupies a terrace on a north-facing slope overlooking a valley that runs west towards Bantry Bay. The site commands an extensive view in all directions except to the south where the ground is rising. Kealkill is one of the smallest of the circles but is typical of the West Cork/Kerry stone circles group. The number of stones in the circle is always uneven, here there are five, one stone, the lowest in the circle, was placed at the south-west side;

Radial Stone cairn in foreground with adjacent Stone Pair, the stone circle visible in the background.
Image courtesy of Áine Brosnan.

archaeologists term this the *axial stone*. Opposite this stone, at the north-east side of the circle, are the two tallest stones, the *portal stones*. Not all survive in this condition, with a number of stones fallen. One of the best-known examples is at Drombeg stone circle, near Glandore. Here, a line drawn between the two portal stones, the centre of the circle and the mid-point of the axis stone, lines up with a notch on the horizon where the mid-winter sun sets - the winter solstice. Kealkil, like many of West Cork's stone circles, does not line up with any celestial event that can be exactly pin-pointed today but then the sky was somewhat different three and a half thousand years ago.

These are prehistoric farming communities for whom knowledge of the changing seasons was of vital importance. To achieve this they were reliant on observing the heavenly bodies, the sun, moon and stars, to know when in the year to sow and plant crops and husband their animals. This is what they were building and using stone circles for - to ensure that their farming was fruitful by pleasing their heavenly gods.

Kealkill was excavated by Seán P. Ó Ríordáin in 1938. The excavation was part of the Government's Special Employment Scheme and employed six men for four weeks. The excavation was disappointing as no artefacts were found. The one interesting feature was two shallow trenches that intersected at a point in the interior, in line with the circle's orientation, which is the line drawn through the centre of the *axial stone* and mid-way between the two *portal stones*. This led Ó Ríordáin to the opinion that the trenches held wooden beams that supported an upright pole where they intersected and that this pole played a part in the rituals performed at the circle.

Sharing this narrow ledge with the stone circle is a *stone pair* and a *radial-stone cairn* indicating this place as a sacred space with a number of different elements represented by the three different monuments.

Kealkill Stone Circle (CO106-006001-) is a national monument and therefore protected under Section 14 of the National Monuments Acts (1930-2004).

Kealkill Stone Circle from south west.

Exemplar 6

Breeny More Boulder Burials, Kealkill, West Cork

Boulder burials to right. Image courtesy of Aine Brosnan.

Boulder burials belong to the later Bronze Age (1,400 – 1,200 BC) and have sometimes been seen as the very tail end of the megalithic tomb tradition. They are a uniquely Irish monument type and of the 141 examples so far identified in the country, 96 of these are in the county of Cork. The largest concentration within the county is on the Beara Peninsula where 38 are located.

Here at Breeny, near Kealkill in West Cork, we have four fine examples set inside a stone circle. Each consists of a large boulder (average size 1.8 meters by 1.5 meters by 1 meter) which is raised above the ground by a number of smaller support stones, usually 3 or 4; the height raised is small, rarely more than 0.25 meters. These support stones are not set in sockets but just rest directly on the ground. Although most examples occur on their own, in six cases they are in a pair; in two cases as a trio and in three cases, including at Breeny More, as a group of four. They are sometimes found in close proximity to other archaeological monuments, most numerously with stone circles (8 examples) including here at Breeny More. A number of the boulders have cup-marks cut into their upper surface linking them with the *rock art* of the period.

The first boulder burial archaeologically excavated was at Bohonagh (CO143-032003-) near Clonakilty. This was excavated in 1959 by Edward Fahy in conjunction with his excavation of the stone circle that lies just 20 meters from the boulder burial. He found that the boulder burial consisted of a large rounded stone, approximately 5 tonnes in weight, supported by three low support stones - the boulder is just 20 centimetres clear of the ground. The excavation found a shallow pit under the boulder which contained a small amount of cremated human bones.

However, William O'Brien failed to find any human remains at the examples he excavated at Cooradarrigan, near Schull (CO139-031001- & 002-) in 1988 and the following year at Ballycommane, near Bantry CCO131-005002-). This absence of burial remains led the excavator to speculate that the interment at these monuments may have just been a token sprinkling of cremated bone that had not survived in the acidic soil. O'Brien also noted that there is a tradition in the later Bronze Age of depositing just a small amount of cremated human remains in a pit rather than all the remains of a cremation pyre. Boulder burials may well be part of this tradition but where the deposition is marked by a large boulder.

In this example the four boulder burials are placed centrally within the stone circle. The site has not been archaeologically excavated so we don't know the relationship between the two monument types except that they are both of later Bronze Age date.

Breeny More Boulder Burials.

Breeny More boulder burials (SMR CO106-005002-) and the stone circle (SMR CO106-005001-) that surrounds them are national monuments and protected under Section 14 of the National Monuments Acts (1930 – 2004).

Exemplar 7

Rock Art on Burgatia Standing Stone, Rosscarbery

North West face of stone featuring Rock Art.

This tall standing stone was erected sometime in the Bronze Age (2000-800 BC). A striking feature of the stone is the decoration on one face. This is *rock art*, a type of decoration that is found on some Bronze Age monuments. It is prominently located in a pass between low hills and overlooks the inner part of Rosscarbery estuary.

The stone is nearly 2 meters tall and like most stones erected in the Bronze Age has a distinct wide and narrow side aligned on its long axis north-east/south-west as seen in most Bronze Age ritual monuments. The stone is decorated with 24 cup marks and one cup-and-ring but they seem randomly scattered across the north-west face of the stone.

Rock art is one of the most intriguing mysteries of the Bronze Age. They appear on rock outcrops, on standing stones and other archaeological monuments at this period. There is a noticeable concentration of these carvings along the coastline from Rosscarbery west to the end of the Mizen Peninsula.

The carving was undertaken with a hard stone point hammered against the rock face. A limited number of motifs were used, the most common being a circular round-bottomed depression known as a *cup mark*. In many cases this is the only decoration applied; in Cork, those stones with just cup marks are three times more numerous (65 examples) than those with more complicated arrangements (22 examples).

Where the decoration is more elaborate we often see the cup mark with a ring around it (cup-and-ring). If there is more than one ring, the rings are gapped and the gaps line up. Meandering lines are often used, sometimes making a pattern but not one that is clearly pictographic.

There are many ideas about what art like this "means" but a convincing explanation or solution to what it represents has proved elusive though there must be some significance to the symbols. The decoration often seems haphazard more like a doodle that a deliberately constructed design.

Burgatia Standing Stone (SMR CO142-025----) is located on privately owned land. It is clearly visible from the N71 road. It is protected under Section 12 of the National Monuments Acts (1930-2004).

South East face of stone with Rosscarbery inlet in the background.

Exemplar 8

An Seisear Stone Row, Beenalaght, Bweeng

An Seisear Stone Row. Image courtesy of Donie O Sullivan.

The Stone Row at Beenalaght is situated on the southern foothills of Bweegduff Mountain, c. 2km south west of Bweeng. It was erected during the Bronze Age (2000-800 BC) as a special place of ceremony for certain times of the year.

The overall length of the row at Beenalaght is 11 meters. The tallest stone is at the NE end, nearly 3 meters in height but the stone at the south-west end is nearly as tall at 2.7 meters. The row was originally six upright stones but one of these has fallen and remains now where it fell.

Stone rows are defined as three or more standing stones set closely together along a straight line aligned on a south-west/north-east axis. This orientation was very important in the Bronze Age and it turns up consistently in the burial and ritual monuments of this period. The longest rows have six stones and the shortest three. In some cases the stones are graded in height with the tallest at one end of the line but in this case, in Beenalaght, the two tallest stones are at either end. There are 83 examples in the County, the majority located in West and Mid Cork.

Archaeological excavations at stone rows have not been very informative, often finding little more than the sockets for the stones themselves. This is not surprising as these are neither places of burial where human remains might be found, nor habitation where the remains of occupation might survive. At most "ritual" sites little has been left behind for archaeologists to discover save the stones themselves, so it is very difficult to find out what exactly took place at a monument like a stone row. Excavations have produced some radiocarbon dates that place *stone rows* in the later Bronze Age period around 1,500 BC, roughly the same age range as *stone circles* to whom they must be related in some way.

The name *An Seisear* is Gaelic for *The Six*, and perhaps when this monument earned this name all six stones were then standing.

An Seisear Stone Row (SMR CO050-009----) is located on private land. It is visible from the R619 c. 1.5km south of Bweeng. It is protected under Section 12 of the National Monuments Acts (1930- 2004).

Exemplar 9

Cousane Standing Stone, Kealkill

Cousane standing stone in its picturesque setting. Image © Photographic Archive, National Monuments Service, Government of Ireland.

There are over one thousand five hundred single standing stones on record in County Cork and most of these were erected in the Bronze Age (2000-800 BC). They belong in the "ritual" category with other monuments of this period like stone circles and stone rows.

This stone is named "Gallaun" on the 1840 six-inch map, a common Gaelic term for a tall standing stone. It is positioned in a commanding position in the Cousane Gap, overlooking Bantry Bay to the west. It is 1.85 meters in height and rectangular in plan with its long-axis aligned north-east / south-west. This orientation was very important in the Bronze Age and it turns up consistently in the burial and ritual monuments of this period.

Given the wide variety and numbers of standing stones, it is often difficult to place them in an exact context or date. One purpose assigned to standing stones is that they may have marked ancient routeways and this example at the summit of the Cousane Gap would seem a likely candidate; route markers are important in heavily wooded landscape as this part of the county was at that time. Other purposes they may have served is as boundary markers between tribal territories, marking where an important event took place or had some form of "magical purpose" related to cosmological beliefs; this latter might be tied into their orientation. Some are burial monuments; two examples in the county, at Killountain (CO110-005----) and Moneyreague (CO093-033----) were found to mark a burial when archaeologically excavated. However, other excavations of standing stones in the county and elsewhere have found no evidence for burials and it seems unlikely therefore that one of the primary functions of Bronze Age standing stones was to mark a burial.

Cousane Standing Stone (SMR CO092-054----) is located on privately owned land. It is visible to the north from the Dunamnway to Glengarriff road (R585). It is protected under Section 12 of the National Monuments Acts (1930- 2004).

Exemplar 10

Carntigherna (Corrin Hill) Hillfort, Fermoy

Aerial image of site.

Carntigherna, the hill that overlooks Fermoy, otherwise known as Corrin Hill, is mostly covered by a Coillte forest but its summit is clear and here we find the remains of a hillfort, one of only five examples in the county.

The top of Carntigherna is encircled by substantial remains of a dry-stone bank or rampart enclosing an area of 7.2 acres, the enclosing element is more elaborate in the north-western quadrant and appears to be the remains of a defended entrance. This discovery was made by a survey of the hillfort in the 1990s by the Discovery Programme's Ballyhoura Hills Project led by archaeologist Martin Doody. Their plan shows the rampart encircling a roughly oval area (240 meters north-south by 160 meters east-west) at the top of the hill with the summit at its centre. Doody described the rampart as of dumped-stone construction with a base width of approximately 9 metres. The rampart takes advantage of the natural breaks in slope around the hillside so that its constructed height (as it survives) is rarely more than 1 metre. However, its external profile, including both the height of the rampart and the natural slope, is up to nearly 5 metres in places – a formidable defensive feature. The entrance is a staggered affair with a narrow gap in the main rampart roughly 25 meters south with a break in the outer rampart. This outer rampart runs roughly 15 meters outside the main rampart from west clockwise to north. This is all quite difficult to see on the ground but some of the ramparts are apparent.

Carntigherna is a very strategic location with a commanding view from north-west clockwise around to the south-west covering most of the eastern end of the Blackwater River valley between the Nagle and Ballyhoura hills. The M8 motorway that crosses close to the foot of Carntigherna is following an ancient routeway crossing the Blackwater by a ford somewhere

in the region of the bridge in Fermoy; the hillfort is in an ideal location to oversee this traffic. Caherdrinny Hillfort (CO019-097003-) 12.5 kilometres to the north is the nearest hillfort and interestingly is visible from the summit of Carntigherna. Both hills are located immediately west of the M8 motorway and both clearly visible from it.

Recent archaeological excavations of hillforts, and particularly at another Cork example at Clashanimud (CO096-034----), date their construction not to the Iron Age, as had initially been suspected, but back into the later Bronze Age, 1,200 to 800 BC. This eliminates the possibility that they were built by Celtic tribes invading the country sometime after 500 BC. As of yet their function is unclear but what is clear is that they are serious large defensive enclosures with a great deal of effort and resources going into their construction. The recent identification of 14 hut sites outside the hillfort at Caherdrinny, if contemporary with the hillfort, is an important discovery as they might contain important clues as to who built these impressive but enigmatic monuments.

Another monument type that might be related to hillforts are coastal promontory forts, like the Old Head of Kinsale (CO137-007----). Some 131 of these are found all along the Cork coastline but even less is known about their date and function than in the case of hillforts.

Carntigherna Hillfort (CO037-049001-) is a national monument protected under Section 14 of the National Monument Acts (1930-2004). It is in the care of the Office of Public Works and accessible via a forest track from a public car park at the foot of the hill.

Hillfort ramparts.

Exemplar 11

Greenhills Ogham Stones, Burnfort, Mallow

Greenhills Ogham Stone

Just south of Mallow, close to the village of Burnfort, are two stones that are inscribed along their edges with ogham letters. These letters are a script, not a language - the language of the inscriptions is Old Irish and these are the start of our history, the oldest writing we have in Ireland. In fact this is the oldest writing to survive in a vernacular language north of the Alps so these stones are unique in European literary history.

The upright tall slim stone stands 2.5 meters in height; the second stone was found nearby in 1906 and placed against a field boundary. They both bear an ogham inscription. Ogham is a script in which groups of between one and five incised long or short lines cut along the edge of a stone, represent letters of the Roman alphabet. The letters are read upwards along one edge of the stone and sometimes continue down another side. The inscriptions follow a fairly rigid formula, taking the form of a person's full name, starting with a first name, then the father's name (after the word MAQI- the ancient form of Mac). Sometimes this is followed by the word MUCOI introducing an ancestral or tribal name. The name is usually in the genitive form implying the inscription should be read as: "this is the stone of X the son of Y of the tribe Z."

The inscriptions on the tall stone standing in the field read: "TRENU MAQI MUCOI QRITTI". The inscription on the stone leaning against the field

boundary reads: "CATTUBUTTAS MAQ..." (this final word is broken at the end but probably had an "I" at the end for MAQI). Who these people were we don't know and when and why they had these stones inscribed and stood in Greenhills we don't know, but they have left us two very intriguing inscribed stones to puzzle over.

There is no universal agreement amongst scholars regarding the purpose of ogham stones. Their relationship with Christianity is also oblique; there are ogham stones to which a cross has been added but also cross-inscribed stones to which an ogham inscription has been added. It is also unclear how old the earliest ogham stones are. These appear to pre-date the arrival of Christianity so a date in the early 4th century AD is sometimes postulated for the earliest.

A brief excavation was carried out in 1985 by State archaeologist Con Manning around both stones in advance of protective work. No features or finds were made, however Manning was satisfied that the stone standing in the field in its original position does not mark a burial. This confirmed the long-held opinion that these stones are not burial markers.

Greenhills Ogham Stones (CO049-052---- & CO050-155----) are a national monument and protected under Section 14 of the National Monuments Acts (1930-2004). The stones are accessible via a roadside stile on a side road close to the turn-off for Burnfort on the main Mallow – Cork road.

Greenhills Ogham Stone

Exemplar 12

Kilmacoo Monastic Enclosure (CO015-046001-), Bawnmore North, Lismire, Kanturk.

Aerial image of Kilmacoo Monastic Enclosure.

Kilmacoo is one of the best examples in County Cork of the early Christian monastic enclosure or *vallum* indicating the site of a busy monastic centre in the Early Christian period. The enclosure surrounds Kilmacoo graveyard, the last vestige of a long ecclesiastical heritage.

The organisation of the early Christianity church in Ireland reflected secular society in that it was based on a network of dispersed rural monasteries. One of the characteristics of these monasteries was their *vallum*, which is an enclosing earthen bank that defined the precinct of the monastery in both a physical and a legal sense. Inside the *vallum* was the rule of canon law and outside was the Brehon law; we see this in early sources with people seeking refuge

in monasteries from the clutches of the secular law. These enclosures around monasteries were larger than the ringforts in which people lived in at that time, but like ringforts, were generally circular in plan. According to tradition, Kilmacoo monastery was founded by St. Mochuda (Carthagh) in the 6th century - a Kerryman most famously associated with Lismore in Co Waterford.

The central building within the monastery was the church; these were all wooden at first but replaced over time with stone, surrounded by a cluster of domestic buildings and workshops. Most monasteries also had a kitchen, a refectory and a guest house. But these were also farming and craftwork centres. They practised both arable and dairy farming and were known for their vegetable and herb gardens. To a population that was tribal, illiterate and living in dispersed centres, these monasteries, with their learned and skilled monks, made a very important contribution to the general wellbeing; commercial, educational and religious needs of the community.

Graveyard at Kilmacoo.
Image courtesy of Catherine Culloty.

The world of these monasteries was replaced by a diocesan and parish system after the Synod of Rath Breasil in 1111 AD. In this way the larger monasteries like Cork, Rosscarbery and Cloyne became diocesan centres and the seat of a bishop, whilst most of the rest became parish centres with a parish church and a resident parish priest. So, whilst there is a change in organisation there is continuity in location. In this way St. Mochuda's monastery at Kilmacoo shrunk from the area occupied by the original *vallum* to a parish church inside a graveyard. By the later medieval period Kilmacoo had been absorbed in to Kilbrin parish which in turn was incorporated into the modern parish of Kanturk.

In many cases the monastic *vallum* is absorbed into the surrounding field system and can be identified today by a noticeable circular pattern in the field boundaries around an old graveyard. Also aerial photographs have identified quite a number. Some 81 enclosures associated with early Christian monasteries have been identified in the county. They nearly all contain an old church (or site of) and graveyard and frequently other features such as bullaun stones and a holy well. Kilmacoo is an exceptional case where the actual earthwork of the *vallum* survives as an upstanding earthwork; this is reflected in local references to the earthwork as a "fort".

Here at Kilmacoo we have two enclosures, an inner and outer one with radiating field boundaries running between them. The outer enclosure is plectrum-shaped with the wider end to the east. It measured approximately 220 meters east-west by 180 meters north-south.

As with many of these early monastic sites there is a holy well a short distance away from the enclosure but dedicated to the same saint; this is *toberkilmacoo* at which, according to local tradition, rounds were made on Good Friday and on Fridays, Saturdays and Sundays during the month of May.

There is a legend related to Kilmacoo graveyard. Colonel Shankey, a popular local landlord, was buried in the graveyard according to his wishes. Then, whenever somebody who is entitled to be buried in the graveyard is about to die, he is heard beating a drum in the locality as an omen of the coming death.

Entrance to graveyard. Image courtesy of Catherine Culloty.

Most of Kilmacoo monastic enclosure (CO015-046001-) is on private land but the graveyard CO015-046002-) at its centre, containing the site of Kilmacoo Church (CO015-04603-), is in the care of Cork County Council and accessible. All are subject to statutory protection under section 12 of the National Monuments (Amendment) Act 1994.

Exemplar 13

St Gobnait's Monastery, Holy Well and Pilgrimage, Baile Bhuirne (Ballyvourney)

St Gobnait's house on the right.

Without doubt the oldest and most enduring pilgrimage in County Cork is that devoted to St. Gobnait at Ballyvourney, whose feast day is the 11th February. The pilgrimage revolves around St Gobnait's church and graveyard and the nearby holy well. It was here according to tradition that St. Gobnait founded her monastery.

The story goes that she left her native County Clare in search of a place to establish her monastery. The location would be indicated by nine white deer grazing in a field and after much travelling she found the spot at Ballyvourney and settled there. There are many other legends associated with the saint including an association with bees, with iron working and with a power to heal and the use of her magic bulla, a small spherical stone which now resides in a niche in the west wall of the church. There is also a deeper element to these stories that links her to Gobniu, the Celtic god of metalworking who survived in popular imagination as the magical builder, the Gobbán Saor. This association implies that Baile Bhuirne was a sacred place going far back into the prehistoric period.

Pilgrims doing the rounds on St Gobnait's feast day on 11th February. On the right stands the medieval church and on the left is the early 19th century Church of Ireland, which is no longer in use. In the foreground is the holy well beside St. Gobnait's house and just inside the graveyard wall is St. Gobnait's grave.

At the east end of the graveyard is the ruin of the medieval parish church, which according to tradition, stands on the site of St. Gobnait's convent. The church is part of the pilgrimage route with five stations located in and around the ruin, including a *Sheila na gig* figure and *St. Gobnait's Bulla* (stone). The graveyard contains a number of other stations including a mound known as *St. Gobnait's Grave* and two bullaun stones. Two other stations just outside the graveyard are a small holy well and a circular structure known as *St. Gobnait's House*. From dawn to dusk on the saint's feast day, the 11th Feb, a constant procession of people come here to do the "rounds", the pilgrimage finishing at the nearby *St. Gobnait's Well*.

St. Gobnait's Grave.

Pilgrims at St Gobnait's well. Image courtesy of Amanda Clarke.

One of the linkages between Celtic mysticism and the Early Christian church is the veneration of water springs, especially in relation to their curative powers. These are the *holy wells* we find throughout the county, often associated with a local saint as is the case here with *St. Gobnait's Well*. This holy well is the final station in St Gobnait's pilgrimage. Here water from the well is drunk and a series of prayers recited. The well is located 60 meters south of the medieval church and graveyard. The well is surrounded on three sides by dry-stone walling but open on the other side. The top is covered by a stone flag and votive offerings are placed on this and onto the tree beside the well. Water from the well is drunk for its curative properties.

Another important and extraordinary element of the pilgrimage is made in the local parish church. Here an oak statue of the saint that dates back to the 13th century is brought out and laid on a table. Lengths of ribbon are then "measured" against the statue and these ribbons are taken as a safeguard against sickness in the following year.

Ballyvourney ecclesiastical complex (CO058-03401-11) is accessible to the public. It is protected under Section 12 of the National Monuments Acts (1930-2004).

Exemplar 14

Saint Bridget's Well, Britway, East Cork

St. Bridgets Well, Britway. Courtesy of Amanda Clarke.

The practice of pilgrimage to holy wells is one of the oldest traditions in Irish Christianity with an origin that goes back to the Celtic tradition of venerating water springs. The pilgrimage to the well is often referred to as *'doing the rounds'* or a *'pattern'*. This often involves drinking water from the well for its curative powers. Most wells have a traditional healing power from curing warts to all sorts of ailments.

This well, located near the old graveyard in Britway, is dedicated to Brigit ingen Léinín, the sister of St Colmán of Cloyne and not to be confused with St Brigid of Kildare. There has been a church in Britway since the early 9th century and the ruins of an important early church lie in Britway graveyard a short distance to south.

This quaint unassuming Holy well in Britway is roadside, approached by a short passage. The stone-lined well is enclosed by a circular stone wall with a gate. A niche in the enclosing wall was used to hold a cup for the visiting pilgrims. According to local tradition the well is reputed to cure blindness.

St. Bridget's stone-lined well enclosed by stone wall with entrance gate.

There is a description of the well in the *School's Folklore Collection* by Patrick O'Regan who describes the rites and rituals associated with this well in the late 1930s:

'There is a wall built around this well. This was built by a man called Garret Heaphy on the 1st May 1880 … There are four trees inside the well; one rowan, two beech and one sycamore….. The annual pattern day is the 15th August but the real pilgrimage day is the 1st February – St. Brighid's Day. The well is frequented for temporal and spiritual benefits and a cure of all ailments. The Rosary is recited, three rounds being given and there are three stones to count the rounds. The water is applied to the affected part. It is also drunk and taken away. The water is also used for domestic purposes but in this instance is not taken from the well proper but from the stream which flows from the well. It is said that water taken out of the well cannot be brought to boil. After the rounds offerings are made; men: money; women: beads. These offerings are placed on the small altar at the back of the well or on the limbs of the trees inside the well. Pieces of cloth are also applied to a branch. In olden times it was the custom after the rounds to repair to Saint Brigid's Stone which lies south east of the well in a field adjoining the graveyard. Prayers were said here and also at the cross on the boundary wall of the graveyard north west from the stone'. (**www.duchas.ie**)

There are 357 *holy wells* identified in county Cork though not all are still evident on the ground. Some wells were enclosed by stone-built structures in the 18th and 19th centuries to protect the spring and facilitate pilgrims and many of these are still visited and venerated to this day right across the county. Most holy wells in Cork have a number of things in common. Most are dedicated to a local saint and bear his or her name. *Rounds*, a series of prayers said at particular stations around the well, were performed at the well most especially on the saint's feast day. The water from the well has an attributed curative power for a specific ailment. This cure for the ailment is achieved by drinking water from the well. Popular cures at holy wells were for sore eyes, toothache and warts. A votive offering was frequently left at the well or attached to a tree as a token for the cure.

St Bridget's Holy Well (CO045-087----) is maintained by the local community, Mass is celebrated here annually on the 14th August. It is protected under Section 12 of the National Monuments Acts (1930-2004).

Exemplar 15

Cloyne Round Tower

Cloyne Round Tower.

Standing on the west side of Church Street, across the road from Cloyne Cathedral, in the village of Cloyne, is a tall cylindrical tower some 30 meters high. This is the round tower of the ancient monastery of Cloyne built sometime in the 10th /11th century. It is one of only two surviving round towers in County Cork; the other example is in Kinneigh (CO094-104002-) near Coppeen in West Cork.

The original Gaelic name for these towers is *cloigtheach* - a house for a bell. A feature of these towers is four evenly spaced windows on the topmost floor; one can imagine a monk ringing a hand-held bell from each of these windows to mark set times during the day and calling the monks to prayer. They may also have been used as stores for valuables, hence the first-floor door. But they were also a mark of prestige as they occur mostly at the larger and more important monasteries. Anyone approaching from a distance will have seen the tall slim tower with its conical cap from a long way off and know they were approaching a monastery of some importance.

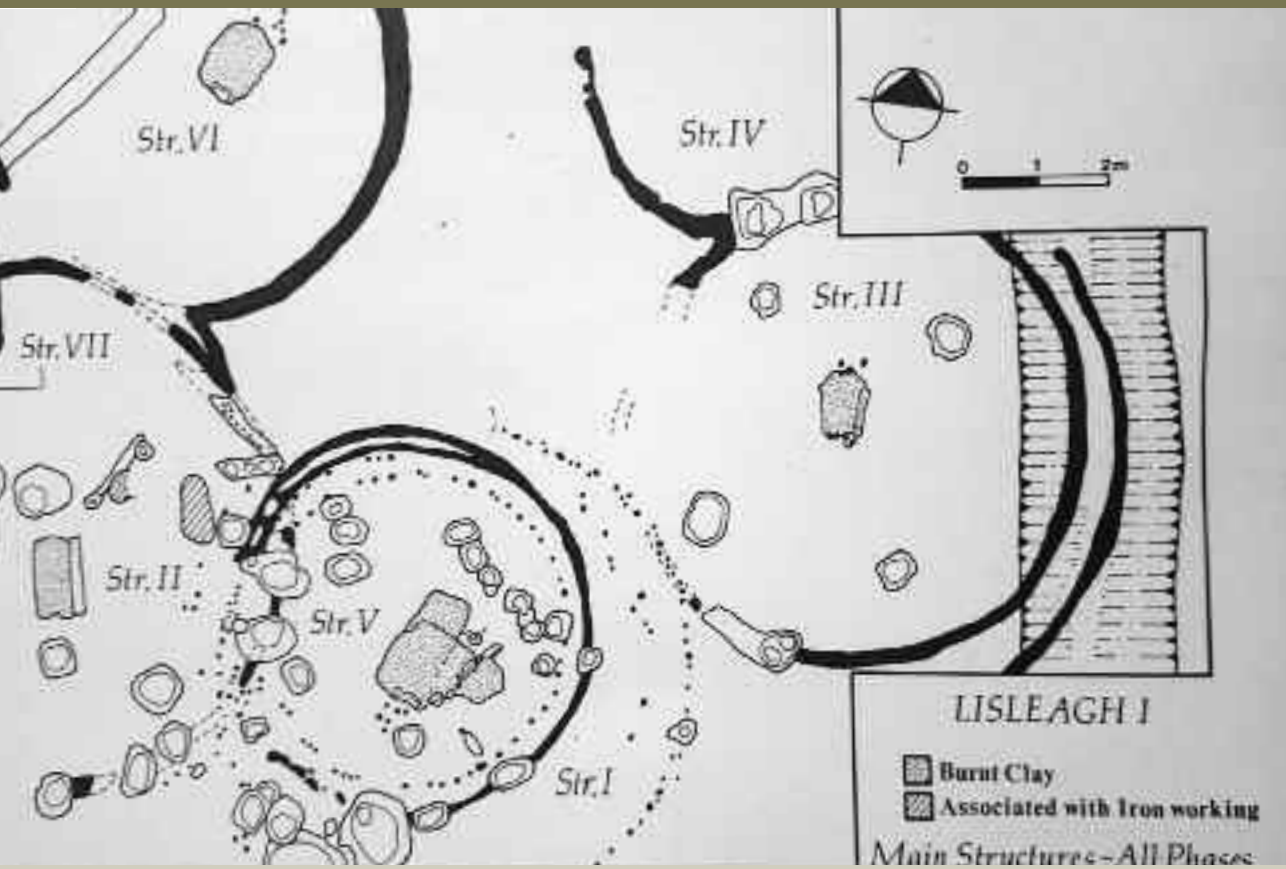
Cloyne monastery was founded by St Colmán, one of the most important saints of the early church in County Cork. The location of the cathedral and the round tower on opposite sides of Church Street show that the precinct of the original monastery was much larger than the graveyard around the cathedral. When the country was divided into dioceses at the Synod of Ráith Breasail in 1111, the importance of Cloyne was recognised by making it a diocesan centre and the seat of a bishop.

There is no historical reference to the building of the tower. The plainness of its door and windows suggest an early date of perhaps the late 10th century for its construction. The present top of the tower is a series of crenelations put in place after lightening struck the tower in 1749; the original top was a conical stone cap.

Cloyne Round Tower (CO088-019004-) is accessible to view from the street. It is protected under Section 12 of the National Monuments Acts (1930 – 2004).

Exemplar 16

Lisleagh Ringforts, Curraghagalla, Mitchelstown



Plan of houses excavated at Lisleagh.

These two ringforts are typical examples of Early Christian farmsteads that occur across the county of Cork. They are usually referred to as a *rath* or a *lios* or colloquially as *fairyforts*. There are 3,736 ringforts on record for County Cork.

A ringfort is a circular enclosure defined by an earthen bank formed from material thrown up from an encircling fosse (trench or ditch) on its outside. Generally the diameter is between 25m and 60m. A single bank and ditch is the most typical form, double rings or triple rings are less numerous and probably represent sites of higher status. The original entrance can usually be detected where a gap in the bank corresponds with a causeway across the ditch. The interiors are empty now but originally contained a collection of circular

wooden houses with thatched roofs and were bustling with all the activities of a self-sufficient farming community including a smithy where they made their own iron tools and weapons.

These two ringforts were the subject of a major archaeological excavation by Michael Monk, University College Cork, between 1981 and 1993. The results of this research have given us valuable information on life in an Early Christian ringfort. In form the two ringforts are typical with a circular area enclosed by a bank with an external ditch. The evidence from the excavation indicates that these two ringforts were occupied from the late 6th century through to the early 9th century, the expected date range for this type of monument. In sequence the larger of the two, *Lisleagh 1* (CO027-029), with a diameter 63 meters, was the first built. There was a period of overlap in the occupation of both enclosures; the smaller enclosure *Lisleagh II* (CO027-030001) with a diameter of 47.5 meters was built with its entrance facing the other. At some stage both enclosures were enlarged, presumably to deal with an increase in population.

The interior of both ringforts contained several circular houses that were being rebuilt or replaced throughout the lifetime of the fort. These had conical thatched roofs and walls of woven wattle. Some also had a central hearth set into the floor. A number of these were conjoined in a figure-of-eight arrangement. The evidence from the excavation shows that these two ringforts were occupied by farmers who also engaged in metalworking,

Aerial of Lisleagh Ringforts.

particularly in ironwork. Evidence for food production included cereal grains, animal bones, quern stones and oat cake. Iron working was extensive judging by the large dump of metal working debris. Iron objects recovered included a knife and a gouge. But these people were also working with bronze judging by crucible fragments and by some bronze objects including a buckle and ring pins. A spindle whorl showed they were spinning wool. The one object that linked these two enclosures with the outside world was a sherd of E Ware, this is a type of imported pottery associated with the wine trade. Sometime late in the life of both forts, *souterrains* were built in the interior. These are underground refuges and are a feature of many ringforts. Another interesting find was a palisade trench along the top of the enclosing bank; the palisade was a wooden fence along the top of the bank for added protection.

The picture that emerges is that of a self-sufficient farming community living between the late 6th and early 9th centuries in enclosed farmsteads. The building of the second fort and the presence of a number of houses in each suggests an extended family group growing in size over the lifespan of the two sites.

Archaeological excavation at Lisleagh showing archaeologists busy excavating and recording - note the faint outline of a circular house.

Lisleagh ringforts (CO027-029---- & CO027-030001-) are located on privately owned land. They are protected under Section 12 of the National Monuments Acts (1930 – 2004).

Spindle whorl found at Lisleagh.

Exemplar 17

Cahirvagliair Ringfort, Cappeen, West Cork

Aerial view prior to consolidation works, note the cultivation ridges across the interior.

Cahirvagliair is a ringfort with an unusual stone-built entrance. Ringforts are the most widespread and characteristic archaeological field monuments in the county with over 3,736 on record. Cahirvagliair has been selected to represent these, albeit unusual, as unlike nearly all other ringforts in the county, it is accessible to the public as a national monument in state care.

Ringfort from north east,
image by Eoghan Nelligan.

Ringforts are enclosed farmsteads that date to the Early Christian period, most were occupied between 500 AD and 900 AD. They housed an extended family group who lived in circular houses with thatched roofs, woven wattle walls and a central hearth sunk into the floor. The enclosing earthen bank and the fosse on its outside are defensive features but built more to protect livestock and family from hit-and-run raids rather than an organised military assault. Because these are self-sufficient communities they also engaged in craftwork, notably in ironworking, making their own tools and weapons.

Stone-built entrance passage with supportive props.

Deep external fosse.

Cahirvagliair was archaeologically excavated in 1983 and 1984 in conjunction with conservation works to the entrance by the Office of Public Works; the excavation was largely confined to the entrance passageway itself. The passageway on the east side of the fort is built through the inner bank only; there must have been a wooden bridge to give access across the wide and deep outer fosse. The passageway itself is 7.7 meters in length and 2 meters wide at the base. It was covered by eight lintels, six of which had survived in position. The side walls were of dry-stone construction and their surfaces punch dressed. By comparison with stone dressing on churches and the nearby Kinneigh round tower, the excavator surmised that the ringfort dated to a century or two around 1,000 AD. He was also of the opinion that this elaborate and unique entrance feature was built to impress rather than having any practical purpose and probably shows that Cahirvagliair was the seat of an important local king who was displaying his status.

This well maintained ringfort in its rural setting is a wonderful opportunity to experience an Early Christian settlement in its original setting.

Cahirvagliair Ringfort (CO094-060001-) is a national monument and accessible to the public. It is protected under Section 14 of the National Monuments Acts (1930 – 2004).

Exemplar 18

Knockdrum Cashel, Castletownshend, West Cork

Aerial view. Image © Photographic Archive, National Monuments Service, Government of Ireland.

Knockdrum cashel is situated on a rocky ridge with extensive views of the Atlantic Ocean. A cashel is the same thing as a ringfort except that it is built of stone rather than an earthwork. They are enclosed farmsteads that date to the Early Christian period and like ringforts most were built and inhabited between about 500 and 900 AD.

The reason they are built of stone is their location. Where the soil is too shallow to dig out a ditch and throw up the material to form a bank as with a ringfort, the enclosing element is instead built in stone. Cashels are most numerous therefore along the western seaboard where the underlying rock is close to the surface. Here at Knockdrum, built on top of a rounded rocky ridge, we can see rock outcropping close to the surface - the typical location of a cashel. Whilst we have thousands of ringforts in the county, cashels are rare with just 123 examples.

Another difference is that the buildings inside a ringfort are made of wood, whereas those inside a cashel are mostly built of stone. The foundations of such a house can be seen inside the fort at Knockdrum. Another feature that ringforts and cashels share is souterrains - underground refuges where people hid in times of trouble. The entrance into the souterrains can be seen in the corner of the house at Knockdrum and just outside the house a small circular opening in the ground can be seen - this is the air vent to allow the people inside the souterrains to breathe.

Enclosing wall with house to right and entrance to souterrain in the centre of photograph.

Entrance of cashel with cup mark stone on left.

Knockdrum Cashel air vent to souterrain.

The cashel itself is circular in plan with a diameter of 22.5 meters. The enclosing stone wall is substantial standing at 2 meters high and 3 meters wide. The entrance is facing north-east (the sheltered side) and is 1.4 meters wide and on one side is a small recess, which might have been a sentry's post.

There are three interesting stones at the site. Just outside the entrance is a stone decorated with 25 cupmarks and two cup-and-ring motifs. There is another stone inside the fort with 10 cupmarks. These are examples of Bronze Age rock art. Just inside the entrance is an upright stone decorated on one face with an equal-armed cross with expanded terminals; there is a cruder cross cut into the opposite face. This is Early Christian in date. These stones were gathered here in the 19th century by the Somerville family who lived in nearby Drishane House. This family took a great interest in the cashel carrying out repairs to the walls and an impromptu "dig" on the house in the fort and the souterrain in the 1870s.

Knockdrum cashel (CO142-070001-) is a national monument and is accessible to the public. It is protected under Section 14 of the National Monuments Acts (1930 – 2004).

Exemplar 19

Glanworth Castle, Glanworth, North Cork

Glanworth Castle in the background overlooking the river and medieval bridge.
Image courtesy of Pauline O'Dwyer

The great castle builders of North-western Europe in the 12th and 13th centuries were the Normans and when they came to Ireland in the late 12th century they brought their castle-building tradition with them. Glanworth Castle is one of the finest examples of a Norman castle in County Cork.

Central two storey Norman tower. Image courtesy of Pauline O'Dwyer.

Glanworth was an obvious place to build a castle - a cliff-faced promontory overlooking the most important crossing point on the River Funcheon between the Blackwater River and the Ballyhoura Hills to the north. Control this river crossing and you are effectively in control of this part of North Cork. A narrow medieval bridge still crosses the river here.

By the 1180s the Normans were pushing into this part of the county previously held by the O'Keeffe clan who probably already had some form of fortification at Glanworth. The knight who pushed them aside was Raymond le Gros, a fearsome warrior, though it was probably his nephew Robert de Caunteton (Condon) who built the first stone buildings on the promontory. By around 1250 the land had passed through marriage to the Roches and Glanworth remained their castle through the remainder of the medieval period.

Aerial photograph taken in 1989 showing the curving outer earthwork as a faint crop mark.

Artist reconstruction of Glanworth Castle. Illustration by Rhoda Cronin.

The drawing shows the castle in its heyday around 1300 AD. At that stage the earthwork cutting off the promontory was still evident; this was probably built by le Gross when he first captured the promontory. It takes time and resources to build in stone so that the first castles built by the Normans were earthworks with pre-fabricated timber superstructures within - quick and easy to build. Inside this earthwork is the stone castle built by de Cauntetons in the early decades of the 13th century. It consists of an enclosing curtain wall, partially built along the top of the cliff face, with a gate tower. Built along the curtain wall on its inside is a single-story hall. A medieval hall was a general purpose building from a refectory to a dormitory to a place where official business was conducted. The third building in the centre of the castle is a two-storey tower. This building has thick walls, a vaulted ground floor, and its only door was at first-floor level. This is where the lord of the castle kept his most valued possessions, notably his family. It also served as a last refuge if the outer defences were breached.

Glanworth Castle underwent a major conservation programme by the Office of Public Works part of which was an archaeological excavation of the castle by Con Manning between 1982 and 1984. An intriguing find from the excavation was a Sheela-na-gig, a female exhibitionist figure. This had been deliberately hidden in a dungeon in the castle some time in later medieval times.

Glanworth Castle (CO027-042001-) is a national monument in the ownership of the State. It is protected under Section 14 of the National Monuments Acts (1930 – 2004).

Exemplar 20

Ballybeg Priory, Buttevant, North Cork

Aerial view. Image © Photographic Archive, National Monuments Service, Government of Ireland.

The remains of the 13th century Augustinian monastery Ballybeg Priory is located on the level flood plain on the southern banks of the Awbeg River, approximately 1km south of Buttevant and just off the N20.

Of the great monastic orders that came into Ireland in the 12th and 13th centuries it was the Augustinian Canons that were the most successful in terms of the number of houses they established. Their monasteries were built around a plan developed by the Cistercians with the church and all the other buildings arranged around a central open space - the

Lavabo

cloister. This is the arrangement we see at the two best preserved Augustinian monasteries in County Cork: Bridgetown on the banks of the Blackwater near Castletownroche and here at Ballybeg Abbey on the banks of the Awbeg just south of Buttevant.

Unlike the Cistercians with their strict adherence to set rules on how the monastery is laid out the Augustinians are more flexible and we see this at Ballybeg. Instead of a cruciform plan we have a long rectangular church with a tower at its western end. And instead of the cloister being centrally placed to the church, here it is offset to the west. Irregularities like this would not have been tolerated by the Cistercians.

The building complex has suffered much damage over time with most of the north wall of the church missing. In the cloister area just the party wall between the cloister walkway and the buildings arranged around its east and west sides now stand. But there are some clues to its layout. On the south side of the cloister a large carved stone basin survives. This is a *laver* where the canons washed their hands before entering the refectory, which therefore occupied the south range of the cloister buildings. Mid-way along the east range the base of an elaborate doorway is evident. A door like this must have been the entrance into the *chapter house*, the main business room of the establishment.

Tower at west end of church. Illustration courtesy of Sheila Fitzgerald.

The tower at the west end of the church is vaulted and on the under-surface of the vault are two human faces with open mouths through which the ropes that rang the priory bell were hung. An unusual feature is the body-shaped recesses built into the north and south walls of the church near its eastern end. These are tombs of a rare type and the only examples in County Cork.

Standing in the field just south-east of the church is a circular columbarium or dovecote. The interior wall has continuous rows of nesting boxes, eleven tiers high. This is where the pigeons of the priory were kept and there is an opening in the roof allowing them to fly in and out. Pigeon meat was a valued source of meat in medieval times and many monasteries kept a columbarium but none in the country are as impressive as this example at Ballybeg.

The foundation charter of Ballybeg does not survive but it was founded by the de Barrys sometime in the 1220s and dedicated to St. Thomas of Canterbury. It was officially dissolved in 1541, but probably continued in use for some time under Barry patronage. It was a ruin by 1750 and the space occupied by a farmhouse and outhouses into the 19th century.

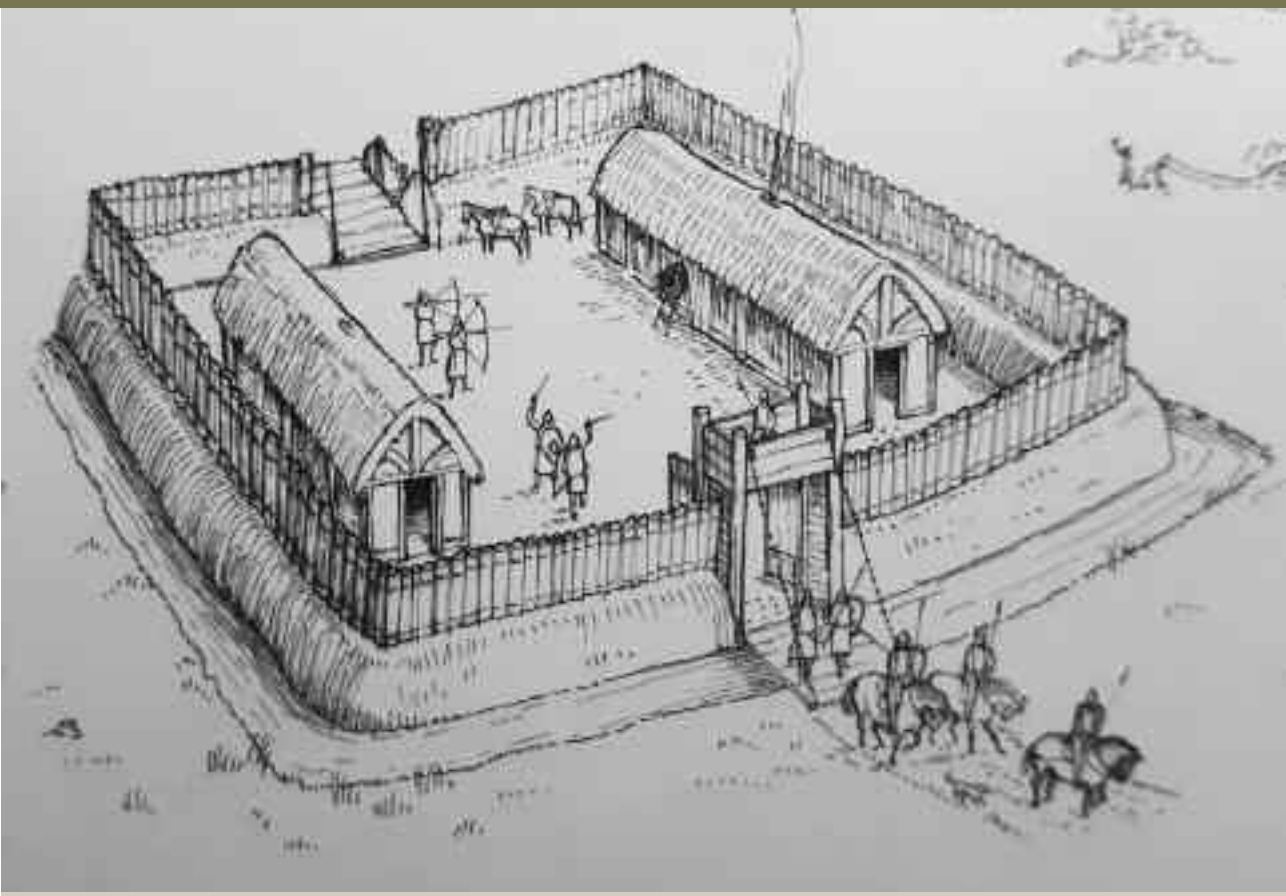
Interior of columbarium.
Image © Photographic Archive, National Monuments Service, Government of Ireland.

Ballybeg Priory (CO017-05901-) is a national monument in State ownership and open to the public. It is protected under Section 14 of the National Monuments Acts (1930 - 2004).

Top of columbarium.

Exemplar 21

Glengarriff Moated Site, Newtownshandrum, North Cork



Artist impression of a Moated site. Illustration by Rhoda Cronin courtesy of Limerick Education Centre.

Glengarriff Moated Site is a medieval defended farmstead c. 1km east of Newtownshandrum, in an area with the highest concentration of moated sites in the county.

Moated sites are rectangular enclosures built by Norman settlers between about the middle of the 13th century into the early 14th century. They are very similar in form to ringforts with an enclosing bank and an external fosse (or moat) but in this case the plan is not circular but square; these are often referred to locally as a "square lios". The enclosed area is usually between 40 and 50 meters across. The enclosing bank and ditch are often more pronounced than in ringforts. The Glengarriff site measuring 56m x 44m is enclosed by a substantial earthen bank, over 2.5 m high in parts, coming to their highest at the corners. Outside the bank is a wide waterlogged fosse all around. There was also a greater effort to get water

into the fosse or moat of these enclosures as witnessed by the *leats* that survive at a number of examples. Here at Glenagarriff a stream flow on the east side probably filled the fosse at some stage. The entrance is at the south end of the west side with a causeway across the fosse.

The artist impression of a moated site shows a drawbridge across the moat with a fortified gatehouse giving entry to the interior with a couple of thatched timber farm buildings. Of course all of these structures are made of wood and so have long since rotted away.

Some 138 examples have been recorded in County Cork and their distribution is noteworthy. They congregate along the line of the Cork-Limerick road and extend from there into the south-west towards Clonakilty. This area represents the border between Norman east and Gaelic west in the 13th century. By around 1280 the colonists were coming under increased attack from native groups to the west and it may have been necessary to protect farmsteads on the border area by building an entrenchment around the settlement. On the other hand moated sites could represent a secondary push by the Normans into more marginal areas on their frontier, and again these forward settlements would need protection.

A recent excavation of a newly discovered moated site at Ballinvinny South (CO064-156001-), about 7 kilometres north of Cork City, was conducted as part of archaeological works in advance of the construction of the M8 motorway. This is a rectangular enclosure some 40 meters by 30 meters in extent. The enclosing element consisted of an earthen bank topped by a wooden palisade. A timber gate gave access to the interior where the foundations of two rectangular buildings were discovered. These were not substantial buildings but more what you might expect in a rural farmstead. But some fragments of imported French pottery show that even the inhabitants of such a humble farmstead were still able to resource imported French wine and the jugs that came with this trade.

A second moated site occurs c. 500m to the southeast at Killaree Shandrum townland and has a water filled fosse.

Glengarriff Moated Site (CO002-036----) is located on privately owned farmland. It is protected under Section 12 of the National Monuments Acts (1930- 2004).

Aerial Image of site.

Exemplar 22

Youghal Town Walls, Youghal, East Cork

P. Burk(e)'s townscape painting of Youghal, painted circa 1720-1730, which is one of the earliest known townscapes in Ireland. It shows the circuit of the town wall.

The modern town of Youghal has spread beyond the confines of the medieval town, however, we can still see the extent of the medieval town by the surviving and well preserved town walls, which are a physical reminder of the town's Norman origins.

Before the Normans came to Ireland the only urban centres were a handful of port towns founded by the Vikings and the larger monasteries like St Finbarr's in Cork and St Colmáns in Cloyne. Perhaps the greatest contribution the Normans made to the country was the building of a network of towns in the areas they conquered. In Cork they built four: Youghal; Kinsale; Buttevant and Cork itself though there was already a settlement there. All these towns were enclosed within a wall that was not just for defence but physically defined the town in legal and social terms. Most of the town walls built by the Normans have long since disappeared because of urban expansion or only fragments survive. But Youghal's town walls are exceptional and are one of the best preserved sections of a medieval town wall anywhere in the country.

The earliest record of Youghal's town walls is a grant in 1275 for their construction but this was probably for a stone wall to replace an earlier bank and ditch earthwork defence. A

stretch of some 450 meters of wall survives along its south-western run; this is on the highest point overlooking the medieval town and its port. There are three circular mural towers along this stretch of wall. There is a further length of town wall on the north-western side running steeply downhill towards the river over some 275 meters. This is almost the entire run of the wall on the landward side. The only breaks in a town wall were the gate towers but none of these survive at Youghal. The Clock Tower that straddles North Main Street is built on the site of the gate tower on this side of the town; this was demolished in 1777 when the present tower was built.

An 18th century painting, showing the view from across the river at Ferry Point, illustrates the extent of the town walls at that time. On the east (left) side is the small "base town" where

South west run of the town walls.

Banshee tower on the south west run of the town walls.

lower class townsfolk lived - these were usually people of native stock. Along the higher ground we see the run of the wall from the Banshee Tower (top left) to St. Marys (top right) where the wall forms two sides of the graveyard. The painting also shows the Franciscan Friary to the east (left) side of the town; this was demolished when the town later expanded in that direction.

Walled towns operated under a charter that nearly always granted the town the right to hold a market. This encouraged the growth of a merchant class who organised the importation and exportation of goods in a regulated manner. Through their contacts in the Norman world these merchants had access to a wider market in Britain and the Continent. Thus the walled town network established by the Normans were vital in the economic development of Ireland in the 13th century and into the future.

Youghal Town wall (CO067-029002-) is a national monument and is protected under Section 14 of the National Monuments Acts (1930-2004).

Exemplar 23

St. Multose Church, Kinsale

View of church from south east.

St Multose church is a landmark building in the historic town of Kinsale. It has been an active church for some 800 years and has seen many changes and alterations over its lifetime but still retains much of its medieval character.

Cork has two of the best preserved medieval parish churches in the Country, St Mary's in Youghal and St. Multose Church in Kinsale. St. Multose is also remarkable in that it is still in use as a parish church. The church as we now experience it is a mixture of re-buildings in different styles over its eight hundred years of existence.

Medieval churches were always built on an east-west axis with the altar at the east end in the chancel. Above the altar was the largest window in the church emphasising the symbolism of the rising sun - the risen Christ casting light into the church. On the south wall of the chancel is a piscina, where the water used to wash the holy vessels was drained. Beside it was the sedilla, a three seated recess in the wall where the priest and his two deacons rested during mass. The nave to the west is where the congregation were present and this was separated from the chancel by a screen, called the *rood screen*. The nave is usually longer and wider than the chancel with a chancel arch marking the division between both.

Door into tower.

View of church from south west.

Runined south transept – Galway Chapel.

The core of St. Multose is a rectangular nave extending to the east into the choir and chancel. The nave has an aisle on either side; the aisle on the north side extends the length of the choir. One of the key features of the building is the tall tower standing at the north-west corner of the nave. The tower door has a very weathered surround with a round arch and above it is inserted the hood moulding of a lancet window and in a niche is a small statue of a cleric with a pastoral staff. A transept extends from the north wall of the nave. There is another transept extension on the south side that is now in ruins.

The oldest intact part of the church is the nave tower and the west wall of the church, both of which have 13th century windows. The ruined transept on the south side is known as the 'Galway Chapel' and is 16th century in date. Otherwise the church was heavily rebuilt at various stages in the 18th and 19th centuries with the chancel given a new ceiling as recently as 1951. During re-flooring of the nave in 1858 many stone coffins were found - made of two flags placed parallel, with one at the head and another at the feet and covered by a series of thin slabs. This placing of burials under the floor of a church was commonplace in the medieval period though this space was usually reserved for those with influence.

The church also contains an interesting collection of 16th, 17th and 18th century grave slabs, memorials and plaques including the tombstone of Jacobus Galwey dated 1627 and the tombstone of William Galwey dated 1628.

St. Multose Church (CO112-033002-) is an active Church of Ireland parish church and access to the interior is courtesy of the parish. It is protected under Section 12 of the National Monuments Acts (1930- 2004).

Exemplar 24

Drishane Tower House, Millstreet

South elevation of the tower house.

Drishane is a late medieval tower house built by the Mac Carthys, according to tradition, in 1450.

Tower houses are the most numerous type of castle in the Cork landscape with some 133 examples. These were built by both Gaelic and Old English (Norman) families in the Later Medieval Period of the 15th and 16th centuries. Drishane is one of the best preserved examples of a tower house in the county.

The tall rectangular tower is four storeys high with each storey occupied by a main room. The third floor is covered by a wicker centred vault. It is entered through a pointed door on the east side. The spiral stairs in the south east wall gives access to the upper floors. The windows are typically narrow at the lower levels, however, the fourth floor windows are larger with elegant double ogee headed windows. The spandrels on the south 4th floor window is decorated with simple geometric design and covered by a hood moulding with stepped terminals flanked by two carved human heads. The thick walls are built of limestone and the outside base of the walls is sloped outwards in a batter. Originally the wall face was probably plastered and finished with a wash.

Tower house from north east with Drishane house to right. Image courtesy of Sheila Fitzgerald.

The artist's impression shows an image of life in a tower house. The ground floor is a store room where sacks of grain and barrels of ale are kept safe. Above is a dormitory for the castle's lower status inhabitants, soldiers and servants. Above the lower stone vault is a kitchen where a feast is being prepared as the lord of the castle is entertaining important guests from a neighbouring lordship. Above this again is a private room where the lord's wife and children live. And finally in the topmost room, the one with the largest windows and a brazier fire in the centre, which is safe because the floor below is another stone vault. Here a *file* is reciting poetry from his store of oral legends. Accessible to this room is a garderobe in the thickness of the wall and at Drishane there are two; this is a simple gravity-fed loo. Access to these various rooms is via a spiral stone stairs in one corner of the tower. Note the small room just inside the entrance door; this is where the door keeper is lodged. Also note directly above the lobby inside the door, an opening - this is the *murder hole* - an unwelcome intruder can be shot through this opening. At the top of the walls are the stepped crenellations of the castle's battlements and in one corner is a projecting machicolation; this is for shooting down on attackers.

Tower houses also had a walled enclosure, known as a *bawn*, attached. At Drishane the bawn has disappeared save for one tower. This stands very close to the tower itself but was positioned there to provide covering fire to protect the door of the tower itself. The castle now stands in the grounds of Drishane House, a country house by the Wallis family in 18th century and enlarged and castellated in the mid-19th century.

Drishane (CCO039-078001) is a national monument though located within a privately owned estate. It is protected under Section 14 of the National Monuments Acts (1930 – 2004).

Wicker centred vault over third floor and pointed door to spiral stairs.

Artist impression of life in a Tower house.
Drawing courtsey of artist Rhoda Cronin.

Exemplar 25

Coole Church, Castlelyons, East Cork

Church from north east showing the east gable with double ogee headed lights. Image courtesy of Elizabeth Byrne.

Early stone-built churches are rare in County Cork but to have two so closely together as this pair at Coole is exceptional. One now stands alone in a field (CO036-019002-) whilst the other (CO036-019004-) is located 150 meters to the north in the graveyard. No other early monastic site in Cork, except Labbamollaga, has two churches - an indication of an important ecclesiastical foundation. This church in the graveyard, the larger of the two, is named *Coole Abbey* on the Ordnance Survey maps though there was never an abbey here. In medieval times it became the parish church indicating that it was probably the main church of Cúil Collaing - an 8th century monastery founded by a now forgotten Saint Dalbhach. The monastery was famed for having a tooth of St. Patrick when such a relic would have attracted pilgrims and have been an important source of revenue.

The church has the usual medieval plan of a nave and a chancel but these are not one build. The nave was a church on its own first. This is evident by the antae that survive on its corners; these features are also present on the other church at Coole. Antae are copies in stone of projections on the corners of wooden churches and date to the 10th/11th century. A very interesting piece of sculpture on a stone inserted into the east gable of the later chancel tells more of its story. This is a rosette, a feature of early 12th century *Romanesque* architecture and is all that is left now of a rebuilding of the church that must have taken place around that time. In the 13th century the old church was transformed into the nave with a chancel added to its western end.

Church from south west, the west gable of nave undergoing conservations works.
Image courtesy of Elizabeth Byrne.

Rosette

Antae. Image courtesy of Elizabeth Byrne.

This church has been the subject of a major conservation programme by Cork County Council. This work is now nearing completion. A holy well is located in a wooded area between the two churches and the area has been turned into an attractive amenity by the local community.

Coole Church (CO036-019004-) is protected under Section 12 of the National Monuments Acts (1930-2004).

South wall of chancel after conservation works. Image courtesy of Elizabeth Byrne.

Exemplar 26

Sherkin Friary, Sherkin Island, West Cork

Friary from south west. Image © Photographic Archive, National Monuments Service, Government of Ireland.

Sherkin is a perfect little gem of a late medieval Franciscan friary. It is set in a small bay on the east side of the island facing the mainland at Baltimore.

One of the most remarkable figures of medieval Christianity is St. Francis of Assisi (1181 – 1226). This son of a wealthy Italian merchant who renounced his wealth and sought to live a life of poverty devoted himself to following the example of Jesus Christ. He quickly gathered followers who in 1209 were formally recognised by the Pope as the Franciscan Order, the Order of Friars Minor, popularly known as the Grey Friars after the colour of their habit. They were itinerant preachers living amongst the general population and begging for alms. However, the success of the Franciscan Order in attracting followers and patronage, and spreading out across much of Europe, meant that by the end of the 13th century many were living in communities and building friaries based on the cloister plan.

The Franciscan order came into Ireland in two waves. The first one in the 13th century was with the Normans who were fervent patrons of the order. Most of these foundations were on the outskirts of walled towns such as at Cork, Youghal and Buttevant; nothing now stands of the first two but the friary church in Buttevant is still there in the middle of the present town. The second wave, in the 15th century, was different. Many of their patrons were now Gaelic and the friaries were located in rural areas, like the Mac Carthy's friary at Kilcrea and the O'Driscoll's friary here on Sherkin, which was founded in 1449 although building probably did not commence until the 1460's.

The plan of the building consists of a rectangular church divided by a tower into a chancel to the east and a nave to the west. The nave has a transept projection on its south side. On the north side of the church is the cloister around which are the three ranges of domestic buildings. The only part that is missing is the arcading that divided the central open area of the cloister, the garth, from the walkway that surrounded it and the wall that separated the cloister from the north range. The decorated features, particularly the window tracery, are all typical of the late 15th century. One attractive feature is the two carved vine leafs that curl upwards from the corbel on the arch under the tower.

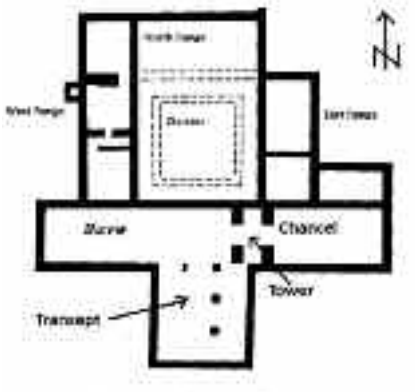
Cloister

Chancel and east window.

Sherkin Friary (CO149-019002-) is a national monument and has been undergoing a programme of architectural conservation works by the Office of Public Works. In connection with these works a large-scale archaeological excavation of the friary was conducted by archaeologist Ann Lynch in the 1980s and is now published in the *Journal of the Cork Historical and Archaeological Society*.

Just outside the friary on the seaward side is a very interesting wall (CO149-019003-). On either side of the wall is a series of horizontal holes. These once held the ends of wooden press beams that were used to squeeze oil from pilchard fish placed in a barrel. The pilchard fishery flourished in West Cork during the 17th century. These curing stations were called *fish palaces*; *palace* is a Cornish word for a cellar where this process took place and from where many of the fishermen that came into West Cork in the 17th century were from.

Sherkin Friary (CO149-01902-) is a national monument and is therefore protected under Section 14 of the National Monuments Acts (1930-2004).



Sherkin Friary Floor Plan.

Fish Palace wall.

Exemplar 27

Bawnatemple Graveyard (Old Cannovee)

Bawnatemple Graveyard. Image courtesy of Aoife Nelligan.

The most visited archaeological monuments in County Cork are old graveyards though the purpose of these visits is usually for a more solemn reason that to admire an ancient monument. Nonetheless graveyards are places of great historic interest and contain a wealth of interesting remains from the past.

Burial has always been an important feature of the Christian church but a tradition that has changed in meaning and form over time. Christian burials took place in sacred ground usually in the precinct of a church and here at Bawnatemple there has been a church since Early Christian Times and hence this is sacred ground.

In the medieval world there were two basic types of burial, those of the great and good, and those of the peasantry who formed the bulk of the population. The former were allowed

burial within the church and if they were of high status could mark the burial with a tomb. Everyone else had the right to be buried by the parish church but burials were haphazardly placed around the south side of the church; it was unlucky to be buried in the shadow of the church. The big change comes with the emergence of a middle class and the wider distribution of land ownership; in Ireland this is happening in the 17th century. Firstly, graveyards are now being enclosed so limiting the area available for burial. Secondly, burial within a church is now rarely allowed. The land owning elite are now being buried in family vaulted tombs within the graveyard and this idea of a dedicated burial space within the graveyard extends to the wealthier townspeople and strong farmers. These groups are now claiming a family burial plot within the graveyard marked by an inscribed headstone.

Headstones appear in numbers from about the middle of the 19th century. Headstones generally tend to face east following the church orientation facing the rising sun, symbolic of the risen Christ. Also appearing in graveyards around this time are rows of low uninscribed headstones; a carved headstone is expensive and beyond the means of most people in 18th and 19th century Ireland but the need to mark a family grave was important. These low grave markers when carefully examined can be quite distinctive.

Bawnatemple Graveyard.

Another feature of older graveyards is the mixing of Catholic and Protestant burials. After the Reformation the Church of Ireland took possession of church land, including graveyards, but allowed Catholics to continue their rights to be buried in these sacred places.

One of the prohibitions on burial in official graveyards was for un-baptised infants and still births. For this reason unofficial burial grounds, known as *cillíns*, were used. Fortunately, the first edition of the

Ordnance Survey maps of 1840 marks these as *children's burial grounds*, otherwise many of their locations would now be lost. There are 33 Children's burial grounds identified in the county which all occur in West Cork. These burial grounds are rarely enclosed and rarely have any burial markers.

Old Canovee is a typical rural graveyard on a very ancient site (CO071-108001-). Around the graveyard the circular pattern of the early monastic enclosure or vallum can still be seen. A stone inscribed with a *Maltese Cross*, found here in the 1970s, is a survival from that time. There were two churches in the graveyard, neither of which now stands. The old medieval parish church has long gone but the Church of Ireland parish church built here in 1814 was demolished in the 1930s. The graveyard has a collection of inscribed headstones and rows of low inscribed gravemarkers, typical of most old rural graveyards in the county. As well as inscriptions, 18th and 19th century headstones were also decorated with carved motifs, a popular one being the urn.

The inscriptions in the graveyard have been recorded and can be viewed at: **https://historicgraves.com/graveyard/canovee-cannaway/co-cvee**.

The care and maintenance of historic graveyards in rural locations like this is often handled by the local community in conjunction with the County Council. These places have a special atmosphere and this needs to be considered in the maintenance of a graveyard to ensure that this aspect is not ruined by insensitive modern interventions. A number of Guidance leaflets have been prepared by the Historic Monuments Advisory Committee of Cork County Council including *Care of Historic Graveyards*, available on the heritage publications section of **www.corkcoco.ie**.

Bawnatemple Graveyard (CO071-108002-) is protected under Section 12 of the National Monuments Acts (1930-2004).

The stone slab with the Maltese Cross.

Exemplar 28

Mallow Castle, Mallow, North Cork

West elevation.

Mallow castle stands of the site of an earlier castle built by the Fitzgerald Earls of Desmond who owned the Manor of Mallow from medieval times. The castle was strategically located to command a very important crossing point on the River Blackwater for the main routeway from Cork to Limerick.

Mallow Castle is a fortified house built in the 1590s by Thomas Norris who was granted the Manor of Mallow as part of the Munster Plantation when the Earl of Desmond's lands were confiscated by the Crown after the Desmond Rebellion of the 1580s.

The plan was for Protestant English grantees, like Norris, to bring settlers over from England and create a Protestant population in Munster loyal to the English Crown. One of the conditions of plantation was that people like Norris would build a house for themselves on their newly acquired lands as a sign of their commitment to the cause. Norris was an exception in building such a house that is a mixture of two things, a house that looks like an English house of the times but also one that is built with an eye on its defence, a fortified house.

The English features of the house are its plan, a rectangle with corner pentagonal towers, timber floors throughout, large casement windows, and straight up-and-down crenulations along the wall tops. Its defensive features include a proliferation of gun loops, most positioned under the windows and a concealed front door. However, in many ways Mallow

East door.

Castle is a unique building. Both the back door and the rear door are framed by cut stone surrounds with flat segmental arches. The larger windows have stone mullion and transom divisions providing plenty of light into the interior. There were two wooden stairs, one in the projection at the back and another spiral stairs in the north-west corner tower.

This is a period when the dark and confined tower houses of the later medieval period are being replaced by fortified houses, like nearby Kanturk Castle, with their well lit rooms and greater sense of comfort and modernity. Houses like Mallow and Kanturk castles represent the period of relative peace and prosperity of the first four decades of the 17th century in Cork when the owners were able to build warm, spacious, well lit houses.

As with all big houses and castles in Cork, Mallow castle came under attack in the aftermath of the 1641 rebellion but Norris and a garrison of 200 men resisted an attack in 1642. But it was attacked and taken three years later in 1645 and was probably never occupied as a residence from then on. The Norris family remained in possession, eventually building a country house on the grounds, Mallow Castle House, and continued to live there into the 1970s.

Mallow Castle (CO033-009001) is a national monument in the care of the Office of Public Works and is open to the public. Mallow Castle House and its grounds are now owned by Cork County Council and also open to the public.

Interior showing floor levels and gun loops under large widows.

East elevation.

Exemplar 29

James Fort, Kinsale, West Cork

Aerial. Image © Photographic Archive, National Monuments Service, Government of Ireland.

James Fort is a bastion artillery fortification built in 1602 in the aftermath of the Battle of Kinsale to protect the harbour from any future invasion.

After the defeat of Hugh O'Neill's army at Kinsale in 1601 and the surrender of the Spanish force in the town, the English realised that the harbour needed better defences in case another Spanish force tried to land there. Between 1602 and 1604 they built a pentagonal bastioned fort on the promontory that overlooks the harbour on its west side, named James Fort after the English king James the First. However, by 1611 the fort was in need of repairs so the inner fort was built to improve its defences and provide accommodation for the garrison.

The idea behind a bastion artillery fortification was to face the enemy's fire with a thick earthen bank that would absorb cannon fire. This was in direct contrast to medieval castles that stood tall and were sitting ducks for flying cannonballs. The science of these fortifications became very elaborate with complicated star-shaped plans and ingenious arrangements for flanking fire from hidden gun emplacements to cover all ground in front of the fortifications. The key to flanking fire was to build bastions on the corners.

At James fort, the outer fortification consists of five earthen bastions on the angles of a pentagon, linked by straight curtain walls. Bastions are arrow shaped to allow guns placed in them to fire outwards but also along the curtain walls in case an attacker gets that close. Mid-way along the south curtain wall are the remains of a gate-house and the revetment for a drawbridge. Centrally placed within is a square fort with bastions on each corner. The walls of the inner fort are pierced by gun loops. There is a large arched gateway on the west face and in the corner of the north-east bastion is a sallyport - a back door that allows defenders sneak out and counterattack anyone attacking the main gate. Inside are two diametrically opposed towers - again their walls are pierced by gun loops - between which, are three gabled barrack buildings, forming a quadrangle.

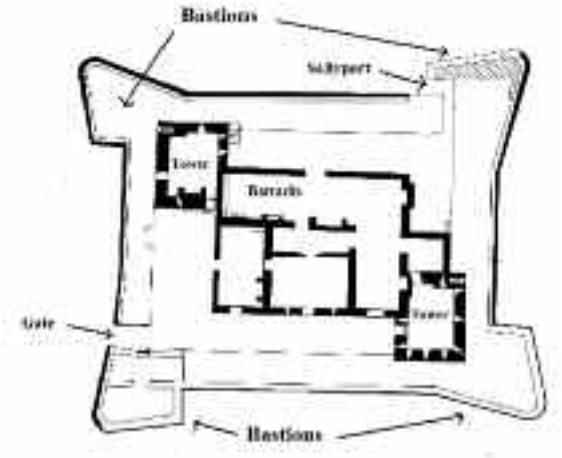
Inner fort. **Image © Photographic Archive, National Monuments Service, Government of Ireland.**

Entrance to inner fort.

From the ditch at the north east corner of the inner fort, a covered way leads down to a shoreline blockhouse (CO112-083---). This had a battery of guns that covered the water along the near shore that was blind to the fort above.

In 1642 the fort held out against a Royalist force led by the Duke of Ormond but in 1649 was captured by Cromwellian forces without a struggle. By the 18th century Cork Harbour had replaced Kinsale as the main naval and commercial port in the south-west and the need for defence here was no longer seen as a priority.

Together with Charles Fort (CO125-007) directly across the harbour, James Fort (CO112-036)) forms part of a group of fascinating 17th century harbour fortifications. Both are national monuments in the care of the Office of Public Works and open to the public. Both are protected under Section 14 of the National Monuments Acts (1930-2004).



Plan of inner fort.

Exemplar 30

Post- medieval Archaeology: Cork Harbour

Ringaskiddy Martello tower. Image courtesy of Cllr Marcia Dalton.

This final exemplar covers the post-medieval period of the 18th and 19th centuries. When we look at the archaeology of this period, the many relict buildings, structures and features that still survive in today's landscape, and many others still in use but of historic importance, the numbers become too vast to cover, even to just list their variety. We have therefore chosen just a handful located in the area of Cork Harbour.

The five monuments selected here to represent the post-medieval period are Ringaskiddy Martello Tower, Inch Church of Ireland, Ballinglanna Mills in Glanmire, Dunkettle House and a limekiln at Trantstown.

The Martello Tower at Ringaskiddy

The tower was built between 1813 and 1815 to cover the high ground that overlooked Westmoreland Fort on Spike Island. It is one of five Martello Towers built in the Cork Harbour area at this time as part of the harbour's defences. These were constructed during the Napoleonic Wars when the fear of a French invasion was a constant worry for the Government. It represents all the various military installations built along the Cork coastline at various times, many of which are now abandoned and in various states of ruin.

Dunkettle House

This elegant late 18th century house was built by Abraham Morris, a wealthy Cork merchant. It is built in an elegant Georgian style with a notable neo-Classical fanlight door featuring

Ballinglanna Flour Mill.

Tuscan columns. It was surrounded by an elegant demesne and had an entrance gateway with a gate lodge, a walled garden and extensive farm and other out buildings. Dunkettle House represents the wealth of country house architecture and demesne features that form an important element in the County's rural heritage.

Ballinglanna Flour Mills

The flour mills in Glanmire were once a centre of thriving activity though now mostly derelict and abandoned. The mill was water-powered and the remains of the wheel pit and its sluice gate remain. The main building is a double gable-fronted five storey building of mid-19th century appearance though incorporating part of an earlier building. The mill fell into disuse following a fire in 1964. This mill represents the industrial archaeology of County Cork much of which, like this building complex, is now derelict.

Inch Church of Ireland

Now boarded-up and no longer in holy use the former Church of Ireland church in Inch is a plain simple building that yet has its own sense of style and composure. The entrance door has a stone surround with a pointed arch and there are four lancet windows in the south

Dunkettle House.

wall and two in the east gable with pointed arches and limestone surrounds. The porch on the west gable and the bellcot on the gable are later additions. This church represents the County's rich heritage of ecclesiastical buildings, many of which, like this building are modest in architectural terms but charming nonetheless.

Trantstown Lime Kiln

This limekiln is a typical example of a rural structure that was built in its thousands throughout the county in the 18th and early 19th century. The kilns were built to burn limestone as an agricultural fertilizer and in limestone areas nearly every farm had its own kiln. The kilns are all very similar in design. The core of the kiln is a circular funnel where the stone is burnt. The kilns are built into sloping ground so that the top of the kiln on one side is level with the ground so that the limestone rock can be dumped into the kiln directly. On the down-slope side at the base of the kiln is an arched opening where the burnt lime is drawn out. These lime kilns represents the county's vernacular tradition that includes the thatched houses of the rural agricultural population and all other remains of the traditional rural farming lifestyle.

Ringaskiddy Martello Tower (CO087-053----); Dunkettle house (CO075-075), Ballinglanna flour mills in Glanmire, Inch Church of Ireland (CO100-013002-) and Trantstown lime kiln (CO064-005----) are protected under Section 12 of the National Monuments Acts (1930-2004).

Trantstown Limekiln.

Inch Church of Ireland. Image courtesy of Margaret McCarthy.

Chapter 11
Legal Protection of Archaeological Monuments

The relevant legislation for the protection of archaeological monuments is the National Monuments Acts (1930-2014). The relevant authority under these acts is the Minister of the Department of Housing, Local Government and Heritage (D/HLGH). It should be noted that in the recent past the relevant Department and/or its name has changed with every change of government.

As currently operated, there are two categories of archaeological monument protected by the National Monuments Acts: *national monuments* and *recorded monuments*.

National Monuments

To a large extent *national monuments* belong to two categories. Firstly are monuments in the ownership or guardianship of the Minister. This comprises some 1,000 individual *national monuments* at 768 locations. County Cork has 58 national monuments in this category, including some of the county's top tourist attractions like Charles Fort and James Fort in Kinsale; Kilcrea Friary, Timoleague Friary, Kanturk Castle and Barryscourt Castle. A list of these national monuments in the county can be downloaded at:
www.archaeology.ie/sites/default/files/media/pdf/monuments-in-state-care-cork.pdf

The second main category of national monuments is those on which a *preservation order* has been placed. The Minister can place such an order when a monument is in imminent danger of being damage or destroyed. There are 48 national monuments in County Cork due to a *preservation order* being placed on them; this facility is used only in exceptional circumstances and the last one issued in County Cork was in 2002.

However, the Minister can decide at any time that a monument is a *national monument* if, as the Act puts it, *'the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest.'*

Any works taking place at or in the vicinity of a *national monument* requires the prior written **consent** of the Minister. Breach of these requirements is an offence. It is also an offence under the National Monuments Acts to dig or excavate anywhere for the purpose of uncovering archaeological features without a **licence** issued by the Minister.

Recorded Monuments

The *Record of Monuments and Places (RMP)* is the most widely applying provision of the National Monuments Acts. This was put in place on foot of Section 12(3) of the National Monuments (Amendment) Act 1994. The RMP consists of two elements: a complete set of Ordnance Survey six-inch maps for each county on which all the known archaeological monuments were indicated and numbered individually; and a listing that gives the location information and archaeological classification for each of these numbers. The *RMP for County Cork*, which was issued in 1998, can be downloaded at: **www.archaeology.ie/publications-forms-legislation**. All the monuments listed in the *RMP* have the status of a *recorded monument*.

The provisions of this section of the Act requires that before any works take place at or in the immediate vicinity of a *recorded monument* the Minister must be given two months advance ***notification*** of this happening. In practice, groups like Teagasc, Irish Concrete Foundation, ESB Networks, Irish Water, Local Authorities and private developers, use the ***notification*** process to ensure their works are not in breach of the Act.

To carry out works at or cause damage to a *recorded monument* without giving two months prior notification is an offence under the provisions of the Acts.

Both the forms for consent at a *national monument* and a ***notification*** in the case of a recorded monument are downloadable from the Department's website:
www.archaeology.ie/publications-forms-legislation.

The Sites and Monuments Record (SMR)

Though only those recorded monuments listed in the 1998 *RMP* have a legal status the Department maintains an up-to-date listing of all known archaeological monuments in the State and this is referred to as the *Sites and Monuments Record (SMR)*.

The *SMR* is available to view online at **https://webgis.archaeology.ie/historicenvironment/**. There is also a facility on the Department's website for informing it of any newly discovered archaeological monuments.

Protecting Underwater Archaeology

Ship wrecks that have been in the water for over 100 years and any archaeological objects found underwater irrespective of their age or location are protected under Section 3 of the National Monuments (Amendment) Act 1987. But the provisions of the Act can also apply to ship wrecks less than 100 years in the water, for example, the wreck of RMS Lusitania, torpedoed by German submarine U-20 off the Cork coast in 1915, was included for protection under the relevant provisions of the Act, before 100 years had elapsed.

Under the same provisions of the Act a licence from the Department is required to dive, survey or disturb any protected wreck site or for targeted searches for archaeological objects underwater. Otherwise such an activity is an offence.

Planning and Archaeology

Under Planning and Development legislation the Minister is a statutory consultee in relation to potential impacts of any proposed development on the archaeological heritage. This allows the Minister to recommend that archaeological conditions be attached to grants of planning permission, or recommend refusal of planning permission by the planning authority to ensure the protection of the archaeological heritage.

As the Planning Department in Cork County Council has its own staff archaeologist this function is carried out in-house with the agreement of the Department. A booklet outlining the interaction of planning and archaeology, entitled *Archaeology and the Planning Process* can be downloaded from the Department's website: **www.archaeology.ie/publications-forms-legislation**. Cork County Council is committed to the protection of our archaeological heritage and has a number of policies in the County Development Plan to ensure its protection.

Archaeological excavation and the use of detection devices

Archaeological excavation and/ or the use of detection devices at or in the vicinity of an archaeological monument, including protected wrecks, is regulated under the National Monuments Acts. Therefore, any such activity requires a licence from the Department.

In order to be granted an excavation licence or a detection licence it is necessary for an applicant to have passed an interview to assess their competency to hold such a licence. An interview can be arranged by contacting **nationalmonuments@chg.gov.ie**.

The Office of Public Works

Under the current arrangement, whilst the ownership of those *national monuments* in State ownership or guardianship is with the Minister of the Department of Housing, Local Government and Heritage, the care and maintenance of these lies with the Office of Public Works (OPW). Their *National Monuments Service* divides the country into six works districts, each with a team of specialist craftsmen and general operatives reporting to a district works manager, under the general direction of a senior conservation architect. OPW also has a Visitor Services unit that operates the guides' service at *national monuments*. In County Cork there is a permanent guides' service at Charles Fort in Kinsale and a seasonal service at other monuments like Barryscourt Castle in Carrigtwohill (temporarily closed at time of writing during conservation works).

Chapter 12
Conclusion

Over the preceding chapters we have tried to tell the story of the people who lived and died over ten thousand years in the place we now call County Cork. The further back in time we go the more difficult that story is to tell - so little survives and so much will never be known. But there are still clues in what has survived as archaeological monuments and in what archaeologists can recover from archaeological excavation. We are finding out more all the time and finding more pieces for the jigsaw that is our past.

There are generations and generations of Stone Age hunters and all there is left for us to find today are tiny flakes of flint from their arrowheads. Who were the people who came into Cork but only built their megalithic tombs in the extreme south-west of the county? What were the people who built and decorated a passage tomb on Cape Clear Island doing out there in the Atlantic?

Cork had two Golden Ages in the past: the Bronze Age and the Early Christian Period. Judging by the number of archaeological monuments that survive from those periods we see an increase in population, in prosperity and in contacts with the outside world. And of course in both periods there were skilled gold workers leaving such treasures as the famed Garryduff Bird.

The two most numerous archaeological field monuments that survive from these periods, the fulacht fia from the Bronze Age and the ringfort from the Early Christian Period, tell their own story. Nonetheless fulacht fia and ringforts are an important part of our heritage and each individual one has a unique story to tell. The fact that so many have survived is a testimony to the landowners who have preserved them; it is worth pointing out that the vast bulk of our archaeological heritage is located on privately owned land.

Stuck between these two Golden Ages is the enigma of the Iron Age. Did the Celts come to Ireland as a people or was it just their language and their art? If they did come as a people they have left scant evidence of that for today's archaeologists to find.

The later medieval period, the 15th and 16th centuries, was a period of intense building activity in the county, matched only by that second great rebuilding in the late 18th/early-19th century. The bulk of our built heritage dates to these two periods. In the later periods the work of the archaeologist and the architectural historian do seem to overlap, and sometimes the question can be asked: "is this archaeology or architecture?" The answer of course is that it can be both at the same time, just different disciplines applied to the same subject.

Once we are into the historic period one might expect the role of archaeology to change but

the discipline of examining the past through physical remains, remains the same. It is still the work of archaeology to let the mute stones speak.

In the past finding out what archaeological monuments were in a particular area was a matter of accessing hard copy six-inch maps and chasing articles in historic and archaeological journals. But the Internet has changed all that. One can now look up all the known archaeological monuments in County Cork and indeed throughout the entire State on the Department's website **www.archaeology.ie** and following the links to the *Historic Environment Viewer*. This is a wonderful resource. Not only are all the known archaeological monuments there but they can be viewed against the background of the various editions of the Ordnance Survey's six and twenty five inch maps as well as aerial photographs.

This information was gathered in the 1980s and 1990s by the Cork Archaeological Survey, a Government funded project carried out by the Department of Archaeology, UCC. Every known or suspected archaeological monument in the county was visited and recorded by teams of archaeologists. This information formed the basis for the Record of Monuments and Places (RMP), an official listing issued under Section 12(3) of the National Monuments (Amendment) Act 1994 which gives legal protection to all the monuments on the list. The work of the Cork Archaeological Survey was then published in a series of Inventories covering the county in four volumes: West Cork; Mid Cork; South and East Cork and North Cork. Such was the amount of new information these Inventories generated that a fifth volume was published to cover these additions to the list of known monuments.

One aspect of Cork's archaeological heritage not covered by the Inventory series is its underwater maritime archaeology. The Department now has a specialised Underwater Unit that covers this aspect of heritage. All wrecks over 100 years old and archaeological objects found underwater are protected under Section 3 of the National Monuments (Amendment) Act 1987. Even wrecks less than 100 years can be protected. All diving on wrecks affected by the legislation must be licensed by the Department. For further information see the website: **www.archaeology.ie/underwater-archaeology**.

We hope that this book is an insight into Cork's wonderful archaeological heritage and will encourage the people of the county to further engage with that rich resource.

Appendix

The following pages contain a wealth of further information with regard to the archaeological heritage of County Cork. In keeping with the Heritage of County Cork Publication Series, a poetry corner is included, in addition to a selection of photographs conveying just how vast the county's archaeological heritage is. An article by Dr. Connie Kelleher on the importance of underwater archaeology is also included.

Many of the photos and accompanying texts on these pages are with thanks to dozens of people and community groups from throughout the county who have engaged in the publication and for that Cork County Council's Heritage Unit is most grateful. The Appendix begins with a Glossary section covering many different archaeological terms and an index is also provided, with the intention of making this publication as user-friendly as possible.






Glossary of Archaeological Terms

ABBEY: Building(s) occupied by a community of monks or nuns.

AD: Anno Domini, After Christ.

ALLEES COUVERTES TOMBS: A type of megalithic tomb found in France.

ANTAE: Rectangular projections beyond the end walls of early stone churches.

ARCHAEOLOGIST: An Archaeologist is a person who studies archaeology.

ARCHAEOLOGICAL EXCAVATION: The scientifically controlled recovery of subsurface materials and information by archaeologists.

ARCHAEOLOGICAL INVENTORY: A list of all known archaeological monuments. In Ireland the Archaeological Survey of Ireland are producing these inventories on a county-by-county basis.

ARCHAEOLOGICAL MONUMENT: See monument.

ARCHAEOLOGY: Archaeology is the study of how people lived in the past through the examination of the physical remains they left behind.

ARTEFACTS: These are any portable object that was made, shaped or modified by people in the past.

ATTIC: A room contained in the roof space.

AXIAL STONE: The stone at the south-west side of a stone circle and the lowest stone in the circle, usually has a flat top.

BANK: A man-made ridge or mound of earth built around an enclosure.

BAY: The vertical division of a building often marked by windows and doors.

BAWN: A walled enclosure attached to a tower house or a fortified house.

BC: (of a date) before Christ.

BIODEGRADABLE: Capable of being decomposed by bacteria or other living organisms.

BOULDER BURIAL: Monument consisting of a single large boulder resting on three or four support stones.

BRONZE AGE: Period from around 2000 to 800 BC, after the Neolithic and before the Iron Age, characterized by the use of bronze for the manufacture of tools and weapons.

BULLAUN STONE: A man-made hollow or basin cut in rock outcrops, boulders or small, portable stones. Their exact function remains unclear though many are associated with early ecclesiastical sites.

CAIRN: A mound of stones, usually covering a prehistoric burial.

CAPSTONE: A flat slab of stone forming part of the roof of a megalithic tomb.

CASHELS: These are ringforts but enclosed by a stone wall rather than an earthen bank.

CASTLE: The fortified dwelling of a medieval king or lord.

CELTIC: Refers to the material culture of the Celts as well as their language and culture.

CELTS: A group of tribes who lived in Western and Middle Europe during the Iron Age. These are the people Julius Caesar encountered when he conquered Gaul (France) and Southern Britain.

CHANCEL: The east end of a church in which the main altar is placed, sometimes divided from the nave by a chancel arch.

CIST BURIALS: Bronze Age burials in an underground stone lined box.

CLIADH DUBH: An Iron Age linear earthwork in North Cork.

CLOISTER: An open space surrounded by a corridor that formed the central core of a medieval monastery, made popular by the Cistercians.

COASTAL PROMONTORY FORTS: These are fortified coastal headland or sea-girt promontories. Often incorporate the Irish word dún (fort) in their name.

COLLARED URN: A Bronze Age cinerary urn with a distinct collar.

CORBELLED: The term used for the method of roofing a chamber by successively overlapping the courses of stone until they meet at the top.

CORDONED URN: A Bronze Age cinerary urn with corded decoration.

COURT TOMBS: A type of megalithic tomb consisting of a long, rectangular-shaped cairn, in front of which is an open court in the form of a semi-circle.

CROSS-INSCRIBED SLAB: A flat stone bearing an inscribed cross, usually marking a burial, dating to the Early Christian period.

CUP MARKS: These were a form of prehistoric art. They consist of a concave depression, no more than a few centimetres across, pecked into a rock surface and often surrounded by concentric circles also etched into the stone.

CUP AND CIRCLE: See cup marks.

CUP-MARKED STONES: An upright stone bearing cup marks.

DESMOND REBELLION: Rebellion by the Earl of Desmond against English rule in Munster that began in 1569 and ended with the killing of the Earl in 1583. The confiscation of his lands by the Crown led to the Munster Plantation.

DITCH: Term for the trench dug to provide material for a bank, usually in the construction of an enclosure. If the ditch is outside the bank the result is a defensive enclosure like a ringfort, but if the ditch is inside the bank the enclosure is probably for ritual or marking a burial like a ring barrow.

DOLMEN: Obsolete name for a megalithic tomb.

DOMESTICATED ANIMALS: Animals controlled by humans to provide food (meat and milk), clothes (wool, fur, hides), power, transport, companionship or for hunting. First introduced into Ireland in the Neolithic period.

DÚN: The Gaelic name for a fortification.

EARLY CHRISTIAN: The period spanning the early centuries of Christianity in Ireland. Also known as the Early Medieval period.

ENCLOSURE: One of the most common types of archaeological monument. It is any area of land separated from surrounding land by earthwork, a wall or a fence.

ENTABLATURE: The upper part of classical buildings supported by columns or a colonnade.

EXCAVATION: see archaeological excavation.

FIELD MONUMENT: Those features of the landscape that is ancient and man-made.

FINDS: Artefacts uncovered during an archaeological excavation.

FINIAL: An ornament at the top of a gable.

FLAT CEMETERIES: These are Bronze Age cemeteries which are not marked by surface memorials.

FLINT: A hard, dark grey form of quartz that is found as lumps of stone in limestone and chalk rocks. When struck properly it will produce sharp points and cutting edges useful to humans.

FOOD VESSEL BOWL: A small pottery bowl placed in a Bronze Age grave.

FOOD VESSEL VASE: A small pottery vase placed in a Bronze Age grave.

FORTIFIED HOUSE: A lordly residence built in the early decades of the 17th century. The stone vaults and narrow windows of tower houses were replaced by wooden floors throughout and larger windows. Though built for greater comfort than their predecessors, they still retained gun loops and machicolations for their defence.

FOSSE: A trench dug around an enclosure in front of a bank for defensive purposes, sometimes referred to as a ditch.

FULACHT FIA: Ancient cooking places that date mostly to the Bronze Age.

GABLED: A roof with a pitch (slope) in front and at the rear but not on the sides.

GARDEROBE: A gravity-fed latrine in a castle or a tower house. Usually located in a separate room.

GRAVE GOODS: Items interred along with the body. They are usually personal possessions such as tools, weapons or food that were supplied for the deceased's journey into the afterlife or as offerings to the gods.

HALL: The main public building in a castle, usually where the lord of the castle entertains guests and conducts his business.

HILLFORTS: Fortifications built on hilltops that date from the Late Bronze Age.

HIPPED: A roof with a pitch (slope) on all four sides.

HISTORIC: Belonging to history, not to prehistory or legend. Reliable written accounts of past persons or events.

HOLY WELLS: Most 'wells' are in fact springs and are often covered by stone-built or concrete surrounds. Water from the well is taken or applied for its curative powers. They are often found in association with ancient churches and monasteries.

HOOD MOULDING: A horizontal projection, on the outside, above a window opening, to throw off dripping water.

HUNTER-GATHERER: Semi-nomadic bands of people whose subsistence is mainly based on hunting wild animals for meat, and gathering berries, fruits, nuts etc. from plants.

HUT SITE: A small building of indeterminate use.

INORGANIC: Material not derived from living organisms (metal, plastic, etc.)

IRON AGE: Final period of prehistory, beginning around 500 BC and lasting into the early centuries of the first millennium AD. Iron superseded bronze as the most suitable material for the manufacture of tools and weapons.

KERB STONES: Large stones set on edge running around the full circumference of a mound or cairn providing definition and revetment.

KILLEENS: An informal burial ground, often where un-baptised infants were buried.

LA TÈNE: A type of art developed by the Celts.

LIGHT: That part of a window embrasure that lets in the light. In medieval times often formed of formed stones with an arched head.

LINEAR EARTHWORK: An extensive length of earthwork, usually an earthen bank.

LINTEL: A horizontal beam or stone covering a space like a passageway or a window embrasure.

LOOP: An opening in a castle wall specifically designed for shooting out through. Arrow loops were large spaces to allow an archer room for his bow but gun loops are smaller as a gunner needs less space.

MARKET HOUSE: From the early 17th century, became an important feature of many of Ireland's market towns. They have a standardised appearance with an open arcade on the ground floor and a large well-lit room on the first floor that often functioned as a court or meeting room.

MATERIAL CULTURE: This refers to the monuments and artefacts found in the archaeological record that define an ancient culture.

MEDIEVAL: A term with a wide usage but generally referring to the period when feudalism was the main form of social organisation.

MEGALITHIC: The word derives from the Greek mega meaning 'large' and lithic meaning 'stone'. The term is usually applied to tombs made of large stones that were built in the Neolithic and Early Bronze Age periods.

MEGALITHIC TOMBS: Four types of these tombs are found in Ireland: Passage Tomb, Court Tomb, Portal Tomb, and Wedge Tomb.

MESOLITHIC: Middle Stone Age. In Ireland the period from 8,000 BC to 4,000 BC.

MOATED SITES: These were rectangular shaped enclosures primarily associated with the 13th and 14th century Anglo-Norman colonisation of Ireland.

MONASTERY: A term with a wide usage but generally applied to an ecclesiastical centre with a religious community.

MONUMENT: Any man-made structure in the landscape of archaeological significance.

MUNSTER PLANTATION: A settlement of English Protestants on the confiscated lands of the Earl of Desmond after the failure of the Desmond rebellion. Took place in the 1590s and early 1600s.

MURDER HOLE: An opening in a roof that allows defenders to shoot down on or drop missiles onto an attacker.

NATIONAL MONUMENTS: This term as defined in Section 2 of the National Monuments Act (1930) means a monument 'the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto'.

NATIONAL MONUMENTS ACTS: National Monuments Acts, 1930-2004. These Acts make provision for the protection and preservation of national monuments and for the preservation of archaeological objects in Ireland.

NAVE: The main body of a church, west of the chancel. Used by the congregation.

NEOLITHIC: New Stone Age. Period when settled farming superseded nomadic life, in Ireland from around 4000 BC to 2000 BC.

OGEE: A double-curved arch, partly convex and partly concave.

OGHAM: An ancient script of twenty characters formed by parallel strokes on either side of or across a continuous line. Usually cut along the edge of a stone. The language of these inscriptions is Old Irish.

OGHAM STONES: Stones that bear an ogham inscription.

ORDNANCE SURVEY: The Ordnance Survey Office in Ireland was established in 1824 to carry out a survey of the entire island in order to update land valuations for taxation purposes. By 1846 the entire island had been surveyed at a scale of six inches to one mile. Ireland was the first country in the world to be entirely mapped at such a detailed scale.

ORGANIC: Material originally derived from living organisms (leather, wood etc.).

PALAEOLITHIC: The period that extends from the earliest known use of stone tools by hominins c. 3.3 million years ago, to the end of the last Ice Age around 10,000 BC.

PASSAGE TOMBS: A type of megalithic tomb in which there is a distinct narrow passage leading to the burial chamber.

PIT BURIAL: A Bronze Age burial in which cremated human remains, covered by an inverted urn, are placed in a pit.

PORTAL STONES: The two tallest stones in a stone circle, placed on the north-east side opposite the axial stone.

PORTAL TOMBS: A type of megalithic tomb where the entrance is flanked by two large, upright portal stones and the burial chamber, covered by a large capstone, slopes downwards from the front to rear.

POST MEDIEVAL: The 17th, 18th and 19th centuries.

POSTHOLE: A small pit that held an upright post.

PREHISTORIC: The period before any historic record exists. In Ireland the prehistoric period is divided into the Mesolithic, Neolithic, Bronze Age and Iron Age.

PYGMY CUP: Tiny pottery vessels found in some Bronze Age cist burials.

QUOINS: The stones forming the corner of a building.

RADIAL-STONE CAIRN: A low circular cairn is which are set stones on a radial axis.

RADIOCARBON DATING: A measurement of the approximate age of an organic object by measuring the amount of the isotope C14 it contains.

RENDERING: Covering of a wall. Traditionally external rendering was either a lime sand render or a clay based daub, both of which allow the walls to breathe.

RING BARROW: A Bronze Age burial monument consisting of a circular bank with an internal ditch.

RINGFORTS: Circular earthwork enclosures constructed by digging an outer ditch and then throwing the excavated material on the inside to form a bank. Within the enclosure stood the farmsteads of Early Christian times.

RMP: The Record of Monuments and Places. This consists of large-scale maps with the location of all known archaeological monuments shown and an accompanying list. This list gives further information on location and classification. All archaeological monuments listed in the RMP are protected by law (see National Monuments Acts). A copy of the Record of Monuments and Places can be found in your county library or downloaded online from www.archaeology.ie.

ROCK ART: Shallow carved decoration of a rock surface, usually circular in pattern. Dates to the Bronze Age.

SACRED SPACE: This is first of all a defined place, a space distinguished from other spaces. The rituals that a people either practice at a place or direct toward it mark its sacredness and differentiate it from other defined spaces.

SEDILIA: A seat for the priest, deacon and sub-deacon officiating at Mass, built into the south wall of the chancel.

SHERDS: Any pottery fragment, piece of broken pot or other earthenware item, which has archaeological significance.

SOUTERRAINS: Underground chambers often found within ringforts. The chambers may be cut in the subsoil or bedrock, and were used for refuge. They date from the Early Christian period.

STANDING STONES: Lone vertical stones. They are not necessarily of one period or serving the same purpose. Some mark prehistoric burials while others may have had a commemorative or ritual function. It is thought that many examples date from the Bronze Age.

STONE AGE: The period of prehistory when humans used stone tools (as well as bone, antler and wood) and metals were undiscovered. Covered by the Mesolithic and Neolithic periods in Ireland.

STONE AXE: A stone tool attached to a handle. Used mainly for working with wood and chopping down trees.

STONE CIRCLE: A circle made up of upright stones, always uneven in number, assumed to be for ceremonial and religious purposes, dating to the Bronze Age.

STONE ROWS: Defined as three or more upright stones set closely together in a relatively straight line and on a general north-east/south-west axis. Their exact function remains unknown but they probably had a ritual, ceremonial or commemorative role. Bronze Age in date.

STOREY: The horizontal division of a building.

STREETSCAPE: The manner in which buildings are ordered along a street.

THUMB SCRAPER: A small flint Stone Age tool held between thumb and forefinger and used in a scraping manner.

TUMULUS: A mound of earth raised over a grave in prehistoric times.

URN BURIAL: A burial in a pit in which the cremated human remains are covered by an inverted urn.

WEDGE TOMBS: A type of megalithic tomb in which the long burial chamber is broader and higher at one end making it 'wedge' shaped. The chamber sides are usually built of a double line of slabs.

Maritime Cork – The Link Between Land And Sea

In a book dealing with field monuments we must also remember that another part of our archaeological heritage lies under the waters off our coast and along the coastline itself. Dr Connie Kelleher, a marine archaeologist with the Department's Underwater Unit has provided us with the following short introduction to the county's marine archaeology as well as an account of an interesting example of the type of feature on the coastline that forms part of that heritage.

With a coastline measuring 1,094km - the second longest in Ireland - it is not surprising that County Cork's maritime and underwater cultural heritage is both rich and diverse. The waterways along the southern coastline acted as maritime highways, linking people to the western seaboard of Britain and Europe and further afield, particularly in post-medieval times. A multitude of maritime activities took place using this strategic stretch of North Atlantic water, including fishing, trade, travel, exploration, colonisation, transplantation, immigration and warfare.[1] The latter is particularly evident in the maritime infrastructure within Cork's main harbours, such as the Port of Cork, Bantry and Kinsale, where coastal fortifications were built or enhanced to address pending conflict threats and where that same coast witnessed immense loss during both World Wars.[2] The use of boats and ships, along with shipwrecking events, perhaps springs to mind first when considering Cork's underwater cultural heritage, but it is the littoral between land and sea - that can reveal previously unknown maritime links - that is often overlooked in the archaeological record. Cork's coastal archaeology along the seaward fringe attests to its direct links with the ocean over the millennia and which includes monuments such as inundated megalithic tombs, coastal promontory forts, later fortifications, fish traps, slipways, jetties, industrial sites and port and harbour facilities.[3]

Tramadroum, Baltimore

Indicative of some of the lesser-known and more ephemeral monument types in the archaeological record, the cultural evidence found in the little cove of Tramadroum, to the southwest of the village of Baltimore, are good examples. The strand is located just inside and immediately northeast of the harbour entrance, and local knowledge and archaeological survey has revealed previously unknown evidence for a slipway, quay and cobbled trackway within the foreshore.[4] The linear stone feature measuring 10m N-S with adjoining 7m-length of stone settings running E-W provides a glimpse of the potential morphology of the quay. Along with basal remains of the slipway, running SW into the subtidal zone on the western edge of the quay, they point to infrastructure for boats, ships and goods being in place at Tramadroum for those using the strand. In the absence of archaeological excavation, it is not

View from Tramadroum looking out over Baltimore Harbour and across to Sherkin Island; the basal remains of the linear quay and slipway are in view.
Image: Connie Kelleher.

possible to date these as their existence has been forgotten in living memory but, importantly, they inform on Tramadroum being used as a dedicated landing place in the past, with maritime facilities in place. Indeed this same infrastructure may well have had direct ties to previously recorded monuments in the immediate locale, such as the fish palace inshore and which would have been accessed via the cobbled road or trackway, as well as potentially other specific events in history, such as the Algerine pirate raid on Baltimore in 1631.[5]

The new archaeological monuments identified at Tramadroum highlight those lesser-known sites that can, very often, be overlooked, only being revealed following storm events when sands shift or gravels move. They are no less important because of this, however, and indeed it is this almost momentary aspect to them that perhaps makes it all the more critical to seek them out, record them and understand them before they cover over again or are destroyed by either natural or cultural impacts, whether through climate change or coastal development. They are as much a part of County Cork's archaeological legacy as any more well-known monument in the landscape.

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[1] K. Brady, C. Kelleher & F. Moore, 2021. 'Ireland's Coastal Waters and its Shipwreck Heritage', in R. Devoy, C. Cummins M. Kozachenko & B. Brunt (eds), *Shorelines: The Coastal Atlas of Ireland*, Cork University Press (forthcoming).

[2] D. Shiels, 2008. 'Identifying and Interpreting Ireland's Post-Medieval Conflict Archaeology', *Journal of Irish Archaeology*, Vo; 17, pp. 137–152; K. Brady, C. McKeon, J. Lyttleton & I. Lawler, 2012. *Warships, U-Boats & Liners: A Guide to Shipwrecks Mapped in Irish Waters*, Government of Ireland Publications, Dublin; F. Moore, C. Kelleher, K. Brady, C. McKeon & I. Lawler, 2019. *RMS Lusitania: The Story of a Wreck*, Government of Ireland Publications, Dublin.

[3] C. Kelleher, 2018. 'Maritime Cork and its Continental Connections', in M. Hallinan, C. Nelligan & M. Sleeman (eds), *Europe and the County of Cork: A Heritage Perspective*, Cork Heritage Unit, Cork County Council.

[4] Tramadroum sites and monuments record: CO150-098 *Quay*; CO150-099 *Slipway*; CO150-100 *Road/Trackway*, Historic Environment Viewer, www.archaeology.ie;

[5] RMP CO150-049 *Fish Palace*, Historic Environment Viewer, www.archaeology.ie; Denis Power, *Archaeological Inventory of County Cork: West Cork*, Government of Ireland Publications: monument no. 3652, p. 410; C. Kelleher, 2020. *The Alliance of Pirates: Ireland and Atlantic Piracy in the Early Seventeenth Century*, Cork University Press, pp. 102–103, 270–273.

Poem:

Through Sands of Time we S(h)ift

by Conor Nelligan

It's all about time, archaeologically speaking.
We have so much to learn, it's our past that is speaking.
To guide us on journeys from the here and now,
Or remind us that all ends up buried somehow?

Or maybe not buried but forgotten in time?
How we march to the beat and yet ignore the rhyme.
Above us, below us, each part is the All.
Ignore what's beneath and we're destined to fall.

As we learn of the world, without and within,
There's a history waiting to find ourselves in.
We are often distracted by bright lights and sounds –
What of stones in alignment and portals and mounds?

What of sagas and stories, tales at Fulacht Fias?
What of ringforts, old sea ports, those founding ideas
Of revolution, resolution and at times retribution;
If we pass up our past we pass up past solutions.

Was there ever a time when we lived to feel alive?
Not alive to make a living, but to leap and run and dive?
To explore our minds' creation at the very point of being;
The past defines the future, there is so much we're not seeing.

Right now we can create a past the future will be proud of.
Tomorrow's past is cast today – the books we are inside of.
Archaeology pairs the past with present minds:
To boldly go where we have been – there's so much more to find.

The Witch's Bed, the Marriage Stone, the Ringfort of the Hound –
A time when justice stood for more that monetarised pounds.
By studying our past we can learn what really matters.
The mirror of our make up is the kind that never shatters.

What if someone told you in the end, it's not material worth?
But how you give your life to every atom on this earth.
Surely then we'd sense the need to learn from our shared past;
If we keep ignoring signposts then we're going nowhere fast.

Fast. It's all post haste. A hyper human race.
We're used to going ninety but nineteen has changed the pace.
Whether good or well enough, in year one or eighty four –
Whatever comes to pass, the idea has come before.

When the axe first fell on wood, so commenced a craft.
Stones could be aligned in a passage; to build shafts.
The language of our trees – it was first etched in stone,
Just as these bodies of flesh must attach themselves to bone.

From nature we come and to nature we will go;
We are always part of nature – surely we all know?
Yesterday's today is the future of our past
And our past has yet to fail us, how else can all this last?

Holy Wells could lose their meaning, despite us meaning well.
The water that once purified could one day lose its spell.
We must always live in hope; of finding something in the rough -
Imagining the sound of that bird from Garryduff.

Standing in line, are these stones a cold reception?
Or warmed by the sun, are they balanced perfection?
So much depends on one's very point of view.
Knowledge of the past can awaken and renew.

The future will provide for those who offer something more
Than that which they expect - all reasons to endure.
There's a past to the present and the future is our gift;
We all must value something – through sands of time we s(h)ift.

Poem:

A Most Difficult Time

by Diarmuid Kingston

In the graveyard, swaying bluebells commandeer all available space
No headstones visible here, save for small standing flagstones
That proliferate the eastern end, where their bodies repose
Beneath their cold cover of grey stones.

Both parent's grave and children's grave still recognisable
Though many generations of time have passed them by
Casualties from the Great Famine in the year of Black '47.

Their friends and neighbours too weak to give them a decent burial
They scratched the surface of cold earth and laid them there to rest
Covering both graves with stones from the nearby ruined church.

This family, it is said, came from the coastal village of Ballinglanna
It was in the same parish with its burial ground at Templequinlan
A father and mother and four small children.

No food, no heat, amid sickness, disease and pestilence
The potato crop had failed totally, they could not survive
Since it was their sole sustenance.

Too weak, too poor to net the harvest of the sea
Stifling stench from rotting gardens infiltrating every space
The miasma of famine, the grim reaper stalking the fair land.

A decimated family, leaving no survivor, their names not recorded
In any archive or place but living on in local lore, handed down
From generation to generation.

Asleep under the long grass, there, their graves destined to stay
Undiscovered, until laid bare by the local council's burn-off spray
The grey cover of cold stones revealed in the late twentieth century.
Today, many generations later, seeing is believing.

Pictorial of Additional Archaeological Heritage in County Cork

Cloghmacon Boulder Burial (CO083-06102-), near Kilmurry.

Lissarourke Boulder Burial (CO095-053), near Newcestown.

Glantane East Wedge Tomb (CO048-092) near Carriganimmy in an area surrounded by Bronze Age monuments.

Knocknakilla Stone Circle and Stone Pair (one fallen) (CO048-099001 & 2), near Millstreet.

Balygrissane Standing Stone (CO099-046002), near Minane Bridge.

Cappaleigh Boulder Burial (CO116-007 001), near Adrigole on the Beara Peninsula.

Barryshall Standing Stones (CO136-017001) near Timoleague. Image by Jack Dempsey provided courtesy of Diarmuid Kingston.

Barryshall Fulacht Fia (CO136-093) in ploughed field near Timoleague.

Carrigagulla Five Stone Circle (CO049---), near Ballinagree.

Coolcoulaghta Stone Pair (CO130-032), near Durrus.

Maughansilly Stone row (CO092-019028-) near Kealkill, Bantry, showing alignment with winter solstice. Image by Áine Brosnan.

Rathdrought Moated Site (CO111-54-), near Ballinadee.

Dromagh Castle (CO030-143) near Kanturk. Image by Sheila Fitzgerald.

Lisnaraha Ringfort (CO062-135001), near Blarney.

St. John's Well (CO048-085), near Millstreet. Image by Sheila Fitzgerald.

Clenor Church of Ireland (CO025-072002), built in 1813 beside a medieval church.

Garranes Stone Row (CO041-084), near Glantane. Image courtesy of Donie O'Sullivan.

Middle Redoubt (CO118-078), Whiddy island.

Raheen Tower house (CO142-082) near Castletownsend. An O'Donovan castle attacked by Cromwellian forces in 1649. Note holes from cannon balls.

Recently identified hut site at Dooneens near Ballingeary by Miriam Carroll and Annette Quinn.

Doonpeter Holy Well (CO043-01402), Glenville, visited on St John's Eve on 23rd of June.

Ballingeary Clapper Bridge (CO081-008). Image courtesy of James Buckley.

Gortroe Church and Graveyard (CO044-40001&2), near Rathcormac.

Knocknaneirk (Hornhill) Stone Circle (CO083-085002), near Coppeen.

Fulacht fia (CO038-040), at Caherbarnagh near Millstreet.

Ballinluig West Mill complex (CO112-012) in Ballyfeard near Kinsale. Corn Mill with Tuck Mill (CO112-012) to rear, taken in 1983 by the Cork Archaeological Survey.

Lissagriffin Bullaun Stone (CO147-024003-), immediately to south of graveyard.

Annaghmore House (CO097-014001), near Innishannon, recorded in 1983 by Cork Archaeological Survey. The house no longer survives.

Ringfort (CO022-129001) in Ballyhoolahan West, taken in 1984 by Cork Archaeological Survey showing a shadow of an outer bank.

Underground passage at Camden Fort Meagher (CO099-024), Crosshaven.

Beennamwell East Wedge Tomb (CO041-116), near Bweeng. It is known as Leaba Cailli. Image by Donie O'Sullivan.

Ightamurragh Fortified House (CO077-024002-), near Castlemartyr.

Kilmeen Graveyard (CO022161001-), Boherbue. Image by Tim Murphy.

Templebreedy Church (CO099-03002-), Crosshaven. Image by Siobhán Russell, provided courtesy of Cllr. Audrey Buckley.

Carrigtwohill Medieval Church and Tower (CO075-017002-).

Garryvoe Church (CO077-037002-).

Kill Cuillin Standing Stone (CO041-044005-), Lackendarragh, near Glantane, in an Early Ecclesiastical Enclosure. A hole in the stone is used to cure ailments by passing a cloth through the hole three times while praying. Image by Donie O'Sullivan.

Caherdowney Cashel (CO048-069), south of Millstreet.

Castlenalacht Stone Alignment (CO096-015), Innishannon.

Some members of the Cork archaeological Survey – from left to right: Mary Sleeman, Mick Monk, Tony Candon, Ivan McMahon, Elizabeth Byrne, Angela Desmond, Matt Kelleher, Sheila Lane, Katey Sleeman, Judith Monk, Denis Power, Rose Ahern, Marcus Nolan, Daphne Pochin Mould, Pat Byrne, Charlie Byrne, Eamonn Cotter, John Cronin, Ursula Egan and Domnall Fleming. 23rd May 1998.

The Cork Archaeological Survey was established in 1982 with a brief to visit and record all known or suspected archaeological monuments in County Cork. The work was commissioned by the National Monuments Section of the Office of Public Works and carried out by a team of archaeologists based in the Department of Archaeology, University College Cork. The outcome of this work was the production of the Sites and Monuments Record (SMR) for the County in 1988; the Sites and Monuments Record for the County (RMP) in 1998, and The Archaeological Inventory of County Cork published in five volumes between 1992 and 2009. A whole generation of field archaeologists worked in the Cork Archaeological Survey at various times over the span of its existence.

Mount Long Fortified House (CO112-041), near Kinsale.

Burial Ground (CO149-013) on Hare Island.

Waterwheel at Midleton distillery by Gayle Dsouza.

Kilcredan Church (CO077-043-002-).

Kilcredan effigies (CO077-065) in Kilcredan Church, Ladysbridge.

Kilcullen Stone Alignment. Image courtesy of Gerard O'Rourke.

Glandine Stone Alignment near Bweeng. Image by Jim Quinn.

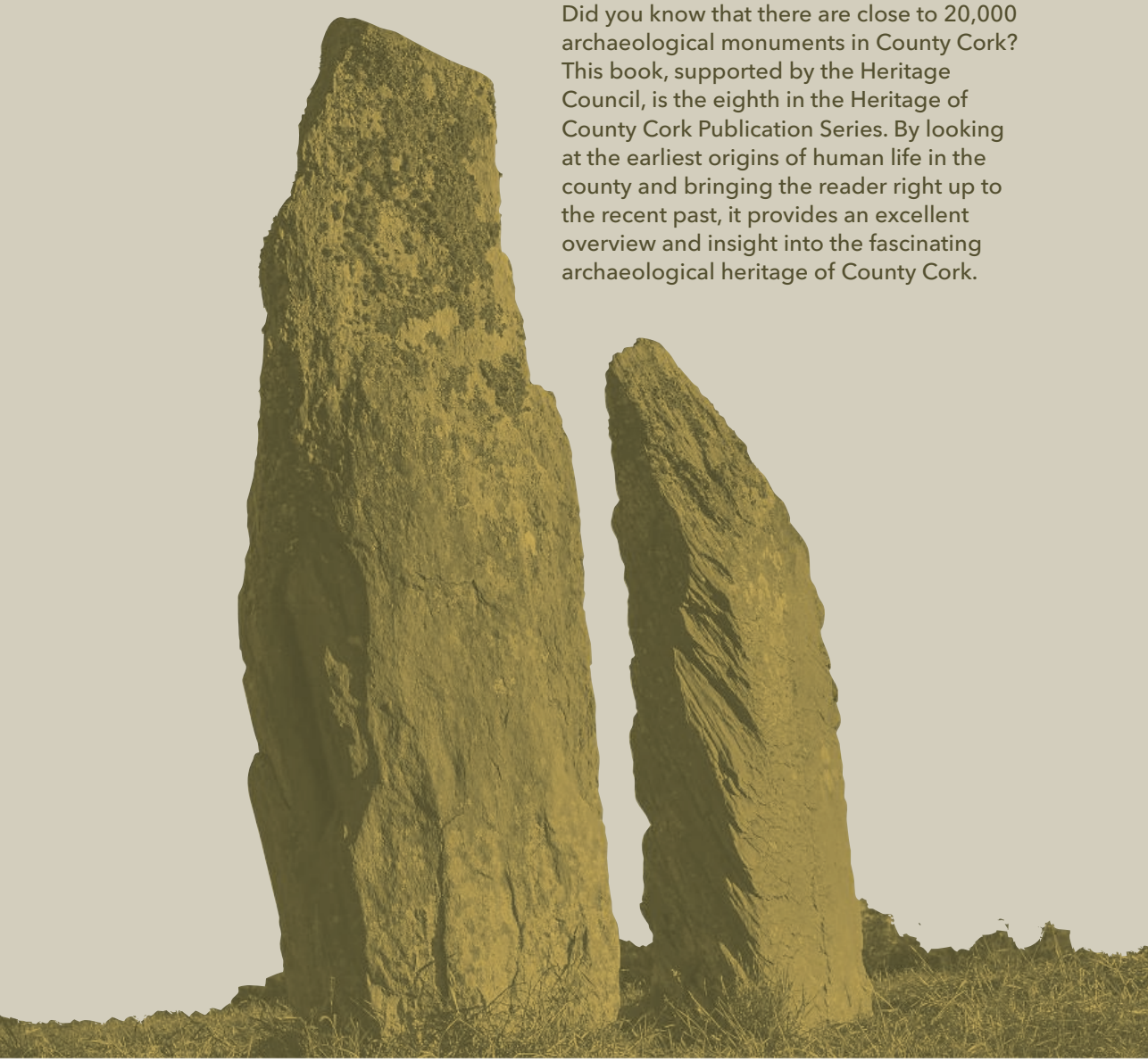
Ogee headed windows at Garryvoe Church (CO077-037002).

Kilcrohane Marriage Stone - image by Charlie McCarthy, provided courtesy of Angela O'Donovan.

Meenachoney Standing Stones. Image courtesy of Gerard O'Rourke.

Index

Did you know that there are close to 20,000 archaeological monuments in County Cork? This book, supported by the Heritage Council, is the eighth in the Heritage of County Cork Publication Series. By looking at the earliest origins of human life in the county and bringing the reader right up to the recent past, it provides an excellent overview and insight into the fascinating archaeological heritage of County Cork.



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