Early medieval Ireland, Archaeological excavations 1930-2004

by

Aidan O’Sullivan, Finbar McCormick, Thom Kerr and Lorcan Harney

Early Medieval Archaeology Project (EMAP) Report 2.1

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This report has recently been accepted for consideration as a monograph publication by the Royal Irish Academy Publications Committee, but it will obviously need further work of editing and proofing before that. We would be deeply appreciative if our colleagues could communicate to us any errors of fact (e.g. site names, directors, companies) or inconsistencies that we will endeavour to correct before publication. Finally, we hope that this EMAP report makes a contribution to our understanding of early medieval Ireland and that enables research across all archaeological sectors; museums, state services, the universities and in the professional archaeological sector.

Aidan O’Sullivan, Finbar McCormick, Thom Kerr, Lorcan Harney
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Executive Summary

- The Early Medieval Archaeology Project (EMAP) was funded in 2008 by the Heritage Council Irish National Strategic Archaeological Research (INSTAR) 2008 programme and the Heritage Council Archaeological Research Grants 2008.

- EMAP's database analysis has revealed that 2,208 early medieval sites were excavated (using 3,047 excavations) between 1930-2004. EMAP has shown that there has been immense research capacity building in the commercial sector, although the resources devoted to research and interpretation of this data in the Universities, Museum and State sectors have not seen a similar expansion.

- However, despite a general perception of a ‘crisis’ of non-publication in Irish archaeology, EMAP has shown that the problem may not be of the same scale as previously believed. EMAP suggests that of the 2,208 early sites, (where excavations were undertaken both on and in vicinity of), between 1930-2004; only 95 would be considered to be ‘Highly Significant’; 307 ‘Significant’; 485 ‘General Significant’; 302 ‘Uncertain’ while 1,019 site excavations were of ‘No Archaeological Significance’. Irish archaeology, through well-funded collaborative research programmes such as EMAP (and other projects for other periods) could easily cope with the publication and dissemination of this new archaeological evidence.

- EMAP has demonstrated that a wide range of new early medieval settlement types have been identified, with significant insights available into the wider settlement landscape. Of the EMAP site categories investigated, a total of 346 sites were ‘settlement enclosures’; 101 were ‘settlement landscapes’; 129 were ‘unenclosed’ habitation sites, 12 were ‘settlement/cemeteries and 216 were earth agricultural/industrial structures or features. A total of 89 sites were in Viking/Hiberno-Norse towns.

- EMAP has demonstrated that an astonishing range of evidence has been uncovered for the role of the church in the Irish landscape. Of EMAP’s site categories, a total of 225 sites excavated were Church/Ecclesiastical’. This can be used to trace the function of ecclesiastical sites and how they related to settlement/cemetery sites, unenclosed cemeteries and to settlement, travel and the economy.

- EMAP has shown that there is significant diversity and variety in burial rites and contexts in early medieval Ireland, AD 400-1200. This includes changing practices and beliefs from the Iron Age to the end of the early Middle Ages, and this report reveals the range of archaeological evidence that provides immense potential for future research.

- EMAP has revealed that there has been a significant amount of discoveries of archaeological evidence for agriculture in early medieval Ireland, particularly in recent years with the discovery of fields, corn-drying kilns, mills and other features, that will require significant rethinking of early medieval agriculture and economy. EMAP has also tabulated and analysed the evidence for early medieval crafts and industry and trade and exchange, providing the basis for a wide range of future research and publication.

- This EMAP report concludes with a preliminary outline of future research challenges and opportunities.
Chapter 1. Introduction

Introduction

The Early Medieval Archaeology Project (EMAP) aims to investigate one of the most significant periods of social, ideological, environmental and economic change in Ireland (c. A.D. 400-1100), when the landscape of Ireland went through a series of extraordinary changes. This included population growth and social and demographic developments that saw the expansion and intensification of settlements and dwellings; radical innovations in agricultural practices (i.e. new plough technology and the earliest horizontal water mill technology in medieval Europe); in crop production and in livestock management (i.e. introduction of dairying).

Early medieval society changed radically too, as developments in political power and territorial organisation led to transitions from tribal-based chiefdoms and local kin-based social polities to regional dynastic lordships. A socio-economic system that was based on reciprocity and clientship was gradually transformed into one that was based on feudal labour services to a lord. Emerging urban markets (both monastic and Hiberno-Norse) and expanding networks of re-distribution brought an increase in international trade and exchange with Britain, Scandinavia, western Europe and beyond. In Ireland, the slow conversion from paganism to Christianity transformed people’s religious beliefs, ideologies of personhood and burial practices and saw significant developments in the landscape (e.g. in cemetery organisation and the growth of monastic centres and estates).

The Early Medieval Archaeology Project (EMAP)

In recent years, an extraordinary range of entirely new, and still largely untapped, archaeological evidence has been uncovered for all these changes, thus presenting an unparalleled opportunity to create new understandings of the dynamics of historical change as experienced by the early medieval peoples of Ireland, within their wider European context. Entirely new types of sites have emerged that do not fit with traditional explanatory models (e.g. settlement/burial complexes; non-ringfort type enclosures; industrial iron-working sites; unenclosed dwellings; complexes of field-systems and enigmatically-isolated corn-drying kilns and mills). The excavation of both rural and urban ‘classic’ early medieval settlements and burial grounds has produced vast amounts of objects, plant and animal remains and human skeletons. Unfortunately, the Irish professional archaeological community – understandably focused mostly on the imperatives of rescue and development-lead excavations – has been largely unable to develop research opportunities offered by these new sites and landscapes.

Most recent Irish archaeological policy statements (by the UCD Foresight group; the Royal Irish Academy vision for Irish archaeology seminar; and the Heritage Council’s research frameworks) recognise that the failure to transform ‘data into knowledge’ is the single-most problematic issue in modern Irish archaeology, almost unique in European terms. What Irish archaeology needs are good examples of collaborative research between the academy and the commercial archaeological sector, and more importantly, works of academic synthesis and publication that begin to interpret this new data. In the early medieval period, this is particularly so as the most recent works of synthesis are either out of date or have not sufficiently considered the newly discovered material (e.g. Edwards 1990, 2005; Laing 2006).

Aims and objectives of EMAP

The Early Medieval Archaeology Project (EMAP) is an INSTAR-funded research consortium, operating to an ongoing 3-year research project design, which aims to investigate and analyse the history, character and results of early medieval archaeological excavations in Ireland, to enable new understandings of the landscapes, settlements and economy of early medieval Ireland, AD 400-1170. EMAP will publish a series of books, peer-reviewed papers and website
with an online database of early medieval sites to help transform unpublished ‘data into knowledge’ and to support all researchers investigating this iconic period in Ireland’s past.

EMAP is a collaborative, inter-institutional and North/South initiative with staff from UCD School of Archaeology and the School of Geography, Archaeology and Palaeoecology, QUB working closely with archaeologists from the state and private sector, particularly Cultural Resource Development Services (CRDS); Archaeological Consultancy Services (ACS), and Margaret Gowen & Co (but also with a range of other companies, particularly in 2009/2010). EMAP is also supporting PhD and MA scholarships for 2 professional archaeologists, supporting their careers and graduate research in the archaeological profession.

The Heritage Council Archaeological Research Grants 2007 and UCD Seed Funding Scheme 2007 provided generous funding to establish a pilot project to review the potential of the early medieval archaeological material. The report of this project has now been updated and ambitiously expanded for the investigation of early medieval archaeological excavations in Ireland, 1930-2004, but with a particular focus on the main period of discovery in recent times, 1970-2004.

This EMAP report is based both on literature research and on the compilation and analysis of a substantial database that can now be used was to rapidly quantify and synthesise the number, type, form, character, significance and results of excavations of early medieval (c. A.D. 400-1200) sites, structures and artefacts between 1970-2002. The principal resource for the compilation of this database has been the online published excavation bulletin reports (1970-2002) located at excavations.ie and a review of selected relevant published monographs and articles.

Scope of EMAP report

The scope of EMAP research has been wide-ranging as it has involved reviewing all forms of excavated early medieval settlement, ecclesiastical, industrial, agricultural and burial evidence in both rural and urban contexts excavated from 1930-2004. The accession to the EU, the redevelopment of urban centres, the construction of an extensive infrastructural network of road and pipeline schemes and the urban sprawl of Irish towns and cities across the Irish landscape has had a profound effect on the Irish landscape and also on the heritage management and legislative framework protecting the Irish landscape, and thus has transformed the face of Irish archaeology.

However, as is well-known, infrastructural and residential developments, particularly since the latter phases of the ‘Celtic Tiger’ years, have placed a serious strain on Irish archaeological organizations with the effect that most resources have been devoted singly towards field recording rather than research. This imbalance between excavated information and the resources available to access this data has raised a number of critical issues which are essential to understanding both a) the nature and practice of early medieval archaeological research and discovery today and b) the character of early medieval Ireland in the past.

This EMAP report will initially examine a number of key issues concerning the character and practice of early medieval archaeological excavations from 1930-2004:

- What is the approximate number of annual excavations between 1930-2004 that concern early medieval related material?
- What is the distribution of these excavations and excavated sites across the country?
- Who has been responsible for these excavations (e.g. University units, government and commercial sectors) and how has patterns changed over time?
- What is the balance of types of excavation between 1930-2004 carried out across the country (e.g. testing, rescue, research) and how has the character of these changed over time?
- How significant is the early medieval archaeological evidence recovered from these excavation types and how have patterns changed over time?
• Why have excavations been undertaken and what has been the impact of different infrastructural and development schemes and projects on the early medieval archaeological resource?

The EMAP report will then move on to analyse and discuss the character of the archaeological evidence recovered from excavations mainly from the period 1930-2004, although use will also be made of available published or emerging archaeological evidence discovered prior to (e.g. 1930-1969) or after these dates. It is hoped that this information can be used by scholars to further understand and examine early medieval landscape and society in the past. It will also seek to identify potential research areas in early medieval archaeology.

Sources of information for EMAP report

EMAP’s long-term principal objective is to publish a series of reports and to establish an online database of excavated early medieval evidence that can be used by scholars and the interested public alike. Stray finds, metal-detecting discoveries, survey work and evidence from antiquarian investigations were excluded from this project and are beyond the immediate focus of the EMAP project. However, ultimately it is intended that every scientifically undertaken excavation since 1930 that been accorded an excavation license or emergency license across Ireland will be examined by EMAP.

Excavations Bulletin

The objectives of this EMAP report were a rapid quantification and synthesis of early medieval excavations in Ireland. The Excavations Bulletin at www.excavations.ie was singled out as the single-most important resource to achieve this immediate aim. Excavations.ie provides succinct reports about every single excavation undertaken across the island from 1970-2004.

EMAP initially decided to focus on excavated material from 1970-2004, as this was the only complete material available on the online bulletin when data was being collected in mid-2008. Archaeological excavations from the period 1930-1969 were then also included for this 2008 review even though (i.e. less than 50) many are relatively well published in such journals as PRIA, JRSAI, the Ulster Journal of Archaeology and other regional/local publications (e.g. the Hencken excavations at Lagore, Ballinderry crannog No. 1, Ballinderry crannog No. 2; Ó Riordáin’s excavations at Garranes, Ballycatteen etc; O’Kelly’s excavations at Church Island, etc). Excavation bulletin reports from excavations from 2005-2008 are not currently available for review. The reports held in the archives of the relevant development (e.g. the NRA), governmental, academic and Museum authorities have only briefly been examined by EMAP as this work will form part of 2009 research.

It is well known that the excavations bulletin, although it is an extremely valuable database in itself for early medieval archaeology, is not sufficient. The excavations bulletin reports are often provisional by nature - usually written only some months after excavations and also often represent reports which are submitted when excavation is still ongoing. It is likely then in some cases that interpretations of the sites and other data may have changed subsequently. As these reports are interim by nature, radiocarbon determinations are often pending for undated archaeology such as ironworking furnaces or kilns and specialist reports may not have been received. This is and will remain a major issue for the EMAP database until more detailed research in the unpublished reports is achieved. It was therefore decided that any undated sites that appeared to be early medieval would be described as ‘uncertain’ in terms of their significance in the EMAP database. More detailed research in 2009 may enable some – but not all – of these uncertain sites to be reclassified.

The quality of the information itself within the bulletin reports also varies quite significantly often because different archaeologists were responsible for writing them (and not always the site director). In some cases, detailed information will be supplied about the number, type and character of monuments and structures like buildings for example while in other instances no
such data is forthcoming. There can also be lack of consistency in including information such as SMR numbers or excavation license numbers within the reports.

The other issue with the excavations bulletin is that there is no standardization of terminology employed in the site type or site name descriptions. It is then very difficult to search the excavations.ie database for site types as they can be described in multiple ways (such as ‘ecclesiastical’, ecclesiastical enclosure’, ecclesiastical site’ and ‘ecclesiastical remains’ etc). Similarly, there is no standardisation in terms of the use of townland or place names.

The excavations bulletin is then principally a database of summary excavation reports written by numerous different archaeologists rather than one of discrete entities of information compiled and organized through a central authority. It is however the most significant archaeological resource in Ireland whose shortcomings are only described here to highlight the issues with the dataset that EMAP has dealt with. The ‘best is the enemy of the good’ and it is considered here that Excavations bulletins, despite their limitations, can be used to rapidly assess to consider the character of excavated early medieval archaeological evidence in Ireland. Future EMAP research can make better use of unpublished excavations reports, journal articles and monographs to build on this preliminary picture.

**Other Published Information**

Published material concerning excavations of early medieval evidence from 1930-2004 was another important resource consulted for compiling the database. The Excavations Bulletin was incorporated into the Irish Journal of Archaeology between the years 1977-1984. Excavations bulletin reports for those years in particular often only contained the name of the published article associated with the excavation. The associated published article was tracked down in these instances to discover information about the excavations at these sites.

*Medieval Archaeology* also contains concise yearly synopses written by various authors about important excavations undertaken in Ireland over several years. This source was also consulted when no information could be established from the excavation bulletin report about an excavated early medieval site.

Particular journals that were consulted when compiling the database included the *Ulster Journal of Archaeology, Journal of Irish Archaeology, Medieval Archaeology, Proceedings of the Royal Irish Academy and Journal Royal Society of Antiquaries of Ireland*. Published monographs were also a valuable source of information – particularly for the significant archaeological excavations that have been conducted in Cork. Of particular importance were works by Rose Cleary and Maurice Hurley for urban excavations in Cork (1997 & 2003), by Hurley, Scully and McCutcheon (1997) for urban excavations in Waterford and Heather King’s (1994 & 1998) edited Clonmacnoise Studies monographs. A wide range of other sources was consulted such as, for example, Wallace’s (1992) publication on Viking Buildings in Dublin when dealing with specific monuments or structures for the EMAP database.

The Unpublished Archaeological Excavations Survey (Doyle et. al 2002) commissioned for the Heritage Council also provides a comprehensive review of all the unpublished and published archaeological reports from 1930-1997 in the Republic of Ireland. It provided additional important information about the changing character of excavations in this period while its appendices of unpublished sites were invaluable as a source of information for locating previously unknown sites and identifying excavation license numbers.

**Other useful Sources**

The Internet proved to be a valuable resource for this project. It was often necessary to consult online maps to establish the location of townlands and excavated sites along urban streets. Both online and published national maps provided valuable information in tracking down excavations along road schemes. The NRA (NRA.ie) and Bord Gáis websites were particularly valuable in this regard. Information about archaeological projects was also often made available on web pages such as the NRA’s Archaeology Leaflets and Poster Series. Commercial
archaeological company websites like that, for example, hosted by Margaret Gowen & Co. Ltd. also proved very useful as they contained information about excavations and projects conducted by companies.

EMAP also decided that some amount of historical research of ecclesiastical sites was also required to identify the early medieval origins of these sites. It was difficult to sometimes establish which ecclesiastical sites could have an early medieval origin as the excavation bulletin often described these sites under multiple ecclesiastical terms including ‘ecclesiastical site’, ‘ecclesiastical enclosure’, ‘church and graveyard’, ‘burial-ground’ and ‘cemetery’ etc. with no information given or provided about their dates or origin. A number of sources particularly Gwynn & Hadcock’s (1970) comprehensive study of Irish Religious Houses as well as local historical books and articles, local web pages and County Library web sites were consulted in order to try to establish the antiquity of these ecclesiastical sites. The information allowed the database to collect information about ecclesiastical sites with known early medieval historical origins; medieval ecclesiastical sites whose early medieval origins could not be established and undated ecclesiastical sites.

The History and Legacy of Early Medieval Archaeological Excavation in Ireland

Introduction
Archaeology is a relatively recent discipline, and reliable excavation techniques and dating technology were only widely adopted in Ireland in the latter half of the twentieth century. The changing interpretation of the role and function of early medieval monuments reflect the history of the development of archaeological science in Ireland, a scholarly overview of which is found in ‘Foundation Myths’ (Waddell 2005). Political, historical and regional factors have also been important in framing research agendas and selecting excavation sites, and their impact on the overall development of early medieval archaeology in Ireland must be acknowledged. This chapter will outline how early medieval archaeology developed in the island of Ireland, and then will examine how this has impacted upon the interpretation of the major archaeological site-types from this period.

Antiquarians
Through the seventeenth, eighteenth and nineteenth centuries, Irish archaeology was the remit of interested amateurs. These were drawn predominantly from the professional classes, with a smattering of clergymen like Richard Pococke (1704-1765), severally Bishop of Ossory, Elphin and Meath; landed gentry in the vein of Thomas Westropp (1860-1922); and ex-military figures such as Major-General Charles Vallancey (c. 1725 – 1812). A number of societies including the Dublin Philosophical Society (founded 1683), the Physico-Historical Society of Ireland (1744), the Royal Irish Academy (1785) and the Irish Archaeological Society (1840) provided vehicles by which like-minded individuals could meet and disseminate their ideas and collections of Irish antiquities. Much of this work was theoretical rather than practical, with arguments based on often spurious historiographical writings, and not on actual physical evidence. The origin and function of upstanding prehistoric monuments, such as portal tombs, cairns, dolmens and cromlechs, provided the subject of much early discussion. James Ware’s (1594-1666) ‘Antiquities and History of Ireland’ (translated and published by Walter Harris in 1705) was the first comprehensive survey of Irish antiquities, and was primarily concerned with ecclesiastical sites. Early church sites, and especially round towers, remained the source of much discussion – indeed the irreconcilable differences between the Nordic model and the Scytho-Celtic model for the origin of these sites ultimately caused the collapse of the Hibernian Antiquarian Society in 1783 (Love 1962). These discussions evolved over the subsequent century and, for example, George Petrie (1790-1866), Hodder Westropp (1802-1885), Richard Brash (1817-1876) and
Margaret Stokes (1832-1900) all developed theories into the provenance of the Irish round tower, that ranged from pagan phallic symbols, to sun clocks, to Phoenician constructions.

Where it existed, archaeological ‘fieldwork’ tended to take on the form of surveys of monuments. Walter Harris (1686-1761) undertook work in Co. Down in 1744, and Charles Smith (c. 1715-1762) also produced surveys of the history, topography and antiquities of counties Waterford, Cork and Kerry in 1746, 1750 and 1756. Ireland’s first comprehensive provincial surveys were undertaken by the artists Gabriel Beranger (1729-1817) and Angelo Maria Bigari (fl. 1772-1779) in 1779 under the auspices of the recently formed - and soon to be defunct - Hibernian Antiquarian Society. Harbison (2002) has recently provided a detailed reconstruction of the journey of these artists on one of their earliest tours across Connacht in the same year. A further regional survey undertaken by John James Barralet (1747-1815) and Gabriel Beranger was commissioned by William Burton Conyngham for the counties of Wexford and Wicklow in 1780 (Harbison 2004).

The Ordnance Survey was founded in Ireland in 1824, and the mapping of the island was undertaken in 1829 under the supervision of Thomas Colby (1784-1852) and latterly Thomas Larcom (1801-1879). The Survey had an ambitious remit, not only to map the island, but also to determine townland boundaries and acreage as a means of equalising local taxation; to resolve the issues arising from mapping place-names and antiquities in the countryside; and to record the history and antiquity of every antiquarian site across the Irish landscape. The scale of this project was too large - the only Ordnance Survey Memoir to be published contemporaneously was that for the parish of Templemore in Co. Londonderry (1837) - and only the northern counties of Ulster were recorded in any detail.

The work of the Ordnance Survey and translations of early Irish texts by John O’Donovan (1806-1861) and others, however had a significant and important influence on early archaeological theories. The range of subjects available for discussion was expanded from stone-built monuments to include other site-types, such as ringforts and crannogs. In contrast to the largely artistic ‘archaeological’ surveys of Beranger and others in the late-eighteenth century, the surveys undertaken in the latter half of the nineteenth century were focused more on site-types, rather than individual sites. George Kinahan (1829-1908), from the Geological Survey of Ireland, examined crannogs in the west of Ireland; William F. Wakeman (1822-1900), a ‘drawing teacher’, looked at the crannogs in Co. Fermanagh; and Colonel William G. Wood-Martin (1847-1917), High Sheriff of Co. Sligo, produced a work on ‘The Lake Dwellings of Ireland’ (1886). Thomas Westropp produced a series of papers cataloguing the ‘ancient forts’ of Ireland in the late-1890s and early-1900s that, for the first time, attempted to deal systematically with the single most prevalent archaeological site type in Ireland.

Some early excavations were undertaken during the nineteenth century. The majority of these were little more than treasure-hunting expeditions – e.g. the dynamiting of the walls of Dun Ceithern, Co. Londonderry in 1837 in search of gold (McCaughan 1988) - and were neither controlled nor recorded. Some of the earliest reputable Early Medieval excavations were undertaken at round towers by Edmund Getty (1799-1857), secretary of the Belfast Harbour Board. His excavations at Armoy, Drumbo, Drumlane, Clones and Devenish (Getty 1855; Getty 1856; Getty 1857) uncovered quantities of human skeletal remains, but little of archaeological value. John Bell (1793-1861) conducted further archaeological digs at round towers in Co. Armagh in the 1850s, and Roger Chambers Walker (1806-1854) undertook some in Munster, but none of these were sufficiently written up. With the exception of the excavations in and around these round towers during the mid-nineteenth century, very little physical archaeology was undertaken on Early Medieval sites in Ireland. The British Israelites’ excavations in search of the Ark of the Covenant at Tara, Co. Meath between 1899 and 1902 were driven by pseudomythological imperatives and were eventually curtailed by the Royal Irish Academy (Carew 2003).

Preservation by reconstruction also seems to have formed the basis for antiquarian or amateur archaeologist projects. Between 1874 and 1878, Walter Bernard, a medical doctor from
Londonderry City, undertook and oversaw the fanciful reconstruction of large portions of the former McLaughlin capital, the Grianan of Ailech, Co. Donegal (Bernard 1870-9).

The disestablishment of the Church of Ireland on 1 January 1871 under the *Irish Church Disestablishment Act* (1869) also had a major impact on how archaeology was approached in Ireland. Former church property, including many archaeological monuments, passed into state ownership, thus raising issues of how these structures could be maintained and conserved. This raised other problems, for example, the rather fanciful reconstruction/conservation work undertaken on the monastic site at Nendrum, Co. Down. The site was excavated between 1922 and 1924, by Hugh Cairns Lawlor (1870-1943), a former Belfast linen merchant, at the behest of the Belfast Natural Historical and Philosophical Society (Lawlor 1925). Lawlor’s methods of excavation and recording were extremely poor (McErlean et al. 2002, 201), and the resultant conservation work was of dubious value.

The Nendrum excavations were to be the last major amateur archaeological project in Ireland. Archaeology had undergone a phase of evolution in the early-twentieth century, and was rapidly developing into a complex, professional discipline. For this reason, but perhaps also because of burgeoning ‘political self-consciousness’ (Evans 1968, 7) both north and south of the new border, the archaeological heritage was removed from the purview of the amateur, and placed under the remit of state-controlled organisations.

**The earliest University Excavations**

University academics assumed a leading role during the formative years of controlled archaeological excavation in Ireland. The principal early excavator in the south of Ireland, and latterly the Irish Free State, was R.A.S. Macalister (1870-1950), Professor of Archaeology at University College, Dublin. Although his prime interest was Middle Eastern archaeology, Macalister also conducted a large number of excavations in Ireland. Most of these were focused on prehistoric sites, but his unpublished excavations at Rathcroghan, Co. Roscommon in 1913, and his excavation at Uisneach, Co. Westmeath in 1925 (Macalister & Praeger 1928) investigated high status Iron Age/Early Medieval transition period sites. Sean P. Ó Riordáin (1905-1957) from University College, Cork, further developed Early Medieval archaeology in the Irish Free State with his excavations in the 1930s and 1940s at sites such as Cush, Co. Limerick (1940) and Garranes, Co. Cork (1942). At around the same time, the South African, Oliver Davies (1905-1986), Lecturer in Ancient History at Queen’s University, Belfast, undertook a number of Early Medieval excavations in the counties of south Ulster (Davies 1947). The Harvard Archaeological Mission to Ireland in the 1930s, under Hallam Movius (1907-1987) and Hugh O’Neill Hencken (1902-1981), was also a leading influence in large-scale excavations, such as Ballinderry I crannog (O’Sullivan 2003, 20-23; Waddell 2005, 217-220). Ó Riordáin’s student, Michael J. O’Kelly (1915-1982), also from University College, Cork, helped develop Early Medieval archaeology in the Republic of Ireland with excavations at sites like Garryduff, Co. Cork (1962-4).

University research excavations tended to focus on substantial upstanding monuments, such as Garranes and Garryduff. This dual emphasis on excavating known archaeological sites and excavating substantial (presumably high status) sites meant that a high proportion of early university excavations on Early Medieval sites could either be classified as ‘Significant’ or ‘Highly Significant’. For similar reasons later university-based excavations show a predominance towards ‘Significant’ or ‘Highly Significant’ sites.

**The emergence of State-funded Excavations**

‘Political self-consciousness’ (Evans 1968, 7) played an important role in defining the way in which the archaeological heritage was interpreted in Ireland post-partition. In Northern Ireland, the care of ancient monuments was entrusted to the Ministry of Finance, and although civil defence was a budget priority, an Advisory Committee (later an Advisory Council) was
established in 1926 to deal with the state of archaeology. The result of this was the creation in 1934 of the first regional archaeological survey in Ireland. In 1940 ‘A Preliminary Survey of the Ancient Monuments of Northern Ireland’ (PSAMNI) was produced by D. A. Chart, which would form the basis for future archaeological surveys.

State-funded excavations became an increasingly important aspect of archaeology in Northern Ireland from the 1950s onwards. There was a sustained phase of Early Medieval excavation in the 1950s, 1960s and through into the early 1970s by the archaeologists of the Historic Monuments Branch of the Ministry of Finance (N.I.). These excavations focused on Co. Down (in preparation for the production of the Archaeological Survey of Co. Down (1966)), and although a similar series of excavations was planned for the production of the Archaeological Survey of Co. Armagh (forthcoming), only a handful of these were undertaken.

The excavations in the late-1960s and early-1970s were focused on the roadwork’s associated with the creation of the M2 motorway in south Co. Antrim, and in this sense were prescient of the bulk of archaeological enquiries that would be undertaken thirty years later. In the 1980s, farm improvement grants from the European Economic Community meant that a number of highly significant sites were fully excavated by the Historic Monuments and Buildings Branch, Department of Environment (N.I.). Department of Environment archaeologists continued to play an important role in excavations in Northern Ireland until 1993 when the excavation unit was privatised and the Environment and Heritage Service archaeologists adopted a more supervisory role. The Ulster Museum also undertook a large number (34) of excavations on Early Medieval sites in the 1970s and 1980s. Many of these government-funded excavations were subsequently published in UJA and other journals.

In a similar way to university excavations, government-funded excavations tended to focus on upstanding, substantial sites, and thus tended to identify ‘Significant’ or ‘Highly Significant’ sites.

The development of Legislation and Protected Sites and Monuments

Archaeological monuments have been accorded protection by the state on the island of Ireland through a whole string of enactments dating back to the disestablishment of the Church of Ireland in 1869.

It was not till the early 20th century that records or ‘Schedules’, in the case of Northern Ireland, began to be compiled of archaeological monuments in private ownership across the island. The National Monuments Act 1930 was the first enactment to truly make provision for the protection of archaeological monuments and objects in Saorstát Eireann. Not only did it create a forum for archaeological excavation but it also established the Archaeological Survey of Ireland, which set up the Sites and Monuments Record in the 1980s. A similar SMR record exists in Northern Ireland. Archaeologists in both jurisdictions have continuously updated these two inventories since then.

The great majority of protected SMR sites in both jurisdictions encompass traditional easily identifiable monuments like ringforts, cashels and ecclesiastical sites that have been the focus of antiquarian and archaeological surveyors since the early twentieth century. Since then both lists have grown incrementally over time as new monument classes have been discovered and more importantly recorded over the history of the archaeological surveys. See http://www.archaeology.ie/ArchaeologicalSurveyofIreland/#d.en.87.

To date, the Sites and Monuments Record has established a list of over approximately 120,000 monuments while a further 800 major archaeological sites are in state care in the Republic. Approximately a further 15,000 sites are recorded in the Northern Ireland SMR. In total then, at least 135,000 monuments are listed in the records of archaeological authorities in Ireland. As discussed below, some of these protected monuments were the focus of salvage excavations in the 1970’s and 1980’s due to farm improvement schemes or residential developments. In more recent years, both the National Monuments Amendment Act 1994 in the Republic as well other
enacted legislation such as the EU Valletta Convention 1992 have introduced new forms of archaeological investigation such as environmental impact statements (EIS), testing and monitoring which have provided further protection of archaeological landscapes and monuments across the island. The Urban Archaeological Survey of Ireland has also delineated areas of archaeological potential in the historic cores of Irish towns and cities further protecting the archaeological resource in these areas.

It is evident then that both these base-line inventories of Irish monuments, compiled by surveyors with vastly different methods and interests since the early 20th century as well as transforming legislative protection of Irish archaeological sites and monuments have informed the origins, quality and quantity of excavations over different periods of time since the early 20th century.

The origins of commercial or pre-development Excavations

The Valletta Convention on the Protection of the Archaeological Heritage (1992) has had a major impact on the nature of archaeology on the island of Ireland. This sought to protect the archaeological heritage by legislation throughout the European Union, and was adopted by both the United Kingdom and the Republic of Ireland. Although the licensing of archaeological excavations had been employed earlier than this, one of the major impacts of the adoption of Valletta was the standardisation of the licensing process in both Northern Ireland and the Republic of Ireland, and the establishment of uniform codes of practice and conduct.

In Northern Ireland, archaeology is currently controlled under the ‘Historic Monuments and Archaeological Objects (NI) Order 1995’, and is supervised by the Northern Ireland Environment Agency (formerly the Environment and Heritage Service). Archaeological excavation in the Republic of Ireland is subject to the 1997 National Monuments Act, and is supervised by the National Monuments Service, Dept of the Environment in consultation with the National Museum of Ireland.

Undoubtedly, the greatest impact of Valletta on archaeology in Ireland, however, has been the legislative incorporation of archaeology into the planning and pre-planning process. In Northern Ireland this is currently covered by PPS16 (Planning Policy Statement 16), and in the Republic of Ireland, by the Planning Acts and National Monuments Acts. The next Chapter will review the scale and scope of pre-development archaeology in Ireland.

The impact of the history of Early Medieval Excavations in Irish archaeology

It is evident then that the character of early medieval excavations has been informed by archaeological legislation protecting state surveyed sites and monuments across the island and by developing approaches to early medieval archaeology as a whole. Many early excavations of early medieval monuments in the Ireland, as elsewhere, were undertaken under the auspices of research bodies, often sponsored by the state sector. The Harvard Archaeological Mission excavation in the 1930’s at significant crannogs at Ballinderry crannog No. I, Co. Westmeath; Ballinderry crannog No. II, Co. Offaly and Lagore crannog, Co. Meath as well as Sean P. Ó Riordáin’s excavations of a series of ringforts in the Cork/Limerick area in the 1940/50’s were the principal highlights of this formative period.

It is well-known that these key excavations have tended to shape the academic and popular imagination of the landscapes of early Ireland; principally leading to the dominance of the ‘ringforts and monasteries’ model of early medieval settlement. It is also the case that perceptions of early medieval society itself were shaped by the results of excavations at such sites as the early medieval crannog of Lagore, Co. Meath or of the classic early medieval ‘ringfort’ excavated by Ó Riordáin - which fitted with interests in the 1930s in the self-sufficient
early medieval farmer, suspiciously like the 20th century farmer that both governments north and south were trying to create.

Up until the 1960s, in the public imagination and in the planners’ minds, early medieval archaeology was about the significant monuments of mythical or real kings and the monastic treasures of the Saints and Scholars. There were very few excavations of less impressive and identifiable monuments like unenclosed settlements or agricultural and industrial sites as these sites tended not to have the aura of extraordinary wealth and quality of evidence which royal sites like Lagore or Garranes had to offer to the under equipped archaeological community. Most importantly however, they were no real reason for these sites to be excavated, as no legislation existed to protect and test for archaeology beyond the bounds of identified archaeological monuments.

An increasing number of rescue excavations were undertaken particularly from the 1960-80’s across the island in advance of EU-grant inspired farm improvement initiatives and development-led excavations in both rural and urban contexts. Archaeologists from the Northern Ireland Historic Monument’s Branch including A.E.P. Collins, David Waterman, Chris Lynn and Brian Williams undertook a series of important excavations of ringforts and raised ringforts. State bodies in the Republic such as the National Museum and OPW also continued to provide the initiative and were involved in significant excavations in Viking Dublin although there were a series of important research excavations undertaken by University academics at sites like Lisheagh ringfort, Co. Cork and Knowth, Co. Meath.

The effects of EEC (subsequently EU) membership had a significant impact on the island from the 1980’s onwards in particular. European funding provided the financial support for a number of important large-scale infrastructural projects such as the Bord Gáis Cork-Dublin Gas Pipeline and more recent NRA roadway development schemes. Along with excavations in advance of large-scale urban and rural development projects, a whole collection of previously unknown archaeological evidence has been discovered beyond the bounds of the cartographic circles protecting SMR and Scheduled monuments. The most important effects of this is the shift away from excavations focused on traditional surveyed monuments such as ringforts and ecclesiastical sites towards new forms of archaeological evidence such as isolated ironworking hearths, unenclosed settlements and settlement/cemetery sites. The emergence of a large independent commercial sector of archaeologists to cope with the increasing demands of these large-scale redevelopment projects has been a parallel phenomenon in this later period.

EU membership also placed the Irish archaeological resource under the protection of tighter planning legislation. During the 1990’s, new forms of archaeological investigation have required excavations to be undertaken both on and significantly near protected SMR and Scheduled monuments in advance of any form of development initiative. Archaeological Surveys have also delineated the boundaries of areas of archaeological potential within the historic core of urban towns and cities while the protection of archaeological landscapes has also received some recognition. These tighter planning requirements have increased the number of excavations being undertaken on or near particular protected SMR monuments. To conclude then, both tighter legislation as well as a simultaneous massive increase in development-led excavation has transformed the character of Irish archaeological excavations in recent years.

**Conclusions**

In the formative years of Irish archaeology, excavations were few in number and focused on significant early medieval monuments/sites. Excavations in the early years were largely undertaken as part of research projects with the intention of maximizing the generation of knowledge of early medieval landscape and society.

From the mid twentieth century onwards, increasing number of excavations were also undertaken as part of rescue/salvage operations of important recorded monuments and also tended to generate significant archaeological knowledge.
During the 1980's and 1990's and early twenty first century, large-scale development-led rescue projects and EU funded infrastructural schemes have revealed a whole new character of previously unidentified archaeological evidence as excavations have moved beyond the boundaries of protected SMR and Scheduled sites/monuments towards the investigation of entire landscapes.

Simultaneously, the rights of archaeological SMR monuments, landscapes and areas of archaeological potential have been accorded extra protection through the introduction of new types of archaeological excavations which are more about complying with tighter planning requirements than generating meaningful knowledge about past landscapes and societies.
Chapter 2. The Character of Early Medieval Excavations in Ireland, 1930-2004

Introduction
Our knowledge of the archaeology of early medieval Ireland, and particularly this island’s people's life ways, dwelling practices and material culture, derives largely from archaeological excavation carried out in the period 1930-2004 (the results of excavations 2005-2008 are still difficult to access, although occasional use can be made of a few publications). However, across the last seventy years or so, there are distinct trends and patterns in the history of archaeological excavation in Ireland, that all heavily influence the ranges and types of data that has been recovered. There is then a range of questions that need to be asked involving the background to, the practice of, and the character of early medieval-related excavations over time. It is well known that archaeological excavations have increased dramatically in Ireland in recent years. Major infrastructural schemes, urban and rural development-led projects and new planning legislation have all transformed the sheer number and character of excavations undertaken annually. They have also dramatically altered the shape, face and make-up of the Irish archaeological organisations dealing with these recent spectacular changes. Furthermore and perhaps most importantly, they have radically changed the character of archaeological evidence recovered in recent years. These developments have yet to be fully worked out to understand their implications and potential in transforming our knowledge of past societies in Ireland.

EMAP has sought to examine some of these key developments through a rapid assessment of the excavated evidence available principally on the online excavations bulletin (currently available for the period, 1970-2004). The EMAP database includes data on 2,208 archaeological sites at the present, containing information about excavations on, and near, early medieval or potentially early medieval sites, monuments and structures – and as it well known in archaeology, the meaning of the word ‘site’ remains ambiguous in practice, being variously applied in the past to isolated single ringforts, to groups of ringforts with fields or even to entire monastic complexes (e.g. Clonmacnoise, Co. Offaly might thus be described as an ‘archaeological site’). A total of 3,047 archaeological excavations were used for excavating those 2,208 sites. The larger number of excavations than sites can be explained by the occasional fact of multiple licences being used year-by-year. Most ‘sites’ typically contain only one excavation license, a good example being an excavation of an isolated ironworking site discovered along a road scheme. It is also unlikely that further excavation will be undertaken at such sites. However, there is always the potential that a number of different excavation licenses may be undertaken on a large monument such as a ringfort or ecclesiastical site. An extreme example is Clonmacnoise, Co. Offaly where over 27 excavation licenses were issued for that ‘site’ from 1930-2004.

Key research questions of this chapter’s assessment of the character of early medieval excavations in Ireland include those aiming to establish:

- What is the approximate number of annual excavations from 1930-2004 that concern early medieval-related material?
- What is the distribution of these excavations and excavated sites across the country?
- Who has been responsible for these excavations (i.e. Universities, government and commercial sectors) and how have patterns changed over time?
- What is the approximate number of excavation types (e.g. Testing, rescue, research) and how has the character of these excavation types changed over time?
- How significant is the early medieval archaeological evidence recovered from these excavation types and how has patterns changed over time?
• Why have excavations been undertaken and what have been the impacts of different infrastructural and development schemes and projects?

**Early Medieval Excavations 1930-2004**

**Early Medieval Excavations Annually 1930-2004**

Under Irish system of licensing, a site excavation can often continue from one year to the next. This was particularly the case in the 1970’s and 1980’s when excavations, often research-based, may have been undertaken at the same site over a number of seasons. To describe an extreme example, the same excavation license was used for excavations at Knowth, Co. Meath for 32 years from the 1970’s-1990’s. In more recent years, new excavation licenses tend to be issued more frequently. As excavation licenses can continue from one year to the next, it is then evident that the number of excavations licenses (a total of 3,047 on early medieval sites) is likely to be less than the number of excavations undertaken annually; probably exceeding the above number by hundreds if not thousands.

Table 2:1 and Figure 2:1 below describe the amount of excavations undertaken annually from 1930-2004 *(not the number of excavations licenses issued or undertaken)*, which dealt with early medieval or potential early medieval archaeological evidence. It was felt that examining the amount of excavations undertaken annually rather than the amount of excavations licenses issued each year would better demonstrates the increase in excavation activity from 1970-2002. The graphics illustrate in particular the huge increase in excavations undertaken annually, particularly from 1993/1994 onwards. The exponential increase in archaeological excavations in the final years of the 20th century/early 21st century can also be clearly seen. No data is currently available on excavations carried out 2005-07, but there is no reason to suppose that the increase rate has changed dramatically from the 2004 figures.

**Table 2:1: Early Medieval Excavations Annually 1930-2004**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Year</th>
<th>Total</th>
<th>Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1930</td>
<td>2</td>
<td>1955</td>
<td>9</td>
<td>1980</td>
<td>21</td>
</tr>
<tr>
<td>1931</td>
<td>4</td>
<td>1956</td>
<td>7</td>
<td>1981</td>
<td>24</td>
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<td>1932</td>
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<td>1957</td>
<td>7</td>
<td>1982</td>
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<td>1933</td>
<td>5</td>
<td>1958</td>
<td>9</td>
<td>1983</td>
<td>25</td>
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<td>1934</td>
<td>8</td>
<td>1959</td>
<td>11</td>
<td>1984</td>
<td>18</td>
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<td>1935</td>
<td>7</td>
<td>1960</td>
<td>10</td>
<td>1985</td>
<td>24</td>
</tr>
<tr>
<td>1936</td>
<td>3</td>
<td>1961</td>
<td>6</td>
<td>1986</td>
<td>28</td>
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<td>1937</td>
<td>6</td>
<td>1962</td>
<td>4</td>
<td>1987</td>
<td>22</td>
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<td>1938</td>
<td>12</td>
<td>1963</td>
<td>5</td>
<td>1988</td>
<td>33</td>
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<td>10</td>
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<td>1940</td>
<td>8</td>
<td>1965</td>
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<td>1990</td>
<td>55</td>
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<td>1941</td>
<td>3</td>
<td>1966</td>
<td>3</td>
<td>1991</td>
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<td>1942</td>
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<td>1967</td>
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<td>3</td>
<td>1970</td>
<td>15</td>
<td>1995</td>
<td>85</td>
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<td>1946</td>
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<td>1971</td>
<td>21</td>
<td>1996</td>
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<td>1947</td>
<td>4</td>
<td>1972</td>
<td>19</td>
<td>1997</td>
<td>131</td>
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<td>1948</td>
<td>2</td>
<td>1973</td>
<td>20</td>
<td>1998</td>
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<td>1949</td>
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<td>1974</td>
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<td>1950</td>
<td>4</td>
<td>1975</td>
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<td>1976</td>
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<td>2001</td>
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<td>1952</td>
<td>2</td>
<td>1977</td>
<td>16</td>
<td>2002</td>
<td>417</td>
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<tr>
<td>1953</td>
<td>11</td>
<td>1978</td>
<td>16</td>
<td>2003</td>
<td>408</td>
</tr>
<tr>
<td>1954</td>
<td>6</td>
<td>1979</td>
<td>18</td>
<td>2004</td>
<td>487</td>
</tr>
</tbody>
</table>
Excavations Annually 1930-2004

Figure 2:1 Early Medieval Excavations Annually 1930-2004

Excavated Sites per County

The database contained entries for 2,208 sites. Table 2:2 and Figure 2:2 illustrate the distribution of these excavations across the 32 counties. The highest number of counties in which excavations were undertaken on or in proximity to early medieval sites occurred in the Northern Leinster, west and southwest Munster and the northeast Ulster. The counties of Meath, Louth, Dublin and Kildare, have a high proportion of the excavations, undoubtedly because of their proximity to Dublin city, with all its development pressures. Elsewhere, Antrim and Down have been the principal focus in the northeast, while fewer excavations have been undertaken in the northwest and west though parts of Munster, particularly Kerry and Cork, have clearly received extensive attention.

Table 2:2 Early Medieval Excavated Sites Per County 1930-2004

<table>
<thead>
<tr>
<th>County</th>
<th>Excavations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antrim</td>
<td>104</td>
</tr>
<tr>
<td>Armagh</td>
<td>20</td>
</tr>
<tr>
<td>Carlow</td>
<td>12</td>
</tr>
<tr>
<td>Cavan</td>
<td>35</td>
</tr>
<tr>
<td>Clare</td>
<td>96</td>
</tr>
<tr>
<td>Cork</td>
<td>203</td>
</tr>
<tr>
<td>Derry</td>
<td>25</td>
</tr>
<tr>
<td>Donegal</td>
<td>35</td>
</tr>
<tr>
<td>Down</td>
<td>65</td>
</tr>
<tr>
<td>Dublin</td>
<td>147</td>
</tr>
<tr>
<td>Fermanagh</td>
<td>17</td>
</tr>
<tr>
<td>Galway</td>
<td>93</td>
</tr>
<tr>
<td>Kerry</td>
<td>127</td>
</tr>
<tr>
<td>Kildare</td>
<td>89</td>
</tr>
<tr>
<td>Kilkenny</td>
<td>47</td>
</tr>
<tr>
<td>Laois</td>
<td>31</td>
</tr>
<tr>
<td>Leitrim</td>
<td>30</td>
</tr>
<tr>
<td>Limerick</td>
<td>99</td>
</tr>
<tr>
<td>Longford</td>
<td>20</td>
</tr>
<tr>
<td>Louth</td>
<td>108</td>
</tr>
<tr>
<td>Mayo</td>
<td>83</td>
</tr>
<tr>
<td>Meath</td>
<td>145</td>
</tr>
<tr>
<td>Monaghan</td>
<td>16</td>
</tr>
<tr>
<td>Offaly</td>
<td>39</td>
</tr>
<tr>
<td>Roscommon</td>
<td>82</td>
</tr>
<tr>
<td>Sligo</td>
<td>96</td>
</tr>
<tr>
<td>Tipperary</td>
<td>95</td>
</tr>
<tr>
<td>Tyrone</td>
<td>25</td>
</tr>
<tr>
<td>Waterford</td>
<td>63</td>
</tr>
<tr>
<td>Westmeath</td>
<td>75</td>
</tr>
<tr>
<td>Wexford</td>
<td>45</td>
</tr>
<tr>
<td>Wicklow</td>
<td>41</td>
</tr>
</tbody>
</table>
Early Medieval Excavations per County

The database contains 3,047 excavations within the 2,208 EMAP defined ‘sites’. The distribution of the excavations have a similar pattern to the evidence for early medieval excavated ‘sites’ across the country with notable concentrations again in Northern Leinster, Eastern Ulster and the south-western counties of Ireland.

The current database also collected information about whether the excavation within an EMAP defined ‘site’ was or was not of early medieval archaeological significance. Table 2:3 below and Figures 2:3 & 2:4 indicate that 51% of the excavations were of no archaeological significance. Counties in Connacht, the northwest and parts of the midlands contained a higher percentage of excavations of no archaeological significance in comparisons to those particularly in Northern and to a lesser extent to the counties in northern Leinster.
### Table 2.3: Significance of Early Medieval Excavations Per County 1930-2004

<table>
<thead>
<tr>
<th>County</th>
<th>Archaeologically Significant</th>
<th>No Archaeological Significance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antrim</td>
<td>99</td>
<td>15</td>
<td>114</td>
</tr>
<tr>
<td>Armagh</td>
<td>27</td>
<td>9</td>
<td>36</td>
</tr>
<tr>
<td>Carlow</td>
<td>6</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Cavan</td>
<td>6</td>
<td>33</td>
<td>39</td>
</tr>
<tr>
<td>Clare</td>
<td>63</td>
<td>68</td>
<td>131</td>
</tr>
<tr>
<td>Cork</td>
<td>108</td>
<td>125</td>
<td>233</td>
</tr>
<tr>
<td>Derry</td>
<td>29</td>
<td>10</td>
<td>39</td>
</tr>
<tr>
<td>Donegal</td>
<td>15</td>
<td>32</td>
<td>47</td>
</tr>
<tr>
<td>Down</td>
<td>70</td>
<td>14</td>
<td>84</td>
</tr>
<tr>
<td>Dublin</td>
<td>190</td>
<td>87</td>
<td>277</td>
</tr>
<tr>
<td>Fermanagh</td>
<td>11</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Galway</td>
<td>52</td>
<td>59</td>
<td>111</td>
</tr>
<tr>
<td>Kerry</td>
<td>70</td>
<td>84</td>
<td>154</td>
</tr>
<tr>
<td>Kildare</td>
<td>66</td>
<td>102</td>
<td>168</td>
</tr>
<tr>
<td>Kilkenny</td>
<td>38</td>
<td>36</td>
<td>74</td>
</tr>
<tr>
<td>Laois</td>
<td>20</td>
<td>17</td>
<td>37</td>
</tr>
<tr>
<td>Leitrim</td>
<td>0</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Limerick</td>
<td>61</td>
<td>68</td>
<td>129</td>
</tr>
<tr>
<td>Longford</td>
<td>7</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>Louth</td>
<td>86</td>
<td>84</td>
<td>170</td>
</tr>
<tr>
<td>Mayo</td>
<td>39</td>
<td>64</td>
<td>103</td>
</tr>
<tr>
<td>Meath</td>
<td>113</td>
<td>93</td>
<td>206</td>
</tr>
<tr>
<td>Monaghan</td>
<td>6</td>
<td>16</td>
<td>22</td>
</tr>
<tr>
<td>Offaly</td>
<td>38</td>
<td>40</td>
<td>78</td>
</tr>
<tr>
<td>Roscommon</td>
<td>21</td>
<td>89</td>
<td>110</td>
</tr>
<tr>
<td>Sligo</td>
<td>32</td>
<td>86</td>
<td>118</td>
</tr>
<tr>
<td>Tipperary</td>
<td>46</td>
<td>76</td>
<td>122</td>
</tr>
<tr>
<td>Tyrone</td>
<td>27</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>Waterford</td>
<td>56</td>
<td>34</td>
<td>90</td>
</tr>
<tr>
<td>Westmeath</td>
<td>47</td>
<td>53</td>
<td>100</td>
</tr>
<tr>
<td>Wexford</td>
<td>20</td>
<td>55</td>
<td>75</td>
</tr>
<tr>
<td>Wicklow</td>
<td>33</td>
<td>27</td>
<td>60</td>
</tr>
<tr>
<td><strong>Total Excavations</strong></td>
<td><strong>1502</strong></td>
<td><strong>1545</strong></td>
<td><strong>3047</strong></td>
</tr>
</tbody>
</table>
Figure 2:3 Significance of Early Medieval Excavations Per County 1930-2004

Figure 2:4 % of Significant & Non Significant Excavations Per County 1930-2004
Excavations annually in the Republic of Ireland and Northern Ireland 1930-2004

Different jurisdictions on the island of Ireland have traditionally approached archaeology in different ways; whether it has been archaeological survey, museums collections or excavation licensing.

Table 2:4 and Figure 2:5 below comparatively illustrates the difference in the amount of excavations undertaken annually on or in close proximity to early medieval sites in both the Republic of Ireland and Northern Ireland from 1930-2004. EMAP statistics indicate that a proportionally high amount of excavations were undertaken by both governmental and academic institutions in Northern Ireland from the 1930’s to 1980’s. This was particularly the case for the years between 1950-80’s when a number of important research excavations (e.g. Archaeological Survey of Down) and farm improvement schemes were undertaken in Northern Ireland. The amount of excavations in these intervening decades (1930-1980) slowly but consistently increased.

The statistics also shows that there has been a sizeable increase in excavations from the 1980’s but particularly for the early years in the twenty first century reflecting both the introduction of tighter legislation concerning excavation licensing on and particularly in close proximity to early medieval sites. This is particularly the case for the Republic of Ireland where stringent planning legislation and the ‘Celtic Tiger’ phenomenon have transformed the amount of excavations being undertaken annually across the country. The figures for Northern Ireland however only exhibit a very gradual increase, imitating the pattern from earlier decades. The economic boom in the Republic of Ireland in the latter years of the 1990’s and early 2000’s is likely to have played a fundamental part in this development. Equally the application of different planning legislation on and in close proximity to early medieval monuments as well as differences in the number and type of protected monuments in both jurisdictions is likely to have played a fundamental role in the disproportionate number of excavations in the Republic of Ireland in recent years. Many of these excavations in recent years in the Republic of Ireland were of no archaeological significance and were undertaken as part of pre-development testing in close proximity to early medieval monuments.

Table 2:4: Excavations Annually 1930-2004 in Republic of Ireland and Northern Ireland

<table>
<thead>
<tr>
<th>Year</th>
<th>Republic of Ireland</th>
<th>Northern Ireland</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1930-1939</td>
<td>32</td>
<td>11</td>
<td>43</td>
<td>26%</td>
</tr>
<tr>
<td>1940-1949</td>
<td>25</td>
<td>9</td>
<td>34</td>
<td>26%</td>
</tr>
<tr>
<td>1950-1959</td>
<td>36</td>
<td>28</td>
<td>64</td>
<td>44%</td>
</tr>
<tr>
<td>1960-1969</td>
<td>28</td>
<td>21</td>
<td>49</td>
<td>43%</td>
</tr>
<tr>
<td>1970-1979</td>
<td>60</td>
<td>54</td>
<td>114</td>
<td>47%</td>
</tr>
<tr>
<td>1980-1989</td>
<td>129</td>
<td>56</td>
<td>185</td>
<td>30%</td>
</tr>
<tr>
<td>1990-1999</td>
<td>740</td>
<td>68</td>
<td>808</td>
<td>8%</td>
</tr>
<tr>
<td>2000-2004</td>
<td>1653</td>
<td>80</td>
<td>1733</td>
<td>5%</td>
</tr>
</tbody>
</table>
Significance of Excavated Early Medieval ‘Sites’

Excavations in the EMAP database are currently described in terms of whether they are or are not of early medieval archaeological significance. As demonstrated above, a total of 51% of excavations were of no archaeological significance. When all excavations can be comprehensively consulted, it is intended to grade all excavations in terms of the character of their early medieval archaeological significance. The significance of the EMAP defined ‘sites’ have however been graded in terms of ‘No Significance’, ‘Uncertain’, ‘General’, ‘Significant’ & ‘Highly Significant’. The criteria concerning how a site was described in terms of its archaeological significance is outlined in the methodology in the appendix.

Table 2:5: Early Medieval Significance of EMAP Site 1930-2004

<table>
<thead>
<tr>
<th>Significance</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncertain</td>
<td>302</td>
<td>14</td>
</tr>
<tr>
<td>No Significance</td>
<td>1019</td>
<td>46</td>
</tr>
<tr>
<td>General</td>
<td>485</td>
<td>22</td>
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<tr>
<td>Significant</td>
<td>307</td>
<td>14</td>
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<tr>
<td>Highly Significant</td>
<td>95</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2208</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Current statistics indicate 46% of excavated sites were of “no early medieval archaeological significance”. The vast majority of this set of sites was undertaken as part of test excavation or monitoring works in close proximity to early medieval monuments such as ringforts, ecclesiastical sites. It is evident that testing and monitoring excavations are the principal excavation types that are proving to produce a result of “no archaeological significance” (See Figures 2:11 & 2:22 below). A high proportion of sites (14%) were classified as ‘Uncertain’. These sites are of archaeological significance but it is often not clear if the archaeology was early medieval in date. Typical examples include ironworking or kilns sites which could conceivably date from the Iron Age to Post-Medieval period. Radiocarbon dates and detailed stratigraphical analysis of these excavated sites were still pending when their reports were
submitted to the excavations bulletin so it is hoped that future research may clarify whether some can be positively associated with the early medieval period.

22% or 485 excavated sites can be described as being of ‘general’ archaeological significance. The quality and quantity of these excavated early medieval evidence was somewhat limited at these sites. A typical example comprises a partially excavated ringfort which uncovered a small quantity of early medieval artefacts. It is interesting then, that only 18% of the sites within the database could be considered as significant or highly significant. This is encouraging as it shows that the ‘crisis’ in Irish archaeology viz. the non-publication of excavations is not as serious as suspected, and that a structured programme of research and publication could easily make a very significant contribution.

**Figure 2:6: Early Medieval Significance of EMAP Sites 1930-2004**

**Significance of Sites per County**
The 2,208 defined sites in the different counties were next analyzed in terms of their significance. Table 2:6 and Figures 2:7 & 2:8 illustrate the results.

**Table 2:6: Significance of Excavated Early Medieval Sites Per County 1930-2004**

<table>
<thead>
<tr>
<th>County</th>
<th>Uncertain</th>
<th>No Significance</th>
<th>General</th>
<th>Significant</th>
<th>Highly Significant</th>
<th>County (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antrim</td>
<td>10</td>
<td>10</td>
<td>43</td>
<td>39</td>
<td>2</td>
<td>104</td>
</tr>
<tr>
<td>Armagh</td>
<td>0</td>
<td>2</td>
<td>11</td>
<td>6</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Carlow</td>
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Table 2:6 above and Figures 2:7 & 2:8 below demonstrate that Northern Counties like Antrim, Armagh, Derry, Down, Fermanagh and Tyrone contained high percentages of sites described as ‘general’, ‘significant’ and ‘Highly Significant’. A disproportionately high number of significant rescue and research early medieval excavations were undertaken from staff from Northern Ireland’s Ancient Historic Monuments Branch, its successor the Historic Monuments Branch and the Archaeological Survey of Northern Ireland from the 1940’s-1980’s.

In the Republic of Ireland, large number of excavated ‘sites’ described as ‘general’, ‘significant’ and ‘Highly Significant’ were located in Waterford, Cork, Limerick and Tipperary, Galway to the west and Dublin, Meath, Louth and Westmeath in Leinster. The northern Leinster counties of Dublin, Meath, Louth and Waterford in Munster contained high percentages of sites described as ‘general’, ‘significant’ and ‘Highly Significant’ in terms of their respective excavated totals, though not at the scale of their Northern counterparts.
Figure 2:7: Early Medieval Significance of Excavated Sites Per County 1930-2004

Figure 2:8: Significance Percentages of Excavated Sites Per County 1930-2004
It is evident however that counties in Northern Ireland contain a small percentage and number of excavated ‘sites’ of No Significance; a development which, as discussed above, may have been partially related to the application of different planning legislation, the scheduling and protection of archaeological monuments and the economic boom in the Republic of Ireland in recent years. In contrast, the number of excavations undertaken annually within counties from the Republic of Ireland in recent years have continued to surpass that of the figures from Northern Ireland; a development which has been intimately related to the surge in excavations of no archaeological in this jurisdiction.

It is instructive to note that counties across the west and northwest region of Ireland like Cavan, Leitrim, Donegal, Monaghan, Roscommon, Galway and Mayo have a high proportion of No significance sites. These counties have witnessed dramatic increases in the amount of excavations being undertaken annually (Figure 2:4 above) and it is evident that these excavations of No Significance are related to tighter legislation concerning development, particularly residential, in rural contexts in recent years.

**Excavations Annually and Sites of Different Significance**

Sites were graded in terms of Significance as described above. Excavations at EMAP defined ‘sites’ were not graded into categories of significance but were simply described as being of early medieval archaeological significance or not. The results from the graph below does not describe the amount of excavations of varying significance being undertaken annually. It does however describe figures for the amount of excavations being undertaken annually on EMAP designated ‘Sites’ of different Significance.

Figures 2:9 and 2:10 show that a high proportion of excavations were being undertaken on Sites of “High archaeological significance” in the mid and later decades of the twentieth century, particularly in the 1930’s, 70’s & 80’s. The Harvard Archaeological expeditions undertook a number of important excavations in the 1930’s at a number of early medieval sites including Ballinderry 1 & 2 and Cahercommaun Fort while Sean P. Ó Riordáin’s, of UCC and latterly UCD undertook a number of significant excavations at Carraig Aille I & 2 & the Spectacles in Limerick in this period. Long term research excavation projects at Clogher, Co. Tyrone; Knowth, Co. Meath; Deer Park Farms, Co. Antrim; Lisleagh, Co. Cork; Iniscealtra, Co. Clare and Kilpatrick, Co. Westmeath from the 1970’s also revealed vast quantities of archaeological evidence that transformed people’s understandings of early medieval Ireland in this period.

These projects were also complemented by important rescue excavations undertaken both in advance of farm improvement schemes and urban redevelopment projects in the major cities from the 1960’s to 1990’s. Important excavations were undertaken on rural ringforts like Tully, Seacash, Ballyhenry, Dunsilly and Ballywee, Co. Antrim, Ballylessant, Crossacreevy, Gransha and Rathmullan Lower, Co. Down, Big Glebe, Bowling Green, Co. Tipperary, Dunbell Big 6, Co. Kilkenny, Sluggary, Co. Limerick, Simonstown, Co. Meath, Millockstown, Co. Westmeath and Lisduggan North, Co. Cork. In contrast, few excavations of no archaeological significance were undertaken on or near early medieval sites in this period as excavations were either research or rescue focused.

Important urban redevelopment projects in the medieval cores of cities in the 1970’s and 1980’s also had the effect of revealing significant archaeological evidence in the Hiberno-Norse towns of Dublin and Waterford in particular as well as at ecclesiastical sites such as Armagh and Downpatrick, Co. Down. Excavations tended then to be research-driven and located on important archaeologically sensitive areas with the consequence that there were few excavations of no significance in this period.

The advent of stricter legislation protecting the archaeological heritage and the Celtic Tiger economic boom had the effect of shifting this relationship from one being formerly of a large amount of excavations being undertaken annually on significant sites towards a disproportionate number of excavations revealing no archaeological evidence on or near early
medieval sites in the 1990’s. The advent of stricter legislation and the economic boom from the mid 1990’s also had the effect of exposing new sets of archaeological evidence such as ironworking sites, kilns and burnt pits which were less easily identifiable and dateable than the previous typical site type (e.g. crannog, ringfort & ecclesiastical site). Potentially a significant number of these sites could be early medieval in date though fortunately this cannot be clearly established at the moment as many still await complete publication or lacked any datable archaeological finds or deposits. Future work by EMAP project will seek to resolve this ‘uncertain’ category.

Figure 2:9: Excavations Annually on Sites of Different Significance 1930-2004
The figures from the percentage graph in Figure 2:10 below reveal the transforming character of archaeological excavations during this period. Excavations on ‘significant’ and ‘highly significant’ sites constituted between 30-70% of total excavations annually from the 1930’s to early 1990’s. This percentage gradually declined to 38/176 excavations (22%) in 1998, 50/293 (17%) in 2001 to 62/487 (13%) in 2004 though the number of excavations on significant and highly significant sites in these years was greater than year in the 1970’s or 1980’s. The graph also illustrates the growth in excavations at sites described as ‘No Significance’ from 1990 onwards. Excavations at ‘No Significance’ Sites constituted 197/417 or 47% of the total excavations in 2002 and 291/487 sites (60%) of excavations in 2004. Indeed Fig. X demonstrates that 2004 comprised a large number of test excavations in the proximity of early medieval monuments which revealed no archaeology of any significance. As is well known, there is then a strong relationship between the growth of testing and monitoring as forms of archaeological excavations and the increase in the number of excavations at or near site that are revealing no archaeological evidence. This is an issue that should perhaps be debated by professional archaeology in Ireland.
Excavation Type

There are 2,208 defined sites and 3,047 excavations from 1930-2004 within the EMAP database. Table 2:7 and Figure 2:11 illustrate the excavation types.

Table 2:7: Excavation Types 1930-2004

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<th>Number</th>
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The statistics indicate that testing was the most favourable form of archaeological investigation at or most commonly in close proximity to early medieval recorded monuments during the period. Rescue and monitoring type excavations followed it. The excavation bulletin reports as well as a range of published sources (e.g. journal articles) were the principal resource consulted for this survey. The type of excavation at or near these early medieval sites was not systematically recorded nor described in these sources. The figures for the excavation types above were also then partially a product of a subjective judgement by the EMAP team based on the written evidence in the consulted resources. It is evident then that there is undoubtedly a small error in the actual amount of excavation types described above. EMAP should, at a later stage in the project, be able to establish more accurate figures for the number of different excavation types that were undertaken on and near early medieval monuments and structures for this period.

Excavation Types Annually

It was decided to establish the amount of different excavation types undertaken annually from 1930-2004. As excavations can continue from year to year, these figures revealed the amount of the excavations types undertaken annually and not the number of issued
excavation types. The figures then total more than the 3,047 excavations whose types are listed and graphically represented immediately above. Non-destructive methods like geophysical survey or underwater diving for survey purposes (a licensed activity) which received excavation licenses were listed under the Non Excavation heading. Two excavations were of unknown status were excluded from the graph.

![Figure 2.12: Excavation Types Annually 1930-2004](image)

The results demonstrate a well known pattern in which research and rescue excavations were predominant throughout the period until in the 1990’s till the introduction of new forms of archaeological investigation comprising testing and monitoring. These research and rescue excavations were generally undertaken by governmental bodies like the OPW in the Republic of Ireland; the Northern Ireland Ancient and latterly Historic Monuments Branch; the National Museum of Ireland and the Ulster Museum and by the university sector typically as long-term research projects. There was no tradition of testing or monitoring during this period as legislation did not demand these forms of excavation. When rescue excavations tended to occur, they were usually undertaken by government bodies, typically for agricultural reasons and farm improvement initiatives that from the 1970’s were supported by EEC agricultural funding. Farm improvement schemes were particularly responsible for the large number of excavations on ringforts across the island but with an unusually high number in the North of Ireland. Conservation projects equally tended to be undertaken by governmental
organizations and were often ran as FAS employment schemes on ecclesiastical sites in particular. By the early 1990s, testing, monitoring and rescue excavations tended to increase in number - both due to the Valetta Convention on the Protection of the Archaeological Heritage (1992) and the surge in development-led projects. Testing excavation became the dominant form of excavation by 1994 reflecting the impact of stricter legislation. The surge has remained constant throughout the 1990’s and 2000-2004 with Testing, Monitoring and Rescue excavations constituting the vast majority of excavations today.

![Excavation Type Percentages Annually 1930-2004](image)

**Figure 2:13: Excavation Type Percentages Annually 1930-2004**

The percentage graph above demonstrates that research excavations constituted a high percentage of excavations undertaken annually in the mid twentieth century. The vast number of significant excavations undertaken by M.J. O’Kelly and Sean P. Ó Ríordáin were particularly important in this period. Though research excavations still play an important role in Irish archaeology, the number of this type of excavation has fallen to less than 1% of excavations at or near early medieval sites in 2004. This development does not suggest any decrease in research excavations undertaken annually but simply reflect the disproportionate amount of excavations undertaken in advance of development-led projects in more recent years. In fact the number of research projects has increased very slightly in recent years and perhaps reflects the emerging role of new centres for archaeology such as the Centre for Maritime Archaeology at the University of Ulster at Coleraine (UUC).
Excavation Types per County

Table 2.8 Figure 2.14 below demonstrate that the number of excavation types undertaken across the island was quite varied. It is evident that there have been fewer testing or monitoring excavations in Northern Ireland, perhaps reflecting the application of different planning legislation. In contrast these counties have had a high percentage of rescue excavations which were of valuable early medieval archaeological significance. It is also evident that western and north-western counties in the Republic of Ireland have a high proportion of pre-development testing. A number of other counties including Down, Antrim, Cork, Kerry and Westmeath have, in contrast, witnessed a high proportion of research excavations during this period.

Table 2.8: Excavation Types Per County 1930-2004

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<td>2</td>
<td>12</td>
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<td>3</td>
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<td>Waterford</td>
<td>4</td>
<td>13</td>
<td>35</td>
<td>35</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>90</td>
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<td>Westmeath</td>
<td>1</td>
<td>26</td>
<td>24</td>
<td>41</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>100</td>
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<tr>
<td>Wexford</td>
<td>1</td>
<td>18</td>
<td>10</td>
<td>46</td>
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<td>0</td>
<td>0</td>
<td>75</td>
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<tr>
<td>Wicklow</td>
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<td>20</td>
<td>18</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>60</td>
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<tr>
<td><strong>Total (Exc. Type)</strong></td>
<td>119</td>
<td>607</td>
<td>775</td>
<td>1353</td>
<td>162</td>
<td>29</td>
<td>2</td>
<td>3047</td>
</tr>
</tbody>
</table>
Figure 2:14: Excavation Types Per County 1930-2004

Figure 2:15: Excavation Type Percentages Per County 1930-2004
Archaeological Institutions and Early Medieval Excavations

Different governmental, academic and commercial organizations have been responsible for these excavations from 1930-2004. The number of excavations undertaken annually by different governmental, academic and commercial organizations was first established. These figures do not describe the number of excavations associated with these particular institutions but highlight the number of excavations undertaken annually by these different groups (excavations can continue for a number of years).

Table 2:9: Excavations Annually Per Archaeological Institution 1930-2004

<table>
<thead>
<tr>
<th>Year</th>
<th>University</th>
<th>Government</th>
<th>Commercial</th>
</tr>
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<tbody>
<tr>
<td>1930</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1931</td>
<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>1932</td>
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</tr>
<tr>
<td>1933</td>
<td>2</td>
<td>0</td>
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</tr>
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<td>1934</td>
<td>6</td>
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</tr>
<tr>
<td>1935</td>
<td>6</td>
<td>1</td>
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<tr>
<td>1936</td>
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</tr>
<tr>
<td>1943</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1944</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>1945</td>
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<td>0</td>
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<td>1947</td>
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</tr>
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<td>1954</td>
<td>2</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>1955</td>
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<td>7</td>
<td>0</td>
</tr>
<tr>
<td>1956</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>1957</td>
<td>2</td>
<td>4</td>
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<tr>
<td>1958</td>
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<td>1960</td>
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<td>1962</td>
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<td>6</td>
<td>0</td>
</tr>
<tr>
<td>1965</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1966</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>1967</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Total: 108 | 89 | Total: 304 | 592 | 2459

Overall Total: 412 | 681 | 2459

The figures clearly reveal that the rate of excavations undertaken by both university and governmental companies remained relatively constant though were generally slightly greater for the post 1970 years than those previously. It also clearly illustrates the huge increase in excavations undertaken annually by commercial companies. The number of excavations undertaken annually by the Universities amounted to 412 with those by government and commercial organizations numbering 681 and 2459 respectively. The institution associated with a very small number of excavations could not be established with a further small collection being affiliated directly to none of these institutions. The figures for the universities included...
that of the Archaeological Services Unit in UCC, QUB centre for Archaeological fieldwork and the UCD Archaeological Wetland Unit.

![Figure 2:16: Excavations Annually Per Archaeological Institution 1930-2004](image)

**University Excavations and associated Excavations**

EMAP has reviewed the number of early medieval excavation issued to university, governmental and commercial organizations from 1930-2004. It has established that the University College Cork has accounted for the largest number of Irish early medieval excavations 1930-2004 by any university body. A significant number of these excavations were undertaken by staff from the Archaeological Services Unit, based in UCC accounting for 72/138 licenses or 65/127 sites). However it is worth noticing that a sizeable remainder (66 licenses & 62 Sites) were also undertaken by UCC staff principally as part of research excavations by staff through the decades. The Dept. of Archaeology (now UCD School of Archaeology) at University College Dublin (UCD) undertook in total 31 excavations at 29 sites. Of these, the UCD-based and National Monuments service-funded Irish Archaeological Wetland Unit (IAWU), undertook 9 excavations at 9 early medieval wetland archaeology sites. Staff at Queen’s University Belfast and its associated Centre for Archaeological fieldwork conducted 49 excavations at 43 sites. The majority were undertaken as part of research excavations through a small number (10 excavations at 9 sites) in recent years were undertaken by the affiliated Centre for Archaeological fieldwork. The Dept. of Archaeology at University College Galway (then UCG, now NUIG) undertook 11 excavations at 11 sites. Excavations by other Irish Universities included five excavations by University of Ulster and its associated Centre for Maritime Archaeology at 3 sites, one excavation undertaken by Leo Swan then of St. Patrick’s College, Drumcondra at Corbetstown in Westmeath and one excavation by Prof. Terry Barry of Trinity College Dublin at Dunbeg Promontory Fort, Co. Kerry. Finally, a growing corpus of foreign based Universities has also undertaken excavations at early medieval sites from 1930-2004.
Five excavations were conducted by Hugh O’Neill Hencken at five important early medieval sites as part of the 1930’s Harvard Archaeological Expeditions to Ireland. Staff from a range of other universities including those of Glasgow, Birmingham, York, Manchester and Cambridge from Britain, Stockholm and Uppsala from Sweden and Cornell University, Ithaca (New York), City University of New York (CUNY), University of California (Berkeley) and University of Pennsylvania have undertaken a number of other important investigations at early medieval Irish sites.

**Table 2.10: Excavation and Sites Excavated Per University unit 1930-2004**

<table>
<thead>
<tr>
<th>University</th>
<th>No. of Excavations</th>
<th>No. of Excavated Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>City University of New York</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Harvard University</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Queen’s University Belfast</td>
<td>49</td>
<td>43</td>
</tr>
<tr>
<td>St. Patrick’s College Drumcondra</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Trinity College Dublin</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Unidentified University</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>University College Cork</td>
<td>138</td>
<td>127</td>
</tr>
<tr>
<td>University College Dublin</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>University College Galway</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>University of Birmingham</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>University of California, Berkeley</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>University of Cambridge</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>University of Glasgow</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>University of Ithaca, Cornell</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>University of Manchester</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>University of Pennsylvania</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>University of Stockholm</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>University of Uppsala</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>University of York</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>University Ulster</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>264</strong></td>
<td><strong>242</strong></td>
</tr>
</tbody>
</table>

The EMAP survey revealed that approximately 242 sites containing early medieval and potential early medieval evidence has been excavated by archaeologists in the university sector, of which 264 excavation licenses were issued for this purpose. The number of ‘season’s of excavations undertaken by the University sector amounted however to 412 (See Table 2:9) indicating that a significant number of these excavations were issued for long-term research projects, as were the case at George Eogan UCD excavations at Knowth, Co. Meath or Mick Monk’s UCC investigations at Lisleagh ringfort, Co. Cork.

**State-funded Excavations and associated Excavations**

EMAP established that 444 sites were excavated by state or governmental organizations, with a total of 497 excavations/excavation licenses issued for this purpose. A proportionally high amount of excavations have been undertaken by the Northern Ireland state bodies at early medieval site during this period. Many of these were subsequently published in UJA and other journals.
Table 2:11: No. of Excavations and Excavated Sites Per Government Body 1930-2004

<table>
<thead>
<tr>
<th>Government Organisation</th>
<th>No. of Excavation</th>
<th>No. Exc. Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archaeological Survey of Northern Ireland</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Birmingham Museum</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>British Museum</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>County Council/Corporation Sponsored Excavation</td>
<td>59</td>
<td>46</td>
</tr>
<tr>
<td>County Museums</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Discovery Programme</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>N.I. Ancient Monuments Branch</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>N.I. Environment &amp; Heritage Service, Belfast</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>N.I. Historic Monuments Branch</td>
<td>103</td>
<td>91</td>
</tr>
<tr>
<td>R.O.I. CPW/OPW</td>
<td>128</td>
<td>108</td>
</tr>
<tr>
<td>R.O.I. National Museum of Ireland</td>
<td>82</td>
<td>81</td>
</tr>
<tr>
<td>Ulster Museum</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>Urban Archaeological Survey of Ireland</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>497</strong></td>
<td><strong>444</strong></td>
</tr>
</tbody>
</table>

The number of excavations undertaken annually by different government bodies amounted to 681 for the years between 1930-2004. The number of excavation issued and undertaken for the same time frame was somewhat smaller at 497 indicating also that a sizeable number of these excavations were undertaken over a number of years.

**Commercial Excavations and associated Excavation Licenses**

However, as is well known (see Fig. XXX above), the great majority of the archaeological excavations undertaken on or near potential early medieval sites or monuments in 1930-2004, were carried out by commercial archaeological companies and consultancies. Beginning in the early 1990s, both urban development and rural infrastructural development begin in earnest, as the Irish economy began to be transformed. Archaeological companies were being established (although some, such as Valerie J. Keeley Ltd, Margaret Gowen & Co Ltd and Archaeological Development Services were companies already operating at the time) and these began to carry out more and more excavations as part of mitigation of archaeological disturbance as required by the planning process. By the late 1990s, these developments were in full flood, codes of practice were being established with the NRA, Bord Gáis and other state agencies and a growing number of commercial archaeological companies and individuals were active in the field. By 2002, Irish archaeological practice had been utterly transformed.

The situation in Northern Ireland was not dissimilar to that in the Republic of Ireland, although the impact of the Valletta Convention was less immediate than that experienced in the Republic. This was partly because Northern Ireland did not fully benefit from the economic expansion of the ‘Celtic Tiger’, and also because the ‘Troubles’ (and their immediate aftermath) were serious brakes on internal investment. Although companies such as Archaeological Development Services Ltd and Northern Archaeological Consulting had been in operation in Northern Ireland since the mid-1990s, large-scale commercial excavations only really occurred in the late-1990s and early-2000s. These companies still tend to dominate the commercial sector in Northern Ireland - although Gahan & Long established themselves by the mid-2000s.

Table 2:12 below comprises the number of excavation licenses in ascending order associated with different commercial archaeological companies from 1930-2004. In a number of rare cases, two companies appear to have been associated with the same excavation license and in these cases, a number was added to both companies. The figures below therefore do not reflect then an accurate number of excavation licenses issued but the number of excavation licenses associated with different companies.
Table 2.12: Excavations undertaken Per Commercial Company 1930-2004

<table>
<thead>
<tr>
<th>Commercial Company</th>
<th>No. of Exc.</th>
<th>-</th>
<th>Commercial Company</th>
<th>No. of Exc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achill Archaeological Summer School</td>
<td>1</td>
<td>-</td>
<td>Headland Archaeology</td>
<td>16</td>
</tr>
<tr>
<td>AOC Archaeology Group</td>
<td>1</td>
<td>-</td>
<td>Tobar Archaeological Services</td>
<td>16</td>
</tr>
<tr>
<td>Archaeological Diving Company</td>
<td>1</td>
<td>-</td>
<td>Archaeology Company</td>
<td>18</td>
</tr>
<tr>
<td>Archaeology Underwater Ltd</td>
<td>1</td>
<td>-</td>
<td>TVAS Ireland</td>
<td>19</td>
</tr>
<tr>
<td>Carlingford Lough Heritage Trust</td>
<td>1</td>
<td>-</td>
<td>Stafford McLoughlin Archaeology</td>
<td>20</td>
</tr>
<tr>
<td>CFA Archaeology, East Lothian</td>
<td>1</td>
<td>-</td>
<td>Archaeological Projects</td>
<td>23</td>
</tr>
<tr>
<td>Dagda Archaeological Projects</td>
<td>1</td>
<td>-</td>
<td>Northern Archaeological Consultancy</td>
<td>29</td>
</tr>
<tr>
<td>Dublin Archaeological Research Team</td>
<td>1</td>
<td>-</td>
<td>Archaeological Consultancy Ltd</td>
<td>35</td>
</tr>
<tr>
<td>GeoArc</td>
<td>1</td>
<td>-</td>
<td>Arch-Tech</td>
<td>37</td>
</tr>
<tr>
<td>Gregory Consultant Archaeology Ltd</td>
<td>1</td>
<td>-</td>
<td>Moore Arch. and Environ. Services</td>
<td>40</td>
</tr>
<tr>
<td>Insight Archaeology</td>
<td>1</td>
<td>-</td>
<td>Judith Carroll</td>
<td>42</td>
</tr>
<tr>
<td>John Purcell Archaeological Consultancy</td>
<td>1</td>
<td>-</td>
<td>Dominic Delany</td>
<td>46</td>
</tr>
<tr>
<td>Neil O’Flanagan</td>
<td>1</td>
<td>-</td>
<td>CRDS</td>
<td>49</td>
</tr>
<tr>
<td>Roscrea Archaeological Survey Team</td>
<td>1</td>
<td>-</td>
<td>Oranmore Arch. Services Unit</td>
<td>54</td>
</tr>
<tr>
<td>South Eastern Archaeology</td>
<td>1</td>
<td>-</td>
<td>Aegis Archaeology</td>
<td>65</td>
</tr>
<tr>
<td>AML Archaeology</td>
<td>2</td>
<td>-</td>
<td>Mary Henry Archaeological Services</td>
<td>65</td>
</tr>
<tr>
<td>ArchCor</td>
<td>2</td>
<td>-</td>
<td>IAC</td>
<td>66</td>
</tr>
<tr>
<td>Barrow Archaeological Services</td>
<td>2</td>
<td>-</td>
<td>Sheila Lane</td>
<td>76</td>
</tr>
<tr>
<td>IUART</td>
<td>2</td>
<td>-</td>
<td>Valerie J Keeley</td>
<td>110</td>
</tr>
<tr>
<td>ArchaeoGrafix</td>
<td>3</td>
<td>-</td>
<td>Eachtra</td>
<td>115</td>
</tr>
<tr>
<td>GAC Ltd.</td>
<td>3</td>
<td>-</td>
<td>North West Archaeological Services</td>
<td>115</td>
</tr>
<tr>
<td>Kilkenny Archaeology</td>
<td>5</td>
<td>-</td>
<td>ADS</td>
<td>187</td>
</tr>
<tr>
<td>Byrne Mullins &amp; Associates</td>
<td>6</td>
<td>-</td>
<td>ACS</td>
<td>224</td>
</tr>
<tr>
<td>John Channing</td>
<td>9</td>
<td>-</td>
<td>Margaret Gowen</td>
<td>228</td>
</tr>
<tr>
<td>National Archaeological Services, Ard Solas</td>
<td>9</td>
<td>-</td>
<td>Freelance</td>
<td>520</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2273</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The principal single archaeological companies responsible for excavations of early medieval sites are:
- Margaret Gowen (228 excavations)
- ACS (224 excavations)
- ADS (187 excavations)
- Eachtra (115 excavations)
- Valerie J Keeley Ltd (110 excavations)

Undoubtedly, these companies' archives and expert archaeologists comprise potentially the greatest resource for research and publication on early medieval archaeology.

However, it is interesting that 'Freelance' excavations (i.e. completed by site directors not explicitly linked with an institution or company) were in fact responsible for the most excavations undertaken. These excavations typically involved testing near or on an archaeological monument and rarely revealed any early medieval archaeology of any significance. Some of these freelance directors have formed individual owned companies (e.g. North West Archaeological Services) and have undertaken extensive testing, particularly in their own particularly counties or regions. The total number of excavation licenses associated with different commercial companies then amounted to 2,273.

The provisional EMAP survey then identified that:
- 264 excavation licenses (9%) associated with Universities
- 497 excavation licenses (16%) associated with government bodies
- 2,273 excavations (75%) associated with commercial companies.
- Unidentified (1%)
These numbers total 3,034 and refer to the number of excavation licenses associated with different university, government and commercial bodies. The body responsible for a further 13 excavation licenses could also not be established or belonged to miscellaneous groups.

**Schemes and Infrastructural Projects**

The above graphs have illustrated the changing character and scale of excavations and role of different archaeological groups across the island from 1930-2004. To further comprehend the changing distribution and character of excavations across the island, it is necessary to consider the role of development-led schemes and projects within these trends. There are currently 2,208 sites and 3,047 accompanying excavations within the database. A total of 2,575 or 84% of licenses issued for excavations on or near early medieval sites or structures from 1930-2004 were in advance of infrastructural, development and rural schemes/projects.

**Table 2:13: Excavations along Schemes and Projects 1930-2004**

<table>
<thead>
<tr>
<th>Scheme/Project</th>
<th>Number of Excavation</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Development</td>
<td>669</td>
<td>22%</td>
</tr>
<tr>
<td>Drainage/Dredging Scheme</td>
<td>31</td>
<td>1%</td>
</tr>
<tr>
<td>Electrical</td>
<td>27</td>
<td>1%</td>
</tr>
<tr>
<td>Farm Improvement</td>
<td>85</td>
<td>3%</td>
</tr>
<tr>
<td>Gas Scheme</td>
<td>98</td>
<td>3%</td>
</tr>
<tr>
<td>Peat Production</td>
<td>23</td>
<td>1%</td>
</tr>
<tr>
<td>Quarry/Mine/Landfill</td>
<td>73</td>
<td>2%</td>
</tr>
<tr>
<td>Residential Development</td>
<td>988</td>
<td>32%</td>
</tr>
<tr>
<td>Road Scheme</td>
<td>420</td>
<td>14%</td>
</tr>
<tr>
<td>Sewerage &amp; Water Supply</td>
<td>131</td>
<td>4%</td>
</tr>
<tr>
<td>Telecommunications &amp; Wind Development</td>
<td>17</td>
<td>1%</td>
</tr>
<tr>
<td>Tram &amp; Rail</td>
<td>4</td>
<td>0%</td>
</tr>
<tr>
<td>Unidentified Service Pipeline</td>
<td>9</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total Exc. Licenses</strong></td>
<td>2575</td>
<td>84%</td>
</tr>
</tbody>
</table>

**Other Excavation Reasons**

| None                             | 412                  | 14% |
| Uncertain                        | 60                   | 2%  |
| **Total Exc. Licenses**          | 472                  | 16% |
| **Total Exc. Licenses**          | 3,047                | 100%|

Residential developments were responsible for 998 (32%) of the total excavations within the database. It was followed by 669 (22%) excavations in advance of commercial developments (Shop extensions, Industrial Units etc.). The extensive road scheme infrastructural developments (420 or 14%) undertaken principally by the NRA in the Republic of Ireland have also been a major force behind the boom in archaeological investigations in recent years.

2,575 excavations were issued in advance of schemes or projects from 1930-2004. The remaining 472 excavation licenses were issued for a number of different reasons. The heading None (412 or 14%) referred to those which were issued for conservation or research purposes as well as other miscellaneous forms of excavation (cemetery extensions, government employment initiatives or excavations in advance of coastal erosions or sporting developments e.g. golf courses) which were not part of a development scheme or any of the headings listed above. The reasons why the remaining 60 excavations (2%) were undertaken were not established and will require further investigation.
Significance of Sites in which excavations were undertaken along Schemes/Projects

The database, as described above, graded excavated ‘sites’ in terms of the archaeological significance uncovered during the excavation(s) at that particular site. The criteria used to interpret the significance of a site are outlined in the methodology. The individual excavation licenses were not graded in terms of their archaeological significance. At this stage of the project, the EMAP database can only appraise the archaeological ‘significance’ of excavated sites in which excavations were undertaken/issued for different schemes and Projects.

Table 2:14: Significance of Sites excavated along Schemes and Projects 1930-2004

<table>
<thead>
<tr>
<th>Scheme/Project</th>
<th>Uncertain</th>
<th>No Significance</th>
<th>General</th>
<th>Significant</th>
<th>Highly Significant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development</td>
<td>72</td>
<td>281</td>
<td>127</td>
<td>117</td>
<td>72</td>
<td>669</td>
</tr>
<tr>
<td>Drainage/Dredging</td>
<td>5</td>
<td>7</td>
<td>13</td>
<td>6</td>
<td>0</td>
<td>31</td>
</tr>
<tr>
<td>Electrical</td>
<td>6</td>
<td>16</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td>Farm Improvement</td>
<td>4</td>
<td>5</td>
<td>49</td>
<td>22</td>
<td>5</td>
<td>85</td>
</tr>
<tr>
<td>Gas Scheme</td>
<td>38</td>
<td>19</td>
<td>16</td>
<td>13</td>
<td>12</td>
<td>98</td>
</tr>
<tr>
<td>Peat Production</td>
<td>1</td>
<td>0</td>
<td>14</td>
<td>8</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>Quarry/Mine/Landfill</td>
<td>15</td>
<td>19</td>
<td>23</td>
<td>14</td>
<td>5</td>
<td>73</td>
</tr>
<tr>
<td>Res. Development</td>
<td>76</td>
<td>731</td>
<td>90</td>
<td>69</td>
<td>22</td>
<td>988</td>
</tr>
<tr>
<td>Road Scheme</td>
<td>142</td>
<td>65</td>
<td>110</td>
<td>69</td>
<td>34</td>
<td>420</td>
</tr>
<tr>
<td>Sewerage/Water</td>
<td>24</td>
<td>70</td>
<td>30</td>
<td>6</td>
<td>1</td>
<td>131</td>
</tr>
<tr>
<td><strong>Total (Significance Type)</strong></td>
<td><strong>383</strong></td>
<td><strong>1210</strong></td>
<td><strong>473</strong></td>
<td><strong>328</strong></td>
<td><strong>151</strong></td>
<td><strong>2545</strong></td>
</tr>
</tbody>
</table>

Figure 2:17: Excavations along Schemes and Projects 1930-2004
Some interesting patterns do emerge from the data gathered. It is instructive to note that excavations in advance of residential developments had a tendency to be described as Sites of ‘No archaeological Significance’. It was found that these excavations were usually undertaken near an early medieval monument (e.g. ringfort) in advance of the construction of a dwelling house. Excavations in advance of large commercial/infrastructural developments and road schemes tended to reveal a higher proportion of important, highly important and significant sites. This was likely due to the scale of excavations undertaken along these projects. It was also likely due to the fact that excavations tended to be undertaken on early medieval monuments or areas with the intention of complete excavation in contrast to testing excavations being undertaken near an early medieval monument to comply with planning legislation for an isolated dwelling.

Both farm improvement schemes and excavations in advance of quarry/mining or landfill activities also contained a higher proportion of sites of importance. These excavations were typically undertaken in the mid-late twentieth century, often particularly in the 1970’s/80’s as part of government supported EEC initiatives. It is also instructive to note that sites excavated along road and Gas schemes projects contained a higher proportion of sites described at this stage as ‘Uncertain’. This set of excavations moved beyond the boundaries of the traditional early medieval site type (ringforts, souterrains, crannogs and churches) and into the landscape uncovering, as discussed above, a whole new and less readily dateable set of early medieval archaeological evidence including ironworking hearths and pits, field systems and cereal-drying kilns. The date of these sites cannot be completely established at the present as many still await complete publication or lack any diagnostic archaeological evidence to help provide a concise date for their time of use.

**Excavations Types along Schemes/Projects**

These characteristics of the archaeological excavations undertaken along the different schemes or projects supports the trends outlined above.

**Figure 2:18: Significance of Sites excavated along Schemes & Projects 1930-2004**

Table 2:15: Excavation Types along Schemes and Projects 1930-2004
Farm Improvement schemes, as mentioned above, were particularly common in the 1970s and 1980s when the EEC agricultural grants were readily available. With the advent of CAP and the large Butter and Cereal Mountains in Brussels, EU agricultural policy shifted from maximisation to diversification. The archaeological heritage also secured important protection in this period at the EU Valletta Convention 1992 whose acts were subsequently ratified by Ireland in 1997. These developments have ensured that few farm improvement schemes date to this later period under study. It is interesting to note that excavations in advance of farm improvement schemes have tended to be rescue in form. This was due to the fact that testing excavations were not a legislative requirement before the 1990’s. It was also the case that these excavations tended to be undertaken on early medieval rural sites with the intention of their complete destruction. As noted previously, the many of the rescue excavations in advance of farm improvement schemes were undertaken in Northern Ireland from the 1950's-1980's.

It is clear that testing and monitoring licenses comprise a higher proportion of excavations in advance of residential developments. These excavations comprise a major proportion of excavations undertaken over the last few years and as discussed above, have a tendency to reveal no archaeology of any significance. In most cases, they reflect planning legislation for the increased construction of single houses in the Irish countryside in recent years. A minority dealt with the construction of housing estates; a type of excavation which contains a higher probability of rescue excavations of early medieval significance. Rescue licenses however comprise a higher percentage of excavations of recent road schemes, development projects and quarrying/mining or landfill activities highlighting the different character, scope and function of these excavations. These excavations were typically undertaken over a large area of land with the intention of complete excavation if any archaeology of any significance was uncovered. These trends correlate with the higher proportion of important, highly important and significant sites excavated in advance of large scale commercial developments and road schemes (See Figure 2.18).
The changing character of early medieval excavations in Ireland, 1930-2004

It is therefore very clear that the character of early medieval excavations has been transformed in recent years due both to stronger legislative protection of the archaeological heritage and the consequent emergence of development-led archaeology. The database confirmed, what is already well known, about a dramatic shift in the massive growth in the number of excavations undertaken annually from the early 1990’s due to development-led projects and schemes. It also illustrated the well-known shift from excavations undertaken by state and university bodies in the earlier decades towards one in which the commercial archaeological sector is predominant by the 1990’s. It also confirmed a dramatic transformation in the character of early medieval excavations from one in which research and rescue excavations were dominant towards one in which testing/monitoring excavations prevailing from the 1990’s. It was found that this shift in the character of the excavations due to tighter planning legislation had the effect of dramatically increasing the number of archaeological excavations of no significance particularly within the Republic of Ireland.

The review also revealed some interesting information about the extent and character of excavations across the island from 1930-2004. It revealed that a high proportion of the excavations were undertaken in North Leinster in the counties of Meath, Louth, Dublin and Kildare reflecting the effects of development-led archaeology within the greater Dublin area. Other areas that have seen relatively high numbers of early medieval excavations include the south-western counties of Cork, Kerry, Limerick and Clare as well as Antrim and Down in Northern Ireland. Elsewhere excavations have been generally fewer in number and of lesser early medieval archaeological significance.

The review also revealed subtle differences and variations in the character and number of excavations between those undertaken within the Republic of Ireland and those in Northern Ireland. It revealed that the Northern Ireland state bodies were at the forefront of many significant rescue and research excavations from the 1950’s-1980’s. It is evident that in more recent years excavations undertaken at or near early medieval or potential early medieval sites
have only slightly but consistently increased in Northern Ireland from 1930-2004 while excavations in both urban and rural counties within the Republic have increased dramatically from the early 1990’s. This might both reflect the Celtic Tiger Phenomenon in the Republic and different planning legislation in both jurisdictions concerning testing and monitoring excavations.

It is obvious that this change in the scope, type and location of excavations has transformed the character of early medieval material being revealed. The next section will analyse and discuss the character of this early medieval excavated evidence across the island.

**What early medieval sites were excavated 1930-2004? A summary of main findings**

To summarise, there are a total of 2,208 sites in the EMAP database comprising both excavations on and near early medieval sites, monuments and structures. There are 3,047 excavations that are embedded inside these sites’ that contain data about excavations on or in close proximity to early medieval or potentially early medieval monuments, structures and artefacts. These sites and excavations are described in total in Appendix 1.

The above sections have dealt with various research themes concerning all the excavations and sites within the current EMAP Database of 2,208 sites and 3,047 excavations. It is evident however, as mentioned above, that a significant number of excavations undertaken on or near early medieval sites and structures were of no archaeological significance and were in many in cases only situated in close proximity to early medieval monuments. The sections and chapters below discusses and appraises figures for archaeologically significant and potentially archaeologically significant sites and excavations from 1930-2004.

<table>
<thead>
<tr>
<th>Significance of Site</th>
<th>Significance Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Significance</td>
<td>1019</td>
</tr>
<tr>
<td>Uncertain</td>
<td>302</td>
</tr>
<tr>
<td>General</td>
<td>485</td>
</tr>
<tr>
<td>Significant</td>
<td>307</td>
</tr>
<tr>
<td>Highly Significant</td>
<td>95</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,208</strong></td>
</tr>
</tbody>
</table>

The database is left with 1189 early medieval archaeologically significant or potentially early medieval archaeologically significant sites when the ‘No Significance’ figures are removed. Of the 1189 remaining sites, a significant number 302 or 25% are of ‘uncertain’ early medieval archaeological status. Further research will be required to clarify if the excavated archaeology from these sites can be confirmed to date to the early medieval period.

The database currently contains 3,047 excavations which are embedded inside the 2,208 EMAP defined ‘sites’. 1503 or 49% of these excavations are of early medieval or potential early medieval archaeological significance. 51% of excavations on or more commonly in close proximity to early medieval monuments and sites (e.g. ecclesiastical sites, ringforts and enclosures) are of no early medieval archaeological significance.

The EMAP database then currently contains 1503 early medieval or potentially early medieval excavations on 1189 early medieval as well as potential early medieval archaeologically significant sites.
Archaeologically Significant Excavations Annually on early medieval sites

The results from Table 2:17 and Figure 2:20 demonstrate that there is a noticeable increase of both early medieval archaeologically significant and potentially archaeologically significant excavations from the early 1990’s. However the increase is not as dramatic as what is represented as Figure 2:1 above as excavations of no archaeological significance were the most common form of investigation from the late 1990’s. It could also be argued that these figures for the latter years from 1998-2004 are perhaps an over approximation because they contain a significant number of ‘uncertain’ sites, some of which on more detailed investigation maybe found not to date to the early medieval period. The net result is that while there is now vast amount of excavations being undertaken on or in close proximity to early medieval sites, less than 50% of those in recent years are of early medieval archaeological significance. 186/417 or 44% of excavations in 2002 were of early medieval or potential early medieval archaeological significance; a ratio which had dropped to 34% of excavations in 2004 (164/487).

Table 2:17: Early Medieval Archaeologically Significant Excavations Annually 1930-2004

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Year</th>
<th>Total</th>
<th>Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1930</td>
<td>2</td>
<td>1955</td>
<td>9</td>
<td>1980</td>
<td></td>
</tr>
<tr>
<td>1931</td>
<td>4</td>
<td>1956</td>
<td>7</td>
<td>1981</td>
<td></td>
</tr>
<tr>
<td>1932</td>
<td>5</td>
<td>1957</td>
<td>7</td>
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<td>1961</td>
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<td>1986</td>
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<td>1962</td>
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<td>1987</td>
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<td>5</td>
<td>1988</td>
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<td>7</td>
<td>1989</td>
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<td>1940</td>
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<td>1945</td>
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<td>1970</td>
<td>14</td>
<td>1995</td>
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</tr>
<tr>
<td>1948</td>
<td>2</td>
<td>1973</td>
<td>17</td>
<td>1998</td>
<td></td>
</tr>
<tr>
<td>1949</td>
<td>3</td>
<td>1974</td>
<td>15</td>
<td>1999</td>
<td></td>
</tr>
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</tr>
<tr>
<td>1954</td>
<td>6</td>
<td>1979</td>
<td>18</td>
<td>2004</td>
<td></td>
</tr>
</tbody>
</table>
Figure 2: Archaeologically Significant Excavations Annually 1930-2004

Site Categories

The database also described EMAP defined ‘Sites’ in terms of broader early medieval categories, as discussed in the methodology. A ‘Category’ field grouped together excavations on early medieval monuments and structures into broader descriptions. An Environ of Site Category was also constructed which grouped together excavations near early medieval monuments and structures into the same broader descriptions. The category descriptions comprised:

- Agricultural Site
- Agricultural/Industrial Site
- Cemetery/Burial Site
- Ecclesiastical Site
- Industrial Site
- Miscellaneous
- Route way
- Settlement Enclosure
- Settlement Landscape
- Settlement/Cemetery Site
- Unenclosed Site
- Viking/Hiberno-Norse Town

Excavated Early Medieval Site Categories

There were 1274 sites recorded in the excavated ‘site’ category field, of which were of early medieval as well as potential early medieval archaeologically significance. The remaining excavated ‘sites’ were of no archaeological significance and principally comprised excavations on ecclesiastical sites that revealed no early medieval archaeological evidence.

A total of 27% of excavated sites can be described as ‘settlement enclosures’ (e.g. ringforts, cashels, enclosures). A total of 21% or 218 of all excavated sites were found to be ecclesiastical sites. This figure excludes those from within the Viking/Hiberno-Norse towns described under that category heading. However, a significant number (131/218 or 60%) of these excavated ecclesiastical sites revealed archaeology of no early medieval significance or archaeology of
uncertain date (e.g. burials of uncertain date). The actual number of ecclesiastical sites which have revealed confidently dated early medieval excavated archaeology is somewhat smaller then though more detailed investigations of those sites described as ‘uncertain’ might revise these figures.

Excavations uncovering unenclosed early medieval settlements (e.g. unenclosed buildings, structures and souterrains) amounted to 10% of the total. A further 10% of excavated sites related to industrial sites engaged primarily in iron/metalworking to varying extents. A site was described as a ‘Settlement landscape’ when it was comprised of a number of different monuments spatially (e.g. ringforts and unenclosed sites within one excavated landscape) or chronologically (unenclosed site superseded by a ringfort etc.) distinct. This type of excavated EMAP site constituted 8% of the total sites within the database.

Early medieval excavated sites situated inside the four Viking/Hiberno-Norse towns of Dublin, Wexford, Waterford and Cork constituted 7% of the total. As mentioned above, this category included both evidence for habitation, industry and ecclesiastical sites within their predefined areas. 5% of excavated sites comprised excavated cemeteries (enclosed or unenclosed) or isolated burials with no associated settlement evidence.

A further 1% related to excavated cemetery/settlement ‘sites’ which have uncovered significant evidence for cemeteries associated with habitation and industrial activity dating to the early medieval period. Evidence for excavated track ways/bridge in isolated contexts amounted to 2% of the total figures. 1% of sites comprised sites which uncovered isolated agricultural/industrial sites (e.g. cereal-drying kilns and evidence for ironworking). 2% of excavated ‘site’s belonged to a miscellaneous category (e.g. underwater excavations for early medieval artefacts).

Table 2.18: Excavated EMAP Categories 1930-2004

<table>
<thead>
<tr>
<th>Excavated Categories</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Site</td>
<td>73</td>
<td>6</td>
</tr>
<tr>
<td>Agricultural/Industrial Site</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Cemetery/Burial Site</td>
<td>68</td>
<td>5</td>
</tr>
<tr>
<td>Ecclesiastical Site</td>
<td>266</td>
<td>21</td>
</tr>
<tr>
<td>Industrial Site</td>
<td>133</td>
<td>10</td>
</tr>
<tr>
<td>Miscellaneous Site</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>Route way</td>
<td>26</td>
<td>2</td>
</tr>
<tr>
<td>Settlement Enclosure</td>
<td>346</td>
<td>27</td>
</tr>
<tr>
<td>Settlement Landscape</td>
<td>101</td>
<td>8</td>
</tr>
<tr>
<td>Cemetery/Settlement Site</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Unenclosed Site</td>
<td>129</td>
<td>10</td>
</tr>
<tr>
<td>Viking Town</td>
<td>89</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1274</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Excavations in environs of ‘Site’ Category

The Environs of Site category was designed to collect information about excavations near protected SMR monuments. This particular type of excavation takes the form of pre-development testing or subsequent monitoring works undertaken in close proximity to early medieval settlement sites in advance of a development that is often residential. They are, in nearly all cases of no archaeological significance and are undertaken rather to comply with existing planning legislation than generate meaningful archaeological knowledge about the past. These forms of investigation have emerged as the predominant form of excavation in recent years, particularly in the context of the Republic of Ireland.

The Environs of category comprises 1003 excavated sites situated in close proximity to an early medieval or potential early medieval site/monument. It was particularly concerned with excavations near rural settlement sites like ringforts or cashels, rural ecclesiastical sites like monasteries or churches and wetland sites in the form of crannogs. Excavations in close proximity to ‘enclosure’ sites which could potentially represent early medieval ringforts or enclosed settlements were also collected.

54% of the excavations were situated in close proximity to settlement enclosure ‘sites’. A further 37% of the excavations were located close to ecclesiastical sites. The early medieval antiquity of a small collection of these ecclesiastical sites was not established. Further historical research will be required to clarify if these sites have an early medieval origin or were founded post A.D. 1170. The figures also include excavated pre-1170 Cistercian monastic foundations. 5% of this set of excavations was situated in close proximity to ‘settlement landscapes’. These sites typically comprised an excavation near a number of ringforts or ecclesiastical sites. Excavations close to unenclosed sites (e.g. isolated souterrains) comprised 4% of the total.

The statistics demonstrate that excavations under the current legislation (particularly in the case of the Republic of Ireland) tend to be undertaken close to easily identifiable monuments which have been extensively surveyed and recorded from the 19th century and which have subsequently received protection under the XXXXX law. They however do not tend to be
undertaken near isolated industrial, agricultural and burial/cemetery sites, as well as many unenclosed habitation sites because these types of sites have never been recognised across the Irish landscape, at any great scale, till the large-scale development led excavations in recent years. The Archaeological Survey of Ireland continues to accord an SMR number to every excavated site and monument in the Republic of Ireland. It will be interesting therefore to see if pre-development excavations in future years are undertaken in close proximity to recently recoded SMR sites such as isolated industrial or agricultural monuments and structures. This is of course providing the existing planning laws continue to be enforced.

Table 2:19: Excavation near Site Categories 1930-2004

<table>
<thead>
<tr>
<th>Excavated Categories</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cemetery/Burial Site</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Ecclesiastical Site</td>
<td>369</td>
<td>37</td>
</tr>
<tr>
<td>Miscellaneous Site</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Routeway</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Settlement Enclosure</td>
<td>538</td>
<td>54</td>
</tr>
<tr>
<td>Settlement Landscape</td>
<td>52</td>
<td>5</td>
</tr>
<tr>
<td>Unenclosed</td>
<td>36</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>1003</td>
<td>100</td>
</tr>
</tbody>
</table>

Figure 2:22: Excavations near Site Categories 1930-2004

The EMAP database then currently houses 1,274 excavated EMAP sites and categories, 1,189 of which are of early medieval or potential early medieval archaeological significance. It also, as discussed above, contains 1,003 sites and associated categories which were undertaken near early medieval and potential early medieval monuments. These numbers totalled 2,277. As there are only 2,208 EMAP sites currently in the database, the overlap of 69 sites comprised cases where an excavation was undertaken simultaneously on an early medieval/potential early medieval site as well as being located in close proximity to another early medieval/potential early medieval site.
Conclusions
The EMAP database then currently contains 1503 early medieval or potentially early medieval excavations on 1189 early medieval as well as potential early medieval archaeologically significant sites. This is archaeological evidence with extraordinary potential for revealing aspects of our heritage, landscape and understanding of past societies - and it has barely been exploited.

The following chapters comprise descriptions and analysis of the excavated monuments, structures and artefacts currently recorded in the EMAP database and uncovered during excavations at these EMAP defined 'sites' from 1930-2004. They also engage in broader discussions of topics concerning early medieval settlement, industry, agriculture, the Vikings in Ireland and the early medieval church and will hopefully give a sense of this remarkable archaeological resource.

- Early Medieval Dwellings, Settlements and Landscapes A.D. 400-1170)
- Early Medieval Church
- Early Medieval Death and Burial
- Early Medieval Agriculture and Economy
- Early Medieval Crafts and Technology
- Early Medieval Trade and Exchange
Chapter 3. Early Medieval dwellings, settlements and landscapes

Introduction

Archaeological, historical and palaeoenvironmental evidence, indicates that the early medieval Irish landscape was densely populated and intensively settled between the 6th to 10th centuries AD. In fact, the settlement landscape of early medieval Ireland has resulted in one of the richest archaeological landscapes surviving in Europe. The surviving archaeological evidence for settlement is wide-ranging, not only including classic early medieval dwelling enclosures (e.g. ringforts, cashels, crannogs, ecclesiastical enclosures and urban towns), but also an emerging diverse range of archaeological evidence for unenclosed dwellings, cave occupations, settlements with cemeteries, coastal midden sites and seasonal or temporary habitations in wetlands, uplands and coastal contexts. The archaeological excavation of early medieval settlements are also our principal source of information on houses and dwellings (O'Sullivan 2006), diet and economy (McCormick and Murray 2007); the organisation of crafts and technology (Comber 2008) and the social organisation and inhabitation of the settled landscape itself (Stout 1997).

Early medieval settlement has long been of interest to the scholar and a range of studies have described its essential features – whether they be ringforts (e.g. Edwards 1990; Stout 2000; Edwards 2005), crannogs (O'Sullivan 1998; Fredengren) or Ireland’s Hiberno-Norse towns (Wallace 19**; Hurley 19**). Other forms of early medieval settlement - the monastic enclosure, crannog, cashel or promontory fort tended to dominate the remainder of the evidence (O'Sullivan 1998; Fredengren 20**). However, in recent years particularly with the large-scale gas pipeline and roadway developments, early medieval archaeology has been entirely re-invigorated by a renewed interest in the potential range and diversity of the early medieval settlement landscape (and the more diverse forms of evidence for enclosed and unenclosed settlements that they have brought). Although they are the most numerous, ringforts (or raths) are now not the only site-type from the early medieval period. Recent excavations have uncovered other sites that have left no upstanding remains, such as settlement/cemetery sites (e.g. Raystown, Co. Meath) and non-circular shaped enclosures (e.g. Newtown, Co. Limerick). There is also an emerging body of evidence for unenclosed sites which has still not been fully integrated into the settlement synthesis for this period. These are represented by isolated souterrains (e.g. Balrenny, Co. Meath (Eogan & Bradley 1977), unenclosed settlements (Ballytuag, Co. Antrim (Williams 1984)), coastal occupation sites (Oughtymore, Co. Londonderry (Mallory & Woodman 1984) and cave dwellings (Kilgreany, Co. Waterford (Movius 1935)). Our knowledge of the early medieval settlement landscape has also been transformed by the discovery of types of archaeological features testifying to the intensity of land-use - such as fields, pits, kilns, mills, ironworking sites and other features.

This chapter will review the emerging evidence for settlement archaeology in this period based on EMAP’s research of excavations 1930-2004, with an occasional particular analytical focus on the period 1970-2004, it will firstly categorise and review settlement during this period and explore the morphology, chronology and distribution of the different monument types to understand continuity and change in settlement and social organization during the early medieval period. A range of enclosed settlement type sites (i.e. ringforts, cashels, crannogs) will be examined and then this will be followed by a review of the evidence for unenclosed settlement. Finally, areas of potential research will be outlined.
Early Medieval Rural Settlement

Introduction
The early medieval settlement landscape in Ireland between the 6th to 12th century, as in much of the rest of Europe, was a largely rural, pastoral landscape with people living on and working the land around them. However, while in northern early medieval Europe nucleated rural settlements emerged at an early stage (with nucleated clusters of longhouses in parts of northern Europe) and ‘villages’ developed in later Anglo-Saxon England, the Irish early medieval settlement landscape remained largely one of dispersed rural dwelling places. Although, it has been suggested that there is some early Irish historical evidence by the tenth century for some type of nucleation in the form of the baile, despite ten years of large-scale excavation, such sites have resolutely failed to appear. Indeed early medieval nucleated settlements only emerge on this island with the development of monastic towns from perhaps the 9th or 10th century (and this remains a matter of debate) or of course in the island’s Norse towns which develop in particular from the early tenth century AD onwards at Dublin, Wexford, Waterford, Cork and Limerick.

Early medieval rural settlements therefore constitute the bulk of the Irish archaeological record for the period. Although ringforts and enclosures remain the dominant settlement type in the excavated archaeological record, there is a growing corpus of evidence for settlement/cemetery sites and unenclosed sites. Table 3:1 and Figure 3:1 illustrate the results of excavated early medieval rural settlement site types from 1930-2004. The total type column refers to the total number of excavated monuments (e.g. ringforts) while the EMAP Site column sums up the number of EMAP ‘sites’ these excavated sites/monuments are occurring on. Various forms of settlement enclosures like ringforts, crannogs, cashels, and enclosures as well as a small collection of excavated hillforts, promontory forts and possible longport sites with early medieval archaeological evidence have been identified. Although enclosure site types remain the dominant settlement type in the excavated archaeological record, there is a growing corpus of evidence for settlement/cemetery sites and unenclosed sites. All these various site-types will be discussed in greater depth below.

Table 3:1: Excavated Rural Settlement Site Types 1930-2004

<table>
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<tr>
<th>Excavated Site</th>
<th>EMAP Site (Total)</th>
<th>Total Type</th>
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<tr>
<td>Cave</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Cashel</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>Coastal Habitation</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Crannog</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>Enclosure</td>
<td>86</td>
<td>107</td>
</tr>
<tr>
<td>Hillfort</td>
<td>4</td>
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</tr>
<tr>
<td>Longport</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Non-circular Enclosure</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Promontory Fort</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Ringfort</td>
<td>215</td>
<td>241</td>
</tr>
<tr>
<td>Raised/Platform Ringfort</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>Settlement/Cemetery Site</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Souterrain</td>
<td>186</td>
<td>247</td>
</tr>
<tr>
<td>Unenclosed Habitation</td>
<td>40</td>
<td>41</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>673</strong></td>
<td><strong>785</strong></td>
</tr>
</tbody>
</table>
There are also outstanding problems in our understanding of changes to early medieval rural settlement at either end of the period, its beginning and its ‘end’. The transitional Iron Age/Early Medieval period - fifth to seventh centuries A.D. - is poorly understood, although an increasing number of sites - particularly those containing early burials - have been discovered from this period. The Early Medieval period between the sixth and the ninth centuries A.D., however, is potentially the most researched phase in Irish archaeology. The character and organisation of houses, dwellings, settlement enclosures (including ringforts and crannogs), churches and ecclesiastical sites in this period appear to be fairly well understood. Industrial activities and trade are recognised, and much has been made of the contemporary cattle-based economy with its concomitant society based around reciprocity and clientship.

However, early medieval rural settlement in the tenth to twelfth centuries is also poorly understood. Although a lot of recent study has examined the archaeology of early Hiberno-Norse towns, the situation in the contemporary rural Irish landscape is less clear. Recent excavations have produced a number of enclosures which have been radiocarbon dated to this period, but their relationships to each other and to the surrounding landscape have not yet been fully resolved. Various archaeologists and historians have suggested that there was a shift circa A.D. 800 from a social organization based around clientship to a system of labour services to a lord indicative of feudalism (Graham 1993, 44; O’Keeffe 2000, 26). Many ringforts may have been abandoned due to actual population relocation within new territorial frameworks under lordship control (O’Keeffe 2000, 26), and this reorganisation may have necessitated the emergence of the central lordly ‘fortress’ (Graham 1993, 44). O’Keefe argues for the emergence of nucleated settlements around these ‘fortress’ sites which, in the historical sources for this period, are interchangeably referred to as caislean, longphort or dun (2000, 26-9). A number of potential sites have been mooted as potential caislen sites, for example Caistel Duin Leodha at Ballinasloe, Dun Echdach (Duneight), Co. Down, and the English Mount, Downpatrick, as well as pre-Norman fortification at Limerick and Dunamase, and the destroyed fort at Dun Mor, Galway. There is some similarity in form between these sites, for example both Duneight and Dun Mor are large, flat-topped mounds, and the site at Downpatrick consists of a raised central mound enclosed by a large bank.

It has been noted by Clinton (2001, 204) that the souterrain appears to have survived the apparent decline of the ringfort and continued to be used into the early second millennium.
A.D. - often souterrains have been found to date to the final phases of ringforts and enclosure sites. Previous surveys by Buckley (1988) and Clinton (2001, 45) as well as the EMAP survey has found that isolated souterrain sites often constituted over 50% of the total number of excavated sites. It is likely that souterrains may be understood as an independent form of monument whose role was re-defined following the decline of enclosed settlements. Clinton (2001, 204) has noted that many souterrains in open settlement sites in eastern and northern counties were found associated with rectangular houses, for which Lynn (1978 - see below) has proposed post-ninth century dates. He has also suggested that these souterrains in open settlement sites may have also been linked to the growth of a tillage economy in this period. The EMAP survey has indicated that a number of open settlement sites have been found associated with souterrains further supporting this notion.

Many of these theories need to be further examined - particularly in the light of a thorough review of excavated evidence in the last few years years (i.e. 2004-2008). There is growing evidence to support the notion that unenclosed sites may have been the predominant form of settlement in this later period though the exact character of this - whether dispersed or nucleated - needs still to be established. The role of the souterrain in this period also needs to be appraised to further understand its links with unenclosed settlement in this period; and the archaeological remains of pre-Norman feudalism (or proto-feudalism) have been difficult to identify. Many theories have been advanced to support this proposition, yet it is not clear presently how we can locate evidence for these changes in social organization and settlement pattern.

**Early Medieval Ringforts/ Cashels**

**Introduction**

Traditionally, early medieval settlement studies have tended to focus on the early medieval ringfort - and less often the cashel - long seen as almost the defining types of settlement of the period and seen since the 1930s as the truly representative homestead of a rural, pastoral society (see O'Sullivan 1998 for an historiography of early medieval archaeology). Archaeological excavations of ringforts, whether they be royal sites such as Garranes, Co. Cork (***) or smaller ringforts such as Deer Park Farms, Co. Antrim (Lynn 199) have tended to emphasise the archaeological investigation of the sites themselves; their size and types of enclosing defences, the location and form of internal structures and the range of material culture recovered from the dwelling spaces within (e.g. Edwards 1990; Mytum 1992; Comber 2006). It is only recently that archaeological excavations have been carried out outside ringforts, with some interesting results – particularly the identification of houses, laneways and fields and other agricultural/industrial features in their environs. Remarkably, there have been few landscape archaeological studies of early medieval settlement in Ireland (Clinton 199**), but in recent times, there has been several historical geographical studies of ringforts, particularly those by Stout (1997) and more recently by Kerr (2007), which have concentrated on their role within their contemporary social and economic landscapes; tracing early medieval social hierarchy and ranking from variations in their morphology, siting and distribution.

The classic site-type for this period then, despite the range of the new discoveries, is the ringfort or rath. Archaeologists based in Northern Ireland have tended to use the term ‘rath’ (e.g. Proudfoot 1961) but the reasons for their choice is unclear, given the rarity of the term ‘rath’ in Ulster place names compared with the rest of the country (Flanagan and Flanagan 1994, 135). Fergus Kelly (1997, 364), however, suggests that the term ‘rath’ is more appropriate because the Early Irish term ráth means ‘earthen rampart’ and thus eschews the militaristic connotations of the term ‘fort’ (see below). Nevertheless, in this study, the term ‘ringfort’ and ‘rath’ are both used. Estimates of the number of ringforts in Ireland, based on
surviving sites or records of destroyed sites, have in the past varied greatly. Stout (1997, 53) produced the first reliable estimate of their numbers on the basis of the records of the Archaeological Survey of Ireland (RoI) and the records of the Environment and Heritage Service (N. Ireland). His estimate (based on figures available in March 1995) was there were at least 45,119 probable ringforts in Ireland but that only 41% have been positively identified (Stout 1997).

**Ringforts and Cashels: Definitions, Morphology and Form**

The Irish ringfort was described in the first edition of Ó Riordáin’s *Antiquities of the Irish Countryside* as being ‘in its simplest form as a space most frequently circular, surrounded by a bank and fosse or simply by a rampart of stone’ (1942, 5). The classification of ringforts has a superficial simplicity. The monument group comprises of univallate, bivallate and trivallate ringforts which should reflect the number of banks and ditches an individual site should contain. To this can be added, cashels, which are generally regarded as stone, rather than earthen, ringfort, as well as raised/platform ringforts (Edwards 1990, 11-19).

The majority of ringforts are univallate raths, i.e. raths with a single bank and external ditch. Stout (1997, 17) has produced the first reliable statistics for their frequency. He states that they “account for over 80% of sites in most areas: 90% ... in Morgallion barony, Co. Meath, 88% in parts of Co. Leitrim; 88% in north Kerry; 85% in Braid and Upper Glenarm valleys, Antrim; 83% in Southern Donegal; 82% in Cruachain, Roscommon; 81% in the south-west midlands; 76% on the Iveragh Peninsula in Kerry; and 69% in County Louth” (ibid., 17).

Stout (1997 18) notes that most bivallate ringforts have, in fact, only one ditch. He notes that in a survey of the south-west midlands only one of 37 bivallate ringforts had a second ditch, while in County Louth some 78% are without a second ditch. Further confusion is provided by a type of ringfort known as a ‘counterscarp rath’, a term that has been applied principally to sites in Ulster (Davies 1947; Jope 1966). This describes a ringfort with an internal bank, a ditch and a low external bank. Kerr (2007, 3) notes that in many cases this is erroneously equated with a multivallate ringfort, noting that ‘the external counterscarp bank may not represent an event contemporary with the construction of the rath, but may represent maintenance of the ditch, whether during occupation of the rath, or at a later more, recent date’.

Trivallate ringforts are, in fact, extremely rare. Indeed, only two examples have been excavated; at Garranes (O’Riordain 1942) and Ballycatteen (O’Riordain and Hartnett 1943), both in county Cork. In both instances these site were surrounded by three banks and three ditches. It is sometimes stated that the central living area of multivallate sites do not tend to be larger than those of univallate ringforts (Stout 1997, 18) but it should be noted that some univallate ringforts can have extremely large interior areas. Stout (ibid. 15) also noted that there can be considerable variation in the enclosed space in a given area. In the south west midlands, for instance, this ranged from 15.5 m to 75m but with 40% having interior diameters of 28-35m. Kelly (1997, 565) indicates that the early Irish term *traig* (foot) is similar, if not marginally shorter, than the modern foot measurement. The *Críth Gablach* states that diameter of an internal royal enclosure (*les*), which excludes the bank, should be ‘seven score feet [42.6m]’ (MacNeill 1923, 305).

Platform raths are another recognised type, if somewhat generally ill-defined. The Northern Ireland Sites and Monuments Record compiled by the Environment and Heritage Service indicates that between 15% and 20% of raths are recognized as ‘platform raths’ or ‘raised raths’ (Kerr 2007). Stout (1997, 17) describes 19% of ringforts in the south-west midlands are of platform type, while 15% of those in Co. Louth have raised interiors. Stout, however, does not use the term ‘raised’ ringfort or rath in his ringfort monograph. Attempts to differentiate between platform raths and raised raths on typological grounds have been rather unsuccessful (McNeill 1975, 49). Height has been suggested as a distinguishing factor.
but there seems to be no clear consensus – Jope (1966, 185-195) set the cut-off mark for the raised rath mound at approximately 3-4m (a fairly arbitrary figure) whereas McNeill suggested a more modest height of approximately 2m (1975, 49).

Raised raths, unlike platform raths, have also been defined as having ‘a perimeter bank around the top area which slopes down towards the entrance...sometimes reached across a causeway or up a ramp’ (Jope 1966, 116). This definition has also been used in an attempt to differentiate raised raths from the later Anglo-Norman mottes on a typological basis (McNeill 2007, 11). It seems that the only conclusive way to differentiate between raised raths and platform raths is by archaeological excavation. Chris Lynn (1981-2, 149) outlined three methods for the construction of these monument types. The scarping a natural mound or knoll would seem to be most applicable to platform raths. Raised raths were constructed through a combination of the accumulation of occupation material and the importation of soil and other material. This was the method used at Rathmullen, Co. Down (Lynn 1982) and Gransha, Co. Down (Lynn 1985; 1988), and at Deer Park Farms, Co. Antrim (Lynn 1987; 1988). In all these instances the sites seem to have originated as ‘flat’ univallate ringforts. In other instances, raised raths were built on a ‘green-field’ site and was constructed as a single event with habitation being confined to the summit, e.g. Big Glebe, Co. Londonderry (Lynn 1988).

Cashels (and see below for further discussion) are essentially regarded as stone versions of earthen ringforts. Their presence in a given is generally seen to be a function of environmental determinism. Edwards (1990, 14) succinctly summarises the general attitude when he states that 'the majority occur in rocky country with suitable stone for wall building ... as a result there are much more characteristic of western Ireland than the east'. Ditches were generally not regarded an integral part of the design of cashels. In many cases it must have been necessary to quarry stones for their construction and a ditch would have been an obvious source of quarried stone as was the case with later medieval castles such as Greencastle, Co. Down (Lynn 1988, 67-8). Conversely, when bedrock was excavated in the construction of ringfort ditches, as was the case at Ballycatteen (Riordáin 1943), Garranes (O’Riordain 1942) and Garryduff (O’Kelly 1963), Co. Cork, there was no attempt to build cashel-type banks, or even stone faced banks. At Staigue and Cahersavane, Co. Kerry, ditches surrounding the stone cashels are present (O’Sullivan and Sheehan 1996, 195). This, however, is a rare occurrence and it may well be that the cashels are built on the site of already existing earthen ringforts. Earthen ringforts are, in fact, more common in the area than cashels (ibid., 135). This raises the possibility that cashel are a later phenomenon than earthen ringforts, something that is considered further below.

Cashel, like earthen ringforts, vary greatly in size both in their internal diameter and the massiveness and height of their walls. There is no suggestion that the surviving walls of the modest sized Dromena, Co. Down (Jope 1966, xx) could have ever achieved the height and monumentality of sites such as Staigue, Co. Kerry (O’Sullivan and Sheehan 1996, 195) or Griannán Aileach, Co. Donegal (Lacy et al 1993, xx). Where comparisons have been made, it was found that the internal diameter of cashel generally smaller than those of earthen ringforts. In Co. Donegal nearly 60% has diameters of 15m and 25m (Edwards 1990, 15).

**Excavated Ringforts and Cashels, 1930-2004**

Recent studies of ringforts have tended to focus on their siting and landscapes towards a reconstruction of their social and ideological relationships (e.g. Stout 1997; Kerr 2007). It is interesting that few landscape archaeological studies have attempted to integrate regional/local studies with the evidence revealed by archaeological excavations. Indeed, archaeological excavation has perhaps shown that these site types are surprisingly varied in morphology, form, occupation histories and chronology, thus challenging simplistic models of ringfort landscapes - and indeed, even of the term ‘ringfort’ itself.
The Early Medieval Archaeological Project's (EMAP) research has established that a total of 280 ringforts (including raised/platform types) were excavated within 254 EMAP defined sites between 1930-2004. There are distinct regional patterns. They were investigated within a total of 31 counties in Ireland. The largest numbers of ringforts were excavated in Co. Antrim (45) followed by Cork (35), Down (31) and Limerick (23). Others notable areas include Kerry and Tipperary in Munster, Tyrone in Ulster, Mayo over in Connacht and Westmeath, Dublin, Louth, Meath and Kildare in North Leinster.

The preponderance of ringfort excavations in Munster and Ulster can be explained by the history of ringfort excavations, as noted above, which has also had a profound impact on our perception of these monuments. It is clear that the earlier archaeological excavations on ringforts were primarily carried out by University-based academics. In the Republic of Ireland, the principal early investigators were Sean P. Ó Ríordáin (originally from UCC, and later from UCD) and latterly Michael O’Kelly (from UCC). Oliver Davies, from Queen’s University, Belfast also undertook a number of excavations in Northern Ireland and the southern Ulster counties. The Harvard Archaeological Mission to Ireland in the 1930s, under Hallam Movius and Hugh O’Neill Hencken, was also a leading influence in pointing out how large-scale excavations, such as Ballinderry I crannog, could be undertaken in Ireland (O’Sullivan 2003, 20-23).

There was a sustained phase of ringfort/rath excavation in Northern Ireland in the 1950s, 1960s and through into the early 1970s by the archaeologists of the Northern Ireland Historic Monuments Branch of the Ministry of Finance (Including Dudley Waterman, Pat Collins, Cynthia Warhurst, Chris Lynn and Alan Harpur, latterly Archbishop of Armagh and Primate of All Ireland). These excavations focused in particular on Co. Down (in preparation for the production of the Archaelogical Survey of Co. Down (1966)), and although a similar series of excavations was planned for the production of the Archaeological Survey of Co. Armagh (forthcoming), only a handful of these were ultimately undertaken. Ringfort excavations in the late-1960s and early-1970s were focused on road development works associated with the creation of the M2 motorway in south Co. Antrim, and in this sense were prescient of the bulk of archaeological enquiries that would be undertaken thirty years later.

Farm improvement schemes provided the bulk of early medieval excavations in Northern Ireland from the mid-1970s through to the 1990s. Many of these excavations were on previously undated earthen mounds, some of which were assumed to be prehistoric, and others, Anglo-Norman. The artefacts and radiocarbon dates proved that sites such as Tully, Co. Antrim (Harper 1970); Ballylessant, Co. Down (Collins 1970); Ballygortgarve, Co. Antrim (Lynn 1971; Lynn 1978); Crossnaacrevey, Co. Down (Harper 1971; Harper 1973-4); Gransha, Co. Down (Lynn 1972; Lynn 1980-4; Lynn 1988); and Big Glebe, Co. Londonderry (Bratt & Lynn 1976; Lynn 1988) were in fact early medieval in date. Although a similar site had been excavated at Ballingarry Down, Co. Limerick in the 1950s (O Riordain 1965, 7), these were the first concentrated excavations of platform ringforts. At the end of the 1970s and the early 1980s Chris Lynn excavated possibly the two most significant platform raths yet discovered - Rathmullan, Co. Down (Lynn 1977-9; Lynn 1981-2; Lynn 1988) and Deer Park Farms, Co. Antrim (Lynn 1985; Lynn 1988; Lynn & McDowell in press).

In north Co. Cork, the excavations of the multivallate ringfort of Lisleagh 1 (Monk 1980-4; 1988; 1995), represented perhaps the major early medieval ringfort investigated in the Republic of Ireland prior to more recent NRA-funded investigations in the last decade. The expansion of developer-funded archaeological excavations, particularly in the Republic of Ireland then revealed a further number of other important ringforts sites. Examples include Aghadegnan, Co. Longford (Carroll 1991); Killanully, Co. Cork (Mount 1992; Mount 1995); Meadowbank, Jordanstown, Co. Antrim (Halpin & Crothers 1995), Carrowkeel, Co. Mayo (Zajac 2002) and most recently Leggetsrath West, Co. Kilkenny (Lennon 2005).
### Table 3.2 Excavated Ringforts Per County 1930-2004

<table>
<thead>
<tr>
<th>County</th>
<th>Quantity</th>
<th>County</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antrim</td>
<td>45</td>
<td>Leitrim</td>
<td>1</td>
</tr>
<tr>
<td>Armagh</td>
<td>7</td>
<td>Limerick</td>
<td>23</td>
</tr>
<tr>
<td>Carlow</td>
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<td>Longford</td>
<td>1</td>
</tr>
<tr>
<td>Cavan</td>
<td>2</td>
<td>Louth</td>
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</tr>
<tr>
<td>Clare</td>
<td>4</td>
<td>Mayo</td>
<td>8</td>
</tr>
<tr>
<td>Cork</td>
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<tr>
<td>Derry</td>
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<td>Monaghan</td>
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<td>Donegal</td>
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<td>Offaly</td>
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<tr>
<td>Down</td>
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<td>Roscommon</td>
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<td>Dublin</td>
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<td>Kildare</td>
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<td>Westmeath</td>
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<td>Kilkenny</td>
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<td>Wexford</td>
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<td>Wicklow</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
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</table>

### Figure 3.2: Excavated Ringforts Per County 1930-2004

**Archaeological Significance of Excavated Ringforts**

The EMAP sites (254) in which the ringforts (280) were excavated were graded in terms of their archaeological significance. A total of 20/254 (8%) excavated sites in which the ringforts (including raised/platform) were investigated were of no archaeological significance. 128/254 sites, or 50% of excavated ringforts were of general archaeological significance. These excavations typically uncovered a limited quantity of artefacts and associated early medieval material. A total of 91/254 or 36% of EMAP sites in which ringforts were excavated were
described as ‘significant’. A small number of these EMAP sites comprised one or two excavated ringforts and associated agricultural/industrial features in the vicinity of the monument. Finally 14/254 or 6% of EMAP sites in which ringforts were excavated were ‘highly significant’ in terms of excavated archaeological evidence. These excavated sites revealed rich amounts of highly significant settlement, industrial and agricultural evidence as well as indications of long term occupation. A number of these ‘highly significant’ sites also comprised a number of excavated ringforts.

Table 3:3: Archaeological Significance of Excavated Ringforts 1930-2004

<table>
<thead>
<tr>
<th>EMAP Site</th>
<th>Quantity</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Significance</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Uncertain</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>General</td>
<td>128</td>
<td>50</td>
</tr>
<tr>
<td>Significant</td>
<td>91</td>
<td>36</td>
</tr>
<tr>
<td>Highly Significant</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>254</td>
<td>100</td>
</tr>
</tbody>
</table>

Excavated Cashels

Early Medieval cashels are essentially stone versions of earthen ringforts. The EMAP survey has identified 24 cashels which were excavated between 1930-2004. They were located in the counties of Clare, Cork, Down, Donegal, Dublin, Fermanagh, Galway, Kerry, Laois, Limerick, Louth and Mayo. Table 3:4 lists these cashels and their relative archaeological significance.

Table 3:4 Excavated Cashels 1930-2004

<table>
<thead>
<tr>
<th>Name</th>
<th>County</th>
<th>Year(s)</th>
<th>Significance</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballyegan</td>
<td>Kerry</td>
<td>1991</td>
<td>Significant</td>
<td>1 Byrne 1991:065</td>
</tr>
<tr>
<td>Barnaderg North</td>
<td>Galway</td>
<td>2000</td>
<td>Uncertain</td>
<td>1 Delany 2000:0374</td>
</tr>
<tr>
<td>Cahercommaun Fort, Tullycommon</td>
<td>Clare</td>
<td>1932-34</td>
<td>Significant</td>
<td>1 Hencken 1938</td>
</tr>
<tr>
<td>Cahirvaglair, Cappeen West</td>
<td>Cork</td>
<td>1985</td>
<td>General</td>
<td>1 Manning 1987-8</td>
</tr>
<tr>
<td>Carn</td>
<td>Fermanagh</td>
<td>1979</td>
<td>General</td>
<td>1 Brannon 1981-2</td>
</tr>
<tr>
<td>Carrowdotia (AR27)</td>
<td>Clare</td>
<td>2002-03</td>
<td>No significance</td>
<td>1 Collins 2002:0138 &amp; Taylor 2003:0091</td>
</tr>
<tr>
<td>Carrowdotia (M27)</td>
<td>Clare</td>
<td>2002-03</td>
<td>Uncertain</td>
<td>1 Collins 2002:0139 &amp; Taylor 2003:0089</td>
</tr>
<tr>
<td>Cathair Fionnúrach, Ballynavennoor</td>
<td>Kerry</td>
<td>1994-97</td>
<td>Significant</td>
<td>1 Gibbons 1997:228</td>
</tr>
</tbody>
</table>
A number of curvilinear and rectangular stone buildings, evidence for industry and agriculture and an extensive collection of domestic, agricultural and bodily artefacts were recovered from two stone cashels at Carraig Aille I & II, Lough Gur, Co. Limerick. Eleven stone enclosure were excavated which revealed ‘significant’ archaeological evidence. They comprise the sites of Barrees, Co. Cork (O’Brien 2002); Rinnaraw, Co. Donegal (Fanning 1987-92); Lissachiggel Cashel, Co. Down (Davies 1940); White Fort, Drumaroad, Co. Down (Waterman 1956); Lecanabuaile (Ó Riordáin & Foy 1941), Loher (O’Flaherty 1982-85), Cathair Fionnúrach (Gibbons 1994), Cahergal (Manning 1986, 1990 & 1991) and Ballyegan (Byrne 1991), all in Co. Kerry; Cahercommaun Fort, Tullycommon, Co. Clare (Hencken 1938), Dunamase Rock Co. Laois (Hodkinson 1993-97) and finally Dún Eoghanachta, Co. Galway (Cotter, 1995). As with earthen ringforts, these sites typically revealed evidence for domestic and agricultural activity, as well as some small-scale metal/ironworking.

Although there is evidence for post-and-wattle buildings at Kildreenagh, Loher, such as would have been found on rath sites, stone seems to have been the main building material, and thus structures associated with cashels tend to leave more substantial traces. Excavations revealed evidence for a stone clochan at Cahergal; three stone-buildings at Dún Eoghanachta on the Aran Islands; a potential Viking-Age rectangular stone house at Rinnaraw (Comber 20**); three buildings at Ballyegan; four stone buildings at Kildreenagh, Loher, two square shaped buildings at White Fort Drumaroad, Co. Down (Waterman 1956) and . A number of conjoined, round and rectangular stone buildings were also excavated at both Lissachiggle Cashel (Davies 1940) and Lecanabuaile, Co. Kerry (Ó Riordáin & Foy 1941). Souterrains were also a feature of Loher, Lecanabuaile, Ballyegan and Cahercommaun Fort and White Fort, Drumaroad. Stone field walls, marking out contemporary field patterns, also survive at Ballyegan, Co. Kerry. A corn-drying kiln was also excavated at Ballyegan, and quern stone stones were a frequent discovery on several other sites.

Archaeological excavations at two of these cashel sites revealed little archaeology of any significance - though this does not prove that they were not important in the early medieval period. A further eight sites revealed only limited early medieval archaeological evidence (6) or archaeological evidence of uncertain date (2) on excavation. The cashel at Cahirvagliair was undoubtedly a significant settlement site in the early medieval period. It consists of a
large inner bank surrounded by a small ditch, a small bank and a large outer ditch, with a dry-stone-walled entranceway (Manning 1987-88). Limited archaeological evidence - scraps of iron, animal bone and a perforated disc - was found, although the focus of the excavation was the restoration of the stone-built enclosing wall and passageway.

Four of these stone cashels could also be described as hillforts. Cahercommaun Fort, Co. Clare perched on an inland cliff-top and containing three concentric enclosing walls revealed archaeological evidence for prehistoric activity as well as two souterrains and an extensive range of early medieval artefacts (Hencken 1938). Another large stone fort commanding extensive views on an elevated ridge on Inis Mór, Co. Galway is known as known as Dún Eoghanachta and was found to have been constructed and re-used in the early and later medieval periods ( Cotter 1995:117). Excavations on the site of a medieval castle on the Rock of Dunamase, Laois confirmed the existence of early medieval pre-castle dry stone walls on the site (Hodkinson 1995:176). Finally a stone fort on Feltrim hill excavated in advance of extensions to Dublin airport proved to have been occupied over a long period of time from the Neolithic to medieval periods (Hartnett & Grogan 1964).

Although most cashels are broadly contemporary with the use of ringforts in early medieval Ireland, some sites, like Rinnaraw, revealed evidence from the seventh to the twelfth century A.D. suggesting that some may have continued to be used until or after the arrival of the Anglo-Normans. Other sites including Dún Eoghanachta and the historically recorded Dún on the Rock of Dunamase provided archaeological evidence for occupation in both the early and later medieval periods.

Ringfort Distribution and Siting

Stout (1997) and Kerr (2008) have provided the most recent reviews of ringfort distribution in Ireland. Earlier work (e.g. Bennett 1989, Fahy 1968) tended to concentrate on the location of ringforts in terms of altitude and local topography. These established that ringforts were generally located on good agricultural land avoiding valley bottoms, and upland areas. The analyses of regional archaeological studies such as Donegal (Lacy 1983), Ickerran, Co. Tipperary (Stout 1984), O’Sullivan and Sheehan (1996) etc. confirmed this pattern. Such generalities, however, only apply to areas of high topographical contrast. North Co. Kerry comprises mostly of low lying land and consequently 69% of the ringforts were below the 200ft contour (Toal1995, 82).

Stout’s (1997) work produced the first island-wide analysis of ringfort distribution as well as providing detailed regional and local studies. He also examined the distribution of different ringfort types and attempted to equate these ringforts with the different grades of society outlined in the early legal texts. He also explored the relationship between secular and rural sites. Finally, he brought the results of many unpublished regions ringfort studies to public attention. Stout identified the lowest densities of ringforts in poor lands of west Connaught and north-west Ulster, a pattern that can be equated with the relatively poor agricultural lands. Low densities were also noted on other areas of mountains within the country. What was surprising, however, was the relatively low incidence of ringforts in the relatively rich lands of Leinster. The generally forwarded explanation for this is that this constituted the best arable land in Ireland and that ‘ringforts here are more likely to have been removed during eight centuries of tillage activity’ (ibid. 62) although Stout is not convinced by this explanation. Place-name evidence would tend to support Stout’s reluctance. The term ‘lios’ or ‘les’ is a common placename element throughout Ireland. It literally means ‘the space about a dwelling house or houses enclosed by a bank or rampart (Flanagan and Flanagan 1994, 112). i.e. a ringfort. There is low density of its occurrence in place names in west Connaught and north-west Ulster but also over most of Leinster (ibid. 111). This would tend to suggest that there was always a low density of ringforts in Leinster. McCormick and Murray (2007, 112-3) argue that the low density of ringforts in Leinster is due to the fact that the building of ringforts due to changes in currency and livestock economy from the ninth century onwards.
On the other hand, recent large-scale excavations in advance of NRA schemes in Meath have certainly revealed a number of ringforts and enclosures otherwise invisible above ground today, which might support the earlier idea of large-scale archaeological destruction along the east coast (Deevy 2005; Fitzgerald 2006; O’Hara 2007; Seaver 2006; Deevy 2008; Kinsella 2008).

In some regions, low densities of ringforts has sometimes apparently coincided with high densities of ecclesiastical sites. In the barony of Morgallion, Co. Meath, Stout (1997, 78-81), using unpublished data of Niall Brady’s, noted that there were high ringfort densities in the podzolic and gley soils of the north of the barony, which was primarily suitable for grazing but a much lower density in the arable brown earths of the south of the barony. These lands had a high density of church sites and it was suggested that ‘ecclesiastical sites could have relied more heavily on arable farming, making full use of lay monks on extensive church estates’ (ibid. 80). McCormick (1997, 37) noted a similar situation in Co. Down where the low distribution of ringforts in east Down and Lecale corresponded with a high density of ecclesiastical sites.

Stout (1997) analysed the relationship, and contrasts, between ringfort and church location in many areas and was able to make some striking observations. It is unclear, however, as to what degree the patterns and relationships noted in a specific area or locale can be applied right across the country. The analysis of the barony of Garrycastle, Co. Offaly would suggest that the church sites, unlike ringforts, preferred sites that would give them access to ‘important arteries of communication’ (Stout 1997, 101). There, is, however an assumption that a major early medieval road followed the route of the River Brosna. Certainly, ecclesiastical sites often tend to be at the periphery of ringfort concentrations. In Co. Offaly, church site generally chose lower altitude levels for their location. Stout (1997, 105), also provides examples of a close association between ecclesiastical sites and multitate ringforts, such as in the case of Seir Kieran, Co. Offaly. Again, one must ask if such close association is the ‘norm’ across Ireland. Only more detailed regional and local landscape archaeological studies can provide an answer to this – and even then the question always has to be asked this is due to local social and political conditions or whether island-wide models can be constructed from particular case studies.

**Ringfort and Cashels: Chronology**

Understanding the chronology of ring forts is fundamental to understanding how the various sites functioned and how they inter-related with other neighbouring sites. There is now a general consensus that the ringfort is an early medieval phenomenon and the belief that some were of Bronze age date, e.g. Cush, Co. Limerick (O’Riordain 1940, 176-177) or Currabinny, Co. Cork (O’Kelly 1951, 84), has been largely or wholly abandoned (although it is now clear that Bronze Age settlement enclosures existed in quite large numbers, as revealed by recent infrastructural developments). It should be noted that both the excavators of these sites believed the majority or ringforts were of early medieval date but that the sites provided evidence of the early date of their ancestry. Caulfield (1981, 207-211) argued that several ringforts including Raheenamadra, Co. Limerick(?), Feerwore, Co. Roscommon?, Carraig-Aille, Co. Limerick and Cahercommaun, Co. Clare were of Iron age construction. Lynn (1983, 48-50) provided a strong refutation or this and an allied defence of early medieval dates for these sites. Despite this, Caulfield has raised an important difficulty in the dating of these sites; some aspects of the artefactual evidence is occasionally in variance with the constructional and occupational evidence. Cotter (1999, 80-82) and O’Flownn (1999, 73-79), for instance, in their detailed re-appraisal of the dating evidence for Cahercommaun, Co. Clare discovered that the artefactual evidence provided suggested activity at the site between the fifth/sixth and eight centuries for which there was no definite corresponding cultural occupation layers or constructional features.
Limbert (19**), adopting some earlier ideas, also suggested that ringforts had been an Iron Age phenomenon. The possibility of the existence of ringforts during Iron Age has again been raised by radiocarbon dates from Lislackagh, Co. Mayo (Walsh 1995, 7-8). The preliminary report indicates a circular enclosure 27m in diameter. The site produced a variety of finds including assemblage of lithics that are likely to be of prehistoric dates. Lislackagh also produced glass beads, lignite bracelet fragments and a bronze stick pin, all of which would fall comfortably within the early medieval period. Three circular structures, 3.6-4.6m in diameter were present. The excavator note that 'while no occupation surfaces survive it would appear that these structures are best interpreted as small houses or huts and in the foundation trenches spreads of charcoal appear to represent the remains of the burnt structural timbers' (ibid.). Radio-carbon dates from the three foundation trenches produced consistent dates of between the second centuries BC and AD. These structures fall at the lower end of the size range of early medieval round houses, where the average diameter is about 6m (Lynn 1994, 90-91). Their size, shape and clustering show a striking similarity to a series of ring ditch burials found within the ringfort at Duntryleague, Co. Limerick. On balance, we suggest that the evidence suggests that it is more likely that Lislackagh was probably a ringfort built on the site of an earlier burial site.

Stout's (1997, 24-9) collation of radiocarbon confirms the early medieval date for ringforts, narrowing the timeframe to between A.D. 600 and 900. There are, however, some fundamental problems associated with Stout's data. In the first instance the dates he quotes and shows in his distribution diagram (ibid, Fig. 2) are calculated at one standard deviation. This implies a probability date accuracy of 68.8% rather than a 95.4% probability when quoted at the more acceptable two standard deviations. The raw radiocarbon data is not produced so cannot be re-calibrated. Secondly, no account is taken for the context of the dates and do not necessarily reflect the construction date of the ring-forts. That said, it is likely that the bulk of the dates reflect the period of occupation of the ringforts. More recently, Kerr (2007, 86-100) re-appraised the radiocarbon dates from ringfort excavations, especially those from Ulster. He concluded that the dating of typical univallate and multivallate sites can be refined to c. A.D. 600-850 (ibid, 98-9). He demonstrates that the chronology of the raised rath is different from the chronologies of the univallate or multivallate sites, and that it has a mid-eighth to mid-tenth century construction/primary occupation date (ibid. 99).

The chronology of cashels has received little attention, perhaps because so few of them have been excavated. Caulfield (1981, 208-9) suggests that Carraig Aille, Co. Limerick was of late Iron Date because of the presence of Late Roman artefacts. Lynn (1983, 48-9) argued that the early material from the site could be attributed to pre-cashel occupation deposits on the site. Some of this material ran under the wall of cashel II but O’Riordain (1949, 45) had interpreted this as being ‘nothing more than the temporary dwellings of the fort-builders on the site during the building of the fort’. The presence of pre-cashel occupation on the sited complicates matters greatly complicates the dating of the site. O’Riordain (ibid. 108) suggested that site occupation dated from between the eighth and eleventh century and most of the finds are from the latter part of the period.

The same dating problems were encountered at the cashel at Cahercommaun, Co. Clare. Hencken (1938, 2) suggested an early 9th century date for the site on the basis of a silver penannular brooch. O’Floinn’s (1999, 73-79), however, in his re-appraisal, of the metal artefacts form the site identified objects dating between the 5th/6th and 8th centuries as well as the 9th/10th century material. Cotter (2001, 8-81) could find very potential in-situ material from the earlier phases. The internal buildings, including, the souterrain seemed to all date to the 9/10th century. The earlier finds were generally from re-deposited material, some used for supporting the souterrains which were partially over ground structures. It may well be that the cashel is contemporary with the souterrains and that the earlier material, as in the case of Carraig Aille, originated from pre-cashel settlement. Souterrain A also appears to be contemporary with the cashel wall and an integral part of the cashel design. The souterrain at its southern end is accessed by a series of steps from inside a hut (Structure 6). It exits at its
northern end through a gap in the cashel wall, which accesses ‘a narrow vertical crevice that runs down the whole face of [a] cliff’ that extends along the northern edge of the settlement (Hencken 1938, 22). Hencken is of the opinion that the souterrain was built so that the ‘occupants of the fort had a way of communicating with the outer world by a more or less secret means’ (ibid.). There was nothing to suggest that the souterrain was a secondary intrusion. Similarly, the excavators of Leacanabuaile, Co. Kerry, concluded that the souterrain at was contemporary with the cashel wall because the chamber was incorporated within it (O’Riordain and Foy 1941, 90-92).

White Fort cashel at Drumaroad, Co. Down (Waterman 1956) also appears to be of relatively late date. The cashel wall enclosed a single rectangular house with associated souterrain. Finds included a large quantity of souterrain ware an iron coulter suggesting a date of the ‘latter part of the first millennium A.D.’ (ibid. 86). An early radiocarbon date of charcoal from the house suggests a date of between the tenth and thirteenth century (Kerr 2007, 91; McAuley and Watts 1961, 36). The cashel at Rinnaraw, Co. Donegal contained a rectangular house with rounded corners. The radiocarbon dates suggests the ‘main phase of activity … dates to the ninth century’ (Comber 2006, 107). On balance, the rather limited dating evidence for cashels suggest that their dates are similar to raised raths and later than the main building phase of earthen ringforts.

The cultural biographies of ringforts

Archaeological excavation can also be used to trace the cultural biographies of many ringforts - the shifting social and ideological meanings that they would have had across time. There has been much discussion recently considering the longevity of occupation of ringforts after their construction. Mytum (1992, 123) has argued that most seem to have been occupied for a relatively short period of time with some ‘perhaps to be measured in decades rather than centuries’. Mytum (1992, 1216) based his conclusion on the fact that only four of sixteen excavated ringforts from Co. Antrim revealed evidence for more than one phase of enclosure bank. Twelve of twenty-one sites from Co. Down and all nine excavated ringforts at Cush, Co. Limerick showed similar results. In this model then, the majority of ringfort enclosures therefore appear to have been only constructed once, with perhaps some limited morphological additions. Evidence for longevity of occupation, however, might be judged by seeking evidence for succession of buildings in the ring fort’s interiors. The evidence is equivocal.

In contrast, Stout (1997, 115) has quoted an early poem about the ringfort at Rathangan, Co Kildare, which gives the impression that ringforts were inhabited over long periods of time, as the poem lists seven successive owners. Given the shorter life expectancy of the time one might easily accommodate seven generations within two centuries or slightly more.

Continuity with the past?

Many ringforts are located on the site of earlier settlements. In many instances this may simply be a coincidence, such as the extensive prehistoric material at Cahercommaun, Co. Clare (Cotter 1999). Sometimes the location may be deliberate. Grogan (2005, 126) suggests that the builders of cashels with the ramparts of the Later Bronze Age hill fort at Mooghaun, Co. Clare the ‘were positioning the forts in order to support a historic claim to the hillfort’. This does not imply a continuity of settlement. There are, however, many cases where there seems to be early medieval settlement on a site prior to the construction of a ringfort. There are some instances, however, where there may have continuity between the prehistoric settlement and the ringfort. The most obvious example was at Clogher Demesne (Warner 1988) where the prehistoric hillfort was succeeded by a ringfort. The site, however, is unpublished and the chronology is unclear.
At Dunsilly, Co. Antrim the building of the ringfort rampart was preceded by two phases of habitation, Pre-Rath (PR) A/B and C (McNeill 1992, 81-85). PRA and PRC provided evidence for circular structures and the PRB and PRC produced souterrain ware. It seems, therefore, that an unenclosed settlement preceded the building of the ringfort enclosure. Brannon (1980, 69-70) suggests the possibility of pre-ringfort houses at Ballykennedy, Co. Antrim. A penannular gully, of 5m internal diameter, predates the bank of ringfort. The date of this gully, however, is unclear. While souterrain ware was ‘present in all main layers’ it is not stated if this includes the content of the gully. At Coolcran, Co. Fermanagh, some stake-holes ‘may have formed a perimeter fence in an enclosure which predated the rath’ Williams (1985, 71) but the site was greatly disturbed and the absence of pre-rath habitation layers renders the evidence rather uncertain. At the unpublished site at Aghadegan, Co. Longford, the ringfort bank was preceded by a palisade enclosure which was in turn preceded by a an unenclosed series of round ‘structures’, presumable houses (Carroll 1991:091). A series of radiocarbon dates implied settlement between the 5th and 10th centuries.

Excavations at the highly significant ringfort at Lisleagh 1 from 1981-5 (Monk 1995) revealed extensive earlier settlement and industrial evidence. Evidence for pre-ringfort activity was revealed in the form of hearths, stake-hole alignments, artefacts, pottery and stone, possibly dating to the Bronze Age. The first ringfort was then constructed in the early medieval period. This was later levelled replaced by a substantially larger bivallate ringfort with a crowning palisade. A number of other ringforts also appear to have been built on preceding Iron Age and Bronze Age funerary and settlement sites though it has not been clearly established if there was continuity of settlement between the ringfort and the Iron Age occupation or if the location of the ringfort at this site was simply coincidental. Earlier high status hillforts were occasionally used as the siting for Early Medieval structures. As noted above, two cashels and associated house sites were also constructed on the ramparts of a Late Bronze Age hillfort at Mooghaun, Co. Clare during the early medieval period (Grogan 1999).

Prehistoric funerary sites also appear to have been occasionally built upon. Excavations at Carrowkeel, Co. Mayo (Zajac 2002) revealed the presence of a ditched enclosure that preceded a ringfort, the fill of which contained charcoal inclusions, suggesting possible cremation remains. A series of cylindrical pits were also uncovered in the north and east quadrants of the enclosure, and, in one, several sherds of coarse-ware were found. The date of this feature was not confirmed but, from typology would appear to be prehistoric. At Carraigaline Middle, Co. Cork, excavations revealed an enclosure measuring approximately 37.5m by 31m, whose ditch had been truncated by a later ringfort ditch (Sherlock 2001). Post-holes, pits, cremation burials and possible funerary pyres lay to the north and northwest of the ditches and indicate both early medieval and prehistoric activity.

Ringforts also appear to have been located on earlier settlement complexes. Excavations at Cloongownagh, Co. Roscommon in advance of the N4 Rockingham-Cortober Road Project (Murphy 1998) revealed evidence for an unenclosed Iron Age settlement dating from the first to the fourth centuries A.D. The site was later enclosed and developed into a ringfort before it was completely backfilled by the tenth century A.D. At Corrstown, Co. Londonderry (Conway 2002), a ringfort was found to have been built on the site of a Bronze Age ‘village’.

It seems highly likely that those early medieval sites placed on, or within, earlier hillforts, were deliberately using the earlier site, whether to express continuity (or change) of political power, as would seem to the case at Clogher, or perhaps just making use of the material, as at Mooghaun. It is more difficult to interpret the sites placed on earlier settlement or funerary sites. There may have been some element of continuity of settlement present, but equally the site ringfort could have been accidentally placed on an earlier archaeological monument. The sheer numbers of ringforts in Ireland make it a possibility that, at least in some cases, the site would be placed on, or near, an earlier site which had left no visible remains.

At Ballykennedy, Co. Antrim, for example, a possible early unenclosed settlement seems to have been later enclosed by a ringfort (Brannon 1980). There are other examples of ringforts
being re-used and re-designed in the Early Medieval period. Some sites appear to have associations with later religious or burial sites. At Millockstown, Co. Louth, (See Cemetery/Settlement Section), the earlier ringfort was impacted upon by a series of lintel cemeteries which only slightly post-dated the original site (Manning 1986). Excavations at Ninch, Co. Meath, revealed a complicated site history. The original trivallate ringfort was succeeded by an unenclosed settlement of circular buildings, which in turn was replaced by a large number of enclosures and a lintel cemetery. The final phase of the site's history consisted of the construction of a number of large sub-rectangular enclosures dating to the tenth or eleventh century A.D. (Eogan & Reid 2000 & 2001). Other ringforts also appear to have been re-used for Early Medieval cemeteries. Excavations at Lougboy, Co. Kilkenny (Keeley 1998) revealed that a small cemetery had been inserted into the southeast quadrant and fosse of an early ringfort. A number of ringforts also appear to have been re-used as the burial grounds of those not judged worthy of consecrated ground (e.g. un-baptised children, suicides, shipwrecks and strangers) and these cillini carried on in use through to the twentieth century. This subsequent function, however, only seems to have began during the later medieval period, long after the sites had been abandoned as habitations.

It is possible that some early religious sites may have been converted from earlier secular ringforts. At Moyne, Co. Mayo (Manning 1987), a faint circle (40m in diameter) in the northern half of the large ecclesiastical enclosure (135m x 125m) was taken as representing possible evidence for a preceding ringfort.

**Multi-Phase Activity:**

Although a large number of ringforts would appear to have only had a single phase of activity, a growing number of excavations have revealed evidence for multi-phase activity during the Early Medieval period. This sometimes resulted in a complete re-organisation of the site. At unpublished Lisleagh I, Co. Cork, and earlier ringfort was razed and replaced by a substantially larger one (Monk 1995, 106). The earlier ringfort seems only to have been of short duration. Monk (ibid.) proposes a selection of factor that may have occasioned this re-structuring; growth of family size, increase or rank or increase in unrest necessitating more substantial defences. At Rathgureen, Co. Galway, the second phase of construction consisted of the construction of a bank and ditch within the earlier enclosure thus converting the ringfort from a univalve to a bivalent ringfort (Comber 2002, 150). It was suggested that this transformation was and an expression of ‘power and prestige’ due to increased wealth of the site’s owners (ibid, 184).

In some instances the ringfort was replaced by different settlement type. At both Rathmullan, Co. Down (Lynn 1981-2), Deer park Farms, Co. Antrim (Hamlin and Lynn 1988) and Gransha, Co. Down (Lynn 1985) the initial ringfort was replaced by a raised rath. At Deer park Farms there was continuity of settlement during as the settlement changed but the evidence on the other sites is less certain. At Dunsilly, Co. Antrim, there was a clear gap between the ringfort phase and the later Anglo-Norman motte phase (McNeill 1991-2, 110-112). In other instances the enclosed settlement gave way to an unenclosed settlement. At Knoth, Co. Meath the enclosed ‘ringfort’ settlement at Knoth, dating to the 7-8th centuries gave way to an open settlement dating to the 10-11th centuries (Eogan 2007, 1-5). The site was abandoned between the two phases. The later phase was characterised by a large number of houses and souterrains, many built on the in filled ditches of the earlier phase.

**Occupation across time**

Other sites have undergone transformations in their morphology over a period of time. The excavations of a bivallate ringfort with associated souterrain at Whiterath, Co. Louth revealed that the double-banked enclosures were constructed over two separate phases (Ó Drisceoil 1999). In most cases when univallate ringforts are extended into multivallate ones, this is done by the addition of an external bank-and-ditch. At Rathgureen, Co. Galway, however, the site was made into a bivallate by the addition of a bank-and-ditch inside the original univallate circuit (Comber 2002). Some sites changed their shaped entirely, for example at
Dowdstown 2, Co. Meath, a circular ringfort was re-modified and expanded into a larger D-shaped enclosure (J. Kinsella pers. comm.).

Many ringforts have produced little or no evidence for buildings, which is unsurprising given the flimsy nature of the round houses which are characteristic of the earlier part of the period; ‘round wicker or post and wattle structures without regular roof supports’ (Lynn 1994, 85). The later rectangular houses tend to be more visible as they generally have ‘dry stone and/or turf lower walling’ (ibid.). Many sites, such, as Garranes. Co. Cork produced scatters of post-holes and stake that did not produce coherent house plans (O’Riordáin 1942, 86-87). Garryduff, Co. Cork, produced evidence of two contemporary sub-rectangular houses, but stratigraphically later paving stones and hearths provides evidence for subsequent occupation but with no further evidence for building (O’Kelly 1963,22). Ballycateren, Co Cork, too produced incoherent scatters of post-holes but the presence of a hearth over a post-hole implied a succession of habitation (O’Riordáin 1943, 12). The primary pre-raised rath phase of Deer Park Farms, Co. Antrim has produced the best evidence for early medieval rural wooden houses due to the waterlogged nature of its deposits. This produced only one phase of house building activity comprising two conjoined house and a single house, all round in form (Hamlin and Lynn 1988, 45-56). The contemporary bank enclosure, however, showed two phases of construction (ibid 45).

In some ringforts there was clear evidence for a succession of houses but it is difficult to ascribe actual timescales to these successions. With the exception of Scandinavian period Dublin we have no idea of the life span of a wooden structure. In Fishamble St Dublin the houses were replaced ever decade or two (Wallace xxx) but this must be regarded as a pretty extreme case. At Lisduggan, Co. Cork a rectangular clearly post-dates a circular house Twohig (1990, 12). At Leacanabuaile, Co. Kerry there was a similar succession of round and rectangular houses (O’Riordáin and Foy 1941, 92). Rectangular houses succeeded round house at Dunsilly, Co. Antrim, but the round houses pre-dates the ringfort (McNeill 1992, 81-85). The greatest evidence for structural longevity is on those ringforts which are superseded by raised raths, such as Rathmullen, Co. Down (Lynn 1981-2) and Deerpark, Farms, Co Antrim (Hamlin and Lynn 1988, Lynn 1987). On these occupation can range from the seventh century to the Anglo-Norman period. In these instances, however, one is getting a secession of different monument types at a single location. At Rathmullen a presumed earthen ringfort is replaced by a raised rath and lastly by a motte. It is not certain if there was continuity of settlement throughout this period.

Longevity can also be demonstrated by the artefactual evidence, as has been demonstrated at Cahercommaun, Co. Clare and Carraig Aille, Co. Limerick (above) but in these cases there is evidence of pre-cashel occupation on the site. The situation is further complicated by the presence of later artefacts, such as medieval glazed pottery on ringforts. The question of the longevity of ringforts can only be adequately addressed by a comprehensive radiocarbon dating programme on ringforts with substantial surviving habitation levels.

**The end of ringforts?**

A number of ringforts also display evidence for being converted into Anglo-Norman mottes in the late-twelfth century A.D. O’Kelly (1962) has noted how a ringfort at Beal Boru was later remodelled by the Anglo-Normans around A.D. 1200. Beal Boru was a defended settlement that is historically recorded as being destroyed by Toirdelbach Ua Conchobair in A.D. 1116 (O’Keeffe 2000, 21) supporting the idea that this ringfort site continued to be used at a late stage in the early medieval period. Excavations at Dunsilly, Co. Antrim (McNeill 1974 & 1975; McNeill 1991-2) show evidence for a pre-ringfort phase, a ringfort phase, and a phase in which the ringfort was converted into a motte. Other univallate raths that appear to have been converted directly into mottes were excavated at Antrim (McSparron 1998) and Killybegs Road, Antrim (McSparron 1998). Excavations at Rathmullan, Co. Down revealed an important high status settlement that dated from the sixth/seventh century A.D. based on imported E-ware pottery. The site was converted into a raised rath in the eight/ninth century,
and then in the twelfth century, the mound of the raised rath was further heightened and turned into a motte.

**Interpreting the Social, Economic and Ideological Roles of Ringforts and Cashels**

A key question in early medieval settlement research is to enquire about the social, economic and ideological roles of ringforts; what were they used for; who were they used by and how did they act to shape social relationships in the landscape. Who was responsible for the building, occupation and use of ringforts and given that they are so numerous, can we pose questions of the settlement landscape itself from their evidence? In terms of function, the interpretation of the role and function of ringforts in early Irish society has changed over the years, with a shift in perception from a military to a primarily domestic function (Kerr 2007, 4-8).

It is undoubtedly the case that early Irish society experienced warfare and political turmoil more or less continuously. One only has to read the annals to recognise the numbers of raids, battles and violent deaths every year, some of which must have impacted upon the ordinary people. However, ringforts despite the modern term, were not military fortifications (although some may have been strategically located and used as such). An analysis of the military or defensive potential of ringforts was first outlined by Mallory and McNeill (1991, 196-198) and their conclusions merit repeating. In the first instance they noted that the entrances were almost invariably poorly designed for defensive purposes. Secondly, the general absence of a strong fence along the crest of the bank greatly compromised any defensive greatly reduced their defensive potential. Thirdly, they noted that the ditch design was poor: ‘the front slope of the bank and sides of the ditch were constructed at quite shallow angles, not the steep sides that we expect for defences’ (ibid. 198) Furthermore there is little evidence that the banks were routinely cleaned after inevitable silting of material into them, thus maintaining any defensive purposes that the banks and ditch may have had. Fourthly, they note that multiple enclosures are no more effective than single one. To be defensively effective they note that ‘the inner [enclosure] should overlook the outer ones so that they do not obstruct the defender’s vision or fire; if they are to be used in succession; it has to be possible to fall back from the outer to the inner”. Finally they note that “the perimeter of a rath thirty metres in diameter is about 100 meters long; this is a long way for single family, who we think lived in a rath, to guard without help; if the idea was that their neighbours all rallied round to help defend what was in effect a communal fortress, we would expect fewer of them and that they would be in more impressive defensive sitings” (ibid.). These arguments are extremely persuasive and they conclude that ringforts were not made for defensive purposes but for social and ideological reasons.

However, it is undoubtedly the case that ringforts offered some measure of protecting their inhabitants in an era of cattle raiding and occasional conflict. McCormick (1995, 34) and McCormick and Murray (2007, 109-10) have argued that the primary aim of the enclosures were to protect cattle in times of cattle raiding. On the basis of documentary evidence from later medieval Scotland it was noted that the objective of cattle raiding was to steal cattle while not unnecessarily endangering those involved in the activity. Thus, in times of cattle raiding the bringing of the livestock into the ringfort could usually have been an effective deterrent. This does not mean that livestock were kept within the ringfort on a regular basis but only in times of heightened cattle-raiding activity. Cattle warranted such protection because they were the basis of wealth at this time.

The role and function of raised raths, however, is not so clear. Unlike univallate raths, the morphology of raised raths meant that they could not so easily function for the protection of livestock. The statistically significant association of such sites with good quality agricultural land suggests that the inhabitants may have employed a more mixed arable-pastoral farming economy than that seemingly practised by the inhabitants of the univallate raths (Kerr 2007,
The evidence also suggests that the raised raths are generally of later date than the univalate type (see below).

Recently, Lynn (2005, 14-17) produced another radical proposal for the origin and function of the ringfort. He examined various theories of their function concluding that they are defended ‘homesteads’ rather than ‘farmsteads’ and poses the obvious question ‘why during the seventh and eighth centuries did ringforts spread like a rash all over the landscape (ibid., 16). He sees no evidence for invasions at this time or a change in the type of warfare practiced in Ireland. An examination of the annalistic evidence led him to the conclusion that the main exceptional feature to effect Ireland during these centuries was a series of plagues and pestilences. These, are generally regarded a having had led to widespread mortality at the time. Lynn suggests that as a reaction to this the nobility attempted to quarantine themselves; ‘In many be that the construction of crannogs and ‘duns’ of the elite was in part triggered by fears arising from the first plague [Justinian] of the 540s’ (ibid., 17). He continues The construction of the commoner ringfort of the landholdings, farming class may have been delayed while a social reorganisation resulting from the decimation of the population by the first plague took place .. or it could be that the main stimulus for ringfort construction by the free farmers had to await he second major outbreak of plague in 664’. Lynn feels that plague provided the catalyst for constructing defences against unwanted intruders but that a later stage these defences came to demonstrate status perhaps ‘copying the sacred form of ecclesiastical or talismanic purposes and to invoke divine protection’ (ibid.).

Certainly, some explanation should be sought for why the phenomenon of the ringfort arose in such a short period of time. The chronology of ringforts (see above) indicates that there was no gradual evolution of the monument type. They were a short lived settlement type and there must be a specific reason for their occurrence. McCormick (1993) argues that the genesis of the ringfort was related to the introduction of advanced dairying technology at the beginning of the early medieval period. Advances in dairying would have led to great significant increases in food production which would have facilitated population increase. Cows and dairying would have suddenly become central in the agricultural economy and cattle ‘began to develop and elevated social and economic position’ (ibid. 35) ultimately leading to them becoming the basis of the wealth system of the period. McCormick concludes ‘this [6th-7th century] may be a period when the growing stress of population on the demand for land, accompanied by increasing cattle raiding, led to the development of the ringfort’ (ibid. 37). The problem with this theory is that ‘revolution’ in dairying at this time has not been demonstrated. It is now known that cows in Britain were being milked from as early as the Neolithic period and that butter was being produced in Ireland several centuries before the advent of Christianity (Downey et al. 2006).

It seems most likely that early medieval ringforts were the physically bounded, enclosed dwelling places of particular social units - i.e. extended families – and that the architecture of the enclosure was socially meaningful in that they usefully and visibly defined the domestic space. In many cases, ringfort banks and ditches were back-filled, re-cut or modified over the generations, so that these enclosures also became places associated with the past, with ancestors and the family. In other cases, the building of a ringfort may have been an event to be associated with a particular person. Multivallate ringforts - particularly those associated with lords and aristocracy this signalled by their architecture the ability of the powerful to gather resources and a labour force to construct his residence. In early Irish sources, a king could be recognised by the “ramparts of vassalage” that surrounded him. In other words, the building and use of ringforts that emerges as a phenomenon in the 6th-7th century may largely be something that emerges out of a period of radical social change; with population increase, an economic ‘boom’ in agriculture and other political, social and ideological changes leading to an increased need within early Irish society to closely and signal define the extended family (as opposed to the community) social unit through architecture.
While the majority of sites may have functioned as farmsteads, the highly stratified nature of contemporary Irish society suggests ringforts would also have represented differences in the social hierarchy. It seems obvious that multivallate sites were of higher status than the smaller univalate examples. The old Irish law tracts, however, do not explicitly outline a correlation between status and the number of enclosures in a ringfort. The archaeological evidence, however, often demonstrates such stratification on the basis of the artefactual evidence. Fine metal-working, which can be interpreted as evidence of artistic patronage by the higher levels of society, tends to be feature of excavated multivallate ringforts such as Garranes, Co. Cork (Ó Riordáin 1942, 134-139) and Ballycatteen, Co. Cork (Ó Riordáin 1943, 35) but is generally absent from univallate sites. There are, however, exceptions. Extensive evidence for fine metalworking was found at the univallate ringfort at Garryduff, Co. Cork (O’Kelly 1963, 95-99). The presence of glass vessels (ibid. 77) and relatively large quantities of imported ware (ibid. 103-112) might provide independent evidence that Garryduff was a high status site.

The consideration of status and wealth in terms of multivallate and univalate ringforts only is rather crude in its approach and cannot reflect the complexity of social stratification at this time. The various early laws that deal with status record three grades of king (Kelly 1988, 17-18), four of nobility (ibid., 28) and either five or six grades of free independent farmer, according the Crith Gablach or Cásin Aicillne (Patterson 1994, 366-7). To this can be added the ‘semi-free’ or ‘tenant at will’, the ‘hereditary serf’ and the slave (Kelly 1988, 11). How many of these grades would have lived in ringforts? The Crith Gablach indicates that the les (farmyard) of the king was surrounded by a rampart. Mytum (1992, 131) argued that ringforts were the residences of ‘the aristocracy, together with the few of the highest grade of freemen who possessed base clients’, but this has not generally been accepted (as befits a monument class numbering in the tens of thousands). The documentary sources would tend to support aspects of this assertion as O’Kelly (1997, 363) states that ‘the most significant difference between the house of the lord and that of a commoner is the presence of defensive earthworks, the digging of which is listed among the duties owed by a client to his lord’. Clients, therefore, were the prerogative of the nobility. The single exception was flaith aithig (commoner lord) a person in transition between a commoner and lord; he had twice the wealth of a bóaire and was therefore able to support clients (Kelly 1998, 28). Consequently, the ownership of ‘defensive earthworks’ might be regarded as physical evidence of one’s noble status. That said, the free farming classes also needed to protect cattle, since most of their cattle were in effect the property of the nobility who provided them as part of the institution of clientship. Unlike the nobility, however, they needed to build their own ringforts.

Stout (1997, 113-4), however rejects this view. While admitting that the law tracts make no mention of ringforts belonging to the non-noble grades of society he argues that the dimension of ringforts given in the sources are greater than most surviving examples, and that consequently the small univalate ringforts must belong to the free non-nobles classes, i.e. the bóaire and ócaire. The problem is that particular section of the Crith Gablach dealing with ringfort dimensions (MacNeill 1923, 305) may only be referring to those of a king. Stout’s distributional analysis of the different types of ringforts is based on the assumption that ringforts were the settlements of both the free farming classes and the nobility (below).

The development of large raised raths from the mid-eighth century onwards (below) may also have been linked to a desire to display wealth and status. Raised raths account for approximately 10% of all Early Medieval sites in counties Armagh, Londonderry and Tyrone (Kerr 2007, 74) – a figure not dissimilar to the percentage of multivallate sites in this area. Figures from Co. Fermanagh show almost 20% of sites are classified as platform or raised raths, however in the case of this county it is highly probable that a large percentage of these sites are platform raths proper - i.e. created by scarping the top of a drumlin – and that this form of construction was popularly utilised to prevent the site becoming waterlogged.
**The Excavated Archaeological Evidence for Social Status of inhabitants of Early Medieval Ringforts**

The archaeological excavations of early medieval ringforts provide abundant evidence for people's houses (see above), daily life, work and practice and their material culture possessions and equipment. All of this excavated evidence can also be brought to bear on social interpretations. It is interesting then that most of the theoretical models of ringforts and social status (see below) have tended to focus on morphology, function, siting and distribution, while the evidence revealed by archaeological excavation has tended to be less well incorporated.

**Ringforts of Low Status Grades**

Can we identify lower social grades from excavated archaeological evidence? It may be significant that the early medieval material culture recovered from most univallate ringforts tends to be basic and relatively sparse (with perhaps the exception of the souterrain-ware region, predominantly in counties Antrim and Down). Finds are usually restricted to basic utilitarian objects such as iron knives, needles, nails as well as rotary querns, hone stones, flint and chert debitage, spindle whorls and needles. This is also occasional evidence for metal-working in the form of slag. Personal and dress items are generally restricted to copper-alloy and iron ringed pins, glass beads and bracelets, lignite bracelets and bone combs and pins.

A total of 128 ringforts excavated to varying extents between 1930-2004 revealed limited stratigraphical details and very small quantities of domestic, agricultural or industrial items. It is possible that some of these sites may represent high status settlements where only partial excavation has taken place. It is also likely, however, that the principal function of many others may have been the coralling of animals, for example Garryduff I, Co. Cork (O'Kelly 1962) or Magheraboy, Co. Sligo (Ryan 2001; O'Neill 2007). Excavations at a univallate ringfort at Shewis, Co. Armagh (Brannon 1980) uncovered one sherd of souterrain ware, and a small number of scattered post-holes were discovered at the site. The site did not appear to have been occupied for any great period and the excavator suggested that it may represent an animal enclosure.

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It is also possible that some excavated sites with a small number of domestic artefacts may represent ringforts for the lowly status. Croom East (Shee 1974) and the univallate ringfort at Drumbroneth, Co. Down (Brannon 1980) may fall into this category. There are likely to be many more examples that appear to represent evidence for animal corrals and ringforts of lowly status. They all have a number of characteristics in common including evidence for a relative short period of occupation as well as material-culture of lowly quality and quantity.

**Ringforts of Ordinary Farmers**

Early medieval ringforts are often seen as the homesteads of social units engaged in agricultural toil in the lands around them. A further 91 EMAP sites were excavated containing ringforts and which revealed archaeological evidence which could be described as ‘significant’ in terms of excavated material. Items of personal adornment as well as domestic and agricultural artefacts were more prevalent at these sites. Approximately 40-50% of these sites also contained evidence for hearths/furnaces and industrial artefacts used for iron and metal production. Over 50% of these sites revealed evidence for post-and-wattle, sod-walled and stone buildings while souterrains were found in a number of places. Souterrain-ware pottery was also a frequent occurrence at many of these sites while a small number of ringforts revealed evidence for corn-drying kilns and gatehouses. Metalled, cobbled or paved surfaces were also revealed at these sites. Important sites in this category include Dunsilly, Co. Antrim (McNeill 1974 & 1975; McNeill 1991-2), Lisnagun, Co. Cork (O’Sullivan 1987, 1988 & 1989; O’Sullivan et al. 1998) and Dunbell Big 5 & 6, Co. Kilkenny (Cassidy 1990) (See Appendix for List). It is also possible that some of the non-circular shaped enclosures at Lusk and Cahircalla More were of a similar status.
These sites could represent the homes of the lower social grades of freemen described in the seventh and eighth century historical sources. The univallate enclosure at Lisnagun, Co. Cork for example, had a diameter of 35m and enclosed a central round house, outbuildings and three souterrains. The quantity of domestic/agricultural and personal times as well as animal bone was limited leading the excavator to suggest that Lisnagun was typical of the majority of univallate raths. It is possible then that many of these sites represent the homesteads of Ocaire and bóaire farmers. The evidence from the polygonal shape enclosure at Sluggary (Shee 1973 & 1974) might also indicate a farmer of modest means.

**Ringforts of Prosperous Farmers and Nobility**

The bóaire and the mruigfher are described in the Crith Gablach as the two highest classes in the ‘farming’ (boairig) grade. Above this grade is the ‘noble’ (fleith) grade, which is further subdivided into five classes\(^1\) with the aire déso at the bottom and the aire forgaille at the summit of this hierarchy (Kelly 1988; 1997). The aire coisring is sometimes included at the base of the fleith grade, and other times at the summit of the boairig grade.

The ringforts of the upper-boairig grade, or lower-fleith grade would therefore be expected to be reasonably similar. Finds indicative of status, such as brooches and decorated ringed pins, might be expected at these sites. Items also indicative of foreign contacts or suggestive of gift exchange, possibly related to free client relationships between a lord and client farmer, might be represented by the presence of imported pottery such as B-ware or more probably E-ware. Non-ferrous metalwork, such as copper-alloy, and/or glass working may also be uncovered. These sites also tend to be occupied for a longer period of time than the ringforts of lesser status.

A number of raised raths would appear to fit these criteria, however in many cases they had matched the criteria prior to the site being raised. Imported E-ware pottery, typically datable to the sixth to seventh century A.D, for example, was found in the univallate phases at both Gransha and Rathmullan (both Co. Down). A number of these sites, such as Big Glebe, Co. Londonderry (Bratt & Lynn 1976; Lynn 1988), also appear to have been constructed after the immensely complex social hierarchy of the Crith Gablach seems to breakdown.

Other candidates for bóaire level ringforts may include Aghadegnan, Co. Louth (Carroll 1991), Inch & Ballyrenan, Co. Down (MacManus 1997), Glebe Site 43 in Tully, Co Dublin (Seaver 2000 & 2001) and the recently excavated site at Leggettsrath West, Co. Kilkenny (Lennon 2006). Certain cashels, such as Kildreenagh, Loher (O’Flaherty 1980-84, 1985), Ballyegan (Byrne 1991), Rinnarraw (Fanning 1987-92) and Cathair Fionnúrach, Ballynavenoor (Gibbons 1994) may also be interpreted as the settlements of relatively wealthy bóaire farmers. The site at Ballynavenoor also revealed evidence for B-ware and E-ware pottery that could indicate potential contacts and trading activities. Evidence for field patterns, souterrains, kilns, ferrous and non-ferrous metalworking, as well as E-ware, was recovered at Roestown indicating a site of potential lordly status. The multivallate enclosure at Rosepark, Balrothery is likely to be of similar high-status as it displayed a similar set of archaeological evidence.

**Social landscapes? Interpreting early medieval social organisation from ringforts**

A number of attempts have been made over the years to interpret the settlement patterns of the Early Medieval period. These have tended to focus on the more visible sites – especially ringforts, cashels, churches and crannogs - and any future research into this area must also take into account the presence of those sites which have left less of an archaeological impact on the landscape – i.e. settlement/cemeteries, unenclosed sites, and non-circular enclosures (to be discussed below). The differing chronology of these sites should also be considered when attempting to model socio-economic factors.

\(^1\) aine déso, aine echtai, aine ard, aine tuisi and aine forgaille (Richey 1879, 321; MacNeill 1923, 296).
The preferences of ringfort constructors in relation to environmental factors and geographical locations was first statistically tested in the Skibereen area of Co. Cork (Fahy 1969), and a similar test was later applied to the study of raths in south Co. Donegal and Dingle, Co. Kerry (Barrett 1973). These tests hoped to give some insight into the function of the individual ringforts and how they fitted into a wider settlement pattern within a specific area. Similar surveys have been undertaken in the southern midlands (Stout 1991), Co. Down (Robinson 2000) and north-west Ulster (Kerr 2007), and showed that environmental factors, such as altitude and soil quality, were influential in determining the location of ringforts. Without resorting to excavation it was therefore possible to suggest that the majority of ringforts were closely associated with the immediate farming landscape. Some sites, however, did not necessarily fit this pattern and these sites needed to be considered in their putative socio-political setting. Stout (1991; 1997, 122-127; 200, 94-101) also attempted to equate ringfort types and the grades of society outlined by the early documentary sources. Using cluster analysis of the size and form of extant ringforts he identified a series of ‘cluster groups’ which attributed to different grades. His study, which was based on fieldwork in counties Tipperary and Offaly, led to settlement models which are impossible to either prove or disprove but certainly attempt to move our understanding of ringforts onto a new level. In particular, in his influential work on the baronies of Clonlisk and Ikerrin in counties Tipperary and Offaly, he used computer analysis to cluster the various raths into six groups and then attempted to assign each group to a certain Early Christian social grade (Stout 1991, 238; 1997, 127):-

- Cluster 1, small univallate forts, at distance from ecclesiastical sites - low-status sites
- Cluster 2, smaller univallate forts, closer to ecclesiastical sites – also low status sites
- Cluster 3, bivallate forts, large overall diameter, low internal diameter, possible ‘royal sites’, found in association with low-status sites
- Cluster 4, large univallate forts, low altitude, near boundaries, strategic forts?
- Cluster 5, univallate forts, low density, medium social status
- Cluster 6, univallate forts, on level ground, medium social status

Based on these statistical ‘clusters’, Stout attempted to interpret the status of the site occupants, and, by doing so, attempted to understand how the early medieval landscape was organized socially. The large, multivallate ringforts (cluster 3) seemed to be central to the settlement system, and may be taken to correspond closely to the dwellings of the typical aire forgaille or high lord. Stout’s Cluster 4 sites (large well-defended, univallate ringforts) may have been the settlements of the aire déso – a lower grade of lord, who seems to have had an inter-territorial military function. These sites may have functioned as places of refuge for the cattle of the local community in times of danger.

Stout suggests that the other ringforts were occupied by the farming grades. The small, simple ringforts that tend to be found in close proximity to high-status sites may have been the settlements of the Ocaire, or small-farmer. The ‘typical’ univallate ringfort, however, with an average internal diameter of approximately 30m and situated on good agricultural land, may have been the dwellings of bóaire, or strong-farmer. Stout suggests that the farms associated with these sites may be the antecedents to modern townlands.

This model supports findings from earlier studies. Thomas McErlean’s work in mid-west Co. Antrim examined the spatial relationship of raths, and focused on their ‘tendency to form discrete groups in association with peripheral churches and crannogs’ (McErlean 1978, 10). This work also drew attention to the proximity of univallate raths to modern townland boundaries (ibid. 32), as well as a similar proximity of multivallate raths and modern baronial boundaries (ibid. 29), suggesting some connection between the putative territories of these sites and modern landscape divisions. Later quantitative studies done on ringfort distributions in Co. Down (Robinson 2000), and Co. Fermanagh (Kerr & McCormick 2004) have largely supported the results from Co. Offaly and Co. Tipperary (Stout 1991).
Stout’s normative model is attractive because it explains differences in ringfort morphology and siting on the basis of social organisation and it interprets the settlement landscape on the basis of interaction between different social groups. There are some problems with the model. It fits well with the reasonable-to-good quality lands of southwest midlands and regions of southern Ulster, but does not necessarily fit with those parts of Ireland where there is a more dispersed pattern of agricultural-quality land - and an accompanying low density in ringfort settlement (e.g. O’Sullivan and Downey (2007, 35) - especially in the west of the island such as Co. Clare, or Co. Donegal (Kerr 2007, 76).

The second major flaw with this model is that it assumes contemporaneity of sites. If sites were not occupied at the same time, different processes could have lead to these distributions, and thus the model deliberately ignores the historical landscape, the changing social and economic conditions experienced by any population group across time. This problem has not been fully addressed by archaeological research in any case. Although there has been a significant increase in the numbers of radiocarbon dates obtained from excavated ringforts, these dates have tended to come from isolated examples in different parts of the island, and thus make it difficult to interpret whether the ringforts in a specific area were occupied contemporaneously or consecutively. The more recent NRA-funded programmes of archaeological excavations through particular regions (e.g. north Cork, Meath, Kilkenny) may enable a closer inspection of the contemporaneity - or otherwise – of early medieval settlements.

Kerr (2007) has taken a different approach to the study of ringfort distribution. His study area (the counties of Armagh, Donegal, Fermanagh, Londonderry, Monaghan and Tyrone), and the number of sites involved (3000+), is substantially larger than any so far undertaken, making it more representative of actual ringfort distribution. The secular early medieval sites were subdivided into univallate raths, multivallate raths, raised raths and cashels, and the relationships of site-types with altitude bands and soil associations were tested. Although specific local topographical factors may have influenced the positioning of individual sites, there is a marked similarity across the study area. The preferences for altitude and soil associations in northwest Ulster are similar to those found from other regional studies undertaken in Ireland, suggesting a degree of uniformity in site function and status across the island.

Univallate raths tend to be found on moderate quality soils, located between 60m and 150m (Kerr 2007, 75), and cashels tend to be found on similar quality land, but at a higher altitude (150m to 210m) (ibid. 83). In contrast, raised raths show a tendency to be found on good quality lands between 60m and 90m (ibid. 80), and multivallate raths show no clear correlation. This has been interpreted as marking a difference in function between univallate raths and cashels (predominantly pastoral farmsteads) and raised raths (predominantly arable farmsteads). The similarity in preference for soil quality shown by the builders of univallate raths and cashels suggest that these sites had similar functions and possibly status (ibid. 83). Typological differences between these sites may simply be indicative of the local availability of building materials, although it is possible that other not yet fully resolved factors, such as site-type chronology (see above), may explain the different preferences of construction. Raised raths show similar altitude and soil quality preferences to Early Medieval ecclesiastical sites (ibid. 80, 84), which have also been interpreted as being reliant on arable agriculture (Stout 1997, 80). Multivallate raths have long been argued to be high status sites. Their lack of association with the hypothetical farming model, and their positioning in the boundaries of putative contemporary polities, support this claim (Kerr 2007, 82).

In general Kerr’s findings support and build on the distribution model proposed by Stout (1997). The majority of sites can be interpreted as the farmsteads of small farmers engaged in pastoral agriculture, with the contemporary high status sites identified with multivallate raths. Unlike earlier studies, however, Kerr incorporated a chronological element. He showed that raised raths are a significantly later site type than univallate and multivallate raths (ibid.
98-99). This throws into question the validity of settlement modelling that assumes the synchronicity of all early medieval sites.

**Conclusions**

A tiny percentage (a minimum of 280 sites, or only 0.6%) of the estimated 45,000 known ringforts have been excavated. One should be wary of making definite judgements about the chronological and morphological developments of ringforts over time based on such a small sample as “less than 1%”. The almost random nature of excavations - especially development driven excavations - and the similarity in the results of these excavations, however, suggest that, although small, the sample is representative of the site-type. Most univallate sites are relatively simple single-occupation phase sites, however many high status sites in particular - many of which were raised ringforts - have more complicated site origins and histories.

**Early medieval settlement enclosures other than ringforts/cashels**

**Introduction – rethinking the dwelling enclosure in early medieval Ireland**

It is clear that early medieval people inhabited enclosures of varying types, ringforts, cashels, crannogs, promontory forts, monastic enclosures and enclosed Norse towns. In early medieval legal sources and narrative literature, houses and dwellings are commonly only described as being located within an enclosed area known as a *les* (translated as ‘farmyard, or courtyard’), thus allowing of a range of forms, shapes and sizes (Kelly 1997, 364). On the other hand, archaeologists have tended to more commonly use the derivatives of the terms *ráth* (‘earthen rampart’) and *caisel*, when they are not simply using the term ‘ringfort’ (which of course, was both a word and concept entirely unknown to the early medieval Irish) and have therefore tended to see ringforts as the ‘normal’ form of enclosed space. In a sense, early medieval people may have seen themselves as essentially living within an enclosure, whether it was know as a *ráth*, *caisel*, *dún* or *les*, all being in case primarily enclosed spaces that essentially bounded and defined the household or domestic space from the outside land, though of course amongst a farming community, both would be used for livestock, crafts and industry and a range of occupation activities.

There has to be a sense then that archaeologists’ modern classifications of monuments such as enclosures may be overriding the knowledge, sense or perception that people in early medieval Ireland had of the various dwelling enclosures they inhabited. It is also true that it is only recently that archaeologists have tended to take the view that a ringfort is essentially a perfectly circular space. As Jonathan Kinsella (forthcoming) has pointed out, earlier scholars were less dogmatic. Ó Riordáin’s (1942) *Antiquities of the Irish Countryside* merely states in its “simplest form the ringfort may be described as a space most frequently [our emphasis] circular surrounded by a bank and fosse or simply by a rampart of stone. Proudfoot (1961, 94) stated the raths or cashels were generally circular although ‘oval or rectilinear’ examples were known. Edwards (1990, 14) stated that raths could be circular, oval or pear-shaped. However, crucially Stout (1997,14-15) emphasised the circular nature of ringforts, largely as part of his classificatory system for his computer analyses and this has tended to dominate recent perceptions of early medieval enclosures (see Kinsella, forthcoming).

However, it is also true that there are early medieval enclosures that do appear to be different in terms of size and scale. When Nancy Edwards (1990) published her comprehensive overview *The archaeology of medieval Ireland*, there was generally a clear separation between ringfort and monastic or ecclesiastical enclosures, with the latter being generally larger. The large oval Phase 3 enclosure at Millockstown, Co. Louth enclosing souterrains and burials - clearly not comfortably located within accepted definitions of a
ringfort - was therefore seen as some form of ecclesiastical site that replaced a ringfort (Manning 1985). The large circular enclosure at Marshes Upper (Site 5), Co. Louth excavated in 1982, had an internal diameter of *circa* 100m (McCormick and Crone 2000). This again appeared to be too large for a ringfort and the excavators preferred to regard it as an ecclesiastical site - but there was no actual evidence for this. The only interior feature discovered was a souterrain. The excavations of the last 10-15 years, however, have totally shaken our accepted understanding of secular and ecclesiastical settlement in Ireland. The ringfort no longer holds the monopoly for *enclosed secular settlements* and the emergence of the ‘cemetery settlement’ has also blurred the border between ecclesiastical and secular

The survey identified approximately a further 107 ‘enclosures’ from 86 other EMAP defined sites of early medieval or potential early medieval archaeological significance. These sites were simply described as ‘enclosures’ by the authors of the Excavations Bulletin reports, and no further information is as yet available on them. The morphology of many of these sites could not be established so it was not possible to describe these sites as raths, cashels, non-circular shaped or other forms of enclosure. Many of them were excavated beside ringfort sites and could have been associated with these places as fields, lanes or other features, while others were revealed during large-scale development projects that created open spaces that enable archaeologists to see beyond the boundaries of individual ringforts or raths. We will need to reassess in future how we define a ringfort/rath as well as non-circular shaped enclosures to help address the growing complexity of the early medieval settlement enclosure dataset.

**Identifying other forms of early medieval settlement enclosure**

**Excavated early medieval ditched enclosures**

Recently, Coyne and Coyne (2003, 17-18) coined the term ‘plectrum-shaped’ to describe the early medieval enclosed site at Newtown, Co. Limerick. This heavily truncated site has a maximum diameter of *circa* 50m, a ditch some 3m wide and causeway entrance 5m wide (Coyne 2006, 64-66). Its interior contained a figure-of-eight house as well as a series of gullies and pits that may be of later date. There was no evidence of an interior bank, although this may have been truncated. There was evidence of a palisade trench 2-3m outside the north-eastern side of the bank. A segment of human skull was found in the base of the house slot trench which was interpreted as being a ‘foundation deposit’ (*ibid.* 68). The house slot produced a date of AD 700-1015 (2siga) with its central post providing a date of AD 797-1280 (2 sigma). The base of the ditch provided a 2 sigma date of AD 890-1030. The enclosure size and the form of the house would suggest a ringfort-type settlement but the shape is clearly anomalous to the ‘classic ringfort’ type. However, it is difficult to know if the Newtown ‘plectrum-shaped enclosure’ constitutes a new early medieval ‘site type’. Other irregular enclosures have also been discovered but not of the same shape as Newtown.

The early medieval enclosure at Killickaweney, Co. Kildare was of a flattened ‘heart shape’ with diameter of 60-70m (Walsh and Harrision 2003, 34-6). The ditch was an average 2.5m wide and 1.5m deep (Walsh 2002; 0924). The site contained two rectangular houses and produced finds that could be dates to the 9-10th centuries. The site produced extensive evidence for iron working. Unusually the sites produced a series of ‘refuse pits’ the contents of which indicate that they are of early medieval date. The largest measures 2.5m by 1.6m x 1.1m deep. Large pits are extremely rare on early medieval sites. The Killickaweney examples produced large quantities of animal posts and artefacts but their original use is not known. One, however, may have been a ‘cistern’. It measured 2.2m in diameter and was 1.8, deep and ‘even in the driest conditions it was permanently full of water’ (*ibid.*) It may have played some industrial function, as it was adjacent to an extensive metalworking area.

Two early medieval enclosures at Balriggen, Co. Louth - discovered as part of the Dundalk bypass - again do not conform to the ‘classic ringfort’ model. The oval ‘western’ enclosure (45x50m) produced no interior features and was interpreted as ‘stock corral’ (Delaney and
Roycroft 2003, 19). The main entrance was at the west but there were a series of ‘mini-
causeways’ at the eastern side that may have allowed ‘people access to the stock area while
preventing cattle from crossing the ditch’ (ibid). To the exterior of the main entrance is a
wide funnel feature comprising of two ditches (ibid. 16) that would have facilitated the driving
of livestock into the enclosure. The larger ‘eastern’ enclosure consisted of an outer oval
enclosure with an interior enclosure 50m diameter. This is therefore a site comprising two
enclosures rather than a multivallate ringfort. The outer enclosed area contained some
curious features. These included some D-shaped ‘partition’ enclosures and what the
excavators refer to as a ‘grand drove way’ consisting of two parallel ditches between the
outer and inner enclosures.

The inner ditch, which showed evidence of re-cutting, was up to 4m wide and 1.4m deep. It
contained large quantities of souterrain ware. No conventional house sites were present
within the inner enclosure. Two substantial rectangular post-hole structures near the western
edge are clearly not houses and may represent grain stores. There was evidence of metal
working associated with some troughs but the most conspicuous feature of the site was a
cemetery containing over 400 skeletons. The burials ranges in date between the 6th/7th
centuries and the 12th/13th centuries (Fibiger 2005, 110; O’Sullivan and Stanley 2005, 151-2)
Stout and Stout (2008, 74) consider the site to be a ‘secular cemetery’ and this hypothesis
will be considered further below. The irregular shaped enclosures at Johnstown, Co. Meath,
will also be considered in this section. The large quantity of souterrain ware at Balriggan
suggests that the site dates to the latter part of the early medieval period.

The early medieval site at Laytown, Co. Meath (McConway 2002, 17-19) saw a succession of
early medieval settlements within enclosures, but nothing that conforms to a ringfort. The
earliest early medieval phase (Phase 2) comprised some circular wattle and daub houses
varying from 4.6-10m in diameter associated with a series of large pits containing ‘domestic
and industrial waste’. Phase 3 consisted of a series of sub-rectangular enclosures. The
earliest was 24.6m in diameter; the later was 50m by 30m. The latest was 80m by 60m in
diameter. The first two enclosures had re-deposited material in the ditches that implied
internal banks that had been deliberately slighted. There was no evidence of bank material in
the latest ditch but a fairly sterile 10m band within the bank implies the presence of a bank.
The finds suggested a 9th/10th century date for these rectangular enclosures. A ring pin from
a feature that post-dated the second ditch and preceded the third was of a 10th/11th century
type similar to those found in Viking Dublin. The interiors of these enclosures were truncated
and there was no houses, industrial or craft areas within them.

It might be suggested here that that the movement to rectangular enclosures may be a
feature of the later centuries of the early medieval period McConway (2002, 19) suggests that
the rectangular shapes of the Laytown enclosures might be due to Viking influences. The site
certainly has a coastal location and its inhabitants may be trying to emulate a longphort but
unfortunately our knowledge of these settlements in themselves is extremely limited but the
evidence from Woodstown, Co Waterford suggests a ‘half-oval’ enclosure rather than an
rectangular shape (O’Brien and Russell 2005, 118-9).

The early medieval enclosed settlement at Roestown, Co. Meath, discovered as part of the
M3 road scheme, also was comprised of a succession of curvilinear and rectangular
enclosures (O’Hara 2007). The site was divided into Area A and B which was truncated by the
modern roadway. In Area A the site began (Phase 1) as a series of ‘small irregularly shaped
fields ... the largest of these enclosed an area of 25m by 25m’ (ibid. 143). There were no
signs of ‘domestic occupation’ associated with the fields but finds in included E-ware (6th/7th
centuries). This phase produced a 2 sigma radiocarbon date of AD 630-710 (O’Sullivan and
Stanley 2007, 161). These enclosure ditches were subsequently backfilled and replaced by a
large U-shaped enclosure (approx. 40x30m) with some radiating ditches (Phase 2). This
U-shaped enclosure produced a 2 sigma date of AD 620-690. In Phase 3 the ditch was
backfilled and re-cut to produce a rectangular enclosure (approx 35x40m) which has yet to
produce carbon-dates but was attributed an 8th-11th date by the excavator (O’Hara 2007,
144). In the thirteenth century AD (Phase 4) a smaller rectangular enclosure (15x10m) was built within the Phase 3 enclosure. Phases 2 and 3 do not appear to have produced evidence of internal houses but the ditches contained substantial quantities of animal bone which indicates some measure of domestic settlement. There were lesser quantities of bone in the Phase 4 enclosure ditch. Site B again produced also produced a succession of enclosures. The main feature again was a D-shaped enclosure (approx 70mx50m) which, the ditch of which was modified on several occasions. The earliest construction produced a date of AD 530-650 while the latest phase producing a date of AD 770-980. There were separate habitation and industrial areas on the site. The latter included corn-drying kilns and fine metal work production.

These enclosed early medieval sites – Newtown, Co. Limerick; Balriggan, Co. Louth; Laytown, Co. Meath, and Roestown, Co. Meath – indicate some of the emerging complexity in settlements and reveal that our focus on circularity may be misplaced and anachronistic. Table 3:5 illustrates the range of shapes and contexts in which ‘enclosure’ sites have been excavated in recent years mostly. Plectrum-shaped, D-shaped, quadrangular shaped, square-shaped and rectangular shaped enclosures have all been excavated, some of which were associated with other conjoined enclosures. The site at Rosepark, Balrothery (Baker 1999:162; Carroll 2001, 334), a multi-ditched enclosure, is described as follow: 'the shape of the enclosure, is, as far as is known, without parallel'. The main features seem to have been souterrains and corn-drying kilns. The presence of E-ware implies a 7th-8th century date.

Table 3:5 below provides a list of some potential examples of non-circular shaped enclosure which have been identified through excavation in recent years. The list is by no means exhaustive or complete.

**Table 3:5 Examples of Excavated Non-Circular Shaped Enclosures 1930-2004**

<table>
<thead>
<tr>
<th>Name</th>
<th>County</th>
<th>Exc. Year(s)</th>
<th>Enclosure Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balgatheran 1</td>
<td>Louth</td>
<td>2000</td>
<td>'Enclosure'</td>
<td>Chapple 2000:0638</td>
</tr>
<tr>
<td>Ballycasey Beg</td>
<td>Clare</td>
<td>1999-2000</td>
<td>N/A</td>
<td>Carey 2000:0043</td>
</tr>
<tr>
<td>Ballynge</td>
<td>Antrim</td>
<td>1973</td>
<td>Quadrangular</td>
<td>Lynn 1973:0001</td>
</tr>
<tr>
<td>Castlefarm</td>
<td>Meath</td>
<td>2004-06</td>
<td>Annexe attached to outer enclosure</td>
<td>O'Hara 2004:1198, O'Connell 2006</td>
</tr>
</tbody>
</table>
To date, early medieval settlements have generally divided into earthen enclosures defined by ditches and banks, by stone walls or as unenclosed settlement sites. Recently, a new type of early medieval site has emerged; a settlement site enclosed by a circular wooden palisade. The site at Ballynagallagh, Lough Gur, Co. Limerick began as a series of seemingly unenclosed round houses dating to the 5th-7th centuries (Cleary 2006, 31). The site was then enclosed by a double timber or wooden palisade dating to the 8th - 9th centuries which had a substantial estimated perimeter of 380m (ibid. 36). Early medieval settlement activities continued on the site until the 12th century. It was not possible to ascertain if this settlement was continuous or episodic. There was no evidence for a bank and ditch phase of the settlement.

At Adhadengan, Co. Longford a palisade enclosure also preceded the ringfort phase (Carroll 1991;199; 1993;152). There seems to have been direct continuity between these two enclosures because part of the palisade was later used as part of the ‘multiple gateway system’ of the ringfort.

An early medieval palisade enclosure was recently excavated in its entirety at Lowpark, Co. Mayo as part of the N5 Charlestown Bypass project (Gillespie 2007). The site seems to have begun as an unenclosed iron working area. This site was then enclosed by two concentric palisades, the inner one being about 30m in diameter and the outermost being 35m. The excavator believed that both to have been contemporary. The main internal features were a souterrain and an unusual sunken rectangular building that displayed some intriguing similarities with the late Viking period sunken houses of Waterford (Walsh, 1997, 48-52). The construction of the souterrain appears to be contemporary with the inner palisade. There were steps at both ends and one end seems to have allowed access immediately outside the inner palisade. The evidence for ironworking was extensive and the site produced some 1.34 tonnes of slag. All stages of the ironworking process seem to be represented. The presence of a souterrain would suggest a post AD 800 date for the construction but the only find was a small piece of gold filigree suggesting a 6th -7th century date (ibid. 23).

**Chronology and Occupation**

Are there any chronological implications in these emerging non-circular enclosures? As already discussed, the great majority of univallate and bivallate ringforts appear to date to between about AD 600 and AD 850 while raised raths appear to date from between the mid 8th and mid 10th centuries (see above). Radiocarbon dates from many of the non-circular enclosures identified above seem to place their origin to a time somewhat later than multivallate and univallate raths, and this possibly also suggests that they were occupied either contemporaneously with, or slightly later than, platform raths. This overall provisional dating evidence tends to suggest that the majority of non-circular sites were constructed and occupied perhaps a century later than the typical ringfort chronology of c. 600-900 A.D. A few non-circular enclosures may have been constructed earlier than this (e.g. Ballynacarriga), and

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**Excavated early medieval palisaded enclosures**

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<table>
<thead>
<tr>
<th>Name</th>
<th>County</th>
<th>Exc. Year(s)</th>
<th>Enclosure Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lusk</td>
<td>Dublin</td>
<td>?CHECK</td>
<td>Sub-Square/D-shaped</td>
<td>Giacometti 2006</td>
</tr>
<tr>
<td>Newtown</td>
<td>Limerick</td>
<td>2001</td>
<td>Plectrum-Shaped</td>
<td>Hayes 2001:787; Coyne 2001:79;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Coyne &amp; Collins 2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Shee Twohig 2000</td>
</tr>
</tbody>
</table>
a certain number may have carried on in existence into the eleventh century (e.g. Roestown, Castlefarm, Raystown, Laytown and Ballynacarriga), but the provisional dating of these sites suggests they had their primary occupation phase from c. 700 – c. 1000 A.D. This general date is further supported by the presence of souterrains at a large number of these sites including Roestown, Ballynacarriga, Ballywee, Gortatlea and Rosepark.

A number of sites including Killickaweeny, Co. Kildare (Walsh and Harrison 2003) and Ballycasey More, Co. Clare (Murphy & O’Neill, 2001) have been radiocarbon dated to between the seventh/eighth centuries to the tenth century. The material culture from similar sites such as Cahircalla More, Co. Clare (Kinsella 2007a, Taylor 2004) and Ballyconneely, Co. Clare (Breen 2000:0047), and potentially Ballynoe, Co. Antrim (Lynn 1973) also appears to date these sites to the latter part of the first millennium AD. Some, however, are clearly contemporary with the earlier ringforts. Some of the burials from Balriggan, Co. Louth provide 6/7th century dates while the E-ware and radiocarbon dates from an earlier phase at Roestown, Co. Meath, suggests a similar date. Ballynacarriga, Co. Cork (Noonan 2001;115) has produced radiocarbon dated from the 5th-7th centuries onwards. Similarly the bivallate site with an associated rectangular enclosure from Conva, Co. Cork (Doody 1992, 021; Doody 1995ref) was dated by the director to the Late Iron Age/early Christian period.

It is also true that many non-circular enclosures (like at least some ringforts) have revealed evidence for multi-phased activity with periodic re-cutting of ditches and the addition of extensions being a common feature of their occupation. At Roestown, Co. Meath, this is particularly the case, where one gains a sense of an early medieval homestead or farmyard where ditches and enclosures are dug, backfilled and re-cut on many occasions over the years. This may occasionally be indicative of upward social mobility, as settlements expanded in size according to the improving fortunes of their inhabitants, so that rather than the enclosure shape representing a different settlement type, their remodelling was the outcome of various and changing social, domestic, industrial and agricultural needs of the people who lived in them. At Ballynacarriga, Co. Cork, excavation found that the rectangular enclosure situated on the slopes of a gentle hill was a later extension of the square enclosure located in the valley floor. There was also evidence of re-working of the primary square enclosure on this site, where the original roundhouse was succeeded by a rectangular building (Noonan 2001). Evidence for phases in the development of the enclosures was also discovered at other enclosures with associated secondary enclosures/annexes (e.g. Ballycasey More, Dowdstown and Castlefarm (O’Connell 2006). Excavations at Rosepark, Balrothery, Co. Dublin, revealed a high status multi-ditched site of a number of different phases which the excavator noted did ‘not fall into any known category’ (Carroll 1999 & 2000). It consisted of a complex of curvilinear and linear ditches of unknown parallel. The evidence from the archaeology included E-ware, souterrains and milling activity, which all suggests that the site was used for a long period of time.

A small number of sites like Roestown, Co Meath (O’Hara 2007), Castlefarm, Co. Meath (Kinsella 2007a) and Balgatheran 1, Co. Louth (Chapple 2000:0638) appear to have been re-used in the later medieval period while it appears that the ditches at Newtown, Co. Limerick (Coyne & Collins 2003) was filled in sometime between the eleventh and the thirteenth centuries AD. Ironically the type-site for plectrum-shaped enclosure, Newtown, was found to have only one principal phase of occupation, and in this sense to be atypical of many of the non-circular enclosures. The rather enigmatic site of Ballynoe, Co. Antrim (Lynn XXX), may be included along with these non-circular enclosures, but it contained no evidence for phases of activity, and may have had some ‘ritual’ function.

**Enclosure Size**

The majority of non-circular enclosures are larger than ringforts/raths, with sites like Killickaweeny, Co. Meath (60-70m), Ballyconneely, Co. Clare (70m by 32m), Balgatheran 1, Co. Louth (approximately 70m; Breen 2000:0047) and Castlefarm, (inner - 90m by 70m; outer - 120m by 100m) (Kinsella, forthcoming; O’Connell, forthcoming) in particular all
comprising enclosures substantially larger than ‘typical ringforts’. Even the smaller-scale sites such as Newtown (maximum width 50m; Coyne 2006, 64), or the D-shaped enclosure at Cahircalla More, Co. Clare (38m wide; Taylor 2004:0141), are larger than the typical ringfort.

**Topographical siting**

Coyne and Collins (2003, 18-19) noted that their plectrum shaped enclosures, such as their site at Newtown, Co. Limerick and other unexcavated examples at Lahinch, Co. Clare and Tralee, Co. Kerry were located on the summits of hills. This, they argued, contrasted with ringforts in the area, which tended to have mid-slope locations. Other irregular-shaped enclosures, however, indicate more varied locations. Ballynacarra, Co. Cork was located along a valley floor with a later additional earthwork extending up a gentle hill (Noonan 2001:115). Balrigan, Co. Louth occupied a ‘gentle knoll on low-lying ground, at the bottom of a topographical basin (Roycroft 2003, 16). Killickaweeney, Co. Kildare is located on a ‘sharp incline on a north-facing slope’ overlooking a former wetland area (Walsh and Harrison 2003, 34). Roestown, Co. Meath is in a low-lying area adjacent to a former marsh (O’Hara 2007, 141). Rosepark, Co. Dublin was situated on a hill-slope (Baker 1999:162). It is therefore possible that the variations in form from the classical sub-circular ringfort may have been the result of specific topographical factors which influenced the shape and layout of the resultant enclosure, rather than any deliberate design on the part of the original builder.

**The evidence for social status**

The material culture remains from these non-circular enclosures suggest that they represented a range of activities and functions. Some sites, like Roestown, Co. Meath revealed a wide range of personal items indicative of a high status site with contacts beyond the shores of Ireland (O’Hara 2007). The excavator of Rosepark, Balrothery, Co. Dublin (Carroll 2001:334) argues that the site would have been of likely to have been the site of a high status settlement on the basis of the large amounts of E-ware present. Castlefarm, Co. Meath was probably a high status site, as indicated by the discovery of brooches, pins and a shield boss (O’Connell 2006, 19-21). The domestic items (some glass beads, bone combs and brooches and pins) recovered from Killickaweeney, Co. Kildare, although clearly an important and industrially busy site, could hardly be regarded as indicating high status. (glass beads and comb? The excavator does not suggest it is high status).

It is presently unclear if the level of industrial activity noted on these sites differs significantly from other. There is evidence for metalworking on several sites. Several areas of ironworking were present at Killickaweeney, Co. Kildare and it was suggested that the iron ore processed may have come from a nearby bog (Walsh and Harrison 2003, 35-36). The site produced some possible evidence for a shaft furnace and this would suggest ironworking on an extensive rather than domestic scale. At Balrigan, Co. Louth (Delaney and Roycroft 2003, 19), the evidence for metalworking was extremely limited while here is no mention of metalworking at Newtown, Co. Limerick (Coyne 2006). At Roestown, Co. Meath (O’Hara 2007, 149) there was evidence for fine metalwork in the form of ingot moulds, crucible fragments and trial pieces but such activity does not appear to have been of an intensive nature. The presence of cereal drying kilns at Rosepark, Co. Dublin (Baker 1999:162; Carroll 2001:334) is evidence for on-site processing of agricultural produce, a feature that is generally absent from ringforts.

**Early Medieval Crannogs**

**Definition**

Crannogs have traditionally been defined as artificial islets of stone, timber and soil, usually circular or oval in plan, enclosed within a wooden palisade (O’Sullivan 1998, 2001, 2004;
O’Sullivan, Sands and Kelly 2007; Fredengren 2001, 2002). Modern archaeological classifications as we have seen above, however, are more about the ordering of information in the present than the reality of life in the past. A broader definition of ‘crannog’ would include stone cairns without palisades, deliberately enhanced natural islands, as well as cairns, mounds and rock platforms situated along lakeshore edges - i.e. not necessarily surrounded by water (Fredengren, 2002). It is also the case that modern archaeological classifications and semantic debates on the topic ‘what is a crannog?’ ignore the fact that we investigate a range of constructed island sites that have experienced a thousand years of building, occupation, abandonment, erosion and conflation of deposits - resulting in rocky islets that look much the same as each other today (i.e. the archaeological monument we call ‘crannogs’).

**Early medieval crannogs excavated 1930-2004**

The EMAP survey established that 29 crannógs were excavated between 1930-2004, a surprisingly large number. They were excavated within the counties of Louth, Longford, Westmeath, Meath and Offaly in Leinster, Mayo and Sligo in Connacht, Derry, Tyrone, Cavan and Down in Ulster and Clare in Munster. They were excavated within the counties of Longford, Mayo, Tyrone, Westmeath, Meath and Sligo. This included excavations of the early medieval crannog at Moynagh Lough, Co. Meath, with its houses, workshops, palisades and metalworking areas. The early medieval crannog at Sroove, Co. Sligo was significant in that it revealed that not all crannogs were of high social status. The early medieval crannog at Bofeenaun, Co. Mayo revealed evidence for a focus on ironworking on this remote island. In more recent years, the Discovery Programme’s lake settlement project has been investigating crannogs on Lough Kinale, Co. Longford, including the early medieval sites at Ballywillin, Derragh; following on from the National Museum of Ireland’s investigations of a crannog at Tonymore North.

**Table 3:6 Excavated Crannogs 1930-2004**

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### Chronology

The chronology of crannogs has largely been understood through the use of archaeological excavations, artefactual studies, and latterly radiocarbon and dendrochronological dating. In the nineteenth and twentieth centuries, settlement on crannogs in Ireland was seen as a long-lived phenomenon (dating back to prehistory) but with a particularly intensive phase of activity in the early medieval period. In the 1980s, emerging dendrochronological dates from crannogs in Ulster and Chris Lynn’s influential paper on ‘early crannogs’ (1983) led to the widespread view that crannogs - in the narrow definition of palisaded islets of stone, earth and timber - were only first constructed in the Early Medieval period. Lynn interpreted these Early Medieval crannogs as quite different from Bronze Age lake dwellings, which were seen to be lake-edge marshland enclosures rather than artificial islets. O’Sullivan (1997), however, noted that the distinction between Bronze Age lake dwellings and Early Medieval crannogs was not always apparent in the archaeological evidence.

Recent work by Christina Fredengren and others has clearly shown that classic crannogs - small palisaded islets in open-water - were being built in the Late Bronze Age, the early Iron Age, the early Middle Ages, and the late medieval period. Mesolithic and Neolithic wetland occupation mounds built of stone, peat and wood and placed at the edges of midlands lakes - essentially small un-palisaded crannogs - have also been discovered recently at Moynagh Lough, Co. Meath; Lough Kinale, Co. Longford and at Clowanstown, Co. Meath. It is also clear that Late Bronze Age and early Iron Age palisaded islands that we more confidently term ‘crannogs’, were being built and used between the ninth and fourth centuries B.C. Although there remains a substantial hiatus of evidence between the early Iron Age and the Early Medieval period - i.e. c. 300 B.C. – A.D. 400 - recent exciting discoveries on Coolure Demesne crannog, on Lough Derravaragh, Co. Westmeath have revealed a multi-period crannog on which an oak palisade was constructed c. AD 402, in the Iron Age/early Christian transition (O’Sullivan, Sands and Kelly 2007).

It is clear, however, from a wide range of archaeological, artefactual and dendrochronological evidence that the most intensive phases of crannog building, occupation and abandonment were within the Early Medieval period, particularly between the sixth and the eleventh
centuries A.D. (Baillie 1979, 79). It is also clear that crannogs were built, or certainly re-occupied, in the later Middle Ages, variously being used as Gaelic lordly sites, prisons, ammunition stores and as places to keep silver and gold plate. Some smaller late medieval crannog islets and platforms may have been peasant seasonal dwellings, or refuges for the poor, or hideouts for outlaws, and some may have been used as late as the eighteenth century.

**Distribution**

The geographical distribution of Irish crannogs is now broadly understood. Early studies were undertaken by William Wakeman in the north-west (1870-1a; 1870-1b) and George Kinahan in the west (1868-9), and, more recently, by Oliver Davies in south Ulster (1942). The Archaeological Survey of Ireland in the Republic (conducted by National Monuments Section) and the county surveys (conducted by the Environment and Heritage Service) in Northern Ireland have established that there are, at the very least, 1200 identified sites. This figure should be seen as a conservatively low estimate given the lack of dedicated archaeological surveys and also since crannogs can easily be obscured by wetland vegetation, reeds, carr woodland or by even shallow depths of water. Unsurprisingly, given the fact that they are by definition lake dwellings, they tend to be found in those regions of Ireland where there are lakes. Crannogs are widely distributed across the midlands, northwest, west and north of Ireland and in particular, in the drumlin lakes of Cavan, Monaghan, Leitrim and Roscommon and Fermanagh. Crannogs are more dispersed across the west and northeast, although concentrations can be identified, such as in Lough Conn, Lough Cullin and around Castlebar Lough, Co. Mayo. Other regions have smaller numbers widely dispersed, and substantially fewer crannogs have been identified in the south and east.

Crannogs tend to be found on smaller lakes. There are particular concentrations of crannogs on Lough Carra and Lough Conn, Co. Mayo; Lough Gara, Co. Sligo; Drumhallow Lough, Co. Roscommon; Lough Oughter, Co. Cavan; and Lough Eyes and Drumgay Lough, Co. Fermanagh. Crannogs are infrequently found on large midland lakes such as Lough Ree and Lough Derg in the Shannon River system, or the large northern loughs of Lower Lough Erne and Lough Neagh. On some larger lakes, such as Lough Derravaragh, Co. Westmeath and Lough Sheelin, Co. Cavan, however, they are distributed along the shoreline at regular intervals.

Crannogs are situated in various different types of modern environment, both deep and shallow lake-waters, lakeshore and peatlands. A smaller number of crannogs have been found in rivers, estuaries and in coastal wetlands.

**Morphology and Construction**

Recent archaeological surveys indicate that crannogs vary widely in morphology and construction, ranging in size from relatively large sites (18-25m in diameter), to smaller mounds (8-10m in diameter). Crannogs of various sizes and types can be located in close proximity perhaps indicating sequences of development or contemporaneity of usage. There appears to be some degree of regional and local variations in construction, but most crannogs have been shown to be built of layers of stone boulders, small to medium-sized cobble stones, branches and timber, lake-marl and other organic debris. Crannogs have produced evidence, from both archaeological survey and excavation, for a wide range of other structures, such as cairns, houses, working spaces, middens, wooden revetments, palisades, and stone walls, defined entrances, jetties, pathways and stone causeways. Crannogs have also produced large assemblages of artefacts, both as a result of archaeological excavation and as discoveries made both accidentally, or by design (e.g. treasure hunters in the 1980s). These material assemblages have included items of clothing (shoes, textiles), personal
adornment (brooches, pins, rings), weaponry (swords, spearheads, axes, shields), domestic equipment (knives, chisels, axes).

Social, Ideological and Economic Roles of Crannogs

Traditionally, scholars have interpreted the social and economic ‘function’ of crannogs from what were deemed the essential properties of a crannog - i.e. high visibility, difficulty of access, and laboriousness of construction. As such, crannogs have often been seen as island strongholds or defensive refuges, providing a secure residence to be occupied at times of conflict and danger (e.g. Warner 1994). There are numerous early medieval (and later) historical references that many crannogs were attacked and burned during raids and warfare, and there are hints from the historical sources that some were aggressive island fortresses situated on political boundaries. Combined with the occasional archaeological evidence for weaponry and the impressive scale of their timber and roundwood palisades, it is easy to see why scholars have often suggested that crannogs fulfilled a military or fortress role.

The archaeology and the early Irish historical sources both suggest that at some crannogs were high-status or even royal sites. There is evidence for high-status feasting, and also evidence that they may have been used as re-distribution centres for the patronage of crafts and industry. As with multivallate ringforts, the size, complexity of construction and impressive architecture of crannogs, may have been used to display the social and ideological power and status of their owners. The Early Medieval crannogs of Lagore, Co. Meath (Hencken 1950-1) and Island MacHugh, Co. Tyrone (Davies 1950; Ivens & Simpson 1988) could certainly be interpreted as the island residences of kings or nobles. Perhaps they were used as summer lodges, public assembly places, and as places for recreation and the strengthening of social ties through feasting, drinking and gift giving. Early Medieval crannogs have also been associated with the patronage and control of craft production (typically fine metalworking). For instance, Moynagh Lough, Co. Meath (Bradley 1991), a probable lordly crannog, particularly during its mid-eighth century occupation phase - was clearly a place where various specialist craft workers resided and worked, while Bofeenan crannog, on Lough More, Co. Mayo (Moloney & Keane 1992) appears to have been devoted to the processing of iron ore by specialist blacksmiths.

The Early Medieval church was undoubtedly embroiled in the same social and economic relationships performed and expressed through architecture and material goods. Although, Early Medieval crannogs are usually only thought of as secular dwellings, given the significant role of the church in the contemporary settlement landscape, it is also likely that many may have been used by ecclesiastical communities. Some Early Medieval crannogs are situated close to monasteries and churches and it is possible that the discoveries in recent decades of Early Medieval ecclesiastical metalwork - e.g. hand bells, crosses and book shrines - on some midlands crannogs that were occupied in proximity to actual church sites and monasteries (e.g. Lough Kinale, Co. Longford (Kelly 1991, 88); Tully Lough, Co. Roscommon (Kelly 2003, 9)) - suggests their use as safe or restricted storage places for relics or perhaps even as island hermitages.

On the other hand, it is clear from archaeological surveys that most crannogs were essentially small islands or lakeshore dwellings, occupied at various times by different people, not necessarily of high social status. Recent archaeological excavations at Sroove, on Lough Gara, Co. Sligo (Fredengren et al. 2004, 164) have suggested that some small crannogs were the habitations of social groups or households who had little wealth or political power. In this and other archaeological surveys around Ireland, it has also been demonstrated that many crannogs were small islets situated in shallow water, quite unlike the classic image presented by the larger Early Medieval ‘royal sites’. Indeed, several crannogs have produced relatively modest material assemblages and could be interpreted as the island homesteads of the ‘middle classes’ or perhaps even the poor. These may have been essentially farmsteads, located close to grazing lands and arable fields, and used for the seasonal storage of plough
implements, quern stones, grain and flour and other agricultural produce. They were certainly places, separated from the shoreline that would have been relatively safe from predatory vermin and wolves. In other words, different types of crannogs were built, used and occupied by various social classes in early medieval Ireland.

Others may have been fishing or industrial platforms, used periodically, seasonally or for particular specific tasks. Finally, it should be allowed that some early medieval crannogs might not have been dwellings at all. Some may have been boundary or route way markers, denoting the edges of political territories. Some may have been cairns or mounds - known in Early Medieval Ireland as *fertae* - to commemorate ancestral burials, battles, persons or significant events, or even by-products of other activities - e.g. temporary heaps of building stone or field clearance cairns.

Virtually every detailed site investigation of an Irish Early Medieval crannog, however, has revealed at least some evidence for what might be called ‘dwelling activity’. While there are several traditional and useful explanations of the uses of Early Medieval crannogs - largely revolving around ideas of ‘island refuges’, the ‘social display of power’ and of ‘island dwellings’ - it is likely that depending on their size, location and history of use, different crannogs were used in different ways.

### Early Medieval Promontory Forts

**Background**

Raftery (1994, 48) has suggested that there are approximately 250 promontory forts around the coastline of Ireland with the largest concentration in the west and east. Few of these have been excavated, but most that have been investigated have revealed some Early Medieval activity and settlement evidence. There is still some uncertainty about the origins of these sites and there has been a tendency to state that they are of Iron Age origin (Edwards 1990, 41). The evidence for this is, however, has yet to be convincingly demonstrated. The use of *chevaux de fries* are an Iron Age form of defence in Iberia (Raftery 1994, 61) and this has led to the suggestion that coastal promontory forts with defences in Ireland, i.e. Dun Dubhcathair, on Inis Mór, Co. Galway and Doonamo, in Co. Mayo may also be of similar date. However, a similar form of defence is present at the cashel at Ballykincara, Co. Clare, which is likely to be of early medieval date. The excavation of the defences at Doonamo (Casey 1999), unfortunately produced no dating evidence. The massive coastal promontory fort at Drumsallagh, Co. Dublin, enclosing some 40 acres, is thought to be Iron Age on the basis of some Samian Ware discovered in plough-soil (Raftery 1994, 208) and the rumoured recovery of Roman era objects by treasure hunters (O'Sullivan and Breen 2007, 106).

#### Excavated Promontory Forts 1930-2004

At least five promontory forts archaeologically excavated between 1930-2004 have revealed evidence for early medieval habitation or activity. They comprise Dunbeg Fort, Co. Kerry (Barry 1981), Larybane (Childe 1936; Proudfoot and Wilson 1962) as well as Dun Aonghasa, Kilmurvy, Inis Mór, Co. Galway (Cotter 1995; 1996), Knoxspark, Co. Sligo (an inland promontory fort; Mount 1994) and Dalkey Island, Co. Dublin (Liversage 1967-67; Doyle 1998).

Archaeological excavations at Dunbeg, Co. Kerry (Barry 1982) and Larybane, Co. Antrim (Childe 1936; Proudfoot and Wilson 1962) dated their construction to the early medieval Period. The excavators of Larybane suggested that the site was constructed about AD 800 (*ibid.* 107). The presence of souterrain ware in the primary habitation layers (*ibid.* 93) supports the late date for the site. Datable finds were absent from Dunbeg but a series of
radiocarbon dates suggest that the period was occupied during the 9th-11th centuries. There was, however, evidence for earlier settlement in later prehistory. A shallow ditch that partially underlay the early medieval stone rampart provided a Late Bronze Age date (Barry 1981, 307). No house remains were found at Larrybane. At Dunbeg, much of the surviving interior space was occupied by a stone clochán, while a souterrain extended outwards from the rampart entrance.

A promontory fort (or more accurately a cliff-top fort) at Dún Aonghusa, Inishmore, Co. Galway was excavated by Claire Cotter from 1992-94, as part of the Discovery Programme’s Western Stone Forts Project. The defences consist of a massive inner wall and three lesser outer walls with a chevaux de fries between the third and fourth wall. Most of the settlement evidence was confined to the inner enclosure (Cotter 1995; 1996. This consisted of a series of huts and extensive settlement evidence, the great majority of which was of Late Bronze Age date. Early medieval deposits were limited and confined to a few discreet parts of the fort interior (Cotter 1996, 14). Some of the Late Bronze age deposits and structures, however, run under the inner enclosure wall (Cotter 1993, 4: 1996 4-5). The date of the wall is, however, somewhat unclear. Some Bronze Age layers run under the wall but there is also evidence that re-deposited Bronze Age material was placed beneath the wall, possibly to provide a stable and level foundation (Ibid. 6). It was not possible to investigate the interior of the massive interior wall. In one area, however, some of the original wall has been removed and it was possible to investigate some of its foundations. The rampart wall appears to have been built up of vertical ‘skins’ of walling, here of which were identified (Ibid. 5; Cotter 1995:125). While the outer skin sat on Bronze Age material, the innermost sat on bedrock. It is possible that the core of the rampart is of Bronze Age date but it was greatly modified during the Early Medieval Period. It is difficult to understand, however, where there is so little habitation material, especially food refuse, surviving form this later period.

An inland promontory fort was excavated at Knoxspark, Co. Sligo by Charles Mount (1994, 22-24) is the first of its kind to be excavated. Most such sites have upland locations (Raftery 1996, 45-48). Knoxpark is low lying, enclosed on three sides by the Ballysadare river and on the other by a silted marshy lake. The promontory fort was rectangular in shape and measured 23m north-south by 19m east-west. The landward side was defended by a substantial bank and external ditch. Inside the bank “are a number of surviving oval hut platforms and the excavations have revealed large quantities of butchered animal remains, iron tools and nails, and vast quantities of iron smelting slag and furnace bottoms” (Ibid. 23). Mount states that the defences are of Iron Age date but does not provide his evidence for this. He then states that the changed to one of ritual usage:- “the funerary use commences with the construction of an oval cairn of massive boulders” (Ibid.). This contained a cremation burial. Subsequent to this an inhumation cemetery was established with 187 burials being uncovered. One burial was radiocarbon dated to 8th-10th century (Mount 1994:206). The chronology of this site needs to be further informed by a strategy of radio-carbon dating. Two inhumation burials were found under the enclosure bank (Ibid. which might suggest that the defences might be of Early Medieval date. If this is the case, and the Iron Age habitation is a similar date he site may in fact be a ‘settlement cemetery’ in the form of an inland promontory fort.

A promontory fort was excavated on Dalkey Island between 1956-59 (Liversage 1967-68). The excavation established that Dalkey Island had been intermittently occupied in the Neolithic and Bronze Age in the form of temporary encampments. The site was then subsequently re-occupied in the early medieval period after a lull during the Iron Age. Three potential phases of activity with a time-span of anything from 2-3 decades to 2-3 centuries were identified dating to the early medieval period. A possible field system and evidence for fortification possibly dates to this period. A significant early medieval shell midden was uncovered below the bank of the promontory fort. Amphora sherds and three bronze pins were recovered in this feature. A large collection of imported B and E ware pottery was recovered during the excavation. Two Samian sherds were also uncovered. A number of native pins and brooches were also recovered. A house, midden and hearth were
subsequently constructed after the promontory fort. Finds from these features suggest an early medieval date. A ring pin and early medieval pot was recovered in a context overlying the midden during a period when the house had disappeared.

The promontory fort was situated immediately north of St. Begnet’s church whose existing remains comprise an early unicumeral structure with surviving western and eastern pitched gables. Liversage dug a trial trench at right angles to the north wall of the church in 1958 and identified a boundary wall and gatepost associated with the early ecclesiastical site. An associated gatepost was also identified. 11 burials were uncovered which were aligned parallel with the early church. Two possible phases of internment were identified. The four deepest burials appear to have belonged to a regularly laid out graveyard in rows at right angles to the church wall. An 11th century Norman coin was found a little above one of the burials.

**The social, economic and ideological roles of promontory forts**

Promontory forts have traditionally been interpreted as refuges or strongholds. This interpretation may be over-simplistic and is largely based on the modern perception of coastal sites as being ‘at the edge’. If these sites are considered within seascapes, however, it seems that some promontory forts were deliberately placed in prominent positions along coastlines. These sites were intended to be seen from the sea and also provided their inhabitants with views across sailing routes. With the development of hostile fleets and sea-borne trading routes, promontory forts established by local kingdoms could have both monitored and controlled the sea traffic.

The impressive promontory fort at Dunseverick, Co. Antrim, is known to have been an early medieval royal site of the Dál Riada, an extended tribal grouping with strong maritime connections between northeast Ireland and western Scotland. Dunseverick is located on a headland on high cliff tops, and, although there would have been few landing places in the vicinity, the location provides excellent views across the sea towards Rathlin Island, the Inner Hebrides, and the southwest coast of Scotland. The nature of the local tides, currents and winds along the north coast mean that the promontory fort was also located on a significant maritime route way.

Dunseverick (*Dun Submarine*) and the maritime fleets of the Dál Riada are mentioned on several occasions in the annals for the seventh and eighth centuries A.D. In Adomnán’s seventh-century *Vita Sancti Columbae* there is a mention of a dangerous whirlpool at a place known as *Coire Breccáin*, off Rathlin Island, understood to be on the sea route between Ireland and Scotland. In Cormac’s *Glossary*, dated to c. A.D 900, there is a description of this eponymous Breccán - a merchant of the Uí Néill - who used to trade with fifty currachs between Ireland and Scotland and whose fleet was lost in these dangerous seas.

The promontory fort at Dunbeg, Co. Kerry (Barry 1981) is dramatically situated on a cliff top on the steeply sloping, south side of the Dingle Peninsula. The location provides extensive views across Dingle Bay, and its inhabitants could have watched any coastal traffic moving around the Kerry coast. The site would also have been high visible to maritime travellers, dominating entry into the bay itself. The site was clearly occupied over several phases - perhaps as early as the Bronze Age - and in its latest form was defined by four closely spaced banks and ditches, with a stone house and souterrain in the small, enclosed interior. As noted above, radiocarbon dates from the occupation deposits suggest that this phase of the site was inhabited from the ninth to the thirteenth century A.D. Most of the animal bones from the site were identified as domestic - cattle, sheep and pig - but there were also small amounts of goose and cod. The Early Medieval monastic site of Reask at the end of the peninsula has produced imported E-ware pottery, probably brought by Gaulish wine-traders, suggesting that the Dingle Peninsula had a long history of foreign trade. Although the later phase at Dunbeg is slightly later than the seventh-century Gaulish trade it is possible that
Dunbeg may have dominated the sailing routes between Viking Cork and Limerick in the tenth and eleventh centuries A.D. (O’Sullivan and Breen 2007).

Surprisingly, despite their coastal location, promontory forts often produce relatively little evidence for the exploitation of coastal resources. The early medieval promontory fort at Larrybane, Co. Antrim (Proudfoot & Wilson 1961-2) was situated at the edge of good agricultural land and its economy was mostly devoted to sheep rearing in particular, as well as cattle herding. There was, however, some evidence of the exploitation of coastal fauna represented by the bones of cormorant, shag, puffin, curlew and merlin, fish bones of cod, saithe, pollock, whiting and wrasse, along with limpets, winkles and oysters. The impression gained is of an essentially agricultural community, who occasionally may have trapped birds and collected eggs on the cliffs, and caught fish in the sea below. The presence of cod might also suggest that use of ocean-going craft fishing offshore (O’Sullivan and Breen 2007).

Early Medieval Souterrains

Introduction

Souterrains are artificial underground or semi-subterranean passages and chambers. Mark Clinton’s (2001) recent book provides the most comprehensive overview of the subject. It has been suggested that there are approximately 3,500 souterrain in Ireland and increasing numbers are known now from excavations of early medieval settlements in the years since Clinton’s review. The great majority of souterrains are dry stone-built although earth-cut and rock-cut examples are also known. Earth-cut souterrains have nearly all been discovered in the Cork region while rock-cut souterrains are found in both in the Cork area as well as North Antrim. Wooden-lined souterrains are also known (Clinton 2001, 10-12). Dry-stone built souterrains are found in clustered areas across the island and comprise over 95% of the known total (ibid. 37). (ibid. 33).

Distribution

The distribution of souterrains across the island is very uneven, being concentrated in North east Ulster, north Leinster, east Connaught and south Munster (Clinton 2001, 34). Large areas of the country are devoid of them. Buckley (1998), using Ulster as a case study, argues that concentration of souterrains represented heartlands of political groups. Warner (1986) rejected this interpretation. Clinton (2001, 39), too rejected Buckley’s stating that “souterrain concentrations cannot be accepted as indicators of political areas”. Clinton detailed consideration of their distribution, however, did not produce a satisfactory explanation either for their presence or absence in certain areas. He considers their distribution at some length and could only conclude the distribution “would not appear to have been simply determined by either topographical or technological considerations alone” (Ibid. 44).

Excavated Souterrains 1930-2004

The statistics from the EMAP survey indicate that 247 souterrains (247/3,500 or approximately 8% of all recorded souterrains) were excavated on 187 EMAP defined sites in 15 different counties from 1930-2004. The highest concentration of excavated souterrains was in Louth and Meath in North Leinster, Antrim in Ulster and Cork and Kerry in Munster. Very few souterrains were excavated in the historic kingdom of Leinster (Kildare, Wicklow, Carlow, Wexford and parts of Dublin and Offaly) as well as in parts of the west and northwest of the country.
Clinton (2001, 89-95) reviewed the evidence and generally agreed with Warner’s (1986, 11) assertion that “the overwhelming weight of Irish archaeological and historical evidence would place the datable souterrains within the ninth to twelfth century bracket”. The single exception was a souterrain in a ringfort Kiscuane, Co. Cork where charcoal from the construction trench produced “dates that centre on the sixth century” (Clinton 2001, 89). The site, however, had not been published and it is possible that material in the trench may have comprised backfill containing residual material for earlier occupation in the ringfort. Clinton (Ibid. 58) suggested that some souterrains in the south-west of Ireland are earlier than those found-elsewhere on the basis that souterrains are found in association with roundhouses in the south west. He discusses at length association between souterrains and houses of differing forms and it is clear (Ibid. 53-58) that in the north of the country they are
almost exclusively with rectangular houses. The possible single exception, at Downpatrick, Co. Down, is equivocal.

Clinton (Ibid. 45) also made the very important observation that the souterrains in the east of the country in the east of the country tend to be located in unenclosed settlements while the majority in the west tended to be located within ringforts. He has also concluded (Ibid, 203) that there is a growing body of evidence to suggest that many souterrains located within a ringforts are secondary additions. Macalister and Praeger (1931, 75) noted that the souterrain at Togherstown, Co. Meath post-dates the ditch of the ringfort while a similar relationship was observed at Kiltale ringfort, Co. Meath (Rynne 1974, 267). At the later unenclosed phase at Knowth, CO. Meath, many of the souterrains were built across the in filled ditches of the earlier enclosure (Eogan 2007, 3-4). In the cases of ringforts that developed into raised raths such as Rathmullen, Co. Down (Lynn 1982) and Deer Park Farms, Co. Antrim (Hamlin and Lynn 1988) souterrains are absent from ‘ringfort’ phase but present in the later horizons. In most instances it is impossible, on the basis of stratigraphical evidence, to determine if a souterrain is contemporary or later than the enclosure defences. In the case of Ballycatteen, Co. Cork, Ó Riordáin (1943, 41) concluded that the absence of pottery in the vicinity of the souterrains implied that they had to ascribed to a later phase of occupation at the site. Recent unpublished excavations also provide evidence for the secondary nature of souterrains. At Rosepark, Co. Dublin some of the souterrains ran across the ditches of the enclosures (Baker 1999:162; Carroll 2001:334).

Recent excavations have confirmed the association between round house and souterrains in the south of the country. At Bray Head, Valencia, Co Kerry a round house and associated souterrain were present while a souterrain entrance was discovered inside the rear annex of a figure-of-eight building at the cashel of Cathair Fionnúrach, Ballynavenoo, Co. Kerry (Gibbons 1994-97, Exc. Bulletin).

Excavated Souterrains associations with EMAP categories

A total of 186 EMAP defined ‘sites’ were found to contain or be located immediately adjacent to the 247 souterrains.

- 93 (50%) excavated sites revealed one or a number of adjacent souterrains with no associated early medieval enclosure.
- Souterrains associated with settlement enclosure sites (e.g. ringforts, enclosures & cemetery/settlements) comprised 74 or 40% of EMAP defined sites.
- 19 sites contained excavations of ecclesiastical complexes that also revealed excavated souterrains within or immediately outside the settlements. They constituted 10% of excavated sites.

<table>
<thead>
<tr>
<th>Site Category</th>
<th>Quantity</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecclesiastical</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>Settlement Enclosure</td>
<td>74</td>
<td>40</td>
</tr>
<tr>
<td>Unenclosed</td>
<td>93</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>186</td>
<td>100</td>
</tr>
</tbody>
</table>
Excavated Souterrain Associations 1930-2004

Figure 3:4 Excavated Souterrains 1930-2004 and associations with EMAP Categories

Excavated Souterrains 1930-2004 and associations with EMAP Site Types

The 247 excavated souterrains were found in a range of contexts described in table 3:9. 80 excavated souterrains (42%) revealed no evidence for associated enclosures or other early medieval archaeological evidence. This does not preclude the possibility that this archaeological evidence does not exist in the vicinity of the souterrain(s) because it is clear that the monument itself was the sole archaeological focus of many excavations. 9 EMAP sites (5%) excavated souterrains and associated early medieval unenclosed habitation sites, primarily in the form of buildings and structures (See Rural unenclosed settlement section below for discussion). A number of other souterrain sites (2%) revealed evidence for associated field banks, ditches and pits and examples include Dromiskin (Halpin 1988:45), Mell 3 (Keeley 2000:0696) and Marshes Upper (Mossop 2002:1335), all in Co. Louth.

A total of 45 or 24% of excavated souterrains between 1930-2004 were found to be associated with ringfort settlement sites. A total of 7 of these sites were located within raised/platform ringfort sites. Examples of ringforts associated with souterrains include Shane’s Castle, Co. Antrim (Warhurst 1971), Lackan, Multyfarnham, Co. Westmeath (Desmond 1999:872) and Letterkeen, Co. Mayo (Ó Riordáin 1951-52). Examples of raised and platform ringforts with associated souterrains include Rathmullan Lower, Co. Down (Lynn 1981-82) and Meadowbanks Rath, Jordanstown, Co. Antrim (Halpin & Crothers 1995:007). Other contexts which souterrains have been uncovered include inside the cashels of White Fort, Drumaroad, Co. Down (Waterman 1953) and Leacanabuaile, Co. Kerry (Ó Riordáin & Foy 1941), the imposing stone walls of Cahercommaun Fort, Co. Clare (Hencken 1938), the promontory fort at Dunbeg, Co. Kerry (Barry 1981) and with a number of potential non-circular shaped enclosure complexes at Ballynacarriga I & II, Co. Cork (Noonan 2001:115 & 2001:116) and Rosepark, Ballyhoura, Co. Dublin (Baker 1999:162; Carroll 2001:334). Both these latter sites were associated with early medieval cereal drying kilns. Another significant enclosure complex containing a ringfort and a number of related enclosures, a large collection of cereal-drying kilns and a souterrain cut was excavated at Colp West, Co. Meath in 2000 and 2001 (Murphy 2000:0748; Clarke and Murphy 2001:952). The site dated to the Late Iron Age and early medieval periods.

Souterrains have been excavated in a range of early medieval burial contexts. Excavations at Boolies Little, Co. Meath revealed a souterrain that was constructed after an early medieval stone/slab-lined cemetery fell out of use (Sweetman 1982-83). A souterrain was also excavated adjacent to an early medieval lintelled cemetery at Rampark, Co. Louth (Campbell 2004:1122). Evidence for a small iron-smelting(?) furnace and a kiln of uncertain use were
also uncovered. An enclosure associated with a small souterrain and an early cemetery was excavated at Kiltale, Co. Meath (Rynne 1974). Souterrains have been identified on a number of other potential cemetery/settlement sites including Ninch, Laytown, Co. Meath (McConway 2001:1007;2002:1489), Raystown 21, Co. Meath (Cotter 2003:1459; Halliday 2003:1460; Seaver 2004:1334) and Balriggan, Co. Louth (Delaney 2002:1295; 2003:1226). Evidence for arable production in the form of corn-drying kilns was also identified on both sites while Raystown also uncovered a significant milling complex. Two excavated souterrains at Millockstown Co. Meath were associated with a large enclosure and lintelled cemetery which the excavator, Conleth Manning, suggested succeeded an earlier ringfort settlement.

Souterrains have also been associated with ecclesiastical sites. Clinton (2001, 48, 49 & 50) has noted that souterrains have been discovered at a number of sites including Templebryan North, Co. Cork, Meelick, Co., Mayo (Raftery, Joseph 1967) and Kiltiernan East, Co. Galway (Westropp 1919, 178). The EMAP survey identified that 17 ecclesiastical sites revealed excavated souterrains between 1930-2004. Examples of ecclesiastical sites include Turraloskin, Co. Antrim (Brannon 1977-79:0008), Ballywiheen (McCarthy 1998:266) and Reask, Co. Kerry (Fanning 1981) and a possible timber souterrain at Cathedral Hill, Downpatrick, Co. Down (Brannon 1987:12). Further research will be required to identify whether a small number of these 17 excavated souterrains were clearly associated with adjacent ecclesiastical complexes.

Table 3:9 Excavated Souterrains and associated Site Types 1930-2004

<table>
<thead>
<tr>
<th>Souterrain Association</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cashel</td>
<td>7</td>
</tr>
<tr>
<td>Cemetery</td>
<td>2</td>
</tr>
<tr>
<td>Cemetery/Settlement Site</td>
<td>5</td>
</tr>
<tr>
<td>Ecclesiastical Site</td>
<td>17</td>
</tr>
<tr>
<td>Enclosure</td>
<td>16</td>
</tr>
<tr>
<td>Field Bank/Ditch</td>
<td>4</td>
</tr>
<tr>
<td>Isolated Souterrain</td>
<td>80</td>
</tr>
<tr>
<td>Promontory Fort</td>
<td>1</td>
</tr>
<tr>
<td>Raised/Platform</td>
<td>7</td>
</tr>
<tr>
<td>Ringfort</td>
<td>38</td>
</tr>
<tr>
<td>Unenclosed habitation Site</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total EMAP Sites</strong></td>
<td><strong>186</strong></td>
</tr>
</tbody>
</table>

Excavated Souterrain Contexts 1930-2004
Clinton (2001, 94) has noted that souterrains appear late in the sequence in known multi-phase sites such as Deer Park Farms, Co. Antrim and Rathmullan, Co. Down. Excavations at Letterkeen, Co. Mayo (Ó Riordáin & McDermott 1951-2, 100) had earlier suggested that souterrains post-dated the initial settlement phase (Clinton 2001, 47), and other such examples were found at Millockstown, Co. Louth (Manning 1986), Nínch, Laytown, Co. Meath (Eogan & Reid 2000, 2001 & 2002), Raystown, Co. Meath (Seaver 2006), and Rosepark, Balrothery, Co. Dublin (Swan & Carroll 1999 & 2000; Baker 1999:162). It is likely that many more sites will display a similar chronology when further details are given in reports about the relationship between souterrains and the associated ringfort.

It is unclear, however, whether the souterrains represent subsequent unenclosed settlements built on the site of abandoned ringforts, or whether they were constructed in direct association with inhabited ringforts. Clinton (2001, 46 & 203) has noted that the souterrains at Knowth - dating to the ninth and tenth centuries A.D. - post-dated the enclosed phase of the Early Medieval settlement at Knowth. The ninth and tenth century settlement at this royal site produced nine souterrains - all associated with rectangular houses - and was described by George Eogan as an ‘unenclosed village’.

Early Medieval Unenclosed Settlements

Background

In the early medieval period, not everybody lived within enclosures. The extent, character and scale of unenclosed settlement during the Early Medieval period is likely to have varied due to different political, industrial, economic, agricultural and social developments. There are few well-investigated unenclosed sites, and the chance discovery of an isolated souterrain is often the only evidence for a possible Early Medieval unenclosed settlement (Edwards 1990, 46). The role and function of Early Medieval unenclosed settlements is thus poorly understood, and they are generally not included in Early Medieval settlement models which tend to be dominated by ringforts (e.g. Stout 1997).

Ringforts are generally interpreted as the occupation sites of either the ‘nemed’ (privileged grades - i.e. the noble and royal grades) or the ‘sóer’ (free grades; i.e. from small farmer upwards) (Kelly 1988, 9; Edwards 1990; Mallory & McNeill 1991; Mytum 1992; Graham 1993; Stout 1997; Charles-Edwards 2000; Seaver 2005). Interpretative models therefore are forged on the perceived interaction between these classes and grades as indicated by the disposition of ringforts. Such grades, however, could only have made up a small percentage of the total population. The ‘fuidir’ (free) and ‘dóer’ (semi-free) must have formed a considerable portion of the population. There must also have been large numbers of slaves, including both ‘mug’ (male slaves) and cumal (female slaves) (Kelly 1988, 9-11). These peoples tend to be overlooked in most settlement models. It has been suggests that the mass of the population lived in small nucleated settlements somewhat similar to the clachans that survived in many parts of western Ireland until the twentieth century (Edwards 1990, 47). Although clachans would appear to be a later medieval, or even post-medieval, settlement type, a small cluster of houses dated to the Early Medieval period has been discovered at Grange West, Co. Sligo (Burenhult 1984), suggesting that there may also be earlier examples.

It is possible that, if enclosed settlements were the defining hallmark of a free-man c. 500 – c. 900, then contemporary unenclosed settlements may have been the sites of the un-free, dependant labourers or the socially marginalised. A number of unenclosed sites, however,
pre-date or post-date the centuries of ringfort construction and occupation, and it is possible that they fulfilled some other social role or function. The evidence for unenclosed settlements principally comes from isolated souterrains and souterrains with associated structures. The chronology of souterrains has already been discussed, and thus these sites would appear to date either to the end of the ringfort occupation period, or subsequent to it. Other evidence for unenclosed settlements comes from unenclosed settlement sites with no associated souterrains, unenclosed settlement sites within field systems and coastal habitations sites.

A list of unenclosed settlement sites is given within Appendix 2. A total of 45 isolated souterrain sites, 32 unenclosed habitation sites and 5 coastal habitation sites were found in a variety of contexts and are listed in the appendixes for excavated sites 1940-2004.

**Unenclosed Early Medieval Buildings**

A large number of early medieval sites have been excavated in recent years and have revealed evidence for unenclosed early medieval buildings with a range of artefact assemblages (See Appendix – ‘Unenclosed Settlement Sites’). Industrial activity appears to have been undertaken on a few of these sites.

Excavations at Platin, Co. Meath revealed two circular unenclosed buildings - one 10m in diameter, the other 15m (Lynch 2001 & 2001). Foundation trenches of the smaller structure yielded glass beads, crucible fragments, tuyère fragments and iron objects. Two parallel gullies revealed burning and iron slag and may have formed the industrial centre associated with the occupation site.

Excavations at Ballyvollen, Co. Antrim revealed an occupation surface rich containing charcoal, souterrain ware pottery, flint, 170 kg of iron slag and a range of iron objects including a nail, a punch and three tuyeres (Williams 1985). Radiocarbon dating suggested that the site was occupied in the 7th century A.D. It was suggested that a small number of features at the site may represent the remains of a simple irregular structure, some 5m in diameter. The site appears to have been unenclosed and may have been engaged in specialised iron working activities.

Excavations at Kilkenny Castle, Co. Kilkenny revealed a twelfth century pre-castle level (Murtagh 1991 & 1992). A sod-built structure, containing a central hearth and the remains of a small furnace to the west, was found beneath the castle. Iron and bronze working debris were found associated with this structure. A hearth and a furnace bottom were found a short distance away from an unenclosed roundhouse at Cloghlucas South, Co. Cork (Gowen 1986; Gowen 1988).

Like the unenclosed souterrain sites, there is evidence for the processing of grain on these sites. Excavations at Cloghlucas South, Co. Cork uncovered a rotary quern stone; and the Early Medieval roundhouses under Maynooth Castle, Co. Kildare (Hayden 1996; Hayden 1999) appears to have been contemporary with a cultivation phase marked by regularly spaced furrows. Seeds and grains were discovered at the Early Medieval roundhouse at Drumadonnell, Co. Down (McSparron 1999), with oats and barley being the dominant types.

These sites, however, show far greater evidence for occupation than the unenclosed souterrain sites. The structures on these sites do not appear to conform to any uniform pattern, and are found in various shapes and sizes. At Kilkenny Castle, local cooking-ware shards were found associated with the rectangular sod-built structure; and souterrain ware and burnt domestic animal bone – predominantly cattle and sheep – were found at the roundhouse in Drumadonnell. The occupation hearths from the latter site returned radiocarbon dates calibrated to A.D. 705 - 1005 and A.D. 680 - 980.
McSparron’s (2004:0078) excavations at Terryhoogan, Co. Antrim uncovered a large circular gully approximately 0.7m wide and up to 0.4m deep, with a diameter averaging 8m internally and 9.4m externally. Two other small curving gullies may have joined together outside the area of excavation and, possibly formed an annex to the main gully. The fill of the circular gully contained souterrain ware-type pottery, iron slag and corroded iron objects. No evidence for structural timber or wicker was found inside the large circular gully. It was suggested that it could however have been a drain or drip channel around an early medieval round house. The other two curving gullies may have been a drain around an annex to the main round house. A linear ditch, also containing souterrain ware and which extended along the south of the site cut one of the gullies. The linear ditch also contained souterrain ware. An elongated pit, 1.4m by 0.8m and 0.35m deep, was found approximately 4m to the north of the circular gully.

Excavations close to Murgasty Church, Co. Tipperary revealed an unenclosed circular hut site, 4m in diameter (Cummins 1998:626). The site had been extensively disturbed by post medieval cultivation. The hut was surrounded by a narrow gully, 0.2-0.5m wide and 0.2m deep, which contained no clearly identifiable post-holes or stake-holes. A hearth and a number of small post holes and stake-holes of no clear pattern were excavated in the interior of the hut. A fragment of a jet/lignite bracelet was uncovered inside one of two shallow pits in the northeast corner of the hut.

Excavations at Ballycullen/Oldcourt, Co. Dublin (Larsson 2002) exposed a semicircular ditch measuring 10.2m east-west by 4.5m. This was interpreted as a possible slot-trench of a house, and a metalled surface containing six post and stake holes was interpreted as a possible entranceway for the structure. The fills of the ditch were found to contain burnt and un-burnt bone, and an internal hearth was also identified. The excavation at Blackhills Lower, Co. Cavan (McConway 1992) revealed two curving gullies (13.2m x 10.6m) and four pits (two of which revealed evidence for in situ burning and could represent hearths). Although flint scrapers were recovered from the topsoil and Bronze Age pottery sherds were recovered from one of the pits, radiocarbon dates from one of the charcoal filled gullies returned dates of A.D. 890-895 and A.D. 1278-1294 so it appears that the structure may have been Early Medieval.

The structures at Ballycullen and Blackhill Lower appear to have been quite large, however smaller structures also appear to have been utilised, for example a circular hut, 4m in diameter, was excavated at Moorgate, Co. (Hodkinson & Cummins 1999). A hearth was located in the centre of the hut, and post holes and stake holes were also located inside the hut. In the northeast corner of the hut, two shallow pits were excavated, one of which contained a jet or lignite bracelet. Two Early Medieval post-and-wattle round houses, approximately 5m in diameter, with associated hearths were also excavated at Maynooth Castle, Co. Kildare. Other shapes were also used. A trapezoidal stonewalled structure (3.4m x 2.8m internally) was discovered at the Early Medieval conjoined clochan at Coarha Beg, Valentia Island, Co. Kerry (Hayden 1994); two further rectangular stonewalled cells were annexed to it. A stone-lined hearth was excavated in the interior, and blue-glass beads, stone spindle whorls and rubbing stones were found within this structure. An occupation date between A.D. 562 and A.D. 758 AD was returned for this structure.

Some upland hut-sites also seem to fall within this category of unenclosed Early Medieval settlements. A circular hut defined by a collapsed wall of rough fieldstones, 0.8-1.4m wide, was excavated in the Barrees Valley, Co. Cork (O’Brien 2002:0174). No interior features were found and the only find consisted of a solitary Early Medieval multi-coloured glass bead. Two small charcoal deposits found underneath the wall stones were radiocarbon dated to 1380 ± 40 BP (GrN-28303), calibrated to the seventh and early eighth century A.D., and similar to the expected date range for the bead. A D-shaped stonewall structure (4.8m by 2.7m internally) was also excavated, and a charcoal spread dated this to A.D. 1044-1212 A.D. Excavations were conducted on two hut sites at Carrignamuck on the west sides of the Wicklow mountains (Brindley 1977-79). Site A consisted of two circular, conjoined structures,
with traces of a possible third hut to the southeast. No evidence of habitation was uncovered except for a horse scapula. Site B lay a quarter of a mile to the east of Site A and consisted of a level platform with a semicircle of dry stone wall. No occupation evidence was found. Excavations were also undertaken on a clachan situated on the southern slopes of Mt Eagle, near the western tip of the Dingle Peninsula. No early finds were discovered (Bennett 1989).

**Early Medieval Unenclosed Settlements associated with Field systems**

Excavations and archaeological surveys at a number of sites have produced evidence for unenclosed Early Medieval settlement associated with contemporary fields. These tend to survive in upland areas, stony areas, or other areas of poorer soil quality. A field pattern with associated settlements was excavated on a terrace at ‘The Spectacles’ overlooking Lough Gur in Co. Limerick (Ó Riordáin 1949). Two early medieval roundhouses - one relatively substantial and built of stone walls with a paved doorway and porch feature - and a rectangular house were located within four small rectangular fields that may have been used as gardens. A series of larger fields and a semi-circular enclosure was located further up the hillside and may have been the location where the livestock was pastured.

A number of *clochan*, some conjoined and associated with souterrains, were discovered at Ballynaveooragh within an elaborate pattern of fields on the uncultivated slopes of Mount Brandon, Co. Kerry (Coyne 2006). A complex of fields, with eight houses dated to two phases, was excavated at Beginish Island, also in Co. Kerry (Kelly, 1956). In one house, dating to the second phase, a rune-inscribed slab had been re-used as a roofing lintel, suggesting the structure dated to a period after the coming of the Vikings (Edwards 1990, 47).

Upwards of 23 sub-circular hut sites were surveyed at Ballyutoag, on the northwest slopes of the Belfast Mountains (Williams 1984). The site consisted of two large conjoined curvilinear enclosures with a group of circular hut platforms around the perimeter, a series of adjacent fields and a third smaller enclosure to the north. It has been estimated that the site could have housed upwards of 100 people. The excavated huts largely date to the eighth century A.D., and the site has been interpreted as a possible Early Medieval transhumance village. Similar Early Medieval upland sites in Co. Antrim have also been discovered at Browndod, Killylane and Tildarg (Williams 1983, 239-245).

Four souterrains, as well as field banks of several phases, were discovered at Kilcarn, Athlumney, Co. Meath (Sullivan 1997). Domestic use was indicated by the large quantities of animal bone, two hearths, and other artefacts (i.e. two bone pins, a glass bead, a lignite bracelet fragment, a bone bead, lithics and metal artefacts) found on site.

Excavations at Carrigoran, Co. Clare (Reilly, Breen & Quinn 1998-2000) have shown a more complex pattern of settlement and fields. The first Early Medieval phase consisted of a series of pits, posts and stake holes. Some of the remains have been interpreted as the remains of a hipped-roof building cut into the ground; an oval structure, supported by a central post, has been identified; and another structure has been inferred from the presence of a curvilinear gully. Eight pits containing charred remains were uncovered, and these may have been used as storage pits or waste pits for cereal grain. A fragment of a rotary quern was also discovered, and three other pits have been interpreted as potential hearths. The site appears to have been abandoned before being re-occupied later in the early medieval period (a ‘Class E’ bone comb, dating to the ninth/tenth century A.D. was found in this phase). It is only in this later phase that small stone-walls and ditched fields were constructed, some of which may have been associated with cereal cultivation. Although there is less evidence for occupation than in the earlier phase, the presence of metal slag and hearths/furnaces provides evidence for smelting and smithing on site during the latter centuries of the first millennium.
These unenclosed settlements associated with field patterns generally appear to belong to the end of the first millennium. A set of rectangular fields and a souterrain - radiocarbon dated to A.D. 405-690 – from Marshes Upper, Co. Louth (Mossop 2002), however, suggests that many of these sites may have been contemporary with, rather than later than, ringforts.

Unenclosed settlements with no surface trace? Souterrains with - and without - associated buildings

Evidence for Early Medieval unenclosed settlement has also come about in the form of the discovery of isolated souterrains (See Appendix on Souterrains) that seem to be associated with some type of settlement or occupation activity. A total of 80/186 or 42% of excavated sites from 1930-2004 revealed souterrains with no associated enclosures, banks/ditches or structures and have been listed above. On occasion, this may have been because a sufficiently large area was excavated to identify enclosure features, but there are plenty of examples where there clearly was no enclosure in the vicinity.

Excavations occasionally recovered evidence for industrial activity or craft-working at these sites. At Ballyknee, Spiddal, Co. Meath (Eogan 1988) two souterrains produced a bronze mount, a single-edged comb, piece of iron and a bronze pin; iron slag and bone combs were also found at a souterrain in Magheramenagh, Co. Londonderry (Reilly 19**). Excavations at Mell 3 (Breen 2000) produced a bronze mount with openwork interlace, and other industrial or craft working refuse such as iron slag and animal bone, as well as a spindle whorl, a lignite bracelet and a blue glass bead.

As discussed above, a large number of the sites in which souterrains have been excavated have uncovered evidence for arable production primarily in the form of cereal-drying kilns. Material associated with arable farming has also been recovered from a large number of isolated souterrains. An undated iron ploughshare was found at Boolies Little, Co. Meath (Sweetman 1982-83), and a ploughshare and coulter were apparently deliberately deposited near the entrance to an unenclosed souterrain at Faughart Lower, Co. Louth (Niall Roycroft pers. comm.). Harvesting tools have also been discovered, for example a sickle dated to the Early Medieval period was recovered at an isolated souterrain at Beaufort, Co. Kerry (Connolly 1995). The bulk of the evidence for arable farming, however, comes from the processing items discovered. Quern stones were found at Spittle Quarter, Co. Antrim (Brannon 1990), Ballyknee, Spiddal, Co. Meath (Eogan 1988), Kill, Co. Kerry (Cahill 1988), Randalstown, Co. Meath (Campbell 1986), Bishops Court, Co. Down (Lynn 1973), and Farrandreg, Co. Louth (Murphy 1998). Excavations at Slievemore, Achill exposed an undated corn-drying kiln and possible souterrain (McDonald 1995, 1998 & 1999), and a souterrain at Ballygalley, Co. Antrim (Farrimond 2002) revealed an adjacent corn-drying kiln which may also be Early Medieval in date.

There is limited evidence for domestic use. The eponymous souterrain ware pottery has been recovered at a number of these unenclosed sites, e.g. Ballyboley, Co. Antrim and Magheramenagh, Co. Londonderry. The limited distribution of souterrain ware restricts the number of sites it is found on, and it is possible that the souterrains were used as storehouses, not dwelling houses. Bone combs, spindle whorls and lignite bracelets may also indicate occupation, but are equally likely to indicate industrial activity. While this is only a very preliminary sketch of the associated material-culture found at souterrains, it nevertheless suggests that crop cultivation and cereal storage may have been an important activity at these sites.

EMAPs survey has revealed eight examples where souterrains, not associated with any enclosures, appear to have been located adjacent to potential early medieval buildings. At Craig Hill, Co. Antrim (Waterman 1956, 87) a single rectangular house was associated with a souterrain. A further stone built rectangular house associated with a souterrain was excavated at Antiville, Co. Antrim (Waterman 1971, 65). The site was enclosed by an
unusually low (0.45m deep on the east side) but wide (4.5m) wide ditch. Both the shape of the house and the presence of the souterrain suggest that both Craig Hill and Antiville belong to the latter centuries of the first millennium, possibly post-dating the ringfort-building phase.

Excavations over a number of years from 1993-2001 at Bray Head, Valentia Island, Co. Kerry by Alan Hayden (1997:231; 1998:267; 1999:324; 2000:0423) and Claire Walsh (1995:132; 1997:230) have uncovered an important unenclosed early medieval settlement dating from the 6th-13th century A.D. The site was associated with enclosed field systems and an early medieval cereal-drying kiln. Five rectangular houses overlaying four round houses, one of which contained a souterrain were also excavated. Excavations at Smithstown, Co. Meath (Gowen 1988) have also revealed four souterrains to the south of a series of gullies suggestive of buildings. A possible keyhole kiln was excavated nearby. Excavations at other sites at Farrandreg, Co. Louth (Bolger 2000), Randalstown, Co. Meath (Campbell 1985), Sheepland Mor, Co. Down (Rees-Jones 1971), Marshes Upper (Gosling 1984 & 1985), Tullygarley, Co. Antrim (McQuillan & Long 1999) and Markstown, Co. Antrim (McSparron 2001) revealed possible structures outside or near souterrain entrances. The shape of the structures could not be established from the excavations bulletin reports. Further research will be required in this area.

**Early Medieval Unenclosed Coastal Occupation Sites (Shell Middens)**

**Background**

There is emerging evidence for Early Medieval settlement and industrial evidence in coastal locations. Some of these sites are clearly associated with shell middens situated along the dunes at the edge of the sea shore (O'Sullivan & Breen 2007, 116). There is currently a lack of understanding about the character and role of these coastal habitation sites as they were primarily used by the people ‘outside history’ (ibid.). Excavations in recent years have examined a number of shell middens and have found that many contain Early Medieval evidence often in the form of surfaces, hearths, middens and occasionally structures.

**Excavations of Early Medieval Coastal Occupation Sites and Shell Middens, 1930-2004**

The EMAP survey has recorded 34 sites that have revealed shell middens within its database. They were excavated within a diverse range of contexts on ecclesiastical sites, ringforts and cashels, crannogs, inside the Viking towns or in isolated contexts. All these sites however were located in some proximity to coast or river. The majority of these middens are undated and some are likely not to be early medieval in date.

A coastal habitation site excavated at Rabbit Valley, Ballybunion, Co. Kerry found extensive shell middens (McCarthy 1986) while a stone pavement, hearth and line of stake holes was discovered at the latter. The author suggested that the former might have been associated with the nearby early medieval monastery while the latter could date to the Iron Age/early medieval period. A shell midden at Dog’s Bay, Roundstone, Co. Galway containing the bones of ox, sheep, pig and grey seal was investigated in July 1944 (O’Rourke 1945). The site had previously been examined by a number of antiquarians including F.G. Bigger who had reported the presence of shells of dog whelk, periwinkle, limpet, oyster and mussel, the remains of a hearth and the stone foundations of a possible hut at the site. Two early medieval ringed pins were also recovered inside the shell midden by antiquarians (O’Rourke 1945).
Two early medieval sites were examined at Doonloughan, Co. Galway as part of a QUB research project (McCormick & Murray 1997). The first site was dated to A.D. 723-889 and was marked by an eroding horizon of interwoven charred wood and straw, suggestive of a wickerwork structure nearby. Two pits containing a vertical burnt post were also uncovered. An unidentifiable oxidised iron object and a copper penannular brooch were discovered. The second site was an incomplete circular stone hut, from which a broken blue glass bead, two worked bone pins, a broken blue bead, and a fish bone were recovered. Broken dog whelp shells were also discovered suggesting the production of purple dye at the site. Excavations in the townlands of Truska, Manninmore and Manni nbeg at False Bay to the northwest of Ballyconneely revealed further shell middens which predominantly dated to the Bronze Age although some examples did date to later (potential Early Medieval) periods (McCormick 1992). Early Medieval shell middens were also excavated at Grange West, Carrowkeel, Co. Sligo (Goran Burenhult 1988). The site consisted of a platform site that was adjacent to the coast and returned a date of A.D. 790-900.

Early medieval coastal middens have also been found on the north coast. Excavations undertaken on a midden at Minnis North, Co. Antrim (Simpson & Conway 1991) revealed three sherds of Early Medieval pottery - two souterrain ware and one everted rim ware. The pelvis and legs of a female were also found in the midden, which produced a calibrated radiocarbon date of A.D. 681-826. An un-associated bone pin also found in the midden was of a type found on a number of Early Medieval sites including Lagore Crannog. Although there are a number of Early Christian artefacts, the midden appears to date from the Neolithic right through to the Early Medieval period.

An early medieval shell midden was excavated at Oughtymore, Co. Londonderry (Mallory & Woodman, 1984). The excavation revealed a huge quantity of shells, mammal bones, fish and bird bones, as well as souterrain ware sherds, two fragments of a decorated bone comb, a portion of an antler ring, an antler spindle whorl, one fragment of a blue glass bracelet and one fragment of a lignite bracelet. Material from the midden was radiocarbon dated to A.D. 665± 45, and there are a number of other potentially Early Medieval middens recorded nearby in the Magilligan peninsula.

A significant early medieval shell midden was uncovered below the bank of the promontory fort on Dalkey Island, Co. Dublin (Liversage 1967-68). Amphora sherds and three bronze pins were recovered in this feature. A house, midden and hearth were subsequently constructed after the promontory fort. The excavation also uncovered evidence for a sherds of B, E and Samian ware at the site indicating that it may have been a significant trading port in the early medieval period (See Doyle 1998).

A possible early medieval stone circular building, built partially of dry stone masonry and dated no earlier than the Iron Age, was excavated in the townland of Glanafeen, Co. Cork overlooking the shallow arm of Lough Ine in August 1953 (Ó Cuileanáin 1955). The excavations uncovered an elaborately built flue and hearth. It was suggested that the number of furnace bottoms, tuyère fragments and furnace lining at the site must support the view that a furnace was erected over the flue. No evidence for domestic occupation in the form of animal bone or domestic finds was revealed. The site appears to represent an unenclosed coastal site of uncertain date associated with the ironworking.

A site in the sand hills at Ballymacrea Lower, Portrush, Co. Antrim was excavated in May 1962 (Flanagan 1966). Two patches of compacted sand associated with occupation debris were discovered. A cluster of basalt boulders may have constituted the wall-footings for a house structure. Charcoal, bone, iron slag, and a number of sherds of souterrain ware were recovered from the site.

An important early medieval coastal habitation site was excavated at Dooey, Co. Donegal (Ó Riordáin & Rynne 1961; Edwards 1990, 46; O'Sullivan & Breen 2007, 119). The earliest phase revealed habitation evidence and fireplaces. The site was the defined by a shallow curvilinear
ditch. Iron objects, cast bronze brooches, pins and worked bone and antler were recovered in Phase 3, suggesting that metal working may have been taking place on site during at this time. The site was later reused as a burial ground in the eleventh century A.D.

O'Sullivan & Breen (2007, 118) have noted that there can be a temptation to interpret these sites as the location place of the homes of the poor and landless. Early Medieval coastal sites appear to be predominantly domestic in nature, and it is possible that rising population during the period in which crannogs and ringforts were occupied may have forced some communities to the margins along the coast (McCormick & Murray 2007). Some sites, such as Doonloughan and Dooey, may have played a specific industrial role which meant that they had to be located on the coast. The number of dog whelk shells discovered at these sites supports the idea that they were associated with the production of purple dye (O'Sullivan & Breen 2007, 119). Proximity to trade routers may also have influenced coastal locations. Dooey, for example, is placed on the North Atlantic seaways, and has been interpreted as the manufactory of a high-status smith (ibid.).

**Early Medieval Occupations in Caves**

**Background**

An intriguing range of evidence exists for the use of caves in the early medieval period, sometimes for occupation, occasionally for burial and perhaps even for the ritualistic deposition of objects. A survey of the artefactual evidence from caves was first undertaken by Coleman (1947). Early medieval artefacts were recovered from a number of sites including Kilgreany, Co. Waterford, Edenvale, Co. Clare, Keshcorran, Co. Sligo, Cushendall, Co. Sligo and potentially Carrigagour, Co. Cork (Coleman 1947). Excavations were undertaken at a cave site in Carrigmurrish, Co. Waterford. The cave was located beneath a limestone knoll that was crowned by a site described as a ‘Bronze Age fort’ (ringfort?). Finds from the cave included combs, spindle whorls, whetstones, jet and iron fragments, all of which may possibly be ascribed to the Early Medieval period. Excavations by Coleman at a cave at Middleton in 1943 also revealed an Early Medieval habitation layer. Bone spindle whorls, beads, pins, iron artefacts, needles and other domestic items were the principal objects recovered from these sites, all of which may be dated to the Early Medieval period.

The material remains from the excavations at Kilgreany Cave, Co. Waterford, undertaken by Hallam Movius in 1928 and 1934 (Movius 1935) have been recently re-examined (Dowd 2002). A sequence of activity from the Neolithic to post medieval period was revealed. The Early Medieval period was represented by Phase IV, and hearths, whetstones, spindle whorls, a tanged iron knife, bone points, worked bone, rotary quern and a bone needle belonged to this phase. A number of personal items were found including a bronze baluster-headed ringed pin, a bone pin with a decorated bead, a ringed pin, a lignite bracelet, and an eleventh/twelfth century gaming piece as well as a double-edged bone comb. Similar bone combs have been dated from the fifth to the tenth centuries A.D. and similar bone combs have been found in nearby caves at Carrigmurrish and Ballynameelagh, Co. Waterford. A fragment of a possible eighth century bell-shrine was also recovered.

Kilgreany Cave is located 10km from the coast, yet a large collection of periwinkle, cockle, mussel, oyster and scallop shells were found inside it. These shellfish appear to have been collected from the seashore and consumed inside the cave. It was suggested by Dowd (2002) that the evidence was not indicative of a person of low status. The presence of three hearths indicates that people were actually living in the cave in the early medieval period; and the artefactual evidence suggests that a range of activities were undertaken at the site including textile manufacture and food preparation.
Early medieval cave excavations, 1930-2004

A cave at Park North, Midleton was also excavated in the summer of 1942 by Coleman. A number of finds including a bone needle, two bone pins, decorated bone comb handle, spindle whorl, two whetstones, hammer stone, small tanged knife, three right angled fragments of silvered bronze, some corroded bronze fragments and a decorated bronze bar possibly belonging to part of a mounting for an early medieval shrine were recovered. It was suggested that the habitation surface dated to the 8/9th century A.D. (Coleman 1942).

At Cloghermore, Co. Kerry, a cave whose entrance was situated inside a D-shaped enclosure has recently been revealed to have had early medieval activity within it (Connolly 1999). Large quantities of disarticulated human bone and animal bone, as well as amber beads, ring-pins, spindle whorls, bone gaming pieces, iron fragments, worked bone, whetstones, pieces of bone combs and a loop headed ring pin were discovered. The disarticulated remains of a child and female were also discovered near the entrance inside the cave. It is possible that the D-shaped enclosure was contemporary with the Early medieval occupation of the cave and that the cave was used *qua* souterrain in this period.

At Dunmore Cave, Co. Kilkenny, nine silver Viking coins dating to around AD 928, were found during excavations in 1973 (Drew and Huddart 1980, 17). A possible late 10th-century hoard including fourteen Anglo-Saxon silver pennies, a silver penannular arm-ring, hack silver, strap tags and sixteen conical-shaped objects woven from silver wire was also discovered at the site in 1999 (Wallace and Ó Floinn 2002, 223). Further excavations were undertaken at the site in 2004 by Marion Dowd in advance of the installation of a new lighting system and uncovered evidence for a shale/lignite bracelet fragment, two bronze ringed pins, a blue glass bead and human skeletal remains (Dowd 2004:0914). It is often believed that the Dunmore Caves are that of the site of *Derc Ferna* within which the Irish Annals record a Viking massacre for the year AD 928 or AD 930 (Dowd 2004:0914).

Conclusions

There is now a large corpus of evidence available for both enclosed and unenclosed early medieval rural settlement sites. Potential new sites have emerged in the archaeological record further highlighting the complicated and diverse nature of settlement across the island during this period. It is evident that the settlement pattern and organization of rural society from A.D. 400-1170 is more complex than previously considered. One major issue is the extent of continuity and change in settlement between the Iron Age and Early Medieval period.

Emerging evidence suggests settlement/cemetery sites may have originated in the Iron Age/Early Medieval transition, however, the chronological development of these sites is not yet fully understood. There are also problems with the typology and morphology of such sites - can *all* these sites as ‘settlement/cemeteries’ and what was their relationship with ringforts and morphologically similar non-circular shaped enclosures?

Non-circular shaped enclosures dating to the second half of the first millennium A.D. have been identified in increasing numbers within the archaeological record. It is still not completely clear if they represent a new settlement type with their own unique origin, or if instead they represent a different way of building a rath, or ringfort. Non-circular shaped enclosures which have been previously described in the archaeological record as ringforts need to be systematically re-evaluated and re-examined to understand how prevalent these sites are and whether they exhibit a particular range of material-culture or convey any distinct preferences for topographical location.
Viking and Hiberno-Norse Settlement, AD 800-1170

Background

The Vikings are first reported in the annals at a raid on Rechru (probably Rathlin Island) in A.D. 795. From the early-ninth century, until the late-twelfth century, they played a significant role in shaping the ethnic, political, economic, social and military development of Ireland. The peoples of Scandinavian origin that lived in Ireland in the ninth and tenth century are generally known as Vikings (or Norse). Those who lived in the eleventh and twelfth centuries have generally been given the description of the ‘Hiberno-Norse’ because they had gradually blended into the Irish political landscape and had converted from pagan to Christian burial and religious practices.

In perhaps the single major contribution of archaeology to the modern Irish sense of identity, the last 20 years has seen the invention and widespread public dissemination of the concept of Vikings in Ireland. Urban renewal developments, particularly in the 1980s and 1990s have transformed our understanding of urban Viking/Hiberno-Norse settlement and burial practices in the towns of Dublin, Waterford, Cork, Limerick and Wexford. In recent years, excavations have also begun to throw up some interesting candidates for Viking rural settlements outside the major towns though the extent and character of Viking rural and coastal settlement is still something of a debate.

Table 3.10 Excavated Viking Sites and Associated Excavation Licenses 1930-2004

<table>
<thead>
<tr>
<th>Viking Activity</th>
<th>EMAP Site</th>
<th>Exc. License</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burial</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Coastal Settlement</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Dyflinarskiri</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Longport</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Urban Cork</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Urban Dublin</td>
<td>37</td>
<td>43</td>
</tr>
<tr>
<td>Urban Limerick</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Urban Waterford</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>Urban Wexford</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>94</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>
Excavations in these five Viking/Hiberno-Norse towns revealed vast quantities of information about craft working, woodworking, industry, trade and commerce, buildings, house plots, town defences and waterfront revetments. Palaeoenvironmental proxies mean that we now have an emerging understanding about the environment, landscape and topography of the developing towns and their hinterlands. We also recognize the role that these towns played within as hubs of trade and commerce along the sea ways of Ireland in the later Early Medieval period.

The reasons and motivations behind the location of Viking settlements is another area of current debate. Many historically recorded ninth century Viking bases were situated on the border of political kingdoms, for example Linn Duachaill - between the territories of the Conaille and Ciannachta - and Dublin - between Southern Brega and Laigin (Ó Floinn 1998, 162). A number of bases, including Ireland’s eye, Scattery Island, Clonaklin and Dublin itself appear to have been established on or adjacent to Early Medieval monastic sites (ibid. 163). It has also been noted recently that Woodstown, Co. Waterford is likely to have been located on the site of a former Early Medieval monastery (O’Sullivan & Breen 2007, 120). Viking burials (See Burial Section) have also been discovered adjacent to a number of ecclesiastical sites including St. Michael le Pole’s and St. Peter’s in Dublin city centre, Finglas, north Co. Dublin and St. John’s Point, Co. Down. This evidence throws up interesting ideas about the interaction and relationship between pagan ninth or tenth century Vikings and the local church authorities.

The **Viking Raiding Period, AD 795-c.900: The Archaeology of the Viking Longphort**

The *longphort* is generally viewed as the earliest form of Viking settlement, though not uncontroversially. The term was first used to describe a Viking defended ship encampment on Lough Neagh in A.D. 840 (Kelly 1998, 13). It has been typically interpreted as a fortified base, often located at the confluence of a river and its tributary, from which the Vikings carried out raids into the neighbouring territories (Ó Floinn 1998, 161).

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**Figure 3:6 Excavated Viking Sites and Associated Excavation Licenses 1930-2004**

Excavated Viking Sites and Licenses 1930-2004

![Graph showing Excavated Viking Sites and Licenses 1930-2004](image)

- **Urban Wexford**
- **Urban Waterford**
- **Urban Limerick**
- **Urban Dublin**
- **Urban Cork**
- **Miscellaneous**
- **Longport**
- **Dyflinarski**
- **Coastal Settlement**
- **Burial**

The *longphort* is generally viewed as the earliest form of Viking settlement, though not uncontroversially. The term was first used to describe a Viking defended ship encampment on Lough Neagh in A.D. 840 (Kelly 1998, 13). It has been typically interpreted as a fortified base, often located at the confluence of a river and its tributary, from which the Vikings carried out raids into the neighbouring territories (Ó Floinn 1998, 161).
There is some form of consensus that the longphort was some type of defended enclosure used by the Scandinavians to establish a temporary or short-term foothold in the Irish countryside during the ninth and early-tenth century A.D. The archaeological identification of these sites however remains highly debated. A number of these sites are historically recorded in the annals in the ninth and tenth centuries A.D, for example Annagassan, Co. Louth, Inbher Dee (Wicklow or Arklow town), Lough Neagh, Linn Duachail, Co. Dublin, Narrow Water and Strangford Lough, Co. Down, Lough Ree on the Shannon and the subsequent Hiberno-Norse towns of Cork and Limerick (Ó Floinn 1998, 162). Kelly and Mass (1995) have further argued that a D-shaped enclosure at Dunrally, Co. Laois on the banks of the River Barrow can be identified as Longphort Rothlaib - ‘the camp of Rodolf’ - which was destroyed in A.D. 860. Kelly and O’Donovan (1998, 13) have suggested that Athlunkard, Co. Limerick can be identified as the site of a longphort due to the discovery of finds from the site and nearby which included a silver weight, spearhead and spear butt.

Excavations at Ballaghkeeran Little, Co. Westmeath (Fanning 1980-84), on the bank of Lough Ree, sought the defended Viking encampment mentioned in the annals from the mid-ninth to the early-tenth century. The earth had been considerably disturbed by subsequent ridge and furrow cultivation, but, upon excavation, a substantial eastern bank was found. Some iron slag and fired clay fragments were found in a cutting made directly south of the promontory in a large banked-up hollow beside the mouth of the River Breenford.

In recent years, excavations have revealed an important Viking longphort at Woodstown, Co. Waterford where a Viking burial, weaponry, decorated weights, silver ingots and other objects were found inside a defended enclosure along the River Suir. Another potential Viking site was excavated at Shandon, Co. Waterford (Murphy & Elder 2000; Dennehy 2001). It was rectangular in shape (90m x 40m) and situated on a coastal promontory. A fine Hiberno-Norse bone trial-motif piece had been discovered earlier during quarrying, leading to speculation that it was the site of a Viking base. Several hearths and a large number of pits containing animal and fish bone in the interior as well as potential middens were identified in excavation. Six oval charcoal pits and an ironworking area with evidence for iron smelting outside the enclosure were excavated. A further line of the rectilinear ditch was excavated and revealed a narrow slot-trench along the inner edge of the ditch, which could possibly indicate a palisade. Finds recovered included iron pins and a copper ingot. The report writer concluded that this site was intermittently visited for fishing during prehistory before becoming an established settlement during the tenth and eleventh centuries A.D. The discovery of a Hiberno-Norse coin, the tenth century Hiberno-Norse bone trial motif, several iron knives, and the proximal end of a whale humerus at the site have been used to identify this site as a Viking longphort.

Gibbons (2004, 23) has highlighted that the archaeological evidence for these settlements is still very slim. Little is yet known about their character, use and form in the ninth and tenth centuries A.D. He has also challenged the identification of Athlunkard as a Viking longphort as he feels that there is no strong place name or archaeological evidence to yet make such an association (Gibbons 2005). There is still a clear lack of understanding - and certainly of agreement - about the role, function and character of ninth century Viking defended ship encampments or longphoirt.

The Archaeology of Ireland’s Hiberno-Norse towns, AD 900-1100

Our EMAP survey of excavations 1930-2004 has found that excavated Viking settlement, industrial and agricultural evidence from the five major Viking towns amounted to 81% (76/94) EMAP defined Viking sites and 91/116 (79%) of excavation licenses containing Viking and potential Viking archaeological evidence. The figures from the five Viking towns exclude excavations of early ecclesiastical sites (e.g. Christchurch in Dublin) which only revealed early ecclesiastical evidence. This percentage illustrates the undoubted significance of these towns in Early Medieval Ireland. It is still not clear whether these figures are also a product of the
large-scale urban excavation projects or represents a reality of the density and distribution of Viking settlement island-wide in the Early Medieval period. Excavations in Dublin followed by Waterford have revealed the most significant archaeological evidence for Viking urban settlement in Ireland. 37/94 or 39% of total excavated Viking sites and 43 of 116 or (37%) of total associated excavation license were situated in Urban Dublin.

**Excavated Viking/Hiberno-Norse Town Defences 1930-2004**

A complete review of the character and scale of urban excavations in Dublin, Wexford, Waterford, Cork and Limerick is beyond the scope of this current iteration of EMAP’s report, but the EMAP database will certainly allow a much closer investigation in future. A provisional survey of the excavated evidence for Viking/Hiberno-Norse town defences and embankments, excavated between 1930-2004, were also established. Both Dublin and Waterford have revealed evidence for successive phases of substantial defences/waterfronts. An undated ditch was excavated at Wexford, while a twelfth century bank was also revealed in Limerick. Table 3:11 and Figure 3:7 illustrate the results.

**Table 3:11 Excavated Viking Town Defences 1930-2004**

<table>
<thead>
<tr>
<th>Hiberno-Norse defences</th>
<th>EMAP Site</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wexford Ditch</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Limerick Bank (12th cent.)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Waterford Ditch1 (Dundory)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Waterford Bank2 (late 11th)</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Waterford Wall 3 (c.1100)</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Waterford Bank4 (c.1150)</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Dublin Bank1 (c.850-925)</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dublin Bank2 (10th cent.)</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Dublin Bank 3 (c.1000)</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Dublin Wall4 (c.1100)</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Dublin Ditch/waterfront</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>52</strong></td>
</tr>
</tbody>
</table>
There is still a whole range of research topics concerning the Viking/Hiberno-Norse towns including the character, shape and development of these settlements. Did these settlements evolve from early longphort sites and what was the extent of urbanization in the ninth century A.D. How did the character of these urban centres evolve from the ninth to twelfth centuries A.D., and what was their relationship with the rural hinterlands. Finally, what is the size and extent of urban settlement at Dublin in comparison to other Viking/Hiberno-Norse towns? These research themes will be the focus of the future studies of EMAP.

We now have a great understanding of the character and physical appearance of urban Viking/Hiberno-Norse towns in Ireland, largely due to the work of Pat Wallace and Linzi Simpson in Dublin and Maurice Hurley in Waterford and Cork, amongst others.

By c. A.D. 914, Viking towns were being established around the coast that served as trading and settlement centres - Dublin, Wexford, Waterford, Cork and Limerick all owe their origins to this period. In the tenth and eleventh century, these towns became the centre of their activity involving international trade and politics. By this stage, the Hiberno-Norse had been assimilated into Irish society, and were very much part of the Irish political scene. The archaeology of Scandinavian and Hiberno-Norse settlement in the tenth and eleventh century is still largely understood in terms of the development of these towns, as might be expected given the quality of archaeological information being produced by recent excavations in Waterford, Wexford, Cork and Dublin.

The Irish annals state that in A.D. 841, a Viking fleet was present at Duib Linn and a longphort was established to raid Leinster and Meath. This longphort was probably a defended enclosure on the river bank, used as a permanent trading base. It may have been located on the River Liffey near Islandbridge-Kilmainham - Viking burials found there in the nineteenth century and the 1930s imply at least the re-use of native Irish cemeteries. Alternatively, the longphort may have been somewhere north of the present location of Dublin castle. Recent archaeological excavations in Dublin have uncovered burials of probable Viking raiders, perhaps even dating before the historically attested longphort. Other excavations in Temple Bar have also located Viking type dwellings dated to ninth century that may represent the longphort settlement itself. In A.D. 902 the early Viking settlement was
apparently sacked by the Irish kings of Brega and Leinster and its inhabitants (or at least the political elite of the settlement) were expelled. The Dublin Vikings appear to have removed themselves to northern England and the Isle of Man after the fall of the longphort.

In A.D. 917, the Norse returned and established the town of Dyflin proper, probably at Duib Linn, somewhere at the confluence of the River Liffey and the Poddle, near Temple Bar. This was an ideal location for a settlement, on high ground overlooking the River Liffey, protected from the south-east by Poddle. It also had access to the river for boats. Although initially located at the east, the town gradually expanded westwards along High Street, so that by the eleventh century it was a large thriving urban settlement, with streets and houses inhabited by a large, ethnically mixed population of traders, craftsmen and slaves.

Dyflin was enclosed within a large earthen bank, topped with post and wattle fence, and there is good archaeological evidence for houses, streets and plot boundaries. It would appear that the town was laid out in an organised, if cramped fashion, following the contours of the hill, possibly according to the instructions of a central regulating authority.

At Fishamble Street, twelve tenement plots can be traced more or less constantly across time, with the occupation of at least 150 different houses over 150 years. Hiberno-Norse Dublin's houses were entered from the street. Each house had vegetable plots, gardens and midden spaces out the back, as well as pig pens, workshops and storehouses. The town was a major centre for craft production, with imported raw materials such as wood, leather, bone, antler, amber and metals used for domestic equipment and high-status goods. It is likely that the townspeople were largely self-sufficient, raising pigs and goats in the back garden, while beef cattle and other agricultural produce were brought in from the surrounding countryside.

There is archaeological evidence that the people of Hiberno-Norse Dublin, Cork and Waterford consumed a lot of fish and shellfish. A marine diet did not seem to feature highly with the native Irish, and recent stable isotope analysis of some Early Medieval human skeletons has hinted at an increased marine diet in Ireland in the Viking Age and Anglo-Norman periods. This is also supported by the archaeological evidence for the increase in use of Early Medieval wooden fish traps on the Shannon estuary and Strangford Lough (and elsewhere around the coastline of Britain) after c. A.D. 1000. Fishing was clearly important at Hiberno-Norse Dublin, as lead line-weights, wooden net-floats and stone sinkers found in excavations indicate fishing using lines and nets from both the shoreline and offshore in boats. Margaret McCarthy's archaeozoological studies of deposits from Dublin, Waterford and Cork confirms this focus on marine species, with bones from hake, cod, ling, plaice and herring all known from these towns. Undoubtedly too, there were wooden fish traps situated along the banks of the river. It is also likely that the Vikings were involved in hunting marine mammals, such as porpoise, whales and seals, and an iron harpoon head found at Fishamble Street was probably used for this purpose. Wildfowl such as teal, duck and mallard were also trapped in the estuarine marshlands.

**Norse rural settlement in Ireland, AD 800-1100**

*The Archaeology of Dyflinarskiri*

It has traditionally been accepted that the best evidence for ninth century Viking rural settlement in Ireland are the few Norse burials on the northeast, west and southwest Irish coastline (Bradley 1995, 10). However, is clear that the discovery of a Viking burial, or indeed Viking stray-find in rural Ireland cannot be directly equated with evidence for Viking settlement as this material-culture can also be a product of trade or imitation on the part of the native Irish. It is also still not clear what role the Scandinavian towns played within the Irish countryside or how and what criteria should be used to identify a Viking settlement outside the urban towns.
The Vikings established a raiding base at Duib Linn about A.D. 841 but it was not long until they were exerting their authority across the regional landscape that would later become known as *Dyflinarskiri* (‘Dublin-shire’). Bradley (1998, 56-65) examined the place-name evidence in the environs of Dublin to reconstruct the potential size and scale of the region and argued that by the twelfth century the Viking-controlled area comprised all of modern county Dublin and parts of counties Wicklow, north Wexford and Kildare. The early extent of *Dyflinarskiri* may also be gauged from annalistic references, for example the *Annals of Ulster* report an outlying Viking settlement at Clondalkin in A.D. 867.

The scope of Viking/Hiberno-Norse regional influence is however still a matter of debate and is likely to have fluctuated over time due to different political and military developments. The character of Viking/Hiberno-Norse settlement in *Dyflinarskiri* is also still highly circumspect and not enough is known yet to reconstruct Scandinavian settlement patterns or their interaction with the local Gaelic communities.

There is scant but nevertheless emerging archaeological evidence for some form of Scandinavian rural settlement in the region. A potential rural Viking settlement was discovered at Cherrywood, Co. Dublin (Ó Neill 1999). The first phase on the site is represented by a ring-ditched enclosure which contained a sixth/seventh century A.D. inhumation cemetery. The second phase consisted of possible Viking longhouses, two accompanying structures and a number of pits. A rectangular pit associated with the two undefined structures contained a decorated whalebone plaque. This type of artefact - dated to the ninth or tenth century - has elsewhere been found associated with burials of Viking women in Ireland and the Hebrides. The form of the buildings as well as the artefactual evidence would suggest that this may have been the location of a rural Viking settlement.

Excavations at Ninch, Laytown, Co. Meath (Eogan, Reid & McConway 2000-2) revealed a highly complex multi-phase settlement dating from the fourth to twelfth century A.D (See Settlement/Cemetery Section). A series of sub-rectangular enclosures was constructed in the southern half of the site during the final phase, from which coarse pottery, a stave-built bucket, a jet bracelet and two ring-pins were recovered. A ring-pin with Viking Dublin parallels dating to the late-tenth/early-eleventh century A.D. was also recovered. It is possible that the final phase of this site may represent a rural Hiberno-Norse settlement. Both Cherrywood and Ninch were located on previously important Early Medieval cemeteries with associated settlement evidence.

Other potential Viking settlements sites include Brownsbarn, west of Tallaght in Co. Dublin where a partial investigation uncovered a Viking bone comb dating to the ninth or tenth century A.D (Bradley 1995, 12), and Feltrim Hill, Co. Dublin where Viking Age bronze stick pins were discovered on an enclosed site (*ibid*). A copper-alloy spiral-ringed pin and copper-alloy brooch pin were found on another potential Viking site at Cooldrinagh, Co. Dublin (Mullin 1995).

The assertion for Scandinavian rural settlement is highly circumspect and often based on very tentative evidence. Perhaps the best indicators for Scandinavian influence across the rural countryside can be found in the distribution of Viking coin and bullion hoards indicating interaction between the two groups of people while a group of grave-markers, known as the ‘Rathdown slab’, in south Co. Dublin is still conceivably the best evidence for regional Viking settlement within *Dyflinarskiri*.

**Viking Age Rural Miscellaneous Finds 1930-2004**

The majority of evidence for Viking activity across the island is attested through the discovery of stray find objects. Whether this can be construed as evidence for Viking rural activity or were instead the products of trade or stray-finds is still open to debate. The vast majority of these finds have been recorded in the topographical files in the National Museum and the Ulster Museum.
Excavations and underwater diving have been responsible for discovering a range of Viking-related archaeological items. River dredging at Shanmullagh, Co. Armagh in 1990 uncovered a tenth century Viking hoard, and an underwater dive was undertaken in 1992 and 1993 to recover other associated items (Bourke 1992-3). Further Viking and ecclesiastical items were uncovered. Bourke (1992) suggested that the whole assemblage represented the stock of a ninth century A.D. Hiberno-Viking metalworker, perhaps derived in part from the treasury of Armagh, only some 10km from the find spot. River dredging along the Bann at Ferrystown, Co. Antrim also required an underwater rescue dive in which Hiberno-Norse ring-money was recovered (Bourke 1995), and a number of Viking age stick pins and a coin, minted in London c. 1035 for King Cnut, were discovered in Limerick (O’Donovan 1999). Weapons have also been recovered. A possible Viking axe was discovered during underwater diving at Coreen Ford, Co. Roscommon (Kelly 1989), and a seventh to eighth century iron sword, an iron spearhead of about the same date and a possible tenth century Viking axe were discovered during underwater diving at Kellysgrove Ford, Co. Galway (Kelly 1991).

Other suggested/Hiberno-Norse Coastal Settlements

A number of potential unenclosed Viking sites have been discovered along the south and southeast coast. Erin Gibbons and Eamonn Kelly have recently excavated a sunken rectangular stone-built house overlooking False Bay near the location of some Bronze Age and Early Medieval shell middens (Gibbon & Kelly 2003, 63; O’Sullivan & Breen 2007, 121). The house had a hearth that contained animal and fish bone and the tenth century double-sided antler comb discovered at the site could be interpreted as Hiberno-Norse in style.

The large unenclosed site of Begenish, Co. Kerry, may also have had a Scandinavian phase (O’Kelly 1956; O’Sullivan & Breen 2007, 122). The lintel of a stone-lined passageway in one of the sunken roundhouses was found to have a runic inscription, and possibly Viking artefacts, such as a bowl made of steatite (soapstone), and Hiberno-Norse ringed pins, were also found on site. Sheehan et al (2001) have speculated that the site may have been used as a way station for mariners sailing from Hiberno-Norse Cork to Limerick in the later part of the Early Medieval period. The place-name of Smerwick Bay has been suggested as meaning ‘Butter Bay’ in Old Norse and many attest to further Viking associations with the southwest coast – although again there are alternative interpretations (Edwards 1990, 191).

Excavations at Bray Head in Valentia Island, Co. Kerry in 2000 (Hayden 2000:0423) 100m to the west of a large early medieval unenclosed settlement uncovered a large early medieval stone round house with an associated souterrain. The round house was replaced within the early medieval period by a unusual, sub rectangular, bow-sided building whose walls consisted of regularly-spaced large posts. Hayden (2000:0423) suggested that this building might be of Scandinavian origin. This structure was in turn succeeded by a late medieval stone walled house.

At Rinnaraw, Co. Donegal, there is a similarly located (i.e. coastal) ‘cashel’ that produced a house that might be argued to show Norse influences. The central stone-built house, dating to around the ninth century, at the cashel of Rinnaraw (which is situated on the western side of Sheephaven Bay, Co. Donegal), was compared to similar Scandinavian examples with rounded external corners at the Orkney Islands (Fanning 1987-92; Comber 2006). Both the historical sources and further ninth century Scandinavian stray-find objects in the general area support the idea that the northwest coast was an area of importance to the Vikings. Alternatively, however, Rinnaraw could be an Irish settlement whose inhabitants were influenced by and trading in the traditions and ideas of the Atlantic seaways of Ireland and Scotland.

Recent discoveries at Shandon Fort, Co. Waterford have also been recently used to suggest Norse influences on a rural settlement. Shandon fort, situated on a promontory to the north of Dungarvan in county Waterford, was the subject of excavations in 2001 and 2002.
(Dennehy 2001:1242; Elder 2002:1790). The site comprises a large rectangular enclosure (90 X 40m) defined by a large ditch which had been partially destroyed through 18/19th century quarrying. The enclosure was partially excavated and revealed several hearths along with a large number of possible refuse pits, middens and charcoal pits in the interior. Many of the pits contained traces of iron and copper working. A line of the rectilinear ditch was excavated and revealed a narrow slot-trench along the inner edge of the ditch, which could possibly indicate a palisade. An ironworking area was identified with evidence for iron smelting outside the enclosure but was not excavated. Finds recovered included iron pins and a copper ingot. It was suggested that the site was intermittently visited for fishing during prehistory before becoming an established settlement during the 10/11th century A.D. Elder also suggested that it may have been associated with the Vikings on account of the find of an 11th century Hiberno-Norse coin, a 10th century trial bone Hiberno-Norse motif, several iron knives and the proximal end of a whale humerus in the 1930's.

Excavations at the promontory fort at Dalkey Island off the Dublin coast have recovered Viking age finds suggesting that the site was re-used in the period, and it has been suggested that the site may have operated as a detention camp for slaves (Bradley 1995, 12).

**Early Medieval Houses and Buildings**

**Background**

Early Medieval houses, dwellings and other domestic buildings are key cultural artefacts from the period, as they provide significant information on domestic life, crafts and industry, as well as evidence for the social and ideological understanding and role of space (Lynn 1978; 1994; Wallace 1992; O'Sullivan 2006). Houses and dwellings were the places where the household slept, ate food, gathered for social occasions and extended hospitality to their wider kin and neighbours. At times of the day, and during the darkness of night, people would have gathered there to prepare food, to carve bone and wood and embroider textiles, or simply to while away the hours around the fire, listening to songs and stories about past times. Indeed, it could be suggested that houses were the places where early medieval social identities were created – as children were socialized, through their observation of the ways of the household, into an understanding of their own place in the world and how their society worked. Early Medieval houses and dwellings should be seen then as key venues for the enactment or performance of social identities of ethnicity, social status, gender, kinship and community. O'Sullivan (2006) has recently explored how these people built, dwelled within and thought about houses and how in particular they might have used the house, and the objects within it, to build their distinctive social worlds.

A range of multidisciplinary sources have been used to reconstruct the character and use of houses in early medieval Ireland. There is particularly good archaeological evidence for houses in both the rural and urban landscape in this period, particularly between the seventh and the eleventh century AD (in contrast with both the Iron Age and the later medieval period). Chris Lynn's (1978, 1994) studies have developed a good understanding of the architectural development of early medieval houses in terms of their shape, size, building materials and the organization of internal features. Archaeological excavations have uncovered evidence for several hundred examples in early medieval ringforts, crannogs and other sites. Urban archaeological excavations - particularly those by Pat Wallace (1992) on Fishamble Street, and by Linzi Simpson (19**) in Temple Bar, Dublin and Maurice Hurley et al (19**) publications on Waterford and Cork - have also led to an unsurpassed understanding of the form of houses from Norse Dublin and Waterford, where waterlogged conditions lead to intact floors, benches, beds, doorways and porches. This physical or material culture evidence for house shape and size, for construction materials, floors, hearths, storage and domestic occupation can be used to enable a reconstruction of cultural norms and daily life and practice within actual early medieval houses. A large and growing corpus of excavated
early medieval buildings is therefore now present within the archaeological record which can be analysed.

**Excavated early medieval houses 1930-2004**

**How many early medieval houses?**

In 1978, Lynn suggested that there were over 160 Early Medieval rural houses and structures recorded (Lynn 1978, 29). Many of these sites could be identified by annular gullies, circles of close-set stake-holes or a scatter of posts and stake-holes with perhaps an associated hearth and occupation area. He further increased this figure in a publication in 1994 suggesting that there were approximately 250 ground-plans comprehensively recorded up to 1986 with some further updating until the time of publication of the article (Lynn 1994, 81). EMAP also undertook a survey of the amount, shape and form of Early Medieval buildings excavated between 1930-2004. The results are very provisional and should be treated very cautiously as the bulletin reports often failed to give information about the date, shape or construction methods used. These figures are likely to be slightly revised at a later date in the EMAP project when excavation reports can be consulted. Nonetheless, EMAP has established that **approximately 522 rural early medieval buildings were excavated between 1930-2004.** A further 159 structures were also excavated in rural contexts. It is unclear from the sources consulted whether some of these structures represent buildings. These figures include excavated buildings in both rural settlement and ecclesiastical contexts. It must be emphasised again that these are **provisional results.**

It is known that both round and rectangular buildings were a feature of early medieval rural sites. Roundhouses were the most common form of building in the earlier (i.e. AD 400-800) phase of the period until rectilinear buildings began to emerge in importance during the tenth century A.D. (Lynn 1978, 37; Lynn 1994, 83). Lynn (1978, 32) has cited a number of examples in which round houses were actually succeeded by rectangular buildings, for example at the early medieval cashel of Carraig Aille II, Co. Limerick, at Church Island, Valencia, Co. Kerry; Cush, Co. Limerick; Dunsilly, Co. Antrim, Lecanabuaile, Co. Kerry; Nendrum, Co. Down and Rathmullan, Co. Down He noted that the early roundhouses were usually built using wicker or post-and-wattle and had an average diameter of 6m (Lynn 1978, 91). Lynn's observation that roundhouses had a tendency to be associated with enclosed settlements spurred him onto claim that sites like ringforts were not likely to have been occupied at the end of the Early Medieval period; a claim that has been supported by radiocarbon dating of this monument (Stout 1997; Kerr 2007). Rectilinear houses, typically measuring between 6-8m and constructed with dry stone and/or turf lower walling, emerged as the dominant form of building by the end of the tenth century A.D (Lynn 1978, 85). Rectilinear buildings also occurred in Early Medieval settlement sites like ringforts, but it was often able to prove that they were preceded by an earlier phase of circular buildings (Lynn 1994, 92).

**Early medieval rural buildings - form and character**

As bulletin reports were often written while excavations were in progress, it was not always possible to give information about detailed information about the buildings. It is very early days in beginning to synthesis the figures, particularly as the results are based on partial and incomplete evidence. The table 3:12 and graph 3:8 below illustrates the figures for the total approximate amounts from different excavated types of buildings. The building type of a significant number of excavated buildings (121 in total) could not be established. The vast majority of excavated buildings were constructed in wood with the most common type being post and wattle structures. It is difficult to establish if sill beam structures were constructed in rural Ireland in the early medieval period. Preservation in rural contexts is unlikely to have been as good as that which occurs in the Viking towns such as Dublin and Waterford where
 evidence of sill beam structures survive. One possible example of a sill beam structure was excavated recently at a settlement/cemetery site at Balriggan, Co. Louth. (http://www.nra.ie/Archaeology/LeafletandPosterSeries/file,3409,en.pdf).

Another potential example was excavated at a ringfort site with associated souterrain in Shane’s Castle Park, Co. Antrim (Warhurst 1971). Fragmentary remains of at least six structures were identified within the ringfort. One of these consisted of two longitudinal trench slots, presumably to hold the sill of a wooden structure, and has been identified by the excavator as being contemporary with the primary occupation of the rath. It is evident that further research will be required for these forms of buildings.

A number of sod and stone walled structures were also excavated. These structures were contained of dry stone and/or turf lower walling. The figures for these structures are preliminary and represent a work in progress. It is evident that no major distinction can be made between a stone or sod walled structure as both materials can be used in the construction of these buildings. While these figures are provisional, it does not appear that these forms of buildings were as popular as post-built structures in the Early Medieval period.

Table 3:12 Excavated Rural Buildings 1930-2004

<table>
<thead>
<tr>
<th>Building Type</th>
<th>Excavation</th>
<th>EMAP Site</th>
<th>Total Building</th>
<th>Total Definite</th>
<th>Total Approx.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
<td>39</td>
<td>37</td>
<td>159</td>
<td>59</td>
<td>100</td>
</tr>
<tr>
<td>Building</td>
<td>53</td>
<td>52</td>
<td>121</td>
<td>57</td>
<td>64</td>
</tr>
<tr>
<td>Post and Wattle Building</td>
<td>124</td>
<td>109</td>
<td>286</td>
<td>228</td>
<td>58</td>
</tr>
<tr>
<td>Sod Walled Building</td>
<td>11</td>
<td>9</td>
<td>18</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Stone Building</td>
<td>51</td>
<td>45</td>
<td>80</td>
<td>68</td>
<td>12</td>
</tr>
<tr>
<td>Clochán</td>
<td>12</td>
<td>11</td>
<td>17</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>-</td>
<td>-</td>
<td><strong>681</strong></td>
<td><strong>447</strong></td>
<td><strong>234</strong></td>
</tr>
</tbody>
</table>

Figure 3:8 Excavated Rural Buildings 1930-2004
Early medieval rural buildings - plans and layout

Lynn (1978 & 1994) has examined the evidence for round and rectilinear shaped houses in great detail. It is not necessary to give examine this evidence in detail. It is evident that that the figure above are very provisional. Only a cursory review of some of the details and findings are thus outlined below.

The first two phases of occupation at Rathmullan were associated with circular houses while rectangular buildings were constructed in Phase 3 and Phase 4 (Lynn 1981-2, 65). Excavations at a cashel at Loher (O’Flaherty 1986) also revealed that two early circular wooden buildings were succeeded by a rectangular structure, and excavations at Ballynacarriga, Co. Cork revealed that a large circular stake hole built structure was replaced by a later rectangular structure (Noonan 2001).

These examples serve to support Lynn’s assertions that round post and wattle buildings are often found to predate rectangular stone or sod-walled structures. A large number of sites were found to contain both rectangular and circular buildings, however often no information was given about the dating of these structures with the consequence that, for the majority of sites, it was not possible to establish a chronology of building types.

Figure-of-eight sites have been exposed during excavation at a number of sites, for example Corrstown, Co. Londonderry (Conway 2001), Deer Park Farms, Co. Antrim (Lynn 1987), Lisleagh 1, Co. Cork (Monk 1988; Monk 1995), Cathair Fionnúrach, Ballynavenoor, Co. Kerry (Gibbons 1994-97) and Newtown, Co. Limerick (Coyne & Collins 2003). Figure of eight buildings have also been excavated in a number of ecclesiastical contexts including Ballybrolly, Co. Armagh (Lynn 1978-9), Illaunloughan, Co. Kerry (Walsh & Marshall 1992-95) and Caheerlehillian, Co. Kerry (Sheehan 1998).
Viking/ Hiberno-Norse Buildings

Previous Surveys

While Early Medieval ‘Irish’ rural circular and roundhouses have been excavated since the early twentieth century, our knowledge about Viking/Hiberno-Norse buildings was developed over the last thirty or so years during urban redevelopment projects. Since then a vast amount of buildings have been excavated, nearly all from within Dublin, Waterford, Limerick, Wexford and Cork. The EMAP survey – based mostly on Excavations bulletins reports - has established that approximately 566 Viking buildings may have been excavated from across the island from 1930-2004.

While Hillary Murray (1983) was the first person to publish a corpus of a total number of excavated sites; she examined 58 buildings excavated before 1976 in Dublin city centre and established an initial classification for the structures, it was Dr. Pat Wallace (1992) that systematically reviewed the evidence and produced the major statement on these buildings in their Irish and international contexts. Wallace (1992, 7) found that over 200 buildings had been excavated in Dublin from 1961-82 at the sites of Winetavern Street (13), St. John’s Lane (10), Fishamble Street (127), Christchurch Place (26) and High Street (19) and Dublin Castle (6).

EMAP Survey and a quantification of known Viking/Hiberno-Norse Buildings

A review of the EMAP provisional data now suggests that approximately 430-450 Viking buildings were excavated within the Hiberno-Norse area of Dublin from 1961-2004.

Approximately 106 buildings were excavated at Waterford. The majority were excavated during the large-scale redevelopments around Arundel Square and Peter Street in the late 1980s and early 1990s. Approximately 25-30 Viking buildings was excavated at Cork, particularly along South Main Street, Tuckey Street, Washington Street and Hanover Street from the mid 1990’s. Finally there was approximately 10-20 Viking buildings excavated at Wexford at Bride Street as well as potentially at Barrack and St. George’s Street in the late 1980s and early 1990s. The most fruitful excavations were on the South Island mostly from the later 1990s till 2004. Finally, approximately 10 excavated buildings could be suggested for Limerick. Those that have revealed Viking habitation evidence were undertaken in the early 1990s and were primarily around King John’s Castle.

The figures demonstrate that approximately 75% of Viking building excavations have been undertaken in Dublin city centre. The results from the large-scale redevelopment undertaken in the heart of Viking Waterford also indicate that the other towns are also likely to have been intensively occupied during this period.

The architectural character of’ Viking Type’ Houses and Buildings

Wallace (1982; 1992, 19) proposed that the house form, or plan of the buildings, should be the principal mechanism used to establish a classification of buildings. He analysed a large sample of buildings excavated from 1961-82 in Dublin city centre and suggested that the buildings could be divided into five principal types. To these may be added two other types (6 & 7) which are predominantly found in Waterford.

- Type 1 structures were the most common building that Wallace discovered in his survey of the Dublin evidence. They amounted to 67% of all the buildings examined by Wallace (1992, 17) in his survey. They were rectangular in plan usually with a doorway at each end and with a floor space divided into three strips which comprised
a central nave flanked on either side by narrow bedding area. This type of building appears to have been used throughout the Viking period.

- Type 2 buildings were less common and sub-rectangular in plan. They were smaller than Type 1 buildings and did not contain three aisles or often formal hearths (Wallace 1992, 14). They were often found associated with Type 1 buildings. Less than 6% of Wallace's surveys were Type 2 buildings.

- Type 3 class of building was created for shortened and slimmed down versions of the Type 1 building but which did not create evidence for threefold division (Wallace 1992, 16). They often contained a doorway at either end like the Type 1 building. Slightly more than 6% of Wallace's types were classified as Type 3 buildings.

- Type 4 class buildings denote those sunken-floored buildings (SFS) which were generally rare in the Irish archaeological record. One example excavated at Winetavern Street was dug into a steep hillside and had an internal walling comprised of earthfast vertical planks (Wallace 1992, 17).

- Type 5 buildings dealt with those structures that could be described as small post and wattle huts often sub-rectangular in plan and contained no internal roof supports. Less than 5% of Wallace's surveys were classified as Type 5. They were found in all levels of occupation.

- Type 6 buildings refer to Sill-Beam structures with load-bearing walls which appear to have been constructed from the early-twelfth century onwards, particularly in Waterford.

- Type 7 refers to rectangular stone buildings found within Hiberno-Norse towns. They have also only been found at Waterford and date to the mid twelfth century.

EMAP’s survey of the data has adhered to the classification system purposed by Wallace (1982 & 1992). Buildings were described as ‘Viking Building’ when no information was given or could be established about the structures. Stave-built buildings whose type were not mentioned or could be established were classified as ‘Viking Stave-built Building’. It was often difficult to establish an accurate number for excavated Viking types at a site. Recourse was made to published material however when it was available. It is evident however that this survey was based on partial and incomplete evidence. These early results should then be treated very provisionally.

Viking Type 1 Buildings clearly predominate and comprise approximately 300 or so of the total number of excavated buildings. They have discovered elsewhere in Cork, Wexford and Waterford. Type 2, 3 & 5 buildings were found principally in Dublin, Waterford and Cork. Type 2 buildings comprised 33% of the total number of building found during the Waterford excavations from 1986-92 (Scully, 37). They constituted a small percentage of Wallace's (1992) survey results. However, excavations at Essex Street West revealed a vast number of Viking buildings, a large portion of which were Type 1.

It is likely then that the location of different political, economic and industrial activities effected the distribution and density of different building types across the towns. A small number of sunken-floored buildings have been discovered in the towns of Waterford, Limerick and Dublin. Four were excavated at Waterford and were dated to the late-eleventh century A.D. (Scully 1997, 45). Similar structures have been excavated at King John's Castle and date mainly to the twelfth century (Wiggins 1990 & 1993-98). An early-eleventh-century example was recorded at Werburgh Street, Dublin (Hayden 1994). They have been compared to ninth/tenth century examples from English towns but do not appear to have been a major feature of the architectural landscape of their Irish counterparts. Suggested sources for their origins include the native Irish souterrain, the Anglo-Saxon Grübenhäuser tradition of England.
and parts of northern Europe, and most likely the parallels in English towns (Walsh 1997, 52). With the exception of the tenth-century Winetavern Street example, most date to the twelfth century.

The earliest houses from Cork, Waterford and Wexford date from the eleventh century A.D., although excavations in Dublin have revealed building dating from the ninth century A.D. It has been noted by Scully (1998, 37) that the mid-eleventh/early thirteenth century Viking/Hiberno-Norse Type 1 buildings at Waterford can be compared to the Dublin Type 1 examples, which principally date to the tenth and eleventh centuries. This supports Wallace’s argument that Hiberno-Norse house-building was influenced by a conservative tradition throughout the Viking period (1992, 11). A change in architectural traditions is apparent in the twelfth century, for example excavations at Waterford and Cork have revealed evidence that wattle-and-post construction is replaced by the sill-beam structure at this time.

Stone-footed and walled buildings appear to have succeeded sill-beam structures in Waterford (Scully 1997, 39), and at least one stone-walled example from Waterford predated the coming of the Anglo-Normans. It is not completely clear if stone was an important resource used for constructing buildings in the other town previous to the coming of the Anglo-Normans.

An unusual early house was discovered at Copper Alley during the excavations at Temple Bar West (Simpson 1999). It was a rectangular structure (7m long x 4.5m wide) and consisted of a double row of large post holes with a hearth and side entrance (Simpson 1999, 9). It did not adhere to any of the Wallace’s ‘Type’ building plans and has been compared to Anglo-Saxon houses in England dating to the late fifth/early sixth centuries A.D. Radiocarbon dates indicate a 68% probability of it belonging to between A.D. 780-890. If it does date to around A.D. 800, then it could represent evidence for potential Anglo-Saxon contacts that are occasionally apparent in burial practice, art and trade. It is unique to any other building in Ireland and its function and origin are still a matter of debate.

Table 3:13 Excavated Viking Buildings 1930-2004

<table>
<thead>
<tr>
<th>Viking Building</th>
<th>Exc. Lic</th>
<th>Site</th>
<th>Total No.</th>
<th>Total Confident</th>
<th>Total approx.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viking Building</td>
<td>24</td>
<td>23</td>
<td>116</td>
<td>88</td>
<td>28</td>
</tr>
<tr>
<td>Viking Stave-Built Building</td>
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<td>4</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Viking Type 1</td>
<td>20</td>
<td>19</td>
<td>340</td>
<td>286</td>
<td>54</td>
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<tr>
<td>Viking Type 2</td>
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<td>70</td>
<td>32</td>
<td>38</td>
</tr>
<tr>
<td>Viking Type 3</td>
<td>3</td>
<td>3</td>
<td>20</td>
<td>16</td>
<td>4</td>
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<td>Viking Sunken Floored Type 4</td>
<td>9</td>
<td>8</td>
<td>22</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>Viking Type 5</td>
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<td>3</td>
<td>14</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Viking Sill-Beam Type 6</td>
<td>4</td>
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<td>5</td>
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</tr>
<tr>
<td>Viking Stone Building Type 7</td>
<td>2</td>
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<td>2</td>
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<td>0</td>
</tr>
<tr>
<td>Anglo-Saxon Type Building</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>-</td>
<td>-</td>
<td><strong>598</strong></td>
<td><strong>466</strong></td>
<td><strong>132</strong></td>
</tr>
</tbody>
</table>
Conclusions

The most recent synthesis and debate on the social and ideological organisation of houses and buildings in Early Medieval Ireland has been produced by O’Sullivan (2006). Chris Lynn’s (1978, 1994) studies have shown that the earliest (between c. AD 500-800) house structures were usually roundhouses, constructed of stone or post-and-wattle walls, with wooden poles for joists and roofs of thatch of reed, turf or straw. Most were fairly small (typically 4-5m in diameter) although some were significantly larger (6-10m in diameter). The enclosed house space was typically about 45m², comprising a single small room. In terms of location, roundhouses tend to be located towards the centre of enclosures. Both early Irish law and archaeology suggest that these sizes were closely related to social rank, so that both custom and law restricted an individual from building larger than a certain size. Even the largest houses in Early Medieval Ireland, however, were relatively small by contemporary European standards. Despite the claims of the narrative literature, there is no archaeological evidence for massive longhouses as found in Anglo-Saxon England (e.g. Yeavering) or Viking Age Scandinavia (e.g. Borg in Lofoten). Neither is there evidence for use of concentric rings of internal roof supports to enable significantly larger houses (as is common on Iron Age British sites). In Early Medieval Ireland, people often chose instead to build a second circular structure and attach it to the larger house, to create a figure-of-eight shape. This backhouse or cúile may have been used as a kitchen, sleeping area or private or exclusive space.

Lynn (1994) has identified a significant change from the use of roundhouses to rectilinear houses after about A.D. 800. Towards the end of the Early Medieval period (tenth to eleventh centuries AD), rectangular houses built in stone or turf were normal, and roundhouses became rare. Moreover, on most ringfort sites where there is clear dating evidence, roundhouses are physically replaced by rectangular structures. These rectangular houses were typically built in stone, earth or turf, with an average measurement of 6-8m in length. They were simply constructed; with low stone walls, lines of boulders, with internal wooden poles to support roof of reed, turf or straw. Rectangular houses are often paved. They also tend to be found closer to entrances and towards the sides of enclosures. The reasons for
this transition in architectural styles from round houses to rectangular houses remain unclear and influences from the Irish church, from later Anglo-Saxon England and the Viking Age world are all possible. It is possible that this architectural shift relates to significant changes in early Irish society. At the time of this architectural transition (i.e. the eighth and ninth century A.D.), social changes included an increasing centralisation of power, an increased focus on smaller familial groups, more restrictive or individualistic land ownership practices. The ownership and use of a rectangular house, which could more easily be divided up into compartments and sections may have went hand-in-hand with changing ideas about personal status, wealth and emerging concepts of private and public space.

Archaeological excavations in Dublin, Waterford and Wexford have also provided much evidence for houses in these towns between the tenth and the thirteenth centuries A.D. In Hiberno-Norse Dublin, houses were usually located on the front-end of long narrow plots, which originally seem to have stretched from the street frontage and occasionally back to the town defences. Each house was entered from the street, with a back or side exit into the plot out the back where there may have been vegetable gardens, pig pens, latrine buildings, workshops and storehouses. Each house also would have had a cess pit out the back. There were several different types of house in use in Hiberno-Norse Dublin and late Viking Age Waterford. Wallace's Dublin Type 1 houses were the most common (comprising about 70% of all houses in Dublin). The origin of the Dublin Type 1 house is still a matter of debate. It may have evolved in Ireland before the tenth century, or it may be an insular version of the rectangular farmsteads found in Norse settlements in the Earldom of Orkney. In any case, it appears to be an ethnically distinctive house type that also influenced other Irish domestic architecture. There are rectangular houses, broadly similar to the Dublin Type 1 house, from rural Irish sites such as Knowth, Co. Meath, White Fort, Drumaroad, Co. Down, Antiville, Co. Antrim and most recently from Truská, Connemara, Co. Galway and from Cherrywood, Co. Dublin. The question of whether the latter two in particular are actually ethnically Viking, Norse or ‘Irish’ rural dwelling places remains an interesting if controversial topic. By the mid-twelfth century A.D. in Waterford (and slightly later in Hiberno-Norse Dublin) there is a shift towards the use of rectangular houses constructed on sill-beams with earth-fast roof supports or to houses built of stone walls. By the mid-thirteenth century AD, fully-framed timber houses emerge.

In the tenth-century A.D. Dublin’s Hiberno-Norse houses were sub-rectangular in plan, with double entrances, ailed partitions and internal roof supports. They typically measured 7.5m by 5.5m; with walls up to 1.25 m high. The walls were of post-and-wattle, typically of ash, hazel and willow. The roofs were supported on four main posts arranged in a rectangle within the floor area. There were usually two opposed doors, located in the end walls, one giving access to the street, the other to buildings at the rear of the plot. Internally, the floor space was divided into three, with the central strip, sometimes paved or gravelled, being the broadest. The floors of the houses were also often covered with laid clay or post-and-wattle. A rectangular stone-lined fireplace was located in the centre. Along the side walls, two low benches were used both for sitting and sleeping. Sometimes corner areas near the doors were partitioned off to form a private space. The front and rear ‘porches’ are also occasionally distinguished by a separate area of flooring of clay or a distinct panel of wattle. Palaeoenvironmental studies of floor deposits of dung, hair, mosses, food remains, ash, and brushwood have revealed much of living conditions and practices.

Social and cultural interpretations of these Norse buildings would attempt to trace the organization of domestic space in terms of household, ethnicity, kinship and gender. It should also be remembered that these Norse houses were occupied by people who believed in different gods and mythologies; people who lived in a society structured differently to ‘native’ Irish society. Norse houses in Scandinavia, Iceland and Greenland do seem to be organized into ‘rooms’ that reflect social, cultural or symbolic spaces - e.g. living areas, sleeping rooms, working areas, rooms for animals. In Hiberno-Norse Dublin there is a sense that the houses have social spaces of some sort. The front porches, often floored differently from the rest of the house (with clay or wattle) and perhaps screened from the rest of the house by post-and-
wattle, perhaps enabled some control of how neighbours would encounter the inner, private household. The back porches leading out into the plots behind the houses may have been used to separate the living space from the backyard, perhaps used as a space to store food, tools or raw materials or to defecate comfortably inside the house (amongst the mosses, textile rags and food debris recovered from Dublin’s cess pits have been old, turned wooden-bowls which were presumably used as ‘chamber pots’ before they were finally discarded!). At Essex Street West, an early tenth to mid-eleventh century house had a concentration of hazelnuts and large animal bones in one corner, suggesting either the storage of food – or food waste. In the town of Hiberno-Norse Dublin (unlike the rural setting of other Norse houses in the north Atlantic), it is also to be presumed that a degree of ‘social blindness’ – an ability to discretely ignore the noises of the neighbour’s family rows through the wattle walls – would be necessary to enable households to live in such close proximity in the densely packed streets of the town.
Chapter 4. The early medieval church

Introduction
The introduction of the Christian religious faith in the fifth century AD represented one of the most significant developments in early Ireland, probably being transformative of society, ideology and concepts of the person, while it also lead to changes in settlement, economy and international trade and exchange. Indeed, its material-culture remains represent one of the visible bodies of evidence for early medieval Ireland and the early Christian ‘Golden Age’ have been used to affirm the presence of a unique Irish cultural identity since at least the 19th century.

Indeed, the description of this phase as the ‘early Christian period’ illustrates the long-held view that Christianity was one of the central ideological forces that defined and shaped this island’s cultural history from the fifth till the twelfth centuries. Its ecclesiastical monuments and artwork have, not surprisingly then, received extensive antiquarian and archaeological scholarly attention from the 19th century and beyond. In the early years of research, antiquarian scholars focused on describing and recording these remains. Art and architectural studies and surveys have since then been at the cornerstone of Irish early medieval archaeological scholarship.

In more recent years however excavation has been undertaken in increasing numbers at early ecclesiastical sites and has added a whole new dimension and set of evidence to interpreting and re-interpreting the early Irish church. This development has coincided with an emerging interest in a variety of research themes dealing with, among others, the character and location of the earliest Christian communities, the layout of ecclesiastical sites, the debate about ‘monastic towns’, the nature of early medieval pilgrimage and the character of early medieval pastoral care. This chapter will examine these particular research themes in the light of recent archaeological excavation evidence. It will also provide descriptive information about the amount and type of excavated ecclesiastical churches, buildings and structures as well as evidence for industrial and agricultural structures at ecclesiastical sites through the early medieval period.

Archaeological excavations and the early medieval church
Excavated Ecclesiastical Sites 1930-2004
O’Sullivan and Ó Carragáin (2008, 34) have recently noted that there was a new consensus among historians that held that ‘only a minority of ecclesiastical settlements were monasteries in the primary sense of the word’. Elsewhere, Stout and Stout (2008, 68-70) have noted that the emergence of a new site type, the ‘settlement’ or ‘secular’ cemetery, blurs the boundary between ecclesiastical and secular sites. In the present instance we will not seek to apply all the criteria outlined by Swan (1983) for defining an ecclesiastical site. Instead the assumption of the existence of a church during the medieval period will be considered enough to apply the term ‘ecclesiastical’. On the basis of this definition about 225 sites have been excavated in the period between 1930 and 2004 of varying archaeological significance within all of the 32 counties of Ireland (See Table 4:1). A further 52 ecclesiastical sites have also been partially investigated though it is not completely clear if they were founded in the early medieval period. These sites are excluded from the tables and graphs below.

The figures from Table 4:1 below demonstrate that relatively few early medieval ecclesiastical sites were excavated in the northwest, the northern central parts of Ireland and parts of
South Leinster (e.g. Carlow, Wicklow and Laois). Early medieval ecclesiastical sites were however more frequently excavated elsewhere, particularly in North Leinster, the eastern counties of Ulster and counties in the southwest and west adjoining the Atlantic coast. The number of excavated early medieval ecclesiastical sites in Dublin is unique however and indicates that the effects of development-led excavation in this part of the country.

Table 4.1 Excavated Early Medieval Ecclesiastical Sites Per County 1930-2004

<table>
<thead>
<tr>
<th>County</th>
<th>Exc. Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antrim</td>
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<tr>
<td>Armagh</td>
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</tr>
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<td>Cork</td>
<td>12</td>
</tr>
<tr>
<td>Derry</td>
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</tr>
<tr>
<td>Donegal</td>
<td>3</td>
</tr>
<tr>
<td>Down</td>
<td>11</td>
</tr>
<tr>
<td>Dublin</td>
<td>31</td>
</tr>
<tr>
<td>Fermanagh</td>
<td>4</td>
</tr>
<tr>
<td>Galway</td>
<td>16</td>
</tr>
<tr>
<td>Kerry</td>
<td>11</td>
</tr>
<tr>
<td>Kilkenny</td>
<td>7</td>
</tr>
<tr>
<td>Kildare</td>
<td>8</td>
</tr>
<tr>
<td>Laois</td>
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</tr>
<tr>
<td>Leitrim</td>
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</tr>
<tr>
<td>Limerick</td>
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</tr>
<tr>
<td>Longford</td>
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</tr>
<tr>
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<td>8</td>
</tr>
<tr>
<td>Meath</td>
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<tr>
<td>Monaghan</td>
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<tr>
<td>Waterford</td>
<td>7</td>
</tr>
<tr>
<td>Westmeath</td>
<td>5</td>
</tr>
<tr>
<td>Wexford</td>
<td>5</td>
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<tr>
<td>Wicklow</td>
<td>3</td>
</tr>
</tbody>
</table>

Figure 4.1 Excavated Early Medieval Ecclesiastical Sites Per County 1930-2004

The fact that ecclesiastical sites were generally known prior to excavation meant that they were generally avoided during large scale development schemes. Recent rescue excavations
were therefore generally due to extensions to graveyards, or limited building work in a vicinity of a known site. Urban sites were often particularly productive as they were sometimes located within the enclosures of early monastic sites. In contrast to other site types discussed in this report, the most extensive excavations tended to be undertaken as research programmes but with a bias towards small coastal sites in the west of Ireland.

**Significance of Excavated Early Medieval Ecclesiastical Sites 1930-2004**

At least 30% of the c. 225 excavated early medieval ecclesiastical sites 1930-2004 have yielded either no archaeology or archaeology of ‘uncertain’ early medieval significance. There are therefore only approximately 168 ecclesiastical sites which have yielded early medieval excavated archaeology between 1930-2004. 22 of these sites can be described as ‘Highly Significant’ in terms of excavated early medieval archaeology. Clonmacnoise, Clonfad and Armagh are examples of these particular sites.

<table>
<thead>
<tr>
<th>Significance</th>
<th>Number</th>
<th>%</th>
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<td>Uncertain</td>
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<td>12</td>
</tr>
<tr>
<td>No Significance</td>
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<td>13</td>
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<tr>
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<tr>
<td>Highly Significant</td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>225</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Figure 4:2 Significance of Excavated Early Medieval Ecclesiastical Sites 1930-2004**
Early Medieval Ecclesiastical Sites - their Contexts and Locations

Ecclesiastical Settlement continuity with Iron Age

Many early medieval ecclesiastical sites provide evidence for prehistoric settlement, e.g. the extensive prehistoric flint assemblage found at Iona (Barber 1979, 353-354) or Unmask, Tyrone (Ivens 1988, 50), but direct evidence for immediately preceding settlement is more difficult to establish. The commonly made suggestion that Inishmurray was originally a secular settlement, for instance, is not based on any firm evidence (O’Sullivan and Ó Carragáin 2008, 33). At Nendrum, Co. Down, Lawlor too had claimed a secular origin for the enclosure walls but there is no evidence for this (McErlean and Crothers 2007, 332).

Evidence for Iron Age settlement at an ecclesiastical site can be found at Randalstown, Co. Meath. The earliest datable find was a Roman imported fibula dated to the first century A.D. (Kelly 1975:32, 1996:20) Shards of B and E-ware and Merovingian glass indicates activity from the 5th century AD onwards. A ditch was excavated at Taghmon, Co. Wexford is said to have returned a radiocarbon dated between the first to fifth centuries A.D, but the raw radiocarbon carbon date was not published (Mullins 1999:888). An early phase of settlement preceding the establishment of an ecclesiastical phase at Kill St. Lawrence, Co. Waterford can be tentatively suggested as charcoal from a pit inside the inner enclosure has returned a radiocarbon calibrated date of A.D. 370-540 (O’Connell 2004, 27). A basal layer in the vallum at Armagh produced a radiocarbon date of 2 sigma AD 130-600 which led the excavators to state that “the date range does allow the possibility that the ditch existed for some time before the traditional mid-5th century date of St Patrick’s arrival in Armagh and that the primary silting and its contents were of prehistoric date” (Brown and Harper 1984, 158).

There are also a number of sites that could be variously described as ‘ecclesiastical’ or ‘settlement/cemeteries’ (but see discussion in burial chapter below) which have revealed possible preceding settlement evidence. At Dunmisk, Co. Tyrone ‘slight traces were found indicating that there were modifications to an already existing Early Christian settlement’ (Ivens 1989, 55). That this was an ecclesiastical site, however, is far from clear as the evidence for a church is tenuous. The burial phase at Millockstown, Co Louth is also preceded by an apparently late Iron Age secular settlement (Manning 1986, 137-141) but this too is likely to have been a secular cemetery (Stout and Stout 2008, 69-70). The presence of a faint circle, 40m in diameter, in the northern half of the large enclosure Moyne, Co. Mayo suggested to Manning (1987, 58) than an earlier ringfort preceded the ecclesiastical settlement. The feature was not, however, excavated. In general, there is very little evidence that the monasteries were located on pre-existing settlement sites. There were generally ‘green field’ foundations.

The Location of Ecclesiastical Settlements

The majority of ecclesiastical sites are found in low-lying riverine contexts that were rarely above 120m and almost never above 180m (Swan 1982, 100). Hurley (1982, 310) in the most detailed study of their location suggests that the locations most favoured for a church site “appeared to have been the shoulder of a low hill or ridge, often overlooking a river or stream... other situations which were favoured include sides of hills, coastal headlands islands ... and occasionally hilltops”. Most importantly, he noted that “few sites are situated in isolated or remote areas “(ibid.). In Hurley’s study of south-west Ireland, he noted that low lying river valley sites were rare. Many of these were termed Dysert which he suggests meant “hermitage” (ibid. 703). He further suggests that these were heavily wooded areas generally eschewed by secular settlement. In midland areas, however, Stout (1997, 100) found that ecclesiastical settlements favoured a ‘low lying riverine distribution’ perhaps reflecting a desire to be near communication opportunities afforded by a riverside location. Clonmacnoise and Iniscealtra serves as an obvious examples of this and Stout (ibid. 102-3) provides an
example in County Offaly where several ecclesiastical sites are located along the side of the river Brosna. River crossing points also appear to be a preferred location as evidenced at Dubh Linn, Clonmacnoise, Kilkenny and a range of crossing-points along the River Shannon including Killaloe and Banagher (Hughes and Hamlin 1977, 24). A desire to be near coastal route ways could account for the locations of Movilla and Bangor, Co. Down, Lismore, Co. Waterford and the large number of coastal and insular sites along the Irish west coast.

Ecclesiastical sites seem also to have political reasons for their choice of location. Historical sources suggest that monasteries were sometimes located on the borders of tuath (Ó Rian 1972) but it is difficult to substantiate this because the locations of early political boundaries are generally unknown. A close association between monasteries and important political centres, or at least large ringforts, has been observed in some parts of the country (Stout 1997, 102) but it is by no means clear that this is a universal occurrence. The close proximity between the monastery at Clogher and the nearby seat of the Uí Crimthainn (Warner 1988, 55) serves as good example. The proximity between Armagh and Navan Fort, an Iron Age ceremonial centre, is less convincing. Unlike Clogher, the site had been abandoned for several centuries before the foundation of Armagh and there were no important ecclesiastical foundation near the other Iron Age centres of Rathcroghan, Co. Roscommon and Dún Ailinne, Co. Kildare. The most convincing evidence for the location of an ecclesiastical site on an earlier settlement site is at High Island, Co. Galway. The church was found to be build on an extensive spread of burning that produced radiocarbon dates ranging between 300BC and AD20 (White Marshall and Rourke 2000, 87). The authors, however, believe that the material was re-deposited but it much have come from a nearby source.

The character of early medieval ecclesiastical enclosures

Introduction

Early Irish monasteries are generally assumed to have been surrounded by an enclosure, or a series of enclosures. These defined the legal area belonging to the ecclesiastical settlement known as the termonn (Hamlin and Lynch 1977, 54). Doherty (1985, 57) have argued that Irish ecclesiastical settlements were designed to a set pattern with a sacred core that was surrounded by a number of concentric boundaries demarcating areas of decreasing holy importance. This template established a model for maintaining the spiritual purity of the holy core. The book of Mulling provides an idealized illustration of this hierarchy of holiness, showing a monastery comprising two concentric enclosures with crosses at the various entrances. Swan's aerial survey suggested that large ecclesiastical settlements generally contain an inner and outer enclosure (Swan 1985) but the surviving visible remains from most ecclesiastical sites appear to have only a single vallum (e.g. Hurley 1982). Nendrum, Co. Down (McErlean and Crothers 2007), is unusual in having three concentric enclosures. The recently discovered site at Clonfad, Co. Westmeath may also have three enclosures (Stevens 2006, 9). The majority of ecclesiastical sites had an enclosure between 90-120m in diameter. In the case of the larger ecclesiastical sites, however, the inner enclosures tended to have diameters of between 100 and 200m, with outer enclosures of between 300-500m (Swan 1985, 97).

There were, however, exceptions to the circular ideal. Iona, for instance, has a rectangular double enclosure. Excavation of part of the vallum bank suggested that it vallum incorporates existing Iron Age earthworks and that this might account for its usual shape (McCormick 1988, 78-80). Thomas (1971, 29) proposed a rectangular vallum at Clonmacnoise but recent excavation and survey suggests a semi-circular shape (Murphy 2003, 21). Hamlin (1977, 85-87) identified a rectangular vallum with rounded corners at Inch, Co Down but the earthwork might be associated with the later Cistercian abbey which also lies within the enclosure.
Nendrum (Lawlor 1925) is the only Irish triple enclosed monastery to have been extensively excavated. The early excavation, however, was of poor quality by modern standards, and the report is particularly weak in terms of detailed plans and cross-sections. The Lawlor excavation, and subsequent smaller investigations, has recently been re-appraised by McErlean and Crothers (2008). The inner central enclosure was the ritual focus of the settlement containing church, round tower, burials, cross slabs and sundial (ibid. 337-370). There was no evidence for industrial activity except for an enigmatic dump of “half fired” pieces of souterrain ware. The middle enclosure contained the domestic buildings including a possible ‘scriptorium’ (ibid. 370-378). Industrial activity was confined to some evidence for non-ferrous metalworking. The evidence from the outer enclosure was less clear. There was some evidence for ironworking (ibid. 386) and the grain-drying kiln present is a later medieval type. There is also evidence that some ecclesiastical sites may have had settlements outside the enclosures. Annalistic evidence for Armagh refers to Trians (thirds) that are referred to as being from outside the ‘rath’ of the monastic enclosure (Hamlin 2008, 229). Excavations of these areas have produced material of an Early Medieval date (Hamlin and Lynn 1988, 57-61).

**Excavated Early Medieval Ecclesiastical Enclosures 1930-2004**

One of the most frequently excavated features at an early ecclesiastical site is its enclosures. Excavations of a significant number of ecclesiastical enclosures, particularly in recent years, are beginning to shed some light on the size, depth and width of these features and when they were first dug and subsequently modified during the early medieval period. The EMAP survey has identified 41 excavations associated with 34 EMAP sites that have revealed ecclesiastical enclosure features which can be securely dated to the early medieval period through either finds or dating evidence (Table 4:3 below). It has also identified a significant number of other potential early medieval ecclesiastical enclosures which will be the subject of more detailed research in future years. The results are still provisional as the online excavation bulletin reports were the principal source consulted for this stage of data gathering.

From the emerging archaeologically dated evidence, it appears that ecclesiastical enclosures were being built, often, well before the 8th century A.D. The evidence from a number of sites (e.g. Armagh, Caherhillan, Kill St. Lawrence, Tullylish, Reask and Iona) indicates that enclosures were possibly being built from possibly as early as the 5th or 6th century though there is some doubt as to whether these features were initially associated with ecclesiastical complex or preceding secular sites. Similarly, it has been suggested that ecclesiastical communities at Inishmurray (Edwards 1996, 118), Illauntannig, High Island and possibly Kildreelig (White Marshall & Rourke 2000b) were appropriating cashels and prehistoric stone forts in the early medieval period.

The ditch at the Irish foundation on Iona, for instance, was about 3m deep and nearly 3m wide (Barber 1979, 296-299). The primary ditch at Tullylish, Co. Down was of a similar size (Ivens 1987, 73) as was two sections of the ditch from the vallum at Clonmacnoise, Co. Offaly (Murphy 2003, 16). In some instances there is evidence for the re-cutting or replacement of these enclosures. At Tullylish, Co. Down, the original inner ditch seems to have been re-cut twice. The ditch eventually filled due to a mixture of silting, dumping, and the deliberate slighting of the enclosure bank. It was eventually replaced by a new ditch located some 6 m to the outside of the original ditch (Ivens 1987, 58-61). This ditch was regularly cleaned out during the earlier part of its life but then allowed to fill up (ibid. 60). Regular cleaning was also noted in the vallum ditch at the monastery of Tallagh, Co. Dublin (McConway 1995:111).

At Dunshaughlin, Co. Meath the vallum ditch was deliberately in filled by the destruction of the bank and then re-cut. (Simpson 2005, 233-5) The original ditch at Dunshaughlin had been deliberately kept water-filled by directing the water into a spring into it. The spring was stone lined and capped with large flags and “the water was channelled from this chamber via a stone drain .. [which] fed directly into the ditch, tunnelled through the natural boulder clay
... bank deposits sealed the cut for the spring" (ibid. 233-4). The vallum at Clonmacnoise was also deliberately filled, presumably by the demolition of the ditch (Murphy 2003, 13). Radiocarbon dating indicated that this occurred between the late seventh and late ninth century when the monastery was a thriving community. It has been suggested (ibid) that the backfilling of the ditch at Clonmacnoise may have coincided with the construction of the river Shannon bridge, which dates to A.D. 804 (O'Sullivan & Boland 1997), or with the expansion of the settlement to the east of the core area (King 1992). The infilling of the ditch implies that the location of the vallum could be changed as expansion, or internal re-organisation of a monastery demanded. It may also imply that the function of the vallum might have become obsolete. In comparison to the thousands of ringforts with surviving substantial banks, few banks of early monasteries are still extant. Was there a deliberate policy of levelling these enclosures at some stage?

While they can be regarded as an essential component of an early monastery it need not be regarded as a primary one. This is most clearly demonstrated at Church Island, Co. Kerry. Here the cashel wall was one of the last items in the site’s development (O’Kelly 1958, 77). The earliest buildings were the wooden church and sod house. There were subsequently replaced by a stone round house and church. At a later stage again a rectangular house was built on top of the large midden that had accumulated outside the round house’s door. The cashel was built after the rectangular house as it curves to avoid it.

**Early medieval excavated internal divisions within ecclesiastical enclosures**

Internal divisions appear to be feature at a number of sites including Reask (Fanning 1981) and Inishmurray (O’Sullivan and O Carragáin 2008). At both sites they seem to demarcate an eastern area associated with the ecclesiastical buildings from the domestic buildings in the western part of the enclosure. The domestic buildings were also located on the western side of Illaunloughan (White Marshall and Walsh 2005). It might be argued that this might be due to purely practical considerations as the western enclosure walls would provide shelter for the living area from the prevailing SW winds. At Church Island and High Island, however, the living accommodation tended to be on the eastern parts of the site (O’Kelly 1957; Marshall White and Rourke 2000).

Inishmurray has not been excavated but the evidence from Reask indicated that the internal dividing wall was an early feature of the site. Some of internal ditches and walls at Moyne also appear to be Early Medieval date (Manning 1897, 45-9). Several recent excavations have also produced features that seem to represent internal divisions within monastic sites. Investigations within the chancel of Cormac’s Chapel and beyond its north tower also identified a cut feature filled with limestone rubble which was suggested as representing a division between the east and west sides of the early ecclesiastical site (Hodkinson 1994). Excavations at Kilpatrick, Co. Westmeath (Swan 1976 & 1994-95) and Kill St. Lawrence, Co. Waterford (O’Connell 2004, 27) have also uncovered evidence for ditches and internal divisions.
Table 4.3 Excavated Early Medieval Ecclesiastical Enclosures 1930-2004

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<th>Site</th>
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<td>Finds and Burials in fill</td>
<td>Early Medieval</td>
<td>Moore 1991:062; Moore, F. 2007</td>
</tr>
<tr>
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<td>Twigs from base of Ditch</td>
<td>A.D. 130-600</td>
<td>Gaskell-Brown &amp; Harper 1984, 158</td>
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<td>Ó Neill 2004:0008</td>
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<tr>
<td>Butterfield, Dublin</td>
<td>Palisade Trench</td>
<td>Iron slag and finds</td>
<td>Early Medieval</td>
<td>Carroll 1997:184</td>
</tr>
<tr>
<td>Church Island, Kerry</td>
<td>Cashel Wall</td>
<td>Cashel = final phase of early monastery.</td>
<td>Early Medieval</td>
<td>O’Kelly 1957-59, 75-77</td>
</tr>
<tr>
<td>Clonmacnoise, Offaly</td>
<td>Inner enclosure Ditch</td>
<td>Radiocarbon dates (Backfilled)</td>
<td>A.D. 803-856</td>
<td>Murphy 2003, 19</td>
</tr>
<tr>
<td>Clonfert, Galway</td>
<td>Outer enclosure (east of church)</td>
<td>Suggested ‘early medieval’</td>
<td>Early Medieval</td>
<td>Walsh &amp; Hayden 2001:496</td>
</tr>
<tr>
<td>Connor, Antrim</td>
<td>Outer enclosure (east side of church)</td>
<td>Souterrain ware pottery and early medieval finds</td>
<td>Early Medieval</td>
<td>Brannon 1986:02</td>
</tr>
<tr>
<td>Doras, Tyrone</td>
<td>Inner enclosure</td>
<td>Twigs from the lowest deposit returned date of 1305±90bp.</td>
<td>AD 615-885</td>
<td>McDowell 1987, 147-148</td>
</tr>
<tr>
<td>Downpatrick, Cathedral Hill, Down</td>
<td>Enclosure</td>
<td>Souterrain ware in Fill</td>
<td>Early Medieval</td>
<td>Brannon 1988</td>
</tr>
<tr>
<td>Downpatrick, Cathedral Hill, Down</td>
<td>Concentric inner and outer enclosure ditches</td>
<td>Souterrain ware in bottom fill of inner ditch.</td>
<td>Early Medieval</td>
<td>Brannon 1997:071</td>
</tr>
<tr>
<td>Dunmisk, Tyrone</td>
<td>Enclosure</td>
<td>-</td>
<td>Early Medieval</td>
<td>Ivens 1980-84:0186; Ivens 1989</td>
</tr>
<tr>
<td>Finglas, Dublin</td>
<td>Enclosure Ditch</td>
<td>Wooden Bucket</td>
<td>Early Medieval</td>
<td>Kavanagh 2004:0599</td>
</tr>
<tr>
<td>High Island, Galway</td>
<td>Inner Church enclosure wall</td>
<td>Retaining wall with burnt refuse = AD 728-971, 2 sigma. Enclosure wall pre-dates internal church and paving.</td>
<td>Early Medieval Pre 11th century</td>
<td>Scally 2000:0391 White Marshall &amp; Rourke 2000</td>
</tr>
<tr>
<td>High Island, Galway</td>
<td>Monastic Dry stone enclosure wall</td>
<td>Earliest feature on the site</td>
<td>Iron Age/Early Medieval</td>
<td>White Marshall &amp; Rourke 2000a; White Marshall &amp; Rourke 2000b</td>
</tr>
<tr>
<td>Iniscealtra, Clare</td>
<td>No. of Enclosure Ditches and banks were excavated</td>
<td>12/13th Century objects from fill of earlier enclosure ditch (1970)</td>
<td>Early Medieval</td>
<td>De Paor 1970-84, Exc. Bulletin</td>
</tr>
<tr>
<td>Kells, Townpark s, Meath</td>
<td>Enclosure/Ditch (22m = D)</td>
<td>Possible 7th century brooch uncovered near base of ditch.</td>
<td>Early Medieval</td>
<td>Byrne 1987:41; Byrne 1988:57</td>
</tr>
<tr>
<td>Site</td>
<td>Enclosing Feature</td>
<td>Dating Evidence</td>
<td>Date</td>
<td>Reference</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------</td>
<td>------------------------------------------------------</td>
<td>--------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Kilgobbin, Dublin</td>
<td>Enclosure Ditches</td>
<td>Early Medieval Glass Bead in top fill of one of the curvilinear ditches</td>
<td>Early Medieval</td>
<td>Larson 2004:0644</td>
</tr>
<tr>
<td>Kill St. Lawrence, Waterford</td>
<td>Outer and inner enclosure ditches</td>
<td>Charcoal from the Primary Fill of outer ditch</td>
<td>A.D. 370-540</td>
<td>O'Connell 2004, 27</td>
</tr>
<tr>
<td>Killernan East, Galway</td>
<td>Dry stone enclosure Wall</td>
<td>Early medieval Finds and ironworking from associated layers.</td>
<td>Early Medieval</td>
<td>Duignan 1951; Waddell &amp; Clyne 1995</td>
</tr>
<tr>
<td>Lackenavorna, Killeeadrum, Tipperary</td>
<td>Oval-shaped enclosure ditch and bank</td>
<td>Kiln c. A.D. 1000 cut into the inner slope of the ditch.</td>
<td>Early Medieval</td>
<td>Manning 1984</td>
</tr>
<tr>
<td>Maghera, Down</td>
<td>Suggested 'Outer' enclosure?</td>
<td>Souterrain Ware in fill</td>
<td>Early Medieval</td>
<td>Lynn 1980-84:0086</td>
</tr>
<tr>
<td>Nendrum, Down</td>
<td>Outer Cashel Wall</td>
<td>Charcoal beneath the outer cashel wall (terminus post quem date)</td>
<td>1375±45 B.P.</td>
<td>Brannon 1977-79:0033</td>
</tr>
<tr>
<td>Reask, Kerry</td>
<td>Dry stone Enclosure Wall</td>
<td>Enclosure wall represented one of the earliest features on the site.</td>
<td>Earliest monastic phase</td>
<td>Fanning 1981</td>
</tr>
<tr>
<td>St. Peter's Church, Dublin</td>
<td>Dawson Court- Digges Lane Arcing Ditch</td>
<td>11/12th century roof tile recovered from upper fill of ditch</td>
<td>Pre 11/12th century</td>
<td>O'Néill 2001:376 &amp; 2001:391</td>
</tr>
<tr>
<td>Tallaght, Dublin</td>
<td>Two Enclosure Ditches: inner enclosure c.130m diameter</td>
<td>Inner Ditch in filled by 14th century. Medieval pottery in upper fill of outer ditch</td>
<td>Likely Early Medieval</td>
<td>McConway 1994:102</td>
</tr>
<tr>
<td>Tallaght, Dublin</td>
<td>Outer Enclosure Ditch (discussed above)</td>
<td>Sherd of medieval pottery in basal fill of a secondary ditch re-cut</td>
<td>Likely Early Medieval</td>
<td>McConway 1995:111</td>
</tr>
<tr>
<td>Tallaght, Dublin</td>
<td>Enclosure Ditch</td>
<td>Twig lets from the base of the ditch</td>
<td>Mid-6th to 8th century</td>
<td>Meenan 1996:142; Walsh 1997:187</td>
</tr>
<tr>
<td>Tallaght, Dublin</td>
<td>Curvilinear Ditch</td>
<td>Animal bone</td>
<td>1210 ± 100 BP</td>
<td>O'Brien 1990:043</td>
</tr>
<tr>
<td>Termonfeckin, Louth</td>
<td>Suggested Enclosure</td>
<td>13th century sherd of pottery from fill</td>
<td>Pre 12/13th century</td>
<td>Murphy 1995:202</td>
</tr>
<tr>
<td>Tullylish, Down</td>
<td>Great inner Ditch</td>
<td>Charcoal samples from fill of ditch</td>
<td>Inner Ditch: A.D. 455-655; A.D. 340-605</td>
<td>Ivens 1987</td>
</tr>
<tr>
<td>Tullylish, Down</td>
<td>Outer Ditch</td>
<td>Charcoal samples from fill of outer ditch. Souterrain ware in fill supports later date for this ditch</td>
<td>Outer ditch: A.D. 680-955</td>
<td>Ivens 1987</td>
</tr>
</tbody>
</table>

**Early medieval monastic ‘streets’ and pathways**

**Historical Sources**

Annalistic sources often refer to ‘streets’ within monastic enclosures (Bradley 1998, 46). The term generally used is *clochán* which essentially means ‘paved way’. O’Corrain (2005, 346) has recently identified, in a previously mis-understood text, a 11-12th century reference to a monastery with seven streets paved with recumbent pillar stones. The location of the monastery, *Cell Belig*, has not been identified. A substantial paved street some 2.4m wide and 70m long survives at Iona, Scotland but is thought to be of Benedictine rather than Early Medieval date (RCAHMS 1982, 142). Excavations between 1930-2004 have uncovered a growing number of examples of potential streets and pathways on ecclesiastical sites.
Excavated Ecclesiastical ‘Street’s and Pathways

Until recently, no ‘streets’ of this scale have been excavated in an Irish monastery. The most substantial monastic street in Ireland is at the early medieval monastic settlement at Clonmacnoise, Co. Offaly. This metalled roadway was located to the northwest of the monastery, on the banks of the River Shannon. It measured 3m wide. Its full length was not ascertained (as it ran out of the excavation cutting) but a length of 18.5m of this road was excavated. It is clearly of early medieval date because it was cut by a pit that could be dated to the late 11th century (King 1995, 240). The early medieval wooden bridge at Clonmacnoise, 160m in length by 4-5m in width and dated by dendrochronology to c. AD. 804, investigated in the late 1990s would obviously also be indicative of some type of roads in the immediate vicinity of the monastery (O’Sullivan and Boland 1997).

Paved pathways are generally not a feature of early medieval secular sites. Notable exceptions are the unique paved entranceway to Deerpark Farms, Co. Antrim (Hamlin and Lynn 1989, 46) and some pathways outside the rectangular houses at Ballywee in the same county (ibid. 33). They tend to be relatively common, however, on monastic sites. At Church Island, Co. Kerry, an extensive paved pathway, running along the inside of the cashel wall, joins the rectangular house (House 2) to the stone oratory (O’Kelly 1958, Plate XVII). At Illaunloughan, a straight section of pavement extends from door of the church while an “L” shaped length of pavement leads to the entrance of the shrine (White Marshall and Walsh 2005, 223). At High, Island the entire area between the church enclosure wall and the church is paved (White Marshall and Rourke 2000, 103). At Reask, Co. Kerry, there are short sections of paving in the entrance areas of some of the buildings (Fanning 1981, 71; 75) while more extensive areas of paving were found around the cells at Skellig Michael in the same county (Bourke 2005, 132). At Inismurray, Co Sligo, a paved pathway extends between the cell and the leacht at Trahanareear (O’Sullivan & O’Carragáin 2008, 224). At Rellickoran on the same island, a pavement of large sandstone slabs makes a complete circuit of the enclosure. In general, these formal pavements are associated with the ‘sacred’ structures within the monasteries. In Downpatrick, Co. Down, a pebbled pathway of unknown date seemed to lead to a medieval cemetery within the enclosure (Brannon 1988, 3). At Mainster Chiaráin, Inis Mór, Galway an area of cobbling with associated drains provided early medieval radiocarbon dates (Ni Ghabhláin 1996:161; 1998:259). Other examples of paved pathways and surfaces are presented in Table 4:4 below.

Table 4:4 Examples of Excavated Pathways and Surface on Ecclesiastical Sites 1930-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>Feature</th>
<th>Location</th>
<th>Date</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapelizod, Island/Martin’s</td>
<td>Metalled</td>
<td>?</td>
<td>11/12th century</td>
<td>Walsh, 2002:0492</td>
</tr>
<tr>
<td>Row, Dublin</td>
<td>pathways</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Devenish, Fermanagh</td>
<td>Stone paving</td>
<td>Adjacent to Round Tower</td>
<td>Possible</td>
<td>Waterman 1973-74</td>
</tr>
<tr>
<td>High Island, Galway</td>
<td>Stone Paving</td>
<td>Church interior church enclosure wall</td>
<td>11/12th century</td>
<td>White Marshall &amp; Rourke 2006, 100-03 &amp; 124</td>
</tr>
</tbody>
</table>
Early medieval Churches and Oratories

The Historical Sources

The historical annals, genealogies and other sources provide a good deal of evidence for the existence of different types of buildings and specialized communities within the Irish ecclesiastical settlement. The documentary sources refer principally to stone (damliac) and wooden (dairthech) churches as well as oratories (Oratorium) and the bell-tower (Cloig thech), more commonly known as the round tower. They also mention the kitchen at Kildare (Cucann) in A.D. 915 and the guest house (les Oíged) A.D. 1003 at Armagh (MacDonald 1981, 310-311). MacDonald has also suggested that the term taigí aernaighi refers to special oratories built either as leper houses or infirmaries (MacDonald 1981, 309). A range of other smaller churches can potentially be identified in passages in the documentary sources. Manning (2000, 40) has speculated whether the term erdamh may refer to a small subsidiary church associated with but not attached to a larger church. MacDonald (1999) has suggested that annalistic ‘recles’ refer primarily to reliquary churches contained within small complexes within the settlement dating principally to the eleventh and twelfth centuries. The documentary sources also refer to a range of different groups of people living at ecclesiastical sites including anchorites’ ancoire, heads of monastic schools fer leíginn, scribes scribae. The range of terms employed in the historical sources paint a picture of complex ecclesiastical settlements containing a diverse set of ecclesiastical structures which one could expect to find on an ecclesiastical site. Few of these buildings, however can be recognized in the archaeological record.

Wooden churches

Introduction

It is generally accepted that early ecclesiastical settlements from the sixth to ninth century would have been dominated by wooden churches and structures (Hamlin 1985, 286). This view is supported by more recent studies which have indicated that mortared ecclesiastical structures only became common from after the 10th century A.D. The general exceptions to this rule are a set of shrine chapels such as Temple Ciaran at Clonmacnoise and St. Declan's
at Ardmore that may have first emerged in the 8/9th centuries A.D. (Ó Carragáin 2003, 132) and dry stone built oratories frequently found in western monasteries, particularly in Kerry (White Marshall & Walsh 2005). The historical records largely corroborate the view that the first churches were generally built of wood and other organic materials. Manning (2000) has undertaken a comprehensive review of the historical evidence for church building in the Irish annals (A.D. 760-1170) and has found that the earliest references generally refer to churches described as *dairthech*, literally ‘oak house’. He has argued that stone churches (*Damlac*) and churches referred to as *Tempall*, which he suggests were principally built of stone, only became more common from the tenth and particularly eleventh century onwards. The historical records also suggest that these wooden churches were complemented by structures of other organic materials in the early medieval period. Hamlin (1984, 118) has documented references to churches built of wattles, mud and clay in the Saint’s lives. The construction of wooden churches was regarded as a particularly Irish trait in comparison to the stone building tradition of the Anglo-Saxon church. Bede in the early eighth century describes how Benedict Biscop, founder of Wearmouth, went to Gaul to find ‘masons’ capable of building a church in the Roman manner while St. Finian, an Irish bishop built a church at Lindisfarne ‘after the manner of the Irish, not of stone built of split oak’ (O’Keeffe 2003, 64-65). As late as the 12th century St Malachy is described in the life of St. Bernard of Clairvaux as having built and The second pushed forward in time to the twelfth century recounts how St. Malachy built a timber oratory which is described as an ‘Irish work’ (ibid 2003, 65).

**Excavated Wooden Churches**

There have been relatively few excavated early medieval wooden churches. Thirteen possible wooden churches are listed in Table 4:5. Complete plans are rare and the evidence for the most part comprises series of post holes. They are frequently identified as rows of post holes beneath stone churches. The only two relatively complete plans are from Church Island, Co. Kerry, and Carnsore Point, Co. Wexford. Both are rather small structures and compare rather poorly with the great wooden church described in Cogitosus’ Life of St Brigid.

The wooden church at Church Island, Co. Kerry was approximately 3 x 2m in size. It was indicated by seven postholes and was on the same alignment as the phase 1 burials (O’Kelly 1958, 58-59). Excavations at Carnsore Point revealed an extremely small potential building, 2.25 by 1.5m in size beneath the extant stone church of St. Vogue’s (O’Kelly 1975, 20-22). The present wooden church was radiocarbon dated to A.D. 660 ± 80 (O’Kelly 1975). The small size of this structure has led Harbison to question its identification as a church. Instead, he suggested that it was a wooden tomb shrine (Harbison 1991, 150). Wallace (1992) argues that the post-holes in these putative wooden churches should not be seen as the external walls of the churches but instead as internal roof supports, as is the case in 10th/11th century wooden houses in Dublin. A further small possible church was proposed at Reask, Co. Kerry but since it is based on only two post-holes it is hardly convincing (Fanning 1981, 80; 86). All these structures imply a post and wattle construction of some type. A very limited excavation of the church on White Island, Co. Fermanagh (Waterman 1959, 65-66) produced evidence for a series of ‘sleeper trenches’ which were 18 inches deep and 7-12 inches wide, which may be from an earlier series of wooden churches. These trenches suggest a substantial plank built structure. The potential sophistication of the carpentry work in early churches can be demonstrated by the worked wood found in the waterlogged vallum at Iona (Barber 1979, 242-3). The wooden structure at Dunmisk, Co Tyrone seemed to be composite building combining slot trenches lined, with stone slabs, and post holes (Ivens 1989, 60-61). The building as truncated by burials but appears to have been about 2.5m wide and up to 7m in length. The wooden structure below the south church at Derry, Co. Down was also of composite construction (Waterman 1967, 55).

At Ilaunloughan, Co. Kerry a sod-walled structure was found beneath the stone church. It comprised two parallel slot trenches containing upright slabs. It is assumed that these vertical stone rows contained the turf walls of the church (White Marshall & Walsh 2005,23-24). The structure had an internal width of about 2m, similar to the overlying stone oratory. Its length could not be definitely ascertained but if a sill stone found within stone church can be
assumed to be part of western door of the sod church it would have had an internal length of about 6m.

Several unpublished excavation have produced evidence for possible wooden churches. Excavations by Liam de Paor at Inischcealtra, Co. Clare uncovered a possible large wooden church (8 x 5m) built using wattles and clay (Harbison 1982; Hamlin 1985, 285). The preliminary publication of excavations at Cashel, Co. Tipperary have also uncovered a potential wooden church, 4.2m E-W X 2.5-4m beneath the chancel of Cormac’s Chapel which Hodkinson (1994, 173) suggested may date to the 9/10th century. Post and stake holes beneath stone churches recorded in the excavation bulletin reports at Church Island, Co. Mayo (Ryan 1993:173); Killtullagh, Co. Roscommon (Gregory 2000:0858) and Killelton, Co. Kerry (Manning 1987:24 & 1988:30) might also indicate wooden churches. A further early potential wooden church was excavated at a fifth century ecclesiastical foundation at Caherhillian, Co. Kerry (Ó Carragain pers. comment).

Table 4:5 Excavated Early Medieval Wooden/Organic Built Churches 1930-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>Feature</th>
<th>Size</th>
<th>Date</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardagh, St. Mel’s, Longford</td>
<td>Possible Wooden Church ?</td>
<td>Early Medieval</td>
<td>de Paor; Harbison 1982, 628</td>
<td></td>
</tr>
<tr>
<td>Caherhillian, Kerry</td>
<td>Possible Wooden Church ?</td>
<td>Early Medieval</td>
<td>O Carragain Pers. Comment</td>
<td></td>
</tr>
<tr>
<td>Carnsore Point, Wexford</td>
<td>Possible Wooden Church 2.25 by 1.5m in size (O’Kelly 1975)</td>
<td>A.D. 660 ± 80 charcoal sample from a post hole.</td>
<td>O’Kelly 1975; Lynch, A &amp; Cahill, M 1976-77</td>
<td></td>
</tr>
<tr>
<td>Cashel, Tipperary</td>
<td>Possible Wooden Church 4.2m E-W X 2.5-4m N-S</td>
<td>Suggested 9-10th century date</td>
<td>Hodkinson 1992:064 &amp; 1993:203 Hodkinson 1994</td>
<td></td>
</tr>
<tr>
<td>Church Island, Kerry</td>
<td>Pos. Wooden Church Length c. 3m or little more Width c. 2m</td>
<td>Early Medieval</td>
<td>O’Kelly 1958</td>
<td></td>
</tr>
<tr>
<td>Church Lough Carra, Mayo</td>
<td>Four post holes No information</td>
<td>Early Medieval</td>
<td>Ryan 1993:173</td>
<td></td>
</tr>
<tr>
<td>Dunmisk, Tyrone</td>
<td>Possible Wooden Church c.3m wide (5-N) X c. 4.5-7m (E-W)</td>
<td>Early Medieval</td>
<td>Ivens 1980-84:0186; , 1988 &amp; 1989</td>
<td></td>
</tr>
<tr>
<td>Illaunloughan, Kerry</td>
<td>Sod walled Oratory Width 2.0m. Length longer than stone oratory (3.2m)</td>
<td>7-8th century</td>
<td>White Marshall &amp; Walsh 2005</td>
<td></td>
</tr>
<tr>
<td>Iniscealtra, Clare</td>
<td>Possible Wooden Church 8 X 5m in size</td>
<td>Early Medieval</td>
<td>de Paor ? Harbison 1982, 628-629</td>
<td></td>
</tr>
<tr>
<td>Reask, Kerry</td>
<td>Pos. Wooden Church Two post-holes 1.2m apart</td>
<td>Earliest monastic phase.</td>
<td>Fanning 1981, 85-87</td>
<td></td>
</tr>
</tbody>
</table>

Pre-Romanesque Stone Churches

Pre-Romanesque Church Types

Early medieval pre-Romanesque stone churches can be broadly divided into four main categories as outlined by Harbison (1982). A large number of stone churches have been excavated which will be considered on the basis of Harbison’s typology.

1. Dry stone built Gallarus-style oratories largely restricted to western Kerry
2. Simple Rectangular structures with roofs both made of wattle/shingles or supported by a stone roof or vaulting
3. Simple rectangular structures with the addition of antae with roofs both made of wattle/shingles or stone
4. Bicameral churches containing contemporary naves and chancels

**Gallarus-style Oratory**

Eight of this type, which are mostly restricted to the Dingle and Iveragh peninsulas in Co. Kerry, have been excavated between 1930-2004 (4:6). The only identified Gallarus-style oratories outside this area have been found on the two island sites of Duvillaun More and Inishglora, off the coast of Co. Mayo, and on the summit of Croagh Parick (Walsh 1994). Traditionally, it was believed that Irish ecclesiastical architecture developed typologically from the beehive hut (clocháns) through the Gallarus-style oratory to the church with upright walls and stone roof (e.g. Petrie 1845, Leask 1955). This view remained largely unquestioned till Harbison’s thought provoking paper *How old is Gallarus oratory* (1970) who like subsequent authorities (e.g. Herity 1995; O’Keeffe 1998) argued that this style of oratory represented a regional western building expression which was not the progenitor of the development of the barrel-vaulted stone roofed church in Ireland (Type 5).

Unlike Harbison, many authorities in the past have however supported the view that the Gallarus-style oratory owed its origins to the curvilinear ‘beehive’ dry stone-built corbelled clochán. These ‘beehive’ shaped cells have typically curvilinear external plan and an either curvilinear or rectangular to square internal outline (Herity 1995, 175). Surveys of the Iveragh and Dingle peninsulas have identified that the dry stone clochán’s were an important feature of vernacular architecture on both secular (e.g. ringforts and cashels) and ecclesiastical sites on the Iveragh and Dingle peninsulas (O’Sullivan & Sheehan 1996, 135; Cuppage 1986, 99). In line with previous ideas by Petrie (1845, 132), Herity (1995, 177) and O’Keeffe (1998, 114) have suggested that the innovation of the rectilinear interior in many dry stone clochán’s may be due to the influence of Christian rectilinear thought on earlier traditions.

These scholar’s (e.g. Herity 1995, 176; O’Keeffe 1998, 114) have viewed the Gallarus-style oratory, with its external and internal rectilinear plan and corbelled stone roof extending up towards an east-west apex, as emerging from the clochán tradition with the square or rectilinear interiors. They have suggested that the Gallarus-style oratory, with its external and internal rectilinear plan and corbelled stone roof extending up towards an east-west apex emerged from the clochán tradition with the square or rectilinear interiors. Recently Rourke and White Marshall (2005) have further refined this typology and have examined how a desire to express rectangularity up to the apex of the structure influenced a progression from early ovoid shaped oratories (emerging from contemporary Clochán’s) to the Gallarus-style oratory. In their chronology, dry stone oratories were in existence on the Iveragh Peninsula from the eighth century or even earlier, evolving through the ninth century with the final phase represented by the Gallarus oratory dating to the tenth or early eleventh centuries.

The architectural chronology advanced by White Marshall and Rourke (2005) is supported from other archaeological evidence. O’Keeffe (1998, 114) has suggested that the recurring association of Gallarus-style oratories and clochán’s with early cross-slabs and leachtas in west Kerry supports an early date for this form of building. The excavations have suggested a broad eighth century date for the dry stone oratory at Illaunloughan based not on direct dating evidence but associated stratigraphical burials and structures. This evidence is consistent with the idea of the oratory with its ovoid (Dome) shaped roof being one of the earliest in Rourke and White Marshall’s (2005) chronology of the typological development of the dry stone oratory. The stone oratory was found to succeed a primary monastic phase of an earlier organic built rectangular church and associated settlement; a pattern which was replicated elsewhere at Church Island, Co. Kerry (O’Kelly 1958, 61-65). It has also been suggested that the oratory on the south peak of Skellig Michil may date to the ninth century (Horn, White Marshall & Rourke 1990, 71). It has a similar form of construction to the small oratory at Skellig Michil which is typologically more advanced than the Illaunloughan
example. A boat-shaped oratory, very similar in form to the Gallarus itself was excavated on the summit of Croagh Patrick in 1994 (Walsh 1994). A sample of charcoal recovered from a context within the oratory was radiocarbon dated to A.D. 430-890. The archaeological evidence then supports the notion that these type of buildings were being were being constructed no later than the 8th century A.D. They should perhaps be regarded as a local building tradition in stone which slightly pre-dated and was also probably contemporary with the earliest mortared stone churches which began to be constructed across Ireland from the 10th century A.D.

Table 4.6 Excavated Gallarus Type Oratories 1930-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>Type</th>
<th>Size</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Church Island, Kerry</td>
<td>Oratory (Uncertain)</td>
<td>c. 5.7 X 3.75m internally, c. 8.5m X 6.5m externally</td>
<td>O’Kelly 1958, 61-65</td>
</tr>
<tr>
<td>Croagh Patrick, Mayo</td>
<td>Oratory (Up-turned Boat)</td>
<td>5.57 (E-W) X 3.50 (N-S) internally, 7.76 (E-W) X 5.52 (N-S) externally</td>
<td>Walsh 1994:186 &amp; 1995:224; Walsh 1994</td>
</tr>
<tr>
<td>Gallarus, Kerry</td>
<td>Oratory (Up-turned Boat)</td>
<td>4.65 X 3.14m internally, 6.86 X 5.74m externally, Wall thickness = 1.1-1.7m</td>
<td>Fanning 1970:19; Cuppage 1986, 287-89</td>
</tr>
<tr>
<td>Tillaunlo, Kerry</td>
<td>Oratory (Dome-shaped)</td>
<td>3.2m N-S X 2.2m E-W internally, Wall thickness = 1.3-1.6m</td>
<td>White Marshall &amp; Rourke 2005</td>
</tr>
<tr>
<td>Killelton, Kerry</td>
<td>Oratory?</td>
<td>4.87m E-W X 3.15-3.7m wide (west and east ends) internally</td>
<td>Manning 1987:24 &amp; 1988:30; Lynch 1892, 82-83; Cuppage, J 1986, 304-05</td>
</tr>
<tr>
<td>Reask, Kerry</td>
<td>Oratory (Dome-shaped)</td>
<td>3.50m X 2.70m internally</td>
<td>Fanning, T 1981</td>
</tr>
</tbody>
</table>

Type 2 & 3 Single Celled Rectangular Churches

Plain unicameral mortared churches comprise type 2 & 3 of Harbison’s (1982) categorisation of buildings. A detailed survey of these two types of churches has been undertaken by Ó Carragáin 2005a & B) and c. 150 has identified belonging to these two groups. These buildings are generally thought to date between the tenth to twelfth centuries (Harbison 1982; O’Keeffe 1998, Manning 2000, 119). The historical evidence would support this dating (Manning 2000). Some characteristic features of many of these unadorned unicameral buildings include the presence of a plinth and large wall-stones, often described as cyclopean, in the masonry of the buildings, steeply pitched gables, flat lintelled western doorways, often with inclined jambs, evidence for the inward sloping of church walls (the batter) and very small flat-headed, lintelled, triangular or rounded windows often set in the east or south walls and again with inclined jambs (Leask 1977, 53-60). A final defining element of these buildings is the presence (Type 3) or absence (Type 2) of antae or corbel stones projecting out from the west and east gable ends.

EMAP has undertaken a very provisional survey of evidence for excavated Type 2 & 3 churches. It is by no means exhaustive and a number of other churches have also been identified as potentially belonging to either type. About twenty of these churches have been excavated (4.7). They are generally plain rectangular structures with doors in their western gable. As one would expect, the excavation of church interiors produced little in the way of archaeological material from their primary period of use. The interior of the church at High Island seems to have been completely paved although only a relatively small area, immediately inside the door, survived in situ (White Marshall and Rourke 2000, 86). There were further layer of paving beneath thin which led the authors to conclude that the present church was the latest of a series of churches although it is not known if the earlier churches were of stone or of wood (ibid. 88). Most early churches have not provided evidence for
internal paving except for threshold flags such as in the case at Church Island, Illaunloughan and Reask, Co. Kerry (Fanning 1981, 77; Marshall White and Walsh 2005, 44; O’Kelly 1958, 62-5). At Church Island the flags were laid down before the gable door jambs were built. The floor flags at High Island appear to have been laid in a bed of mortar (White Marshall and Rourke 2000, 90) The floor level at Illaunloughan is described as ‘a formal grey-white pebbled clay/till flooring’ (Marshall-White and Walsh 2005, 160) but in most cases no formal floor levels seem to have been identified.

Altars are constituent parts of a church but few have produced evidence for them. Indeed, outdoor leachts are more common (below). O’Sullivan and Ó Carragáin (2008, 322) suggest that it is not likely that most early medieval altars were of wood and quote a 12th century Irish synod that prohibited ‘priests from celebrating Mass on a wooden table, according to the usage of Ireland’. Stone built altars have only been found in two excavated churches, High Island, Co. Galway and Carnsore, Co. Wexford (Marshall White and Rourke 2000, 83-5. The stone built altar at High Island has been plastered in the same way as the interior walls of the church. Evidence for the internal plastering of churches was also found at Saint Molua’s church, Killaloe, Co. Clare and in Clonmacnoise cathedral, Co. Offaly (ibid.). Evidence for plastering and white washing were also found on the small building on Church Island, Lough Key, which as identified as a church shrine (King 2002:1594) Finally, Marshall White and Rourke (2000, 90-1) reviewed the evidence for the use of foundations in early medieval church building in Ireland and surmised that they were no used. In Britain there is evidence for the use of foundations from circa AD 1000. Sometimes, however, the bottom course of the buildings comprised of a narrow plinth made to provide a level base for the building. There are also incidences where churches were built on artificially made platforms, as was the case with St Molua’s church, Co Clare (ibid.).

Table 4.7 Excavated Type 2 & 3 Early Medieval Churches

<table>
<thead>
<tr>
<th>Site</th>
<th>Type</th>
<th>Size</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardagh, St. Mel's, Longford</td>
<td>Type 3</td>
<td>?</td>
<td>Harbison 1982, 628</td>
</tr>
<tr>
<td>Banagher (Magheramore), Derry</td>
<td>Type 2?</td>
<td>?</td>
<td>Lynn 1970:10 ; Waterman, D &amp; Hamlin, A 1976</td>
</tr>
<tr>
<td>Carnsore, St. Vogue's, Wexford</td>
<td>Type 2?</td>
<td>9.38m E-W X 4.9m N-S</td>
<td>O’Kelly 1975; Lynch &amp; Cahill 1975:37</td>
</tr>
<tr>
<td>Clonmacnoise Cathedral, Offaly</td>
<td>Type 3</td>
<td>?</td>
<td>De Paor 1950’s?</td>
</tr>
<tr>
<td>Coolbanagher, Laois</td>
<td>Type 2</td>
<td>9.7m X 6.45m- Existing Nave (Traces of Original church)</td>
<td>Delany 2003</td>
</tr>
<tr>
<td>Dalkey, Dublin</td>
<td>Type 3</td>
<td>?</td>
<td>Liversage 1967-68</td>
</tr>
<tr>
<td>Derry, South Church, Down</td>
<td>Type 3</td>
<td>16ft 3ins. X 11ft. 9ins. Internally. Walls 2ft. 6-9 ins thick</td>
<td>Waterman 1967</td>
</tr>
<tr>
<td>Derry, North Church, Down</td>
<td>Type ?</td>
<td>?</td>
<td>Waterman 1967</td>
</tr>
<tr>
<td>Dysart, Kilkenny</td>
<td>Type 2</td>
<td>8.02m x 5.35m internally</td>
<td>Murtagh 1989:061 &amp; 1991:078 Murtagh, B 1994</td>
</tr>
<tr>
<td>Freshford, Kilkenny</td>
<td>Type 3</td>
<td></td>
<td>Murtagh 2001:686</td>
</tr>
<tr>
<td>High Island, Galway</td>
<td>Type 2</td>
<td>Interior: 3.15m N-S X 3.5m E-W</td>
<td>See White-Marshall &amp; Rourke 2000, 70-124</td>
</tr>
<tr>
<td>Inisheer, St. Gobnet’s Church, Galway</td>
<td>Type 2</td>
<td>?</td>
<td>Walsh 1980-84:0114 Mason 1930</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Site</th>
<th>Type</th>
<th>Size</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilcash, Tipperary</td>
<td>Type 2</td>
<td>?</td>
<td>Sweetman 1984</td>
</tr>
<tr>
<td>Killoughtermine, Carlow</td>
<td>Type 3</td>
<td>?</td>
<td>Leask 1943</td>
</tr>
<tr>
<td>Kilteel, Kildare</td>
<td>Type 2</td>
<td>7.5m X 5.75m externally; 5.7m X 4.06-8m internally</td>
<td>Manning, C 1981-82 &amp; Manning, C 1996-1997</td>
</tr>
<tr>
<td>Kilteernan East, Galway</td>
<td>Type 3</td>
<td>Original church (Nave)= Exterior 10.5m X 6.3m. Interior= 9.2m X 4.25m</td>
<td>Duignan 1951; Waddell &amp; Clyne 1995</td>
</tr>
<tr>
<td>Leigh (1), Tipperary</td>
<td>Type 3</td>
<td>20ft X 12ft internally Walls: 2ft. 6 ins. Thick</td>
<td>Leask &amp; Macalister 1945-48</td>
</tr>
<tr>
<td>Leigh (2), Tipperary</td>
<td>Type 3</td>
<td>?</td>
<td>Leask &amp; Macalister 1945-48</td>
</tr>
<tr>
<td>Mainistir Chiaráin, Oghill, Aran Islands, Galway</td>
<td>Type 2</td>
<td>11.5m (E-W) X 5.95m (N-S)</td>
<td>Ó Gabhlaíin &amp; Moran 1996:161; Ó Gabhlaíin 1997:221 &amp; 1998:259</td>
</tr>
<tr>
<td>Moone, Kildare</td>
<td>Type 3</td>
<td>9.5m X 5.6m internally</td>
<td>Clyne 1998:326 &amp; 1999:407</td>
</tr>
<tr>
<td>Peakaun, Toureen, Tipperary</td>
<td>Type 2</td>
<td>?</td>
<td>Duignan 1944</td>
</tr>
<tr>
<td>Raholp, Down</td>
<td>Type 2</td>
<td>c. 35 ft (E-W) C 20-25 ft (N-S) (Bigger 1916)</td>
<td>Neill 1989:020; Bigger, 1916</td>
</tr>
<tr>
<td>Rosshill, ‘Teampull Bhreandáin’, Galway</td>
<td>Type 2</td>
<td>Original Church at least 5.6m (E-W) and c. 4.85m (N-S).</td>
<td>Clyne 1990:057</td>
</tr>
<tr>
<td>Skeam West, Cork</td>
<td>Type 3</td>
<td>3.84m (N-S) X 6.85m (E-W Maximum surviving length)</td>
<td>Cotter 1990:021 Cotter 1995</td>
</tr>
<tr>
<td>St. John’s Point, Down</td>
<td>Type 3</td>
<td>c. 7-8m X 4-5m externally</td>
<td>Brannon, N 1980</td>
</tr>
<tr>
<td>Tighlagheany, Killeany, Galway</td>
<td>Type 3</td>
<td>5.90m by 2.90m internally</td>
<td>Manning, C 1985</td>
</tr>
</tbody>
</table>

**Pre-Romanescque Bicameral Churches**

Type 4 Pre-Romanesque buildings are small structures with thatched or shingled roofs and a rectangular chancel separated from the nave typically by unadorned semi-circular arches which are typically prominent in the Dublin/Glendalough region. The nave and chancel can be contemporary with each other or the latter can be a later addition providing that the construction of an unadorned non-Romanesque semi-circular arch is constructed contemporary with the chancel (O’Keeffe 2003). Examples of this church type have been recorded at Refert and Trinity Church in Glendalough, Confey, Co. Kildare, Palmerstown and Killiney, Co. Dublin (O’Keeffe 2003). It has suggested been suggested that these buildings are likely to date to the late eleventh or early twelfth centuries based partially on architectural details (O’Keeffe 2003, 83-85) and on the negative assumption that relatively few nave and chancel churches lack Romanesque sculpture (Hare & Hamlin 1986, 322).

At least two pre-Romanesque bicameral churches have been excavated in Ireland. Excavations 300m from the Clondalkin Round Tower revealed a mortared nave and chancel church slightly off centre within an oval enclosure (Ryne 1967, 30). The remains of an altar were discovered against the inner wall of the east end of the chancel. The stone church of Peter, Waterford, was begun in the early twelfth century and was modified over several centuries. The post-holes below the stone church may suggest an earlier wooden church but they did not reveal a convincing ground plan (Hurley and McCutcheon 1997, 192). Five main building phases could be ascribed to the 12th-mid 13th century as the church evolved from a small single celled rectangular building, 5.25x4m, to a complex affair comprising nave, chancel, apse, north and south aisles and a chantry chapel (ibid. 198).

**Barrel-Vaulted Churches (Early-Mid 12th century)**

Small barrel vaulted oratories surmounted by a corbelled roofs can also be discussed as a pre-Romanesque church type (Ó Carragáin 2005). These buildings can be found at Louth, Co.
Louth, St. Doulagh’s, Co. Dublin, St. Kevin’s, Glendalough, St. Columba’s, Kells, Rahan, Co. Offaly, Donaghmore, Co. Tipperary, St. Flannan’s Oratory, Killaloe and Cormac’s Chapel, Cashel. The roughly triangular void between the barrel-vault and stone roof is a characteristic feature of the superstructure of these churches (See O’Keeffe 2003, 88) and could have been accessed through a trap door in the underside of the barrel-vault (e.g. St. Kevin’s House and St. Columb’s Church at Kells) or through a small staircase in the north-eastern corner of the church (e.g. St. Mochta’s, Louth).

Recent studies suggest that the barrel-vaulted stone roof is an architectural feature of the 11/12th centuries (Radford (1970, 58; Harbison 1970, 46-47; O’Keeffe 2003). One of the largest barrel-vaulted buildings can be found at Cormac’s Chapel in Cashel whose construction date has been securely dated to between 1127-34 (O’Keeffe 2003, 123-165; Stalley 2006, 162-175). There is an emerging consensus then that the churches are unlikely to be much younger or older than the barrel-vaulting at Cormac’s Chapel (O’Keeffe 2003, 89).

It has been suggested by Gem (2006) that St. Flannan’s Oratory at Killaloe may date to around 1100. Harbison (1982, 31-33) and O’Keeffe (2003, 85-91) has also argued that St. Kevin’s Church at Glendalough, St. Columba’s Church at Kells and St. Mochta’s church at Louth may date to a similar period.

Cormac’s Chapel, Cashel, Co. Tipperary, St. Carthage’s church at Rahan, Co. Offaly and possibly St. Doulagh’s Church at Balgriffin, Co. Dublin have been the only partially excavated examples of this set of small barrel-vaulted structures. At Cashel, Co. Tipperary, Hodkinson (1994) identified evidence for preceding wooden and stone churches beneath Cormac’s Chapel and the present Cathedral respectively, as well as extensive evidence for associated burial and other ecclesiastical structures evidence. The nave and chancel church of has been extensively and beautifully restored since the 19th century. Limited testing along the south side of St. Carthage at Rahan, Co. Offaly, exposed a number of east-west orientated skeletons but here as no evidence for earlier buildings (Cummins 2004:1424). It has also been suggested by Harbison (1982, 31-33) that the eastern part of St. Doulagh’s Church, Balgriffin may represent the original single-chambered stone roofed church dating to the pre-Norman 12th century. Another final interesting example relevant to this discussion is the excavations undertaken inside the crypt of Christ Church, Dublin which revealed wall remains of an earlier structure which was partially re-used as foundations for a later pier (Simpson 1999:187 & 1999:186; Kehoe 1999:188). Stalley (2000, 65-66) has put forward the hypothesis that the late Romanesque works at Christ Church was influenced by the presence of an earlier building whose barrel-vaulted crypt could date to c.1100. O’Keeffe (2003, 101) has also added further circumstantial architectural evidence to bolster this theory.

Churches with Attached Round Towers

Finally, moving towards the mid and later 12th century, a number of barrel-vaulted churches with engaged and attached round towers have also been identified (See Lawlor 1999 for list). They include St. Mary’s, Ferns, Co. Wexford, Trinity Church, Glendalough, Co. Wicklow and Kilmacnassan, Ireland’s Eye, Dublin. It is possible that they may have taken their inspiration from Cormac’s Chapel (1127-34) which appears to sit at the junction of the small barrel-vaulted chapels and churches dating to c. A.D. 1100 and churches with engaged round towers which became more common from the mid-later 12th century. The long demolished round tower at St Michael le Pole, Dublin is also thought to have been engaged but the evidence is equivocal. Excavation uncovered the west wall of a 12th – 14th century church and the foundation of an adjacent tower. The excavator concluded that the latter foundations “clearly indicated that the site did produce the foundations of a free standing round-tower close to the western end of the church”(Gowan 2001, 38) while there was also evidence, though “scant and tenuous” for an internal round tower (Ibid. 38-9).

Foundation remains of Excavated Early Medieval Churches

A growing number of excavations have uncovered evidence for the foundations or lower wall courses of earlier stone structures beneath extant early and later medieval stone churches. It
is evident that a number of these stone structures may represent the remains of early medieval churches. A list of some examples is provided in Table 4:8 below.

<table>
<thead>
<tr>
<th>Site</th>
<th>Form</th>
<th>Succeeded: Earlier Church</th>
<th>Preceded: Post-Norman Stone Church</th>
<th>Preceded: Post-Norman Additions</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardfert, Kerry</td>
<td>Northern Wall and plinth part of extant church</td>
<td>Not identified</td>
<td>Yes (Romanesque west door)</td>
<td>Yes</td>
<td>Moore, F 2007</td>
</tr>
<tr>
<td>Aghacross, Cork</td>
<td>Wall: 1.2m along the north and west walls of the present church.</td>
<td>?</td>
<td>?</td>
<td>Yes</td>
<td>Monk 1993:014; Dunne 1997:029; Cotter 2000:0106; Monk, J et al. 1995</td>
</tr>
<tr>
<td>Cashel, Tipperary</td>
<td>Section of wall extending beneath Cathedral door</td>
<td>Yes (Wooden structure-Cormac's Chapel)</td>
<td>Yes</td>
<td>Yes</td>
<td>Hodkinson 1994</td>
</tr>
<tr>
<td>Christ Church, Dublin</td>
<td>Wall remains of structure which partially re-used as foundations for a later pier</td>
<td>No</td>
<td>?</td>
<td>Yes</td>
<td>Simpson 1999:187 &amp; 1999:186; Kehoe 1999:188</td>
</tr>
<tr>
<td>Church Island, Lough Carra, Mayo</td>
<td>Plinth and internal west corner beneath medieval church</td>
<td>Yes (Wooden)</td>
<td>No</td>
<td>Yes</td>
<td>Ryan 1993:173</td>
</tr>
<tr>
<td>Derry, South Church, Down</td>
<td>Dry-stone built structure 13ft 6ins wide.</td>
<td>?</td>
<td>Type 3 church</td>
<td>Yes</td>
<td>Waterman 1967</td>
</tr>
<tr>
<td>Donaghmoyne, Monaghan</td>
<td>Two linear mortar structures, 2.2m x 0.4m aligned E-W. Building not fully excavated.</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>Moore 1999:726 &amp; 2000:0795</td>
</tr>
</tbody>
</table>

**Early medieval domestic buildings within ecclesiastical sites**

**Introduction**

Excavations are providing increasing evidence for wood and stone domestic buildings on ecclesiastical sites. Most of these comprise houses but other specialised structures have also been identified. The evidence for these is presented in Tables 4:9, 4:10 & 4:11. A significant number of other potential early medieval excavated timber buildings/structures have also been identified on ecclesiastical sites though are not described below.

**Timber and sod buildings**

As in the case of churches, round stone houses have sometimes replaced wooden buildings of the same shape. Evidence for this was noted at Church Island, Co. Kerry (O'Kelly 1958, 59-61) and the excavator suggested that it was contemporary with the wooden church although this could not be demonstrated archaeologically. It was assumed to be a domestic structure but the presence of iron slag indicates that it was also used for industrial purposes. The
rectangular house at the site was not preceded by a wooden structure. At Iliaunloughan, Co. Kerry, the three round huts from the earlier eighth century levels were constructed of sods in the same manner as the early church on the site (Walsh and White Marshall 2005, 11-18). The huts had an internal diameter of about 3.7m and a central rectangular hearth. There was no evidence of industrial activity and it was assumed that the living quarters of the monastery’s community. At Doras, Co. Tyrone, (McDowell 1987, 138-144) a round post and wattle house had an estimated diameter of 6.25m. A fireplace comprising of four flat stones was located near the centre of the house. There was no evidence for a central post. A drainage gully surrounded part of the house. Three round houses were present Kilederdrum, Co. Tipperary with diameters of between 6 and 8.8m (Manning 1994, 245-248. House 1 was delineated by a ‘circular’ trench with a delineated the doorway. The trench comprised a series of straight, and the absence of postholes or a slot trench suggested to the excavator that the house was constructed in sleeper beams (ibid. 245). Four internal postholes in the form of a square suggest roof supports, and there was an informal central hearth. Houses 2, and its replacement House 3, had been severely disturbed by burials. Circular timber buildings have been identified on a significant number of ecclesiastical sites but in most instances there is little information about their size or means of construction. Conjoined wooden houses were also present at Caherlehillan, Co. Kerry (Sheehan 1998:268).

Table 4:9 Examples of Excavated Early Medieval Timber Buildings 1930-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>Shape</th>
<th>Location</th>
<th>Date</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballyvourney, Cork</td>
<td>Rectangular Building</td>
<td>Ecclesiastical Site</td>
<td>Early Medieval</td>
<td>O’Kelly 1952</td>
</tr>
<tr>
<td>Church Island Lough Carra, Mayo</td>
<td>Rectangular building</td>
<td>Area of medieval church (Early Church?)</td>
<td>Early Medieval</td>
<td>Ryan 1993:173</td>
</tr>
<tr>
<td>Church Island, Valencia, Kerry</td>
<td>Circular Building</td>
<td>East of oratory, Associated with iron smelting</td>
<td>Early Medieval Phase 1</td>
<td>O’Kelly, 1958, 59-61</td>
</tr>
<tr>
<td>Clonfer, Galway</td>
<td>Buildings</td>
<td>Field to east of church in vicinity of possible outer ecclesiastical enclosure.</td>
<td>Early Medieval</td>
<td>Walsh &amp; Hayden 2001:496</td>
</tr>
<tr>
<td>Clonmacnoise, Offaly</td>
<td>Circular Buildings</td>
<td>Associated with metalworking. Steeple Garden to the west of the graveyard (Location of Visitor Centre)</td>
<td>Early Medieval</td>
<td>Manning 1989:078 &amp; 1990:096</td>
</tr>
<tr>
<td>Derry Ioran, Tyrone</td>
<td>Circular Building</td>
<td>Western perimeter of site in vicinity of possible early medieval enclosure ditches.</td>
<td>Likely</td>
<td>MacManus 2003:1843</td>
</tr>
<tr>
<td>Doras (Tullyniskan), Tyrone</td>
<td>Circular Building</td>
<td>Southwest of extant church immediately inside excavated possible enclosure ditch.</td>
<td>Early Medieval</td>
<td>McDowell 1987</td>
</tr>
<tr>
<td>Downpatrick, Down</td>
<td>Circular Building</td>
<td>Southwest slopes of Cathedral Hill</td>
<td>Early Medieval</td>
<td>Brannon 1987:12 &amp; 1988</td>
</tr>
<tr>
<td>Dunmassk, Tyrone</td>
<td>Circular Building</td>
<td>Southwest Quadrant; Metalworking area</td>
<td>Early Medieval</td>
<td>Ivens 1980-84:0186; , 1988 &amp; 1989</td>
</tr>
<tr>
<td>Dunmassk, Tyrone</td>
<td>Circular Building</td>
<td>Southwest Quadrant; Metalworking area</td>
<td>Early Medieval</td>
<td>Ivens 1980-84:0186; , 1988 &amp; 1989</td>
</tr>
<tr>
<td>Dysart, Kilkenny</td>
<td>Circular Building</td>
<td>Associated iron slag: Southwest of Church</td>
<td>Likely</td>
<td>Murtagh, B 1991:078 &amp; 1994</td>
</tr>
<tr>
<td>Kilpatrick, Corbetstown, Westmeath</td>
<td>Circular Building</td>
<td>Southern area of enclosure; Fragments of antler and metalworking associated with building.</td>
<td>Early Medieval</td>
<td>Swan 1975:36 Swan 1976</td>
</tr>
</tbody>
</table>
### Early medieval dry stone cells

**Introduction**

Dry stone curvilinear houses have a broad distribution across the west of Ireland but were particularly common on secular and ecclesiastic sites in the Kerry region (Cuppage 1986, 99; O’Sullivan & Sheehan 1996, 135). These sub-circular dry stone structures rarely survive intact but typically contain inward battered walls which, in most but not all cases, corbel towards the apex of the roof. It is often difficult to identify whether some of these structures were raised in corbelled courses to the apex (Beehive Clochán tradition) or whether they consisted of low battered corbelled walls with a roof of turf or thatch. There has been some debate as to the origins of the early medieval Beehive Clochán. Traditionally, it has been believed that this form of dry stone construction emerged from an indigenous prehistoric dry stone tradition (Leask 1955). This view is no longer supported as excavations at a number of ecclesiastical sites including Illaunloughan, Church Island, Reask and the Cashel at Loher have demonstrated that organic buildings were built during the earliest phase of the settlement before giving way to circular dry stone cells (Ó Carragáin 2003, 24 & 43, Note 26). Indirect support for this view comes from the understanding that no dry stone structures were found at the ecclesiastical site of Caherlehillan which significantly fell out of use by the 7th century A.D. (Ó Carragáin 2003, 43 Note 26).

**Excavated Cells 1930-2004**

The excavated examples are listed in Table 4:10. Dating is problematic but a sample from immediately under the wall of a cell at Illaunloughan, Co. Kerry produced a 2 sigma calibrated date of AD 775-961 (White Marshall & Walsh 2005, 42). Other dating for occupation of the site implies that the house is unlikely to be later than the early ninth century. The masonry style of the Illanouloughan cell was comparable to that on several of the Skellig Michael examples though found closest similarity to the excavated cell in the Monks garden below the main settlement at Skellig Michael (See White Marshall & Walsh 2005, 38). Mortar was used to set the paving slabs on the floor of Cell A and B on High Island, Co. Galway. It was also used with the paving in the church which the excavators suggested was built sometime between the 9th and 11th centuries burials (See White Marshall & Rourke 2000, 121). Given the unusual use of mortar in the flooring it is likely that the church and the stone cells are of the same date.
None of the excavated corbelled cells have provided evidence for internal partitioning, as have been noted in some round houses on secular sites. The only internal feature in the Illanloughan stone house (D) comprised an informal off-centre fireplace (White Marshall & Walsh 2005, 148). Much of the interior had been disturbed by the digging of a later period. The interior of the Church Island, Co. Kerry, round stone house (4.5m diameter) contained one of the most intact floors of any early medieval house. The floor as sealed by charred straw which the excavator interpreted as representing collapsed burnt thatch (O’Kelly 1958, 68). Twelve post-holes along the inside of the wall are likely to have contained roof supports, with the two immediately at the sides of the door opening could have acted as frames for a door. O’Kelly (1958, 123) suggested that the post holes supported elbow crucks or a variation of same. The whole floor was essentially a trampled midden comprising for the most part of shells, animal and fish bones interspersed with burnt grain. The hearth comprised an oval spread of peat ash, located off-centre towards the door. A slightly curved rectangular arrangement of postholes, 2x1m in size, was located against the wall opposite the door. This, O’Kelly interpreted as being the supports of a bed (ibid. 69). A drain, partially rock cut, ran from the interior of the house out the door. In recent vernacular buildings, drains are indicative of the keeping of animals in a dwelling (Aalan 1997, 148). Fanning (1981, 88) interpreted the late insertion of a similar drain into the conjoined houses at Reask and being evidence for their use as byres. It is unlikely, however, that the Church Island cell was a byre house and it is likely that the drain was for human use, thus ensuring that the dwellers did not have to go out outside to relieve themselves, particularly during winter. The exposed location of house may have necessitated such an innovation. Such sanitary arrangements have not been noted elsewhere in Ireland. It is likely to be no coincidence that early examples in Britain are generally confined to similarly exposed coastal locations such as Skara Brae in Orkney and Jarlshof on Shetland. O’Kelly noted that the walls of the Church Island round house were not weatherproof and suggested that it had originally been insulated by a layer of sods on its exterior wall. He suggested that the stonework annulus that surrounded the house could have supported this (ibid 70-1).

The round stone houses are Reask were also devoid of internal partitioning. Houses A and B were conjoined having single entrance in House B with a formally paved entrance (Fanning 1981, 87-92). House B contained a large informal hearth with post-holes at either end, possibly for supporting a spit. There was no fireplace in House B and it is likely to have functioned as sleeping quarters. As in the case of church Island, Houses A and B were surrounded by a stone annulus which could have supported a turf windbreak. The two conjoined round houses C and D were smaller than A and B with diameter of 4.6m as opposed to 6m for the individual houses. They also differed in that there was no surrounding annulus and the fireplace, actually a fire-pit, was in the inner house rather than in the house with the door. Excavations of the corbelled houses at High Island, Co. Galway revealed stone lined hearths with associated midden material (Scally 1997:210; 1998:256). The houses had paved floors which appeared to be set in mortar (White Marshall and Rourke 2000, 90). Recently the excavation of a partially destroyed dry-stone round house was excavated at Trahanarear on Inishmurray, Co. Sligo (O’Sullivan & Ó Carragáin 2008, 216-39 & 320-21) but unfortunately no archaeological deposits were present in its interior. The excavation found that it had preceded a leacht which may have been built sometime between the 9th-11th centuries (O’Sullivan & Ó Carragáin 2008, 216-39 & 320-21). It was not possible to establish if the walls of this dry stone structure were raised in corbelled courses in the beehive clochán fashion or whether it consisted of low stone walls with a roof of turf or thatch though the excavators did favour the latter option because of the relatively thin surviving walls.
Table 4:10 Examples of Excavated Early Medieval Dry stone Cells 1930-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>County</th>
<th>Feature Description</th>
<th>Date</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballyvourney</td>
<td>Cork</td>
<td>Circular Stone Building</td>
<td>Early Medieval</td>
<td>O'Kelly 1952</td>
</tr>
<tr>
<td>Church Island</td>
<td>Kerry</td>
<td>Circular Stone Cell</td>
<td>Monastic Phase 2</td>
<td>O'Kelly 1957-59</td>
</tr>
<tr>
<td>Illaumloughan</td>
<td>Kerry</td>
<td>D= 4.3m-4.4m</td>
<td>8/early 9th century</td>
<td>White Marshall &amp; Walsh 2005</td>
</tr>
<tr>
<td>Iniscaultra</td>
<td>Clare</td>
<td>Cell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inishke North</td>
<td>Mayo</td>
<td>Dry stone Conjoined Beehive structure</td>
<td>Early Medieval</td>
<td>Henry 1945 &amp; 1951</td>
</tr>
<tr>
<td>Reask</td>
<td>Kerry</td>
<td>Conjoined Cell A &amp; B</td>
<td>Monastic Phase 2</td>
<td>Fanning 1981, 88-92</td>
</tr>
<tr>
<td>Reask</td>
<td>Kerry</td>
<td>Conjoined Cell (C &amp; D)</td>
<td>Monastic Phase 2</td>
<td>Fanning 1981, 92-94</td>
</tr>
<tr>
<td>Reask</td>
<td>Kerry</td>
<td>Cell (E)</td>
<td>Monastic Phase 2</td>
<td>Fanning 1981, 94-96</td>
</tr>
<tr>
<td>Reask</td>
<td>Kerry</td>
<td>Cell (F) Internal D= 3.5m Wall thickness= 90cm</td>
<td>One of the earliest clochans</td>
<td>Fanning 1981, 96</td>
</tr>
<tr>
<td>Reask</td>
<td>Kerry</td>
<td>Cell (G) Internal D= 2.75m Wall thickness .80-1m</td>
<td>One of the earliest clochans</td>
<td>Fanning 1981, 97-98</td>
</tr>
</tbody>
</table>

**Early medieval rectangular stone houses**

Rectangular domestic buildings have been found on a number of ecclesiastical sites (See Table 4:11). These tended to be differentiated from churches by the presence of hearths and other domestic or industrial activity. The poorly recorded rectangular house at Nendrum, Co. Down, internally 9x4m, was identified as a ‘school’ by its excavator on the basis of the presence of stylie and slate motif pieces. McErlean and Crothers (2007, 376-7), however, suggest that the building is of later medieval date and that the artefacts are from occupation layers predating its construction. The rectangular stone house at Church Island was built on top of the rubbish midden discarded from the stone round house. The house, which measured 5.5x3.5m internally, had two opposing doors in the gables ends, similar to the arrangement in the wooden houses in Fishamble Street, Dublin. Like the round-house, it too had an internal drain that may have been for sanitary purposes but O’Kelly (1958, 74-5) believed that it was constructed for the collection of water. The drain entered the house under the south-western wall, presumably collecting water from the higher area outside, and exited by the south-eastern door. It seems to have functioned as a reredorter drain. The roofing support system was similar to the round house (above) with a series of post holes at the base of the wall. The Church Island house is located immediately outside the monastic enclosure wall. Marshall White and Rourke (2001, 51) suggest that it is a guest house on the basis of the early documentary evidence which indicates that the monastic guesthouse was sometimes located outside the monastic enclosure.
At Reask, a rectangular house, with an internal dimension of 5.5x2.8m, was built into the enclosure wall (Fanning 1981, 94-5). An off-centre hearth was located opposite the single door, which opened from the long axis of the building. Three rectangular houses were present at Kiltieran, Co. Galway (Waddell and Clyne 1995, 162-174) but unfortunately their date could not be clearly ascertained as early medieval and much later finds were often found in the same layers. House I, as at Reask, was attached to the enclosure wall but the others were freestanding. House three was the largest with internal dimensions of 15.9x4.27m. This is much larger than any known house from Early Medieval Ireland (Lynn 1994, 91). Finally, excavations in the New Graveyard, Clonmacnoise have yielded evidence for a rectangular structure (King 1993:187). It appears to have been contemporary with an adjacent round house and was built using roughly coursed limestone boulders measuring on average 0.3m in diameter and standing to a maximum height of five courses. Both were surrounded by a gravelled yard with a wooden gate, walls and a large hearth and were assigned a rough 8-10th century date (King 1996:324).

Table 4:11 Examples of Excavated Early Medieval Stone Buildings 1930-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>Shape</th>
<th>Location</th>
<th>Date</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Church Island, Kerry</td>
<td>Rectangular (External Rounded Corners)</td>
<td>Northeast of island</td>
<td>Early Medieval</td>
<td>O'Kelly 1957-59, 73-75</td>
</tr>
<tr>
<td>Inishkea North, Mayo</td>
<td>Stone Buildings</td>
<td>Sand Dunnes</td>
<td>Early Medieval</td>
<td>Henry 1945 &amp; 1951</td>
</tr>
<tr>
<td>Kiltieran East, Galway</td>
<td>Rectangular (I) (External Rounded Corners)</td>
<td>Southeast corner of the site</td>
<td>Early Medieval</td>
<td>Duignan 1951; Waddell &amp; Clyne 1995</td>
</tr>
<tr>
<td>Kiltieran East, Galway</td>
<td>Rectangular (II) (External Rounded Corners)</td>
<td>Southeast corner of the site</td>
<td>Possible Early Medieval</td>
<td>Duignan 1951; Waddell &amp; Clyne 1995</td>
</tr>
<tr>
<td>Kiltieran East, Galway</td>
<td>Rectangular (III) (External Rounded Corners)</td>
<td>Southeast corner of the site</td>
<td>Early Medieval</td>
<td>Duignan 1951; Waddell &amp; Clyne 1995</td>
</tr>
<tr>
<td>Reask, Kerry</td>
<td>Rectangular Stone Building</td>
<td>Built into enclosure wall</td>
<td>Possible Early Medieval</td>
<td>Fanning 1981</td>
</tr>
</tbody>
</table>

Conclusion
Our knowledge of monastic dwelling houses is unfortunately then biased towards small foundations along the Atlantic seaboard. The impression provided by the evidence that they these monastic cells provided accommodation for a small number of occupants. White Marshall and Walsh (2005, 16) estimated that the two conjoined huts at Illaunloughan would have housed five or six occupants. Some of the documentary evidence, however, indicate that all the monks of a monastery, with the possible exception of the abbot, would have dwelt communally. McDonald (1997, 36-38) has shown that the Adomnán’s life of Columba indicates that the monks on Iona lived communally and that their sleeping quarters was essentially a large dormitory.

**Early medieval monuments: Round Towers**

Introduction
The round towers of Ireland have been the subject of two recent monographs (Lawlor 1999; O'Keeffe 2004). Lawlor's work provides a good corpus of the extant surviving and lost round
towers, with a particular emphasis constructional features of the monuments, reflecting the author’s profession as an architect. O’Keeffe’s work is more discursive and contains much interesting speculation on the function of the towers. Stalley (2001) has also discussed the function and possible architectural tem-plates for these monuments. The most comprehensive descriptions of the individual towers is still to be found in Barrows (1978) monograph one round towers. There have been at least 6 excavations of round towers in the period under consideration for the present report (4:12).

Table 4:12  Excavated Round Towers 1930-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>County</th>
<th>Foundation</th>
<th>Burials</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardmore</td>
<td>Waterford</td>
<td>Single course plinth resting on footing of uncut sandstone slabs over a deposit of stony clay.</td>
<td>Possible earlier burials</td>
<td>Lynch 1996:385</td>
</tr>
<tr>
<td>Devenish</td>
<td>Fermanagh</td>
<td>‘Solid circular mass of stones’</td>
<td>No evidence</td>
<td>Waterman 1973-74</td>
</tr>
<tr>
<td>Inisceiltra</td>
<td>Clare</td>
<td>‘Shallow foundations’</td>
<td>?</td>
<td>Barrow, L 1979, 61 &amp; 62</td>
</tr>
<tr>
<td>Leigh</td>
<td>Tipperary</td>
<td>Built on substantial circular foundation of rough limestone boulders 2.6m deep</td>
<td>Erected over earlier Burials</td>
<td>Glasscock 1970; Glasscock 1971; Glasscock 1970:30</td>
</tr>
<tr>
<td>Roscrea</td>
<td>Tipperary</td>
<td>Single layer of footing stones projecting from underneath the tower</td>
<td>Not documented</td>
<td>Lynch 1996:385</td>
</tr>
<tr>
<td>Tullaherin</td>
<td>Kilkenny</td>
<td>Internal test-pit revealed no evidence for internal wall footings though 3 clay floor levels were uncovered.</td>
<td>No evidence</td>
<td>Hayden 2004:0930</td>
</tr>
</tbody>
</table>

Excavated Round Towers: Evidence for Foundations

Barrow (1979, 23) has argued that many round towers would have been built on top of substantial foundations filled with rubble cores. Lawlor (1999, 75) too believes that foundations were a necessary feature of round towers, noting that on top of this was usually built a plinth in the form of ‘concentric steps [that] occupy the space between the outer circle of the below ground masonry and the line intended for the wall-surface of the tower’. At Leigh, Co. Tipperary the circular foundation of rough limestone boulders was found to be 2.5m deep ‘the bottom stones set deep down into the natural boulder clay’ (Glasscock 1070:30). This, however, is the only tower to have provided evidence for such deep foundations. Excavation at the earlier tower at Devenish, Co. Fermanagh, (Waterman 1973, 100-2) revealed that the foundation comprised of a solid circular mass of stones bedded in ‘good quality lime mortar, liberally used (ibid, 101). The outside facing survived to only one or two courses. The upper levels, including any plinth, had been removed so the original height of the foundation height is unknown. There was no evidence, as was the case at Leigh, for the digging of a deep trench for the foundations. The southern part of the foundations were built on the ‘natural surface’ while the northern end were cut only about 25cm into the old ground surface. This might explain why the tower failed and needed to be replaced. Waterman exposed and area of paving and associated postholes at the eastern edge of the structure which he proposed represents the approach to the original entrance and support for ‘the landing at the first floor entrance’ (ibid. 102).

These two excavations provide contradictory evidence about the nature of round tower foundations. At Devenish the ‘foundations’ were essentially an above-ground feature while at Leigh they were constructed in a deep trench. Excavations on the outside of the base of the round at Ardmore, co. Waterford reveal something in between. The tower had a single course plinth of which sat on a ‘footing of uncut sandstone slabs’ which has a depth of 0.5-0.7m (Lynch 1996:385). Lynch also noted that that shallow foundations have been recorded at other towers, e.g. 0.6 at Kilmacduagh and 0.9m at Kilkenny. The excavator concluded of Ardmore that the ‘ground level at the time of tower construction must have been little different of that of today’. This implies that the plinth was above ground and the foundation in a dug trench. Lynch (ibid.) refers to ‘excavations’ in the interior of the Ardmore tower undertaken in the middle of the nineteenth century which discovered that the base of the
tower comprised of a layer of mortar which overlay a thick deposit of overlapping flagstones which in turn overlay another layer of mortar. This implies a solid circular foundation similar to that of Devenish. However, Barrow’s (1979, 25) photographs of the Leigh foundation indicate that they comprised a thick rough circular ring of stones with a circular hollow area in the middle.

Several round towers including Ardmore, Cloyne, Roscrea, Cashel, Drumbo, Clones, Devenish, Armoy, Drumlanigan, Inniskeen, Tory Island and Timahoe were excavated in the 19th century by antiquarians who sought to establish if the basement of round towers were used for sepulchral purposes. Barrow (1978) quotes the findings of these early investigations in his gazetteer of the individual sites and unsurprisingly most provided evidence for burials that predated the construction of the towers.

**Early medieval monuments: High Crosses**

**Excavated High Crosses 1930-2004**

Excavations of at least 13 high cross foundations have been undertaken between 1930-2004 (4:13). Most of these excavations have taken place in recent times as part of conservation work on the monuments. The base of the cross at Ballymore Eustace, Co. Kildare, was found to lie on disturbed natural soil and the excavator surmised that the cross was in its original position (King 2004). The base proved to be of the truncated pyramidal shape favoured in early medieval Ireland. The bottom of the base was unworked and its uneven base was in places propped up by small stones to level it. It can be assumed that the unworked part, approximately half its height, was originally buried. Removal of three high crosses to the new visitors centre at Clonmacnoise, Co. Offaly afforded the opportunity to excavate the bases. The South Cross was found to lie on top of some early medieval cross slabs (King 1992, 23) as well as a fragment of post-medieval slab. This would imply that the cross was in a secondary position but the excavator noted that the evidence suggested that the broken slabs ‘had been placed beneath the cross slabs in relatively’. Removal of the stone cross-base revealed a pit some 0.6m wide and 0.85m deep which King (1994:196) suggests may be the base of a wooden cross. A similarly positioned pit, some 1.4m in depth was found under the cross of the Scriptures (ibid.). The base uncovered under the Northern Cross at Clonmacnoise differed from the usual type. The stone seemed to comprise a re-worked millstone and Manning (2002, 8-9) suggests that it originally may have had a composite base similar to St John’s cross Iona. Burials were found either under, or in the immediate, vicinity of the three crosses at the site.

There have been conflicting views about whether or not the Market Cross at Kells was in its original position, an argument that was particularly enlivened by the fact that the cross was located at a considerable distance from the monastic core. Swan (1998) argued the cross was a ‘Termon’ cross located at the monastic gateway of the outer enclosure of the monastery. Historians, such as Doherty (1980, 83; 1995, 60), Simms and Simms (1990, 1-2) and Swift (1998, 116-7) tended to agree with this hypothesis. Bradley (1985, 440) suggested that the cross might have been moved to this position during the seventeenth century and more recent cartographic and illustrative evidence suggests that the cross have moved a few times in more recent times (King 2004, 240). The recent removal of the cross to a safer location allowed the modern plinth to be removed. Unfortunately the plinth, erected in 1893, had ‘dug to a depth of c. 1m into subsoil thereby removing and previous occupation material that might have existed and a result the excavations did ‘not, unfortunately. Shed any additional light on the on the site on the siting of the cross (King 2004, 238). The high cross at Cashel was also set in a large plinth which its excavator believed was constructed after the 13th/14th century (Lynch 1983, 15-16).
Table 4.13 Excavated Early Medieval High Crosses 1930-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>County</th>
<th>Original Context</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boho, Toneel North</td>
<td>Fermanagh</td>
<td>No (1832)</td>
<td>Donnelly, Murphy &amp; Macdonald, 2002:0700; Donnelly, MacDonald, Murphy &amp; Beer 2005</td>
</tr>
<tr>
<td>Ballymore Eustace</td>
<td>Kildare</td>
<td>Likely (South of Cathedral)</td>
<td>King, 1999:357; King 2004</td>
</tr>
<tr>
<td>Cashel, St. Patrick’s Rock</td>
<td>Tipperary</td>
<td>No</td>
<td>Lynch, A 1983</td>
</tr>
<tr>
<td>Clonmacnoise (North Cross)</td>
<td>Offaly</td>
<td>No (17/18th century)</td>
<td>Manning 1990:096; Manning 1992; King 1993:186</td>
</tr>
<tr>
<td>Clonmacnoise (South Cross)</td>
<td>Offaly</td>
<td>Yes (South of Cathedral)</td>
<td>King 1992; King 1994:196</td>
</tr>
<tr>
<td>Clonmacnoise (West) - Cross of Scriptures</td>
<td>Offaly</td>
<td>Yes (West of Cathedral)</td>
<td>King 1992; King 1994:196</td>
</tr>
<tr>
<td>Glendalough, St. Kevin’s Cross</td>
<td>Wicklow</td>
<td>Possible (Southwest of Cathedral)</td>
<td>Lynch 1989:101</td>
</tr>
<tr>
<td>Kells, Market Cross</td>
<td>Meath</td>
<td>Uncertain (Market Cross- Outer enclosure to east)</td>
<td>King 1997:423; Swan, L 1998</td>
</tr>
<tr>
<td>Kilfenora (Dorothy Cross)</td>
<td>Clare</td>
<td>Uncertain (Graveyard)</td>
<td>Rogers 2004:016</td>
</tr>
<tr>
<td>Labbamolaga Middle</td>
<td>Cork</td>
<td>No</td>
<td>Cleary 1995:035</td>
</tr>
<tr>
<td>Peakaun, Toureen (East Cross)</td>
<td>Tipperary</td>
<td>Possible (Graveyard)</td>
<td>Duignan 1944</td>
</tr>
<tr>
<td>Roscrea</td>
<td>Tipperary</td>
<td>Likely (South of Cathedral)</td>
<td>Manning 1997:555</td>
</tr>
<tr>
<td>St. Stephen’s Leper Hospital</td>
<td>Dublin</td>
<td>No (High Cross Find)</td>
<td>Buckley &amp; Hayden 2002</td>
</tr>
<tr>
<td>Tighlagheany, Aran Islands</td>
<td>Galway</td>
<td>No (High Cross Find)</td>
<td>Manning, C 1985, 96-120</td>
</tr>
</tbody>
</table>

Early medieval monuments: the archaeology of pilgrimage

The Archaeology of pilgrimage has received detailed attention by a number of scholars, particularly in recent years (e.g. Harbison 1991; Herity 1995; Ó Carragáin 2003; O’Sullivan & Ó Carragáin 2008). A range of architectural features including various forms of tomb-shrines, shrine chapels and leachta have been investigated in recent years shedding new light on the character of pilgrimage in early medieval Ireland.

Tomb-Shrines

Introduction
The tomb-shrine of the founder saint was an important focus of ritual at early church sites (Thomas 1971, 132-166). Several recent works have emphasised their role in pilgrimage in Ireland during the early medieval period (Harbison 1991; Herity 1995; Ó Carragáin 2003). It has been suggested that these tomb-shrines operated as memoria or martyria containing the corporeal remains of the founder saint (O’Keefe 1998, 116). There has been a tendency to suppose that these shrines were an essential component of early monasteries and Swan (1983, 274) includes them as among his criteria for identifying an ecclesiastical site. As a result of this, excavators have sometimes applied the term ‘shrine’ to features which are of questionable function.
Slab-Shrines
One example is a small paved structure associated with two small pillar stones at Reask, Co. Kerry which has been identified as a ‘slab-shrine (Fanning 1981, 84-5) of the type discussed by Thomas (1971, 142). It was found at the same level as the lintel cemetery and in a context below the oratory and its associated paved entrance. Had it not been found in proximity with early burials, it is extremely unlikely, however, that this structure would have been considered as a shrine.

Box or Corner Post Tomb Shrines
A more elaborate type of box structure with corner posts which can be confidently described as a tomb shrine has been identified by Herity (1993, 191). These small structures are typically decorated all over the outer surface and are constructed with stone slabs whose edges are placed inside grooves of the corner-post pillars. Previous studies (e.g. Henry 1957) have described a number of these structures in the Kerry region. Though there are no surviving examples, Herity (1993, 191) has proposed that the size and shape of a number of decorated slabs at High Island, Co. Galway, Carrowtemple, Co. Sligo, Tullylease, Co. Cork, Inisceiltra, Co. Clare and Toureen Peakaun, Co. Tipperary (Waddell & Holland 1990) fits neatly with their role as side and end slabs of small box shrines. Potential corner-posts for these ornamented box shrines have been recorded by Herity (1993, 191) at a number of other sites including Kilnaruan, Co. Cork, Kildrenagh on Valencia Island, Co. Kerry (Henry 1957, 88-90) and possibly Killeen Cormac, Co. Kildare (Macalister & Praeger 1928-29, 254-55). Similar evidence for small corner-post shrines has also been recorded by Thomas (1971, 150-59) at a number of Scottish sites including Iona and St. Ninian’s Isle who has dated these monuments to the 8th and 9th centuries A.D.

Excavations exposed a possible corner post shrine inside a natural hollow in the southeast corner of Church Island (O’Kelly 1957-59, 87-90; Henry 1957). Ó Carragáin (2003, 144) believes that this is a corner-post type shrine although O’Kelly believed that its grooved corner stones were later additions. Excavations failed to establish whether the shrine marked a special grave or a number of burials due both to the heavily disturbed nature of the monument and the acidic nature of the surrounding soils. Another possible corner post shrine contemporary with a wooden church, has also been excavated by John Sheehan (forthcoming) in the northeast corner of the ecclesiastical enclosure at Caherlehillan, Co. Kerry. It had been covered by a mounded deposit of quartz pebbles and appears to have represented the last addition to a site which went out of use in the 8th century A.D. Excavations at Caherlehillan identified that the corner post shrine was built over a grave whose lintels exhibited wear-patterns consistent with devotional pilgrimage activity (Ó Carragáin 2003a, 134; See Sheehan forthcoming). The cist-like burial beneath the shrine was one of the two earliest graves within the cemetery and was found associated with 7th century E-ware pottery (Laing 2006, 230).

Gable Shaped Tomb Shrines
A-roofed or gable shaped tomb-shrines have been recorded in number of sites of such Killabuonia, Kilreelig and Killoluaig, Co. Kerry (Henry 1957, 96-112), St. Chrónán’s Bed, Teampall Chráinín, Co. Clare and Kilcholan on Inishmore, Aran Islands (Harcison 1991, 151-154). Westropp (1901, 405) believed he had found part of a gable-shaped or A-roofed shrine at Slane, Co. Meath which, if correct, might indicate that this type of shrine had a wider island-wide distribution (White Marshall & Walsh 2005, 56). Many of these gable-shaped shrines like Killoluaig, Ilaunloughan and Killabuonia in the Iveragh Peninsula in Co. Kerry were found situated on raised areas or low mounds demarcated by vertical-set stones (White Marshall & Walsh 2005, 56-58). The actual complexity and monumentality of these shrines in their original form has recently been strikingly revealed at Ilaunloughan, Co. Kerry (Marshall White and Walsh 2005, 58-66). The shrine lay on a raised paved plinth with a formal entrance approached by a paved pathway on its western side. Two stone cists were present within the gabled chamber. Large quantities of quartz stone were scattered over the plinth. Two long slate stones lying against each other formed the gable-shrine. Within this, two
stone cists, shaped like miniature lintel cist graves, contained the bone of two male adults and a child. Radiocarbon dates the burials to between seventh - eighth centuries.

Shrine Chapels

A group of small mortared rectangular unicameral buildings, often containing deep antae and a western doorway, are present on a number of important ecclesiastical sites across the country. A number of examples belonging to this group of buildings include St. Diarmuid’s, Inishcleraun, Co. Longford, St. Columba’s Shrine, Iona, Tech Molaise, Inishmurray, Co. Sligo, Temple Clirán, Clonmacnoise, Co. Offaly, St. Declan’s, Ardmore, Co. Waterford, Labbamolaga, Co. Cork and potentially the lower part of St. Columba’s House, Kells, Co. Meath (Ó Carragáin 2003, 131; O’Keeffe 1998). Hagiographical, archaeological and folkloric evidence has long suggested that these small churches were regarded as saint’s burial shrines (Ó Carragáin 2003, 130-76; Harbison 1991, 147-51, Herity 1993, 190-91, O’Keeffe 1998, 116). Ó Carragáin’s (2003, 134) has observed that the location of these buildings varies greatly in relation to the main liturgical church on ecclesiastical settlement supporting the idea that they were built over the original founder’s grave-site.

Ó Carragáin (2003, 130 & 165 Notes 11 & 12) has suggested that these buildings should be described as ‘shrine chapel’ instead of ‘tomb shrines’ because “in Ireland ‘scrín’ which derived from the same root as shrine, denoted the principal corporeal reliquary of a particular saint, while in origin ‘chapel’ denoted a small free-standing building used to house a relic”. Documentary references and radiocarbon dates have suggested that these mortar built shrine chapels may date from as early as the eighth and ninth centuries (Harbison 1991, 151, O’Keeffe 1998, 116; Berger 1992 & 1995: Ó Carragáin 2003, 131-33 & 165 Notes 13-16) and therefore pre-date mortared stone churches. It should be noted, as noted above, that the radiocarbon dates derived from the mortar samples are suspect. The characteristically deep dimensions of the antae in proportion to the size of these buildings can also be used as a pointer to indicate an early date (Manning 1998, 76; Ó Carragáin 2003, 133 & 2005 a, 139).

A chapel shrine on island of Inchmacnerin, Lough Key, Co. Roscommon was recently excavated by King (2000:0860;2002:1594; 2007). The building was located to the north of the main church and measured 4.7m east-west by 2.5m north-south externally. Two human burials contained within partly stone-lined graves were discovered in the interior of the structure. These provided radiocarbon dates at two sigma A.D. 1021-1216 and A.D. 1034-1229. The chapel shrine of Columba at Iona also contained two slab-lined graves but these are thought to be of later medieval date (RCAHMS 1982, 42).

Excavated Leacht 1930-2004

Introduction

Leacht’s are open air altar-like dry-stone constructions which are commonly found on a number of western monasteries including Inishmurray, Co. Sligo (O’Sullivan and Ó Carragáin 2008) Illauntannig, Illaunloughan and Skellig Michael, Co. Kerry (Cuppage 1986, 295; Marshall White and Walsh 2005, 46-51; Horn et al 1989, 42-5) and High Island (Marshall and Rourke 2000, 36-7). Recent excavation of leachts on Illaunloughan and Inishmurray have resulted in re-appraisals of the monument type. The ethnohistory of the term ‘leacht’ implies as association with burial and can be translated as a ‘memorial or monument’, a ‘heap or mound’, a ‘memorial cairn’ or a ‘grave’ or ‘grave mound’ (White Marshall & Walsh 2005, 49). Thomas (1971, 168-72) has argued that it derives from the words Lectus in Latin and lecht in Old Irish, both of which mean ‘bed’ in the early medieval sense of a ‘grave’. They are often assumed to be ‘open air alters’ but Hunwicke (2006, 49) has noted that they are unsuitable for the purpose of performing the sacrifice of the Eucharist as they are generally too low, they do not afford a level surface for the chalice, and are ‘not constructed so that Mass could be celebrated facing east’. O’Sullivan and Ó Carragáin (2008, 321) note that of the sixty five known leachts in peninsular Kerry only two are likely to have functioned as altars.
Excavated Leachta 1930-2004
A small number of leachta have been excavated (Table 4:14)). Both Inishmurray, Co. Sligo and Omey, Co. Galway provided evidence that leachta were rebuilt and renewed over time. At Omey the original dry-stoned leacht was replaced by a mortared form “probably in the late middle ages” (O’Keefe 1992, 5). The excavated leachta, however, have failed to produce conclusive dating evidence. A glass vessel from the base of the core of a leacht at Trahanareer, Inishmurray, could possibly be of Roman date but the excavators concluded that it was more likely to be modern (O'Sullivan and Ó Carragáin 2008, 233). The excavations at the large oratory on Skellig Michael and at Illaunloughan have also both demonstrated that these buildings were structurally integrated into early medieval leachta (White Marshall & Walsh 2005, 48-49). Similarly, excavation on the Little Oratory Terrace on Skellig Michael identified a possible rectangular dry stone-built leacht which was coeval with the surrounding paving, revetment walls and oratory (Lynch 1987:25). The leacht at Illaunloughan was contemporary with the monastery as its construction ‘predates the stone oratory but possibly not by a significant period’ (Marshall White and Walsh 2005, 156). Some of the excavated leachta were located on top of burials but it is unclear if they were built specifically to mark the location of a particular burial. The leacht at Illaunloughan cut through, and damaged, earlier burials (ibid. 156-7) so a direct association is improbable. It has however been suggested by White Marshall & Walsh (2005, 53) that the leacht at Illaunloughan may have been used as an open-air altar with a potential liturgical purpose which marked ‘the place of the earliest oratory and honoured the earliest monks buried around the oratory’.

The two leachta in Relickoran, Inishmurray were also built over burials which provided calibrated 2 sigma dates of AD 711-982 and AD 893-1148 (O’Sullivan and Ó Carragáin 2008, 291. The larger leacht was located in an area of dense burial activity so direct association is again improbable. The small leacht, however, was located over two burials in an area enclosed by a stone wall and otherwise devoid of burials. It could be argued that the leacht was intentionally located to mark these burials. O’Keefe (2004, 16) states that the leacht on Omey was built over a ‘special burial’ in a lintelled grave but it was in an area of very dense burial so its position may have been coincidental.

The leacht at Trahanareer, Inishmurray was built on top of a rectangle of paving at the centre of which was a post hole surrounded by packing stones. The excavators noted that the central position of the post-hole leaves no doubt that the leacht was erected immediately after the post it had held was removed, because the exact position of the post would have been forgotten if there had been a substantial hiatus between the two monuments (O’Sullivan and Ó Carragáin 2008, 237). They interpret the post hole as evidence for a ‘table alter’ mounted on a single wooden prop. Thomas (1971, 176-178) argues for the presence of this type of altar in Ireland at the time. The implication, therefore, is that the stone leacht would also have functioned as an altar. O’Sullivan and Ó Carragáin (2008, 319-23) conclude that the leachta on Inishmurray were most likely to have been altars and that ‘a plurality of altars with different dedications was regarded as a basic requirement for important ecclesiastical establishments’ (ibid. 323). They would have been used regularly by the resident clerics but also as part of the liturgy of pilgrimage which they argue was an important component of religious life during the early medieval period (ibid 318-9).
### Table 4:14 Excavated Early Medieval Leachtta 1930-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>Context</th>
<th>Size and associated Features</th>
<th>Date</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ilalaunloughan, Kerry</td>
<td>Cashel (North side)</td>
<td>Leacht (North side of Dry stone oratory)</td>
<td>8th/early 9th century</td>
<td>White Marshall &amp; Walsh 2005</td>
</tr>
<tr>
<td>Inishmurray, Sligo</td>
<td>Laghta Patrick</td>
<td>Herity (1995, 115) = rectilinear dry stone leacht c. 1.92m X 2.3m with no cross-slab</td>
<td>9-12th century</td>
<td>O'Sullivan 1999:792; O'Sullivan &amp; Ó Carragáin 2008, 239-43</td>
</tr>
<tr>
<td>Inishmurray, Sligo</td>
<td>Ollamurray</td>
<td>Original Leacht= 1.8m E-W X 1.4m N-S. 0.4M high</td>
<td>9-12th century</td>
<td>O’ Sullivan, 2000:0887; O’Sullivan &amp; Ó Carragáin 2008, 298-313.</td>
</tr>
<tr>
<td>Inishmurray, Sligo</td>
<td>Relickoran</td>
<td>Two Leachta inside conjoined enclosures. Rectilinear Leacht inside main enclosure= 1.9m N-S X 1.8m E-W. Small leacht = 0.8m high X 1.9m E-W and 1.2m N-S (remnant)</td>
<td>9-12th century</td>
<td>O’Sullivan 1999:793 &amp; 2000:0888; O’Sullivan &amp; Ó Carragáin 2008, 251-98</td>
</tr>
<tr>
<td>Inishmurray, Sligo</td>
<td>Trahanareear</td>
<td>Leacht (0.7m high X 1.9m in max. length). inside small enclosure abuts earlier cell</td>
<td>9-12th century</td>
<td>O’Sullivan 1997:468; O’Sullivan &amp; Ó Carragáin 2008, 216-39.</td>
</tr>
<tr>
<td>Ome, Galway</td>
<td>Rectangular Enclosure</td>
<td>Leacht inside small enclosure</td>
<td>Early and Late Medieval</td>
<td>O’Keeffe 1992:092 &amp; 1993:111</td>
</tr>
<tr>
<td>Skellig Michael, Kerry</td>
<td>Large Oratory Terrace</td>
<td>Leacht (Structurally associated with oratory)</td>
<td>Early Medieval</td>
<td>Bourke 2001:574; White Marshall &amp; Walsh 2005, 48-49</td>
</tr>
<tr>
<td>Skellig Michael, Kerry</td>
<td>Little Oratory Terrace</td>
<td>Rectangular Leacht (1.65m x 0.85m x 0.75m high) Structurally associated with Oratory</td>
<td>Early Medieval</td>
<td>Lynch 1987:25</td>
</tr>
</tbody>
</table>

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### The Organisation and Layout of Early Medieval Ecclesiastical Sites

**Introduction**

There has also been much discussion about whether and if yes, when, did early medieval ecclesiastical sites begin to take on a standard plan. The extant stone remains at western monasteries offer a unique glimpse into the layout and organisation of early medieval monasteries. Michael Herity has dealt in detail with this question in a collection of articles about western monastic sites published together in 1995. He has noted that the church or oratory and the founder tomb or cross-slab were undoubtedly the focal points of these western monasteries (Herity 1995, 15) with domestic huts often situated in marginal places along the edge of the enclosure at Ilalaunloughan (White Marshall & Walsh 2005), Reask (Fanning 1981), High Island (White Marshall & Rourke 2000) and Kiltiernan, Co. Galway (Waddell & Clyne 1995). These focal ecclesiastical structures were however primarily situated towards the eastern sides of the monastic enclosure (Herity 1984; White Marshall & Rourke 2005, 128). Herity (1995) has suggested that the drystone domestic clochán's were often placed on the side furthest from the church, often facing across to it from an open space called the *platea*. This open space (*platea*) was located at the west façade of the oratory or principal church and may have been used as a place of congregation or point of crossing where monks traveled from their sleeping quarters to the church buildings. This layout in
which the church or oratory is located in the east and is separated to the domestic huts to the west by an open platea can be found at Inishmurray, Loher (Kildreenagh), Reask (Herity 1984, 109), Kilreeilig, Co. Kerry (Herity 1995, 35) and Illaunloughan (White Marshall & Walsh 2005). The space did not need to be demarcated by partitioning walls though such evidence has been found at Reask (Herity 1995, 30; Fanning 1981) and Inishmurray (1995, 39). A similar form of division also appears to have been in existence at Cashel, Co. Tipperary (Hodkinson 1994, 173). The excavator noted a clear division of space in the Pre-Cormac Chapel (Pre 1127-34) phase where a boundary appears to have been created to demarcate the space between a graveyard to the east and a more profane area to the west. Hodkinson has noted that the subsequent Cormac’s Chapel straddled this boundary with the chancel for the clergy in the eastern area and the nave for the laity to the west. In other sites such as Killabuonia and Skellig Mhichil, it appears that the church authorities manipulated the local hilly topography to create terraced slopes which were ideal for organizing and demarcating space at these sites.

Excavations have yet to clearly establish when these ecclesiastical sites began to acquire some form of standard form and how the layout of these sites changed over time. The excavations at Church Island and Reask revealed evidence for two major phases of occupation where organic built structures were replaced by stone buildings (O’Kelly 1957-59; Fanning 1981). Such a scenario has also been uncovered at Illaunloughan where the excavators have dated the transition from sod-walled structures to stone churches to the eighth century (White Marshall & Walsh 2005, 37). Indeed there is indirect evidence indicated by a cross-decorated ogham stone that Church Island was occupied from an early date. An early date for Reask is also likely due to the recovery of an early cross and spiral carved pillar as well as imported Bii pottery sherds. Both sites revealed evidence for churches and structures which were most likely contemporary with each other and dated to both phases through this could not unfortunately be proved stratigraphically. The evidence at these two sites and Illaunloughan does appear to suggest a conscious re-organization of these sites sometime in the seventh and eighth centuries which was reflected through the superimposition of new Gallarus-style oratories and drystone clochán’s on top of previous organic structures and burials. Evidence from Reask also suggests that the enclosure was repaired and the areas between the church/cemetery and domestic structures divided by an internal wall in this second phase (Edwards 1990, 118).

Christian Ideology and the Organisation and Layout of Ecclesiastical Settlements

It has been argued (1995, 17) that the conjunction of the oratory, cross-slab and founder tomb and leachta at early church sites was once common throughout the entire country. Herity has argued that monasteries to the east developed into something more elaborate and complex through the early and later medieval periods, with those hugging the Atlantic coast preserving their archaic and conservative qualities. There is a strong argument to be made that the cult of the relics and the associated growth of pilgrimage a fundamental impact on the growth and organisation of early ecclesiastical settlement as centres of worship and pilgrimage (Ó Carragáin 2003). There has been an emerging understanding that these monuments associated with pilgrimage and founding saints can provide valuable information about how ecclesiastical sites were organised in this period. A number of recent studies have sought to explore how broader ecclesiastical topographical templates and religious ideas shaped and informed the architectural form and location of churches, domestic buildings, high crosses, leachta, tomb shrines and cemeteries during the early medieval period (e.g. Doherty 1985; Aitchison, 1994; Ó Carragáin 2003)

A key characteristic, as mentioned above in the discussion of the various tomb-shrines at many Irish ecclesiastical sites is the ‘prevalence of enshrinement in modest structures removed from the main liturgical space and often over the saint's original graveyard’ (Ó Carragáin 2003, 134). The position of these shrine houses varies greatly in relation to the main liturgical church at the ecclesiastical settlement because they were built over the graves of founding saints prior to the formal organisation and layout of ecclesiastical sites in the 7/8th century (Ó Carragáin 2003, 134). Studies of the architectural setting of relics in Francia and
Anglo-Saxon England have found that the shrines of founding saints were however situated next to the altar in the church (Ó Carragáin 2003, 139). This contrasts to the Irish model of separating liturgical and reliquary space into two distinct structures. Ó Carragáin has suggested that the Tomb of Christ (Aedicule) in Jerusalem may have provided the prototype for the Irish architectural setting for early relics. Adomnán, bishop of Iona c. 680 appears to have been familiar with this complex as he depicted both the primary liturgical building (Constatine’s Basilica) and the aedicule or tomb of Christ as distinct structures. The aedicule was contained within the Anastasis (Resurrection) Rotunda which was shown as a series of concentric circles enclosing the sacred space. It is instructive to note that both Doherty (1985, 57) and Aitchison have argued that Irish ecclesiastical settlements were also conceived as having a religious template in which a sacred core was surrounded by a number of concentric boundaries demarcating areas of decreasing holy importance. This template which established a hierarchy of holiness in which a priestly elite was based in the sacred core and the laity based out in the periphery provided a model for maintaining the spiritual purity of the holy core.

It is likely that the organization of pilgrimage activity was a fundamental feature of important early ecclesiastical settlements. It is evident that the growth of the cult of relics corresponded with increasing formalisation of ecclesiastical cemeteries in the seventh and eighth centuries as the church sought to root out the continuing use of ancestral burial mounds in this period. This is clearly illustrated through the use of the term reliquiae or ‘remains of saint’ to denote an early Christian cemetery or reilig in the seventh and eighth centuries (Doherty 1984, 53; Ó Carragáin 2003, 147). They sought to achieve this as O’Brien suggests by replacing the tradition of burial beside the bones of ancestors for burial beside the bones of saints (O’Brien 1992, 136). At the same time, it appears that relics were brought on a circuit through the local region (Lucas 1986, 16) to reinforce the authority of the local saint as a patron (érlam) of the local secular community. The church authorities sought to further reinforce their authority by developing the motif of the Irish saint collecting soil from the Holy Shrines of Rome and sprinkling it across the Irish cemetery. These particular cemeteries were known as Ruáma or Romes and serve to further illustrate the role in which important shrines at Rome and Jerusalem played in developing and organising the church elsewhere in Christendom.

The early medieval ‘Monastic Town debate’: interpreting settlement, industry and agriculture at significant church sites:

Introduction
The character and extent of settlement, industry and agriculture around larger ecclesiastical sites has been the subject of intense debate, particularly in recent years. There has always been some hazy understanding about nucleated settlements around important ecclesiastical cores with Henry (1967, 42) suggesting that the population of some of these sites like Armagh may have surpassed 3,000 people. The first theoretical explicit explanation of early medieval ‘monastic town’s in Ireland emerged following the publication of three successive articles by Charles Doherty in the early 1980’s (1980, 82 & 85). The final article, ‘the monastic town in early medieval Ireland’ was a logical conclusion of a theory which suggested that the monastic settlement was the primary agent in stimulating urban development during this period (Doherty, 1985). It has had a profound effect on how archaeologists conceptualised economic, social and political developments in this period and has largely been taken at face-value by eminent historians and archaeologists such as Ó Corrain (1994) and Edwards (1996). Doherty’s theory evolved from an assumption that every ancient city grew out from a sacred core (Doherty, 1985, 46). The idea of the ‘monastic town’ in early medieval Ireland has been a persuasively popular idea because it has cut to the heart of a range of issues including the question of the indigenous origin of Irish towns and the role of monastic sites within their regional landscapes.
Doherty's theory first evolved from an assumption that every ancient city grew out from a sacred core (Doherty, 1985, 46). He explored the concept of the 'celestial or ideal city' as a means of thinking about how people cross-culturally mentally organised their cities and created order (cosmos) in the past during an early phase of urbanisation. In a Christian European context, he suggests that the idea of the New Jerusalem, which acted as an imago mundi or image of the universe, was the symbolic template for how Irish churches were spatially ordered. He then suggested that the church emerged as the dominant institution of Irish society by the eighth century because it had monopoly over literacy, manpower, donations, secular political support, craft-working and agricultural techniques. This development increasingly posed a major theological problem to the Christian cosmology (Doherty, 1985, 55). This fact that the church served as the major fixed point within a landscape ensured that it drew a large secular population that increasingly threatened to pollute the sanctity of the sacred core of the New Jerusalem. The solution was to take the idea of the city of refuge (civitas refugii) from the bible and to maintain the purity of the settlement by clearly demarcating the complex into areas of different sanctity. This resulted in the ‘creation of an idealised form, a schema, which allowed a monastic site to have a holy of holies at the core, around which were areas of sanctuary that decreased in importance the further they were from the centre’ (Doherty, 1985, 57). The large secular population or manaig were restricted to the suburbana along the edges of the complex, thus preserving the purity of the sacred ecclesiastical core. Therefore Doherty concluded that a process in which a standard cosmological layout was imposed on ecclesiastical sites had taken place by c.800. An architectural monumentalisation of the sacred core and the appearance of market crosses at the periphery of such settlements then followed in the 10th century and with Doherty safely concluding now that ‘it is at this point, that one might with confidence begin to use the term urban’ (Doherty, 1985, 60).

The idea of ‘monastic towns’ has been challenged by a growing number of historians and archaeologists. Graham has discussed a number of issues with Doherty’s theory in publications in 1987 and 1993 and in an important review of the ‘progress in medieval Irish studies’, a number of other scholars including Ryan (1996, 162) and Etchingham (1996, 138) have called for a complete reassessment of the concept of the ‘monastic town’ in early medieval Ireland. Subsequent papers by Valante (1997) and Swift (1998) have discussed in detail a number of potential problems with Doherty’s concept of ‘monastic town’s’. Both Swift (1997) and Valante (1998) have challenged Doherty’s use of urban terminology such as civitas and suburbana in his discussion of settlements like 7th century Kildare. Doherty, in fairness, never talked about 7/8th century monastic towns, but his use of such terms in promoting his own argument, they argue, have led to many archaeologists taking these translations at face-value and interpreting large nucleated settlements around monastic cores from the 7-9th century. This has led, as Swift (1997, 118) has outlined to ‘the belief in the existence of somewhat ill-defined pre-tenth century towns… because of his use of 7th and 8th century texts which are laced with what appears to be urban terminology’.

Swift has analysed these terms in detail. She has argued that the urban terms like civitas and suburbana used by Doherty can be equated with terms like tabernaclum, atrium and platea that were used to depict a distinctive Irish dispersed ecclesiastical settlement pattern. She suggests instead that when Irish monastic communities used such urban terminology, that they were not referring to the idea of urbanism as shared with the Great Eastern cities, but were instead interpreting such ideas in an Irish localised context. She identifies the different tenants and secular communities living around these places from the sources, but she concludes that ‘here again, the civitas is surrounded by pastures, enclosures and the houses of the peasants rather than the streets, fortified defences and the semi-industrialised craftsmen favoured by proponents of the early monastic town’ (Swift, 1998, 113). She has also argued that Doherty’s model fails to consider the possible role of secular sites in the origin of towns in Ireland. Both she (1997, 113-114) again suggests that the words civitas, platea and atrium were terms used to describe settlement areas in both high status ecclesiastical and secular sites. This is evident in a Patrician hagiography which describes the royal Leinster site of Dun Ailinne as a Civitas Regalis (Swift, 1998, 114). She argued that the
use of the terms *civitas, platea* and *atrium* in both ecclesiastical and secular contexts in the seventh and eighth centuries, suggests that it would be dangerous to see monastic sites ‘as being organised in a fundamentally different way from secular sites’ (Swift, 1998, 119).

It is important to emphasis however that Dohertry’s (1985) claims for ‘monastic towns’ refers to the tenth century and afterwards following the emergence of Hiberno-Norse towns. So how applicable is the theory of the ‘monastic town’ from the tenth to twelfth century? Graham (1993) has suggested that Ireland was in the process of feudalising in the eleventh and twelfth century and seems to have been prepared to accept that urbanisation around monastic cores was an important element of this development. As noted above (See Section), Valante (1997) has challenged the whole notion of ‘monastic town’s at any stage in early medieval Ireland. She has challenged Doherty’s (1981) that monasteries were at the centre of a re-distributive economic system and has argued that there is no evidence that monasteries were controlling trade and exchange during the early medieval period. She (1997, 15-18) has claimed that these sites, even in the eleventh and twelfth centuries cannot be described as urban as the majority of people living in these settlements relied instead on agricultural production. While she acknowledges that the historical sources records houses and buildings around major ecclesiastical sites like Armagh, she has concluded, like Swift (1997) in her discussion of seventh and eight century monasteries, that eleventh and twelfth century ecclesiastical sites were surrounded by a dispersed form of secular settlement. These ecclesiastical sites did accrue an urban status, she argues, but only in the thirteenth century after the arrival of the Anglo-Normans.

The Excavated Archaeological Evidence in the Context of the ‘Monastic Town’ Debate

Introduction

This review of the monastic town debate has just touched on some of the principal ideas that have been put forward by a number of eminent historians, and historical geographers. Parallel with these ideas, a number of archaeologists (e.g. Swan 1985; Bradley 1992, 1998, 1995; Stout 2000) have been discussing the subject of urban origins in early medieval Ireland. Many of these archaeologists (Bradley 1992; 1999; Stout 2000) have suggested that early medieval ecclesiastical sites were displaying proto-urban qualities as they were operating as centres of trade and markets and that there is a growing body of evidence to support the idea of settlement complexity, density of population and evidence for specialised industrial and agricultural activities at these sites. While beyond the remit of this chapter, a crucial and vital element of this debate is our archaeological definition of what constitutes a ‘town’. Can archaeologists further build on the work of Bradley (1998) and develop a range of criteria which can be used to assess whether one can identify sites with potential ‘urban’ qualities? It is evident that these ideas need to be examined in light of the growing body of excavated evidence for craft working, industry and trade from ecclesiastical sites in recent years.

Early Ecclesiastical Sites

The character of the early pre-tenth century church in Ireland has always been something of a conundrum. Few scholars today would suggest that ecclesiastical sits were displaying ‘urban’ qualities prior to the tenth century. It has been suggested by Herity (1977) and Swan 1982 & 1985) that ecclesiastical sites were beginning to display a remarkable consistency in their basic format and layout across the country from the seventh and eighth century though a contrary view of ad hoc development has been traditionally postulated (See de Paor 1958, 64; Killanin & Duignan 1967, 26; Hughes & Hamlin 1977, 73). Herity (1995, 17) has suggested that the conjunction of the oratory, cross-slab and founder tomb at early church sites was once common throughout the entire country. Swan (1985, 97) has similarly argued that the size and layout of ecclesiastical settlements across the whole island generally display some key consistencies comprising enclosures, ecclesiastical cores and boundary crosses. Like Doherty (1985), both archaeologists have suggested that ecclesiastical sites were developing
a standard layout during the 7/8th centuries though this was not architecturally manifested in stone till the ninth and tenth century.

If ecclesiastical sites were beginning to display some consistency in the layout of their ecclesiastical core, can we also begin to speculate about the character and extent of settlement at these sites? In recent years excavations have revealed a whole set of new archaeological evidence which has the opportunity to contribute to the debate. Evidence for pre-tenth century iron and metalworking has been uncovered at a number of western monasteries (e.g. Reask, Church island, Illaunloughan) as well as at significant sites such as Iona, Kilpatrick, Clonmacnoise and Armagh. The evidence for specialized high status metal and glass working at Cathedral Hill, Armagh and the presence of imported wares (c. 400-700) at many ecclesiastical settlements indicates that these sites were also emerging as significant economic centres of society. There is also a growing set of evidence for early milling and corn-drying activities at ecclesiastical sites. The potential evidence for the role of monasteries like Nendrum as specialised grain-producing sites highlights the important economic functions of various ecclesiastical settlements across the country. It has been suggested (Murphy 2002) that the backfilling of the substantial enclosing outer ditch at Clonmacnoise may have coincided with the construction of the river Shannon Bridge which dates to A.D. 804 (O’Sullivan & Boland 1997) and the expansion of the settlement to the east of the core area (King 1991-2000, Excavation Bulletin). Along with the evidence for the digging of large enclosure ditches across the country in this period, this suggests that certain early sites could command control over considerable labour resources at particular times in this formative period.

How can we interpret settlement around ecclesiastical cores from this disparate bunch of archaeological evidence? Swift (1998) has suggested that the archaeological evidence corroborates her assessment of the documentary sources which indicate that important seventh and eighth century ecclesiastical sites were surrounded by ‘pastures, enclosures and houses of the peasants’ in the seventh and eighth centuries. While the archaeological evidence is still too patchy and partial to attempt any substantial re-evaluation of the ideas for a dispersed non-nucleated ecclesiastical sites forwarded by Hamlin and Swift, there is potential emerging evidence that some key sites were developing into significant economic centres fulfilling various agricultural and industrial activities in this period. One of the key arguments of Swift (1998) is that ecclesiastical sites were not organized in ‘fundamentally different way to contemporary secular sites’. An important area of research would be to consider the character of the archaeological evidence at contemporary high status ringforts, crannogs and settlement/cemetery sites in relation to the evidence at ecclesiastical sites to understand both the nature of settlement at these various sites and their various economic, social, political and religious roles and functions within their wider regional landscapes.

Later Ecclesiastical Sites

The theory of the ‘monastic towns’ principally referred to the tenth-twelfth centuries. A range of historians (Doherty 1985), historical geographers (Graham 1993) and archaeologists (Swan 1985; Bradley 1992, 1994, 1995) have pinpointed the time around the tenth century as a significant period in the formation of ‘monastic towns’. These ideas have coincided with ideas that Irish society was displaying proto-feudal characteristics in the later early medieval period (Ó Corrain 1972, 171-172 & 1978; Byrne 1973; Ó Cróinin 1995, 291-292; O’Keefe 2000, 26). Graham (1993) has also specifically examined the relationship between the development of urbanisation and the growth of proto-feudal structures in Irish society. As outlined above, Swan has suggested a link between the location of high crosses and the existence of outer market-places immediately outside the entrance of the significant monastic sites like Armagh, Kells and Glendalough. He suggested that this point of mergence of ecclesiastical worship and the secular activities it generated could represent evidence for the gradual ‘transformation of monastic communities into centres of trade and commercial activity’ (Swan 1985, 101). In line with Doherty (1985), it has been suggested by Bradley (1995, 5 & 14) that ‘monastic towns’ began to develop in the tenth century and by the mid-twelfth century ‘the Irish urban network consisted of five port towns and about fifteen monastic towns’.
How have archaeological excavations in recent years contributed towards further advancing our knowledge and understanding about ecclesiastical settlement in this period? A cursory review of the evidence suggests that there is a growing body of evidence for iron/metalworking and agriculture at a large number of sites with some sites such as Armagh, Clonfad, Clonmacnoise and Dunmisk exhibiting evidence for highly specialized craftsmanship. The potential role of ecclesiastical sites in exploiting marine resources on a large scale is well documented in the medieval period and the potential association of a number of eleventh and twelfth century fish-traps with Movilla Abbey could represent evidence for the practice in an earlier context. The continuing discovery of both Hiberno-Norse and Anglo-Saxon coins in ecclesiastical contexts also indicates the importance of these centres in this period though they cannot however be used to suggest the presence of a market-economy.

It could however be argued that a particular number of these sites are beginning to display some evidence for considerable settlement complexity in this period. In 1994, Bradley sought to archaeologically test the theory of a ‘monastic town’ through selecting Clonmacnoise as a suitable case-study. He suggested a range of archaeological criteria to define an Irish monastic town; these include settlement complexity with a central core, domestic houses, workshops, streets, fairs, trade, enclosure and defence, a political role for the site as well as documentary evidence. He has argued that Clonmacnoise fulfils these suggested criteria and can be identified as a ‘monastic town’ in the later early medieval period. It is evident that the documentary sources record the presence of precincts surrounding the ecclesiastical core that were commonly known as trians at a number of sites including Armagh and Clonmacnoise (Bradley 1994, 44). The excavations at these larger ecclesiastical sites are uncovering increasing evidence for zones of industrial and agricultural activities in these ‘suburban’ areas beyond the inner ecclesiastical enclosure (See Craft Chapter). Evidence for intensive agricultural exploitation, stone sculpture, bone, antler, textile and leatherworking and highly specialised iron, metal and glass-working points to the important diverse economic role of these ecclesiastical sites within their wider regional landscapes. While, these sites have only been partially excavated, it is nevertheless clear that these monasteries had emerged as significant economic, social, religious and perhaps political centres within their regional landscapes.

Ecclesiastical Sites as centres of Trade and Exchange

Introduction
Much has been written about monasteries as centres of trade and the possibility that they functioned as urban centres (Doherty 1980; Swift, 1998; Valante 1998). It is extremely difficult to unequivocally identify evidence for internal trade in Ireland. Early monasteries were centres of craftwork (Ryan 1998) so it is unlikely that one could demonstrate that an object found was result of internal trade rather than being manufactures on a particular site. The discussion will therefore be confined to foreign trade. It can be assumed that all ecclesiastical sites were involved in some way an international trade network because wine is an essential libation of the Eucharist.

Imported Pottery
There is evidence for imported of pottery from western and northern modern-day France and the Mediterranean dating the fifth to eighth centuries at high status contemporary secular and ecclesiastical sites across Ireland. The evidence has recently been reviewed by Campbell (2007) although he does not list the individual sites where the material was discovered. Phocaean Red Slipware (A ware), dating between the 4th and 7th century, was manufactured in western Turkey add has been found on one ecclesiastical site in Ireland, Cabinteeley, Co. Dublin (ibid. 14; Conway1998; 124; Conway 1999, 41). Late Roman Amphorae (B ware) date mainly to the 5th and 6th century and are a general Mediterranean type and were manufactured in several locations (Campbell 2007, 19). This has been identified at several Cabinteely, Co. Dublin (Conway ibid.) Caherlehillan, Co. Kerry (Sheehan 1999:326), Reask,

'E ware', which comprises a large range of vessel types including jugs, beakers, bowls, pitchers and storage jars, and is the most frequently encountered imported pottery in Ireland. It dates primarily to the sixth and seventh century and is thought to originate in south-western France (Campbell 1997, 28). E-ware has been recovered from a growing number of early ecclesiastical sites including Armagh (Gaskell-Brown & Harper 1984, 157), Cathedral Hill at Downpatrick (Brannon 1988, 63), Killelededrum, Co. Tipperary (Manning 1984, 253), Clonmacnoise, Co. Offaly (King 1991:110), Cabinteeley, Co. Dublin (Conway 1999, 34), Caherlehillian, Co. Kerry (Sheehan 1999:326), Kilpatrick, Co. Westmeath (Swan 1995, 79) and Inishcealtra, Co. Clare (de Paor 1974:9).

D ware is also derived from France and like E-ware, has been dated to the 6th-7th century (Campbell 2007, 27-8). It can be found in the form of bowls, plates and moratoria. The latter type was used for the pureeing of fruit and vegetables (ibid. 27). The only Irish incidence of this type on an Irish ecclesiastical site is at Cabinteely, Dublin (Conway 1999, 41).

**Glass vessels**

Bourke's (1994) review of imported glass in Ireland indicate that that the majority was found on high status secular sites, with only two ecclesiastical sites producing material. Randalstown, Co. Meath produced a fragment of French cone beaker while a bowl fragment was found at Reasak (ibid. 206; Fanning 1981, 123).

Fragments of porphyry have been found on several Irish sites and these have been discussed in detail by Lynn 1994). With the exception of a single piece of red porphyry from Armagh, all was of the green type. This red type was quarried in Egypt while the green type came from Greece (ibid. 19) but it was used mostly by the Romans as a decorative building material. Several reasons have been suggested for its importation into Ireland. One is that because of it association with Rome it was thought to be an appropriate material for inclusion in portable altars. Lynn noted that fragments have been found at the ecclesiastical sites Armagh, Downpatrick, Movilla Abbey, CO. Down and Kilteel, Co. Kildare. Generally, they were found in contexts that post-dated AD 1000. There were also seven separate finds of the material from Fishamble Street and Christ Church Place, Dublin. Since Lynn's survey, further examples of green porphyry have been found at Clonmacnoise (King 1992:157) and Derrynaflan, Co. Tipperary (O Floinn 1985:53). The bias of the material towards ecclesiastical sites would tend to support the theory that it had some religious function.

**Coinage**

Gerriets (1985, 132-133) and Kenny (1987, 517; 2005, 844-45) has cited the presence of coin hoards at ecclesiastical sites as supporting the theory that monasteries tended to be markets centres. Hall (1974) assembled the then available evidence for such deposits, mostly chance finds Hoards of Anglo-Saxon or Viking coins were found a Durrow, Co. Offaly (deposit c. 940), Glendalough, Co. Wicklow (3 hoards c. 942, c. 975 and c. 1090), Monasterboice, Co. Louth (c.953), Armagh (2 hoards c. 970 and c. 1103), Rahan, Co. Offaly (c. 970), Kildare (c. 991). Several more coin have been found on excavations since this survey. A single Hiberno-Norse coins (c. 1000) was found at Downpatrick (O Baoill 1993:034), two Hiberno-Norse coins (c. 1020-1060) were found at Clonmacnoise (King 1992, 15), while a mid 11th century Norwegian coin was found at High Island, Co. Galway (Scally 1999:305).
**Early medieval church archaeology - some concluding thoughts**

Despite the enormous riches of the archaeological record for the early medieval church and its iconic role in early medieval studies generally, our understanding of the chronological and structural development of early medieval ecclesiastical and hermitage sites during the early medieval period is still quite limited though steadily improving.

Many western hermitage sites such as Illaunloughan, High Island and Reask, Co. Kerry have been extensively excavated and we have a good understanding about the chronological development and organization of activities at these few sites. Yet, it is evident that few ecclesiastical sites across the rest of the country have been comprehensively excavated, with the exception of a very small number of sites including Armagh, Clonmacnoise and Clonfad.

We still lack a clear understanding then about how ecclesiastical sites were organized in terms of industrial areas, cemetery locations, habitation areas and ecclesiastical structures during the early medieval period. It is evident that a detailed study of this settlement, industrial and agricultural evidence could identify regional patterns in terms of the organization, character, layout and function of ecclesiastical sites through the early medieval period.

In recent years, there has also been a growing interest in a variety of both art/architectural and landscape research themes dealing with, among others, the archaeological evidence for the earliest Christian communities, the layout of ecclesiastical sites, the debate about ‘monastic towns’, the nature of early medieval pilgrimage and the character of early medieval pastoral care. Studies in these diverse areas also have the opportunity to shed new light on various facets of the early church in Ireland, particularly in light of recent archaeological excavations.
Chapter 5. Early medieval burials and cemeteries

Introduction

The centuries from A.D. 400-1200 are commonly regarded as the ‘early Christian period’. Yet there is a growing body of archaeological evidence for the long-lived nature of Pagan practices, or more appropriately the slow conversion of Irish society (or elements of it) to Christian belief and practice; as well as a growing sense of the diversity and complexity of burial practices during this period across the island. Christianity only appears to have emerged as the dominant religion by perhaps the 6th century A.D. However old traditions died hard and burials continued to be interred in many diverse, often probably ancient contexts up to the 7th/8th century A.D. and even beyond. In the 9th and 10th century, we see the re-introduction of ‘Pagan’ Norse burial rites in the Viking Age and throughout the period, there is also an intriguing, idiosyncratic range of human burials placed in ‘odd contexts’ such as early medieval house floors (e.g. at Newtown, Co. Limerick (Coyne and Coyne 2003, 17-18), or in caves as at Cloghermore, Co. Kerry (Connolly and Coyne 2000) and at Kilgreany, Co. Waterford (Dowd 2001, 2002). It is certainly true that Irish archaeology has uncovered an extraordinarily rich array of evidence for people’s beliefs, ideologies and ritual practices. The most challenging aspect of this material for the future is that we do not ‘normalise’ it to fit in with our neat – and poorly understood - social identity categories of ‘Irish’, Anglo-Saxon’, ‘Viking’, ‘Pagan’ or ‘Christian’, especially given that archaeologists have recently recognised that early medieval social identities of community, personhood and belief can no longer simply be ‘read’ in the traditional fashion, from the archaeology of burial (Williams 2006).

A wide range of authors have previously published on early medieval burial practices in the period 1930-2004. There are of course, large numbers of publications of early medieval cemetery site excavation reports (e.g. Burke and Clinton 1983-84; Hurl 2004; Manning 1985-1986, Manning 1986, O’Neill 2006, 2007, 2008, to choose a few at random). There have also been a wide range of primary and secondary publications of early medieval burials and cemeteries that give a sense of changing practice and beliefs across time, ranging from the transitional Iron Age/early medieval period (e.g. Eogan 1974, 1974; McCormick 1995; O’Brien 1990, 1993, 2003; MacGarry 2005, 2007; Clarke and Carlin 2006) to the Viking Age (Hall 1974, 1978; Sheehan 1987; Ó Flöinn 1998, 1998; O’Brien 1995, 1998; Harrison 2001; Simpson 2003). Elizabeth O’Brien (1992, 1993, 1995, 1998, 2003) has written some of the key texts in understanding and interpreting the burial practices of the peoples of early medieval Ireland that have emerged from such site excavations. Finally, there is also a growing and welcome number of published specialist osteological reports analysing the genetics, health, diet and diseases of the human bodies themselves (e.g. Howells 1940-1941; Power, 1994; Buckley 1991; Ó Donnabháin and Hallgrímsson 2001; Fibiger 2005; Channing and Randolph-Quinney 2006; Hallgrimsson et al, forthcoming) and this latter area will be key for understanding the populations of early medieval Ireland; their life, physical health and diet and the ways in which their social identities of kinship, social status and gender were ‘embodied’ (i.e. experienced and performed ‘through the body’) - the only way after all that any person could have experienced the early medieval world.

This chapter describes and analyses at a preliminary level, the wide range of early medieval burial evidence that has been discovered in Ireland, AD 400-1100. The first section describes the rites and practices used in burying the corpse of the deceased, in other words the actual treatment of the body itself. The chapter then examines the diversity of burial practices in the Iron Age/early medieval transition period (i.e. in the 5th-6th century A.D.), in enclosures, mounds and other contexts and describes the increasingly rich evidence for unenclosed burials and cemeteries in the early medieval archaeological record. The function and role of these sites still has to be established. We then explore the emerging evidence for early medieval ‘settlement/cemetery’ sites - a distinctive and new type of archaeological site used.
right across the period (in reality, an old type of site only recently recognised as distinctive) that warrants much greater analysis and thought (e.g. Manning 1986, O’Neill 2006, 2007, 2008; Wiggins 2006; Seaver 2005, 2006). We then move on to explore the evidence for ‘Christian’ burial practices as Irish society evolves into the early medieval period proper, with the emergence of burial in ecclesiastical or monastic contexts (e.g. Fanning 1981; Fry 1999; Scally 1999, Swan 1976; Marshall and Walsh 1994, 2005) and here we review the emergence of ecclesiastical cemeteries possibly in the 7th/8th century, their links with earlier funerary sites and the evidence for diversity in burial rites within these sites. As mentioned above, there is intriguing evidence that ‘Pagan’ burial practices continued well into the early medieval period – suggesting that the hegemony of Christian authorities was not total in the landscape. In any case, ‘Pagan’ burial practices are certainly re-introduced in the 9th century AD, when Viking raiders were being buried in Dublin and elsewhere, until the Hiberno-Norse were converted to Christianity and merge into the gradually more homogenous burial practices of the developed Medieval world. This chapter also provides a preliminary review of that ‘Norse’ furnished burial practice, AD 800-1170.

Burying the dead in early medieval Ireland - how was the corpse treated in rites and practices?

We can firstly explore the rites of burial itself. Early medieval people in Ireland buried their dead in a range of ways, using a variety of rites and practices, involving the placing of the body in slightly different positions and using grave goods, stone, wood and cloth in different ways (O’Brien 1992, 1993, 1995, 1998, 2003).

Almost all early medieval burials were buried without grave goods, in an east-west orientation (with the head to the west), in an extended, supine position (i.e. lying on the back) in a long dug grave (that may be defined in various ways). This is a burial practice that is not entirely Christian in origins, as it emerges in Roman-Britain in the 2nd/3rd century AD. Rarely, early medieval burials are in a prone (lying face down) or flexed (with legs drawn slightly upwards); practices that may be contingent on events (hurried burials during war, disease) or cultural practices (Anglo-Saxon influences or the treatment of marginalized people such as criminals or outlaws).

However, it is not as simple as this and it is now known that the treatment of the corpse itself (as well as the grave furniture, see below) shows some chronological development through the early medieval period (e.g. the gradual shift away from an unwrapped body towards the use of a shroud cloth tightly wrapped around the body), but there is also evidence for continuities (e.g. the use of unprotected or unlined graves - simple dug pits - across the entire early medieval period) and for rites that vary within burial grounds at the same time (e.g. the use of stone slab-lined cists in the 5th/6th century or lintelled graves in the 7th/8th century at the same time as unprotected graves). This means that although patterns can certainly be discerned, it would be unwise to date excavated burials by burial rite alone. There are also a few practices that, although rare (such as the very rare use of ‘pillow stones’ placed behind the head) can be found across all periods. In crude summary, burial rites in the early medieval period include:

- **Iron Age/ early medieval transition period burials (5th/ 6th century AD)**
  (evolving from Iron Age traditions in the 3rd/4th century AD): Bodies are buried as extended inhumations, east-west in orientation, in long stone slab-lined cists or in unprotected dug graves. The corpse is placed ‘loose’ (i.e. not wrapped in a shroud or cloth binding - although there may have been a covering cloth over the face - so that arms and feet are apart). The long stone cist might be defined with upright kerbstones along the sides and ends of the grave, with stones also laid as a base and across the top as capstones. It is not possible to say whether such burials in slab-lined graves are ‘Pagan’ or
‘Christian’, as extended inhumation in east-west orientation is a rite descended from Romano-British, non-Christian practices

- **Early medieval ‘Christian’ and ‘Pagan’ burial (7th/8th century AD, or later).** Early medieval Christian – as most of them probably were by the 7th/8th century AD - burials were often (but not always) in ecclesiastical graveyards: Bodies must have been tightly wrapped in a cloth shroud, causing the arms to lie tight against the body while the feet are close together at ankles (as depicted on Cross of Scriptures). Bodies may be placed in a ‘lintelled’ grave (with stones at edges and ends, but NOT with laid stones in the base of grave) or alternatively in a dug, unprotected grave. Lintelled graves tend to be dated to after the seventh century AD. The head may be flanked or propped by ‘ear-muff’ stones (preventing the head from slumping sideways) or there may be a ‘head-cist’ (i.e. an arrangement of stones around head only). Other unusual burials are also known in caves that might be ‘Christian’ burials, but some of these may well be ‘Pagan’ burials (e.g. at Cloghermore, Co. Kerry) well into the Christian era (i.e. in the 7th/8th century AD). There are also some burials from the 6th/7th century AD, mostly along the east coast, that have produced a few grave goods (e.g. brooches, knives, deposits of charred grain) that might be interpreted as Anglo-Saxon burials.

- **Early medieval ‘Norse’ furnished burials (9th/early 10th century)** will usually be in unprotected graves, typically with various associated objects (e.g. males with daggers, swords, shield bosses or females tortoise shell brooches – although it is possible for such gender roles to be not so clear). It should be noted that not all Norse people were buried with such high-status grave goods, suggesting that it may be difficult to distinguish between Christian ‘Irish’ and Pagan ‘Norse’ unfurnished burials in the 9th and 10th century AD.

- **Early medieval Christian burial with recumbent decorated/cross slabs (8th-11th century AD).** The burial is associated with gravestones, such as recumbent slabs. The burial may be in unlined graves or lintelled graves, but the distinctive touch is the recumbent slab over or beside the grave. This practice was probably reserved for people of high (e.g. aristocratic or ecclesiastical authority) status. High status recumbent slabs have also been recovered from a large number of significant early medieval ecclesiastical sites particularly at Clonmacnoise and Gallen, Co. Clare, Iniscaeltra, Co. Clare, Glendalough, Co. Wicklow, Nendrum, Co. Down, Inishmurray, Co. Sligo, the Aran Islands, Co. Galway, Kilpeacan and Kilberehert, Co. Tipperary and Tullylease, Co. Cork (Lionard 1961). A number of high status burials at Iniscaeltra and Glendalough were lined with slabs that project over the surface. They were then covered with recumbent slabs, many of which were decorated with incised and carved crosses. Small socket-holes were present at the head or foot of the graves and would have held upright crosses (Lionard 1961, 150). These burials tend to date to after the 8th century and may represent the burial places of high status ecclesiastics and secular individuals.

- **Late Medieval burials (12th/13th century and later)** Corpses are placed in wooden coffins (with surviving iron coffin nails), arms will be placed crossed across chest, and body will be tightly wrapped in a shroud – and shroud pins will be associated with body (as at Ardfert, Co. Kerry).
Iron Age/Early medieval burials in penannular burial enclosures and in annular enclosures/ring-ditches (5th-7th century A.D.)

Introduction

O’Brien (1993) was the first archaeologist to note that Iron Age/Early Christian transitional burials were being interred in annular burial enclosures (i.e. circular ditched enclosures, descended from the very long tradition (i.e. as in Bronze Age and Iron Age) of burial in ring-ditches and barrows). She showed how historical sources like the *Collecto Canonum Hibernensis* provided information about the continuing practice of burial within possible pagan unconsecrated cemeteries in the 6/7th centuries. O’Brien (1993, 133) noted a comment by Tirechan which mentioned the burial of two daughters of a king inside a round ditch “after the manner of a ferta, because this is what the heathen Irish used to do, but we call it a relic”. O’Brien suggested that Iron Age/early Christian ring-ditches or ring-barrows were the possible location of these pagan ferta or relic cemeteries in the 5th/6th/7th centuries AD. O’Brien’s (2003) paper mentioned five annular burial enclosures known at that stage which could be examples of ferta or relic cemeteries.

Iron Age/Early Medieval burial in Penannular Enclosures

In the Iron Age/early medieval period transition there seems to have been a few places where the very rare practice of burying the dead in penannular enclosures was carried out. One of the earliest hints of this Iron Age/early medieval burial tradition ironically came from the later prehistoric research of the Discovery Programme. The Ballyhoura Hills Project’s (directed by Martin Doody) excavations at Chancellorsland, Co. Tipperary discovered that a fill (not a burial deposit) from the ditch of a ring barrow produced a radiocarbon confirming its use in the 7/8th centuries – although the site had originally been excavated as it was thought to be a Bronze Age barrow located close to a confirmed Bronze Age settlement enclosure (O’Brien 2003, 69). However, O’Brien (1993) recognised the implications of ‘late’ date and also noted how a similar ditched enclosure containing extended inhumations in unprotected graves was revealed 200m to the southeast of the ecclesiastical enclosure at Durrow, Co. Offaly. Though the dates of this annular ditched enclosure were not available at the time (they have since suggested a 9th century AD date; Elizabeth O’Brien, pers comm.), she postulated whether it might represent a pagan cemetery (ferta) that was Christianised later.


At Greenhills, near Kilcullen Co. Kildare a number of unprotected and stone/slab-lined east-west inhumations, including an adult female and a child, were situated inside and outside the ditched enclosure (Keeley 1989-1991). A burial outside the enclosure produced a radiocarbon date of between the 4th and the 7th centuries AD.

At Castle Upton, Templepatrick, Co. Antrim, a centrally placed stone-lined grave and an unprotected parallel grave were found inside a penannular enclosure (Gahan 1998, Excavation Bulletin).

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2 Penannular enclosures are those ring-ditches where a single causewayed entrance is left, so that the ditch is not continuous; In contrast, more common annular enclosures are continuously circular ring ditches: Elizabeth O’Brien pers comm).
At Chancellorsland, Co. Tipperary, a penannular enclosure was excavated and ditch fill was radiocarbon dated to the 7th/8th century AD (O’Brien 2003, 69).

At Westereave, Co. Dublin, the first phase saw the establishment of a well-ordered cemetery containing east-west unlined pit burials inside a penannular burial enclosure or ring-ditch. The second phases saw further stone-lined burials extending out over the fill of the ditch into the surrounding area. In total 52 burials were excavated at the site (Gowen 1988, Excavations Bulletin).

At Colp West, Co. Meath, excavations revealed a cemetery of over 100 inhumations, 14 of which were set in stone-lined burials. A number of primary burials appear to have been contained within a penannular burial enclosure, 15m in diameter that in turn was succeeded by a cemetery of approximately 100 burials (Gowen 1988, Excavations Bulletin; O’Brien 1993, 98).

At Ardsallagh II, Co. Meath, archaeological excavations by Linda Clarke (ACS) in advance of the M3 Clonee to north of Kells Motorway, identified an early medieval penannular enclosure, 21m in diameter with an entrance causeway. The excavations revealed two early Bronze ring-ditches containing flat cremation cemeteries. The early medieval penannular ring ditch was found beside these features and was found to have imitated them in form (a feature noted at Rathdooney Beg, Co. Sligo, where a Neolithic bowl barrow was similarly replicated in the Iron Age (Carlin & Clarke 2006)). Its primary and main fills were radiocarbon dated to between the fifth to the eighth century and it was later re-used as a segmented enclosure. There was no clear evidence for burials (Linda Clarke pers. Comm.).

At Ardsallagh I, Co. Meath located close by, a penannular ring-ditch, 14m in diameter, was also recently excavated by Linda Clarke (ACS). Late Bronze Age and Iron Age cremation burials were found on the site, indicating that it already existed as a ritual locale. The Iron Age/early medieval transition penannular enclosure ditch, with an entrance to the west, was dug in the 4th-6th century AD and the burial enclosures showed evidence for use in the 5th-7th century AD. The early medieval burial ground had up to 30 east-west inhumations, including 5 stone-lined inhumations outside the enclosure and 24 interred bodies inside the ring-ditch. Four radiocarbon-dated burials ranged from the fourth to the seventh century AD (Clarke & Carlin 2006; Linda Clarke pers comm.).

A penannular ring-ditch (II) was excavated by Christine Baker at Cloncowan, Co. Meath in advance of the Bord Gáis Pipeline Scheme to the West. Sixteen burials were excavated, 13 of which were found within the ditch with the remainder in the interior. There was no consistency in their alignment though one burial was defined by earmuffs while another contained a pillow stone. Most of these burials have proven to be late medieval in date, though early medieval burials are also present (Baker 2002:1438).

**Iron Age/Early Medieval Burial in Annular Enclosures/Ring-Ditches**

Early medieval burial in annular enclosures (i.e. with continuous, circular ring-ditches) is much more common. EMAP’s review of the excavation evidence has thrown up other potential sites which could be considered in such a category involving burial inside ditched enclosures described in this instance by O’Brien as “Annular Burial enclosures” but which could also be variously described as ring-ditches or ring-barrows.

Excavations at Mell II, Co. Louth in advance of the M1 Motorway revealed nine crude stone-lined graves in close proximity to a ring-ditch that may date to the Bronze Age. A silver ornament was found interred with one inhumation while a cremation pyre was also potentially excavated (Breen, excavations Bulletin, 2000).
Excavations at the large settlement-cemetery site at Raystown, Co. Meath also revealed a 4/5th century ring-ditch, 20m in diameter that served as the setting for an inhumation cemetery of 93 people that continued through the early medieval period.

Excavations at Armagh by Lynn in 1979 revealed a Neolithic ring ditch, 11m in diameter which was found associated with a cemetery of approximately 60 east-west inhumations. The site was located in the postulated area of the historically known Temple na Ferta. A radiocarbon determination for one grave returned a date spanning the mid fifth-mid seventh century (cal. A.D. 430-640) (Edwards 1990, 130). One of these was interred within a wooden coffin and marked out by wooden posts which Ó Carragáin (2003) suggested might represent evidence for a translation. The cemetery appears to have fallen out of use by the 9th century when the area was used for industrial purposes.

Excavations at Corbally, Co. Kildare revealed a site that began as a small ring-ditch but later evolved into a large sub-rectangular enclosure, c. 50m in diameter. Eight simple dug graves were excavated. Burials inside the ring-ditch were radiocarbon dated to between 330AD and 540AD, while those from outside the enclosure were dated to between 770AD and 820AD (Stout 2006). It appears then that burial activity switched from the interior of the ring-ditch to around the monument as appears to have occurred at Westereave and Colp West. A vast quantity of settlement evidence was also uncovered. The site appears to have been an important settlement site with some burial activity from the Late Iron Age to the 10/11th century at least.

Excavations at Coldwinters, Lusk, Co. Dublin in advance of the M1 Airport-Balbriggan Motorway Bypass (Opie 1999, Excavations Bulletin) revealed a double-ditched enclosure. The outer ditch was 45m in diameter while the inner enclosed an area of 39m. Six east-west burials were excavated within the interior of the site. A small circular ring-ditch measuring c. 10m in diameter, 0.8m wide and 0.3-0.8m deep was cut into the large enclosure. A single human extended supine burial contained within a slab-lined grave and covered by a few covering lintels was excavated within the centre of the ring-ditch and was aligned south-east/north-west. There were no grave-goods present. A limited quantity of settlement evidence was uncovered.

Iron Age/Early Medieval Burial in Ancient Ring-Barrows

One interesting facet of this burial evidence is the hint that some communities buried their dead in barrows and ring-ditches that had actually been created in prehistory. In other words, people were actually using ancient monuments, as opposed to building new monuments that either respected or mirrored ancient forms. Excavations have therefore revealed that Iron Age/early medieval transition inhumation cemeteries were interred inside and around pre-existing ring-barrows.

An Iron Age ring-barrow was excavated at Bellinstown, Co. Dublin in advance of the M1 Balbriggan-Airport Bypass (Lynch 2002 Excavation Bulletin). A deer antler and a small deposit of cremated bone were found inside the monument. The northeastern side of the monument was cut by five unprotected east-west inhumation. Immediately beside these inhumations were four others, orientated northeast-southwest.

A possible annular enclosure or ‘ring-barrow’ was found 10m to the north of the ecclesiastical cemetery at Derrynaflan monastery, Co. Tipperary and excavated by Elizabeth O’Brien, under a licence held by Raghnaill Ó Floinn (E. O’Brien pers. comm.). The barrow had been extensively disturbed by later activity but survived as a shallow flat bottomed ditch 1.0m wide and enclosing an area of 6m in diameter. Two pits were found to contain quantities of charcoal, cremated bone and animal bone as well as potential undisturbed burials. No human bone was identified (O’Floinn 1985: 53).

Excavations by Finbar McCormick (1995) at Kiltullagh, Co. Roscommon revealed a cemetery of stone/slab-lined and unprotected inhumations and Iron Age cremations pits beside a
standing stone and ring-barrow on the summit of the hill. One stone/slab-lined inhumation burial was dated to the 5th century A.D. It is clear that the ring-barrow and standing stone had become the focal point of later inhumation burials in the Iron Age/early medieval transition in the 5/6th centuries.

Recent excavations at Cross, Co. Galway in advance of the N6 Galway-Ballinasloe Road Scheme revealed two ring-barrows that appear to have been the focal point of burials in the early medieval period (Bermingham 2007).

**The Origins and Chronology of the Iron Age/Early Medieval Pennanular and Annular Burial Enclosure**

In summary, there is increasing evidence for the burial of predominantly east-west inhumations (that may or may not be Christian burials) inside, outside and around ditched enclosures that were variously penannular enclosures, annular enclosures, ring-ditches and ring-barrows. It is clear that excavations in recent years have increased the number of known ditched enclosures with Iron Age/early medieval east-west inhumations, many buried within stone/slab-lined cists. Radiocarbon dating indicates that some of these were re-used Iron Age monuments; some were located on or close to Late Bronze Age or Iron Age burial grounds (although these ancient cremation burials would hardly have been distinctively marked or highly visible in the fifth century), while some were actual Iron Age/early medieval dug monuments constructed *a novo* in the mid-fifth century AD and after (i.e. contemporary with the earliest Christian missions in Ireland, although this of course does not signify that these were Christian believers).

What are the origins of these Iron Age/early medieval burial grounds - that may well be the form of monuments known to Tirechan as *ferta*? O’Brien (1993, 2003) noted that the Iron Age/early medieval burial enclosures had possible common ancestral antecedents in the Irish landscape in the form of the Bronze Age and Iron Age ring-ditch and/or ring-barrow. It is certainly possible that Irish Iron Age/early medieval transition burial enclosures have their origins in native Irish prehistoric monuments (and it is striking that at Ardsallagh I and II, there was clear Late Bronze Age and Iron Age burial activity there beforehand). Clarke and Carlin (2006), amongst others, have also noted how the annular ditched enclosure (ring-ditch, ring-barrow) is a monument that is continuously found from the Neolithic through to the early medieval period.

O’Brien (1993, 2003) has noted that Iron Age/early medieval *penannular* enclosures tend to be located in areas of Ireland that had both historical and potential archaeological links with Anglo-Saxon England in the 7th century; i.e. the kingdom of Brega on the east coast. She noted that her five examples of penannular burial enclosure (i.e. penannular referring *only* to those enclosures with an entrance gap in the ditch, *not* the much more common annular enclosures that are fully circular enclosures) could be compared particularly to sites in Anglo-Saxon England. These penannular enclosures, which remain rare and are almost exceptional, invariably date to the 6th/6th centuries AD. O’Brien suggested that the penannular burial enclosure was probably a once off phenomenon which was due to contacts with Anglo-Saxon England in the 6th and 7th century (although she also suggested potential influences or links with Scotland, north Wales and Gaul).

Early medieval Brega undoubtedly shows other evidence for contacts with Anglo-Saxon England, both in historical and archaeological terms, building on cultural contacts that stretch back into the Iron Age. However, it is also true that the dating evidence shows that penannular enclosures certainly show many essential similarities (in size, location and general appearance) with fully circular, annular enclosures and many of these of course can be dated to the period AD 300-500, potentially well before any Anglo-Saxon connection. Excavations at Ardsallagh II, Co. Meath and Raystown, Co. Meath have confirmed that the early ring-ditches date to the 4/5th centuries A.D. The fact that burials tended to be located in the interior, inside the ditch and around the ditched enclosures at a number of the sites including Bellinstown and Ardsallagh 2 supports the idea that the ring-ditches predated the inhumation
cemeteries by at least some time (although the enclosing ditches could be merely days or weeks earlier than the first burial within them).

Undoubtedly, a range of traditions influenced burial in the Iron Age/early medieval transition, both native, ancestral and new. While it is possible that penannular enclosures may be related to influences from Anglo-Saxon England in and around the 7th century, the re-use of pre-existing funerary monuments such as ring-ditches was also an important component of religious practices in this period. This is particularly relevant when we understand that many of these like Ardsallagh and Chancellorsland contain evidence for ritual practices extending back into the Bronze Age. It is evident then that we should then consider the power of ancestral places as a powerful motivation factor in the location of transitional burials. This is clear when we consider the other settings and forms of 5th/6th/7th century burials and cemeteries across the island.

The abandonment of Iron Age/early medieval transition annular enclosures as we move on into the early medieval period

It is interesting that some penannular/annular enclosures were abandoned, whilst others continued to be used as places for the dead. Some ring-ditches possibly like Chancellorsland, Castle Upton, Templepatrick and Greenhills appear to have only been used for a limited number of burials in the transitional 5-7th century A.D. period. The penannular enclosures at Westereave and Colp West though appear to have provided a focal point for subsequent unenclosed early medieval cemeteries that later developed over the fills of the ditch and into the surrounding area. Both sites appear to have revealed no settlement evidence though it must be stated that only a small part of the sites, particularly at Colp West were fully excavated in 1988/89. Excavations at Ardsallagh II, Bellinstown and Kiltullagh also attest to the continued practice of limited early medieval burial in the interior and exterior of these monuments. The ring-ditches at Raystown and Corbally appear to have developed into subsequent significant enclosed settlement sites with evidence for burial well into the early medieval period (See Settlement/Cemeteries-Settlement Section below).

It appears then that many Iron Age/early medieval ring-ditches which may have been used for burial in the 5-7th century A.D. only saw limited activity and fell out of use after this period. The bulk of sites though appear to have seen intermittent burial evidence up around the 8th century A.D with a minority of sites developing into significant settlement/cemetery sites and possible ecclesiastical cemeteries.

Iron Age/Early medieval burials in association with prehistoric standing stones (5-7th centuries A.D.)

While the Iron Age/early medieval transition penannular/annular burial enclosure or ring-ditch/ring-barrow was possibly the most significant form of burial monument in the 5th/6th/7th century, it is also clear that other types of burial places were also popular across the island in this period. Some of these are similar to the above evidence, in that pre-existing funerary or ritual monuments provided a focal point for transition-period burials. Standing stones were one important ancestral monument that appear to have been foci for burial in this period.

The Evidence for Standing Stones and Iron Age/early medieval transition Burial

Excavations at Kiltullagh, Co. Roscommon (McCormick 1995) mentioned above were undertaken beside a standing stone indicating the important significance of this site in the period. Excavations at Kiltullagh, Co. Roscommon revealed a cemetery of stone/slab-lined and unprotected inhumations and Iron Age cremations pits beside a standing stone and ring-barrow on the summit of the hill. One stone/slab-lined inhumation burial was dated to the 5th
century A.D. It is clear that the ring-barrow and standing stone had become the focal point of later inhumation burials in the 5/6th centuries.

Excavations at Ballykeel South, Co. Clare revealed a stone/slab-lined cist burial that was radiocarbon dated to c. A.D. 400 beside a standing stone and near the enclosure known as Ballykeel Fort (Cahill 1988, Excavations Bulletin).

Excavations on the summit of an artificially constructed mound at Kilgowan, Co. Kildare revealed at least 9 extended east-west inhumations besides a cross-inscribed standing stone (Valerie Keeley 1987, Excavations Bulletin). A ditch-type feature (ring-ditch?) was excavated to its east though it was unclear if it enclosed the burials. Though no dates were given for these extended inhumations, it is probable that they date to this transitional period.

Excavations at Brackloon, Co. Kerry (Fionnbarr Moore, Excavations bulletin 1991) revealed a roughly east-west slab-lined burial situated halfway between a cross-inscribed pillar stone and an outcrop of rock art. No dates were available for this burial though it could potentially be early in date.

Excavations at Forenaughts Great, Co. Kildare (Grogan 1980) revealed a carefully constructed mound 1m in height containing a cremation burial dating to the 5th century A.D. It is unique in that it is the only excavated cremation burial site that dates to the fifth century A.D. A standing stone was located the Longstone Rath where Early Bronze Age cist burials had been excavated beneath previously. It is evident then that Standing Stones were considered as important ancestral monuments that could be reused in a funerary context in and around the 5/6th centuries. The antiquity of these Standing Stones is still a matter of debate with some commentators suggesting dates from the Neolithic to Iron Age, although ogham stones are obviously also standing stones.

Continuity of burial on into the early medieval period
A number of these examples such as Ballykeel South and Brackloon appear to represent isolated examples of stone-lined cists which potentially date to the 5/6th centuries A.D. Along with Kilgowan, it appears that these sites did not continue to remain a focal point of burial into the early medieval period. The cremation burial at Forenaughts Great remains an enigma. Its discovery beneath a mound suggests that that it fits neatly with the ‘mound burial’ category which appears to also have been a once of construction during the transitional 5-7th century A.D period. Kiltullagh was located both beside a ring-ditch and standing stone. The site is likely to have provided foci for an ecclesiastical site with early medieval origins at the summit of the hill. Another possible exception is Millockstown, Co. Louth where an important early medieval ‘settlement/cemetery’ site was excavated in close proximity to a standing stone.

Iron Age/ Early medieval burials in prehistoric mounds and cairns (5-7th century A.D.)
It is also evident that ancient prehistoric mounds or cairns could also provide a focus for burial from the 5-7th centuries A.D. Evidence for this form of burial has been excavated in a variety of contexts including Neolithic passage tombs, early Bronze Age cemeteries and Bronze Age cairns.

The evidence for the re-use of prehistoric monuments by Iron Age/ early medieval transition burials
Excavations at Knowth (Eogan 1974) revealed nine crouched, four flexed, eight extended and thirteen disturbed inhumations around the circumference of the passage tomb at Knowth, Co. Meath. The crouched and flexed inhumations contained grave goods and are Iron Age in date. Four extended slab-lined graves were set slightly apart and Elizabeth O’Brien (pers
Excavations at Betaghstown, Co. Meath revealed another complex funerary landscape dating from the Neolithic to Bronze Age. The prehistoric evidence there took the form of a Neolithic timber circle and an early Bronze Age cemetery. It was possible that the Bronze Age burials excavated by Kelly in 1979 may have been covered by a mound (Kelly 1979; Meenan 1998). Excavations also discovered an inhumation cemetery dating from the Late Iron Age/early medieval transition. A number of crouched pit and slab-lined cist burials were excavated at the primary levels of the site. One of the crouched pit burials was by an iron belt buckle, two penannular brooches, stone axe pendant and bronze plate and is likely to be late Iron Age/early medieval in date (Kelly 1979). Elizabeth O’Brien (pers comm.) suggests that the ritual and grave goods indicate that this could be a Romano-British or early Anglo-Saxon burial.

Early medieval burials were also found in a Bronze Age cairn, 25m in diameter, excavated by Elizabeth O’Brien in 1997 and 1998 at Ballymacaward, Co. Donegal, not far from the sea. The cairn measured 25m in diameter and was surrounded by a later stone kerb. A Bronze Age cist was probably the primary use of the cairn. Iron Age cremated bone mixed with charcoal and contained within two small bowl-shaped pits were uncovered near the centre of the site and radiocarbon dated to 2/1st centuries B.C. A total of ten Iron Age/early medieval east-west inhumations were also uncovered. Three were contained within slab-lined cists, one of which was radiocarbon dated to the mid fifth century AD. The remaining burials were in unprotected dug graves; some wrapped in shrouds, and were dated to around the 7th century AD. Ballymacaward is a fascinating example of a burial ground used periodically across later prehistory and into the early Middle Ages, with interesting connections being established by early medieval communities with the past.

Excavations along the M1 motorway at Claristown 2, Co. Meath revealed an enigmatic site that dated from the Neolithic to early medieval period. The earliest Iron Age phase consisted of a circular hut measuring 6m in diameter. It was succeeded by the burial of an adult inside a stone-lined cist in the centre of a possible ring-ditch that was then covered by a small mound. A possible circular structure was then built over the central burial. The structure was eventually dismantled and covered by a cairn of stones. Nine stone-lined inhumations were found to the north of the cairn and are likely to be Late Iron Age/early medieval in date, while another four unprotected burials were interred to the south of the cairn in the early medieval period (Russell, 2001). It is possible that people in the late Iron age/early medieval period understood the mound covered by a cairn of stone as an ancient ancestrally funerary monument.

Excavations were undertaken at Knoxspark, Co. Sligo (Mount 1994, Excavations Bulletin-94E060). A large early medieval cemetery with possible Late Iron Age/early medieval origins was excavated around two cairns which contained a cremation and child burial. It appears that the site was then enclosed by a rectangular promontory fort measuring 23m north-south by 19m east-west. Evidence for settlement evidence was also recovered indicating the site’s possible function as an early medieval ‘settlement/cemetery’.

**Continuity into the early medieval period**

Ballymacaward appears to have been re-used in the fifth century with a final number of unprotected burials interred around the site in the 7th century. A similar phasing of activity may have taken place at Claristown 2 where number of Late Iron Age/early medieval slab-lined burials were succeeded by unprotected burials dating to the early medieval period. No accompanying settlement evidence appears to have been uncovered at these sites. The burial sites at Knowth and Betaghstown are likely to date to the 5/6th centuries A.D. However the burials and the megalithic tomb at Knowth provided a focus for the development of a
significant early medieval settlement site with royal associations. Similarly, the burials at Betaghstown were located a short distance from an unenclosed early medieval cemetery (See Below), while an important enclosed settlement/cemetery site appears to have developed around two cairns at Knoxpark in the early medieval period.

**Iron Age/Early medieval burials in ‘mounds’ (5th-7th century A.D.)**

Elizabeth O’Brien (2003) has noted another type of Iron Age/early medieval transitional burials that she has described as “Mound Burials”. O’Brien’s (2003) ‘Mound Burial’ typically takes the form of classic transitional stone/slab-lined cists which were covered beneath low mounds.

**The Evidence for Iron Age/early medieval Mound Burials**

O’Brien (2003) noted four burials excavated beneath a low mound at Pollacorragune, Tuam, Co. Galway (Riley 1937, 44) that were subsequently dated to approximately the fourth/sixth centuries A.D.

An excavation at Muckduff, Co. Sligo undertaken by Joseph Raftery (1941, 302) also revealed an extended inhumation beneath a low mound which O’Brien (2003, 66) suggests dates to a similar period.

O’Brien (2003, 65) has also observed that extended east-west inhumations were excavated beneath a mound at Ninch, Co. Meath, one of which was possibly stone-lined. The mound measured 5m in height and 24m in diameter. One burial was radiocarbon dated to the fifth century A.D (Sweetman 1983).

A burial contained within a long stone cist was excavated beneath a low mound 14m in diameter at Farganstown & Ballymacon, Co. Meath (Kelly 1976). No radiocarbon dates were available for the site although it is quite likely that it is also transitional in date.

Other potential sites in which Iron Age/early medieval transition burials may have been interred in a raised mound include Knocklore, Co. Louth that was bulldozed in 1964. No extant remains of the raised mound survive though it was believed that upwards of 20 burials were recovered of uncertain date. Testing was conducted at the area in 1996 by Martin Fitzpatrick in advance of the N2 Ardee-Rathory Road Realignment but nothing appears to have been recovered. The site is of uncertain date though could potentially date to this transitional period.

Fifty inhumations were also excavated inside a mound at Johnstown, Co. Meath and dated to around the Late Iron Age. A charnel pit contained three inhumations and dated to AD 370-640 (Carlin, Walsh & Clarke, 2008). This cemetery later provided a focus for a significant early and late medieval settlement and cemetery site. In this case, the mound was probably a natural hill feature, but it may well have been that Iron Age/early medieval communities - unaware of its natural origins - regarded the site as a *rēta*.

Eoin Grogan's (1980) excavations at the low mound containing a cremation burial at Forenaught Great, Co. Kildare could potentially be regarded in this category. The presence of a 5th century cremation appears to represent an aberration in the burial data however as cremation appears to have fallen out of use by the 2nd/3rd century A.D.
**Ad hoc burial and the concept of the ‘burial mound’**

It is clear then that pre-existing burial places - possibly regarded as ancestral or ancient monuments - were significant sites of high-ranking burial from the 5-7th century A.D., O’Brien (1992, 133) has however also alluded to another type of isolated burial. She has noted a number of historical references by Muirchu and Tirechan to people being buried on the spot of their death. Another reference by Adomnán refers to how after Columba had baptized an old pagan man, he presently died and was buried beneath a cairn of stones. It is evident that slab-lined cist burials were interred beneath a number of mound burials at Ninch, Co. Meath, Ferganstown & Ballymack, Co. Meath and Pollacorragune, Tuam, Co. Galway and Muckduff, Co. Sligo as noted by O’Brien (2003, 65). A further slab-lined burial was interned beneath a cairn of stones at Claristown 2 although there was evidence for preceding prehistoric evidence. It is possible however that the examples of Knockloore and Johnstown 1 provide exceptions to the idea that transitional mound burials were associated with ad hoc burial as they appear to have been contained in themselves important cemeteries.

**Continuity of burial into the early medieval period**

The ‘mound burials’ typically take the form of one or a limited number of inhumations, often set inside stone/slab-lined burials that were interred beneath small mounds. These small burial mounds do not appear to have remained a focal point of burial after the 5/6th century A.D. The possible exception listed under this category is at Knockloore, Co. Louth where upwards of 20 undated burials and Johnstown 1 that continued to be used as a settlement and cemetery site into the post medieval period. It is possible that these two examples belong to different categories as ‘mound burials’, observed by O’Brien (2003) appear to have been a once of construction built during the 5-7th centuries A.D.

**Iron Age/early medieval burials in other forms of enclosure**

There is also a growing body of evidence to suggest that large, pre-existing enclosures - or newly built enclosures (subtly different from the annular enclosures described above) - were used for burials in the Iron Age/early medieval transition period (4-7th centuries A.D.) some of which also became a focus for later settlement activities (See Settlement/Cemetery below Section). There is however no evidence for any churches on these sites, suggesting that they are some form of ‘secular’ burial ground. Some of these enclosed burial grounds became a focus for settlement.

**The Evidence**

Excavations at Cherrywood, Co Dublin revealed a 6/7th century inhumation cemetery containing 38 burials inside an enclosure measuring 43m x 20m. The site was situated in a rich prehistoric funerary landscape and was subsequently reused by later early medieval and potential Viking settlements (O Neill 1998, Excavations Bulletin- 98E0526).

Excavations at Mount Offaly, Co. Dublin revealed a large cemetery dating from the 5/6th century-11/12th century A.D. was enclosed within a bivallate enclosure (inner 50 x60m; outer 60-65m) at Mount Offaly. The enclosure was subsequently expanded in the early medieval period.

Excavations at Parknahown, Co. Laois by ACS also recently revealed a double-ditched enclosure (60m in diameter) whose ditches fill contained a late 7th century brooch. It enclosed a cemetery of approximately 600 people and was used for a number of centuries during the early medieval period.

Excavations at Faughart Lower by NAC also revealed a double-ditched enclosure that was dated to the 4-6th century A.D. The enclosure appears to have pre-dated the burials that began in the 5-6th century A.D.
Excavations at Millockstown, Co. Louth in Phase 1 revealed an enclosure measuring 65m x 56m. The enclosure was subsequently succeeded by a ringfort and later lintel cemetery (Manning 1986).

A similar scenario occurred at Ninch, Laytown that revealed that a number of enclosing ditches possibly indicative of a ringfort predated the construction of a lintel cemetery c. 6-9th century A.D. (James Eogan; Cia McConway 2000-2002, Excavations Bulletin- 98E0501).

It must be said that 4-7th century A.D enclosures appear to have provided a foci for burial at these places though not all sites necessarily contained 5-7th century burial. These enclosures all appear to date to the Iron Age/early medieval transitional period. They were however not all necessarily associated with other prehistoric monuments though this appears to have been the case at Millockstown and Cherrywood. There are a number of other settlement/cemetery sites that contained large enclosures (See Gazetteer). No approximate dates were provided for the enclosures though they are likely to belong to roughly the same period.

**Undated Enclosed Cemeteries**

The EMAP survey also identified a number of enclosed undated cemeteries that could possibly date to the early medieval period.

Rescue excavations were undertaken at Sand Pit Grove, Caherabbey Lower, Co. Tipperary when a number of burials were uncovered during quarrying activity along a gravel ridge beside the River Suir. Six burials orientated east-west and buried within unlined graves were discovered during the excavation. The dates of the burials are uncertain though their location along a gravel ridge might suggest an early date. Cartographic evidence suggested that the cemetery was situated within an enclosure of undetermined size (Mary Cahill, 1988, Excavations Bulletin).

Excavations at Murphystown, Co. Dublin in advance of the M50 South-eastern Motorway in 2002 revealed a possible enclosed cemetery of uncertain date (Valerie J. Keeley 2002, Excavations Bulletin- 02E0153). The site was situated near a stream. Seven wholly or partially intact skeletons were found along with 13 disarticulated skeletons. The burials were extended east-west inhumations with no grave goods. One burial was however orientated north-east/south-west. A possible enclosure was represented by a shallow depression in the landscape (Breen, 2002, Excavations Bulletin- 02E0153).

Excavations at Rathmiles, Co. Laois in advance of the construction of a golf course in 2001 revealed a sub-circular enclosure containing a cemetery. The east-west inhumations were uncovered. No associated settlement evidence was uncovered. The date of these burials is uncertain (Delany, 2001, Excavations Bulletin- 01E1100). The dates of these enclosed cemeteries are uncertain though the potential remains that they could be early medieval in date.

**Early medieval unenclosed cemeteries**

Excavations in recent years have also revealed a number of apparently unenclosed cemeteries that date to the early medieval period. In many cases, the site appears, from Excavations Bulletin reports, to have only been partially excavated leaving open the possibility that some form of enclosure may have existed in the past (or still exists on the site) that was not identified in the fieldwork project. The origins and character of these unenclosed cemeteries have yet to be established. It is not yet clear who was buried in these sites and whether they represent a different cemetery site type to ‘settlement/cemeteries’ and ecclesiastical cemeteries. Some of these sites have revealed a locational preference for gravel
ridges and prominent topographical features. It also appears that a number of these sites may also have originated in the late Iron Age/early medieval period.

**The evidence: unenclosed cemeteries**

Excavations at Betaghstown (The Anchorage) by James Eogan (Rosanne Meenan 1998 & 1999 Excavations Bulletin- 98E0072) in advance of a development revealed an unenclosed burial-ground of approximately 60 burials situated approximately 500m from a small transitional Iron Age/early medieval burial-ground uncovered by Kelly in 1977 (Kelly, 1987-See above). The site appears to have been fully excavated by Eogan but no enclosure appears to have been discovered. The majority of the burials were set into stone-lined pits although a few were found within lintel and slab-lined graves. Two burials were crouched. No accompanying settlement or ecclesiastical evidence appears to have been uncovered.

Excavations at Mount Gamble, Miltonsfields, Cobbe’s Hill, Co. Dublin revealed an unenclosed cemetery (and this site was fully excavated) just southeast of the early ecclesiastical site at Swords, Co. Dublin. The excavations revealed 287 burials, the vast majority set in simple unprotected graves though some were also found to incorporate ear-muffs (O'Donovan 2002, Excavations Bulletin; Frazer 2003, Excavations Bulletin). The cemetery dated from the 6-12th century and no accompanying settlement evidence appears to have been uncovered. This excavation seems to indicate that this was the burial ground of a community across time, with the burial of a few individuals every few years, as might be expected in the normal mortality rates of a rural community (Edmond O'Donovan, pers comm.).

Excavations at Kilshane, north Co. Dublin (Gowen 1988, Excavations Bulletin) revealed a further unenclosed cemetery containing 123 burials. The inhumations appear to have been interred 3-4 deep in unprotected graves although about a dozen did contain ear-muffs on either side of the skulls. Some burials had grave goods in the form of knives and there was also burnt grain. Consequently, O’Brien (1993, 98) has suggested that there were some early Anglo-Saxon influences at the site. No date was provided for this site though it is quite possible that it was in use by the 6/7th century A.D. and continued into the early medieval period.

Excavations were undertaken at Peterstown, Trim, Co. Meath in advance of a road development in 1997 (Murphy 1997, Excavations Bulletin- 97E0389). Four unprotected east-west inhumations were excavated. One returned a radiocarbon date of 1594±37 years BP (cal. AD 414-532). The site may represent a small isolated transitional Iron Age/early medieval cemetery. It is not clear if the whole site was fully excavated.

**The evidence: unenclosed cemeteries located along gravel ridges/mounds**

A large number of burials were recovered from beneath and adjacent to two burial mounds at Ballysadare, Co. Sligo in advance of N4 Ballysadare-Collooney Bypass Road (Opie 1995; 1996). Excavations revealed a burial with an associated pillow-stone, a large number of east-west unprotected inhumation burials, two lintel graves as well as two furnished inhumations apparently containing a ribbon torque and a bronze ring. Though no dates were available at that time, it is possible that this cemetery was in use from the late Iron Age through the early medieval period.

Excavations at Ardagnross, Co. Westmeath in advance of a quarry extension along a gravel ridge in 1995 revealed an unenclosed cemetery dating from the mid 6th-early 9th century A.D (James Eogan 1995, Excavations Bulletin). The small cemetery consisted of two rows of burials, 6 in the eastern row and 8 in the western. Approximately 20 burials were discovered. The majority were extended inhumations. One was interred in a prone position and others were in flexed positions (with a radiocarbon date of AD 548-820; Elizabeth O’Brien pers comm.). One definite stone-lined burial was discovered while another contained ear-muffs. Further burials had been revealed during initial quarrying activity so it is likely that the
A cemetery is somewhat greater. A bronze annular ring was also excavated from one grave. The cemetery then appears to go from an Iron Age/early medieval transitional period to well into the early Middles Ages, with burials taking place into the 9th century A.D.

Excavations at Boolies Little, Co. Meath by (David Sweetman 1982) revealed the remains of a souterrain and a small along a pronounced ridge of land. The earliest burials amounted to 16 internments and were contained in shallow stone-lined graves dug into stratified boulder clay. Some of them had secondary burials inserted directly above them but all predated the construction of the souterrain. Associated finds included a polished bone pin and iron plough sock. Post medieval burials were found above this early medieval cemetery.

A potential early medieval cemetery was excavated at Sarsfieldstown, Co. Meath (Mary Deevy 1999, Excavations Bulletin). At least 8 east-west unprotected inhumations with no associated grave-goods were excavated beneath a gravel mound. A preliminary analysis of the skeletons by Laureen Buckley suggested that they are very likely to be pre-medieval in date (Mary Deevy 1999, Excavations Bulletin). This suggests that they may date to the early medieval period.

Other potentially early unenclosed early medieval cemeteries include Cushinstown, Co. Meath and Ahena, Co. Mayo. At least 14 lintel graves (usually dated to after the seventh century AD) were uncovered at Cushinstown, Co. Meath (Victor Buckley, 2000, Excavations Bulletin). The site is located 200m from a medieval church so the possibility remains that they form part of an ecclesiastical burial-ground. This is strengthened by the presence of lintel burials that O’Brien (2003, 67) has noted tend to be discovered in ecclesiastical contexts and date from the 7/8th century A.D. It has been tentatively classified as unenclosed.

Excavations at Ahena, Co. Mayo revealed nine east-west inhumations during gravel quarrying (Murphy 1998, Excavations Bulletin). The dates of these burials are uncertain.

**Burial across the early medieval period**

It is likely that the cemeteries at Kilshane and Betaghstown were in use from the 6/7th century-8/9th century A.D. Although no dates are available, a similar phase of activity could be suggested for Boolies Little. This site appears to have originally been used as a cemetery before it was succeeded by a possible phase of occupation attested by the souterrain. Only a part of the site was excavated so it is possible that further cemeteries and habitation evidence could await discovery. It is possible that some of these burials may have interred at the site from 6-10th century as souterrains are usually found to date to the 9/10/11th century (Clinton 2001).

The cemetery at Ardnagross was radiocarbon dated to the mid 6th-early 9th century while that at Ballysadare is likely to have spanned this period at the very least due to the size of the cemetery.

Excavations at Mount Gamble revealed an unenclosed cemetery dating from 6-12th century A.D. The site at Sarsfieldstown can only be broadly dated to the early medieval period while that Peterstown is rooted in the transitional Iron Age/early medieval period. The evidence suggests that these unenclosed cemeteries are likely to have originated in the transitional Iron Age/early medieval period and have continued well into the early medieval period. These sites appear to have revealed no definite evidence for associated settlement sites, except possibly at Boolies Little though both the cemetery and habitation evidence here do not appear to have been contemporary with each other. The majority of these sites are then likely to have been in use from the 5/6th century-8/9th century with the exception of Mount Gamble and possibly Ballysadare that continued to be used up to the end of the early medieval period.
Isolated Unenclosed Burials

O'Brien (1984) has further documented the discovery of a number of isolated slab-lined cists across the country from time to time, particularly in the counties of Kerry, Mayo, Meath, Offaly, Cork, Galway, Waterford, Wicklow and Dublin. A number of these isolated slab-lined burials such as Belladoonan, Co. Mayo (Morris 1932), Dooey, Donegal (Duignan 1945; Ó Riordáin and Rynne 1961), Aghhalahard, Cong slab-lined grave (Raftery & Moore 1944) and Killaree and Sheastown, Co. Kilkenny are likely to date to around the 5th/6th/7th centuries A.D. based on the form of their graves and on occasional grave-goods that might suggest an early Anglo-Saxon association (O'Brien 1993, 97). Other potentially early stone/slab-lined graves have been found at Ballybunion, Co. Kerry (O’Floinn, 1987, Excavations Bulletin), Ballysimon, Co. Limerick (Collins, 2001, Excavations Bulletin) and Margaretstown & Baltrasna, Co. Dublin (Stout 1991, Excavations Bulletin).

Isolated lintel graves have been excavated at Dromkeen East, Co. Kerry (Bennett, 1985 Excavations Bulletin), Drumbaragh, Co. Meath (Cahill 1988, Excavations Bulletin), Carrowsteelagh, Co. Mayo (Cahill 1990, Excavations Bulletin) and The Fisherman’s Grave, Lackan, Co. Sligo (Buckley 1991 Excavations Bulletin). O’Brien (2003, 67) has suggested that lintel graves originally evolved from 5/6th century stone/slab-lined burials and were a significant form of burial rite, mostly found in ecclesiastical contexts, from the 7/8th century A.D. These sites were reported as isolated lintel burials in the excavations bulletin, so it is always possible that some could represent solitary graves of Christians buried away from ecclesiastical contexts in the early medieval period. However, it is clear that the great majority of these excavations did not examine the area around the reported disturbance which revealed the stone/slab-lined or lintel burial so it is more likely that they formed part of a larger early medieval cemetery.

Burial with the ancestral dead? Interpreting Iron Age/early medieval transition and early medieval burial practices

Burials in the landscape: natural landmarks and ferta cemeteries: hill-tops, gravel ridges and waterways

It is interesting that some transitional Iron Age/early medieval cemeteries have a propensity to be located on hill-tops, gravel ridges and close to important boundary markers. Hill-tops and low rises above the landscape appear to have been significant locations for Iron Age/early medieval transitional inhumation cemeteries as is indicated at Kiltullagh, Co. Roscommon; Kilgowan, Co. Kildare; Corbally, Co. Kildare; Raystown, Co. Meath; Johnstown, Co. Meath; Colp West, Co. Meath; Claristown, Co. Meath; Westreave, Co. Dublin and Knoxspark, Co. Sligo. Prominent gravel ridges also appear to have been significant with a number of sites located on such places, including Ardnagross, Co. Westmeath; Ballysadare, Co. Sligo and Boolies Little, Co. Meath. Waterways may have also been another topographical location that was a focus of burials in this period.

O’Brien (1992, 133) has noted that Colp West (Inber Colpd) was located near the mouth of the River Boyne in a mythologically and historically important area. O’Brien (1997, excavations bulletin) also noted that Ballymacaward, Co. Donegal was located on the northern bank of the River Erne which was an important boundary in the early historic period. Eamonn Kelly has recently pointed out that many Iron Age bog bodies have a tendency to be found along tribal and baronial boundaries. The antiquity of these divisions is still a matter of debate although it is worth pointing out that both Kiltullagh and Johnstown straddle the boundaries between the counties – and presumably local baronies - of Roscommon/Meath and Meath/Kildare respectively. It is evident then that these potentially pagan Iron Age/early medieval ferta cemeteries displayed an interest towards pronounced topographical points of the landscape such as hill-tops, ridges and waterways which were likely operated as important boundaries that were imbued with significant mythological and ancestral meaning.
**Who was buried? The burial rite**

It is then clear that pre-existing funerary monuments were an important determining factor in the location of burial sites from the 5-7th century A.D. O’Brien (2003, 66) has noted that east-west extended inhumation skeletons containing no grave-goods and enclosed within slab-lined cists was an important burial rite from the 5-7th century A.D. She notes that these types of burials are typically found inserted into or around these pre-existing funerary monuments. Slab-lined cist burials have been excavated at a number of the above sites including Betaghstown, Claristown 2, Boolies Little and Knowth, Co. Meath, Castle Upton, Co. Antrim, Kiltullagh, Co. Roscommon and Ballymacaward, Co. Donegal among other places. It is evident in some cases that these were often the earliest (i.e. in the historic period, there were Bronze Age and iron Age burials there) burials inserted into prehistoric monuments as was the case at Ballymacaward, where fifth century slab-lined inhumations were later succeeded by unprotected burials dating to around the 7th century A.D.

O’Brien (2003, 67) has suggested that high-ranking, probably Christian, individuals, were interred in and around these prehistoric monuments among (their putative) pagan ancestors in this period. That the amount of slab-lined cist burials excavated at these sites and dating to this period is generally low in number supports this hypothesis. This act undoubtedly served to reinforce the link between themselves and the indigenous ancestors to create a claim of sovereignty to the land. One good example was at Ballykeel South, Co. Clare, where a stone-lined cist dating to the fifth century was interred close to a Standing Stone.

The archaeological record also confirms the presence of east-west extended inhumation burials containing no grave-goods and dating to this period. The earliest burials at Johnstown, Co. Meath were unlined as were a number of others at Betaghstown, Co. Meath (Eamonn Kelly, 1977-79, Excavations Bulletin- E814) and Cooleeshalmore, Co. Kilkenny (Neary, 2003) among other places. Other sites containing unprotected burials that may date to this period include Maddens Hill, Kiltale, Co. Meath, Ballinlough, Co. Laois (O’Brien 1993, 133) and Bellinstown, Co. Meath (Lynch, 2002, excavations Bulletin).

It is evident then that this type of burial (i.e. unlined graves) was largely contemporary with the stone/slab-lined cist burial. In some cases, however, as at Ballymacaward, Co. Donegal, fifth century slab-lined inhumations were later succeeded by unprotected burials dating to around the 7th century A.D. (Elizabeth O’Brien 1997 & 1998, Excavations Bulletin- 97E0154). They cannot however be used as a realistic indicator for the burial of a less high-status individual. The location of the burial-place of the general populace in this period is still unclear.

**Early medieval Anglo-Saxon burials and contacts**

O’Brien (1993, 2003) has also highlighted some strong similarities between some of the Irish burial archaeological record and those of the Anglo-Saxons in England around the 7th century A.D. She has documented the historical evidence for contacts between the two peoples in the form of raids, religious studies in Ireland and Irish missionary activity. It is evident that a number of accounts refer to Anglo-Saxon ecclesiastics leaving to study among the Irish, as was the case with a certain Egbert who together with Aethelhun and other figures resided at the Irish monastery of Rath Melsigi, identified today as Clonmelsh, Co. Carlow in the mid 7th century (O’Brien 1993, 94). A number of other ecclesiastical sites such as Glendalough, Co. Wicklow and Killegar (Cell Adgair), Co. Wicklow have also revealed possible Anglo-Saxon connections while another Anglo-Saxon figure, Berichter, is commemorated on an early cross-slab at Tullylease, Co. Cork and is remembered at St. Berrihert’s Kyle, Co. Tipperary. Finally, O’Brien (1993, 95) has also noted that the Anglo-Saxon King, Egfrith, lead an attack on the district of Brega (Meath) in the territory of the Southern Uí Neill in A.D. 685 when a number of captives were taken.

It is well known that contacts with both Gaul/Merovingian Francia and Anglo-Saxon England was responsible for a cross-fertilization of artistic, iconographic and decorative ideas which
combined Celtic, Germanic and Romanic elements from the 7/8th centuries A.D. It is possible then that we must also consider another form of archaeological evidence in the form of burials and grave-goods, to further understand the extent of Anglo-Saxon influence and contacts in Ireland in this period.

O'Brien (1992) has noted that the dominant burial rite from the fourth century A.D. to the present is that of east-west extended supine inhumations, with no grave-goods either in unprotected dug graves, graves outlined with stones or lined with slabs, with or without covering stones. She has noted then that clothed burials or those accompanied by grave-goods, ear-muffs or other features such as wooden biers should be subjected to closer scrutiny. O'Brien (1993, 96 & 97) has noted a crouched clothed burial at Betaghstown, Co. Meath that contained a number of grave-goods including penannular omega types brooches. These brooches were worn in a fashion – one on each shoulder – as in Anglo-Saxon dress, implying that the burial is in the Anglo-Saxon tradition. She has further documented further possible enigmatic burials often containing grave-goods with Anglo-Saxon associations at a ringfort at Raheenamadra, Co. Limerick (Stenberger 1966); Aghalahard, Cong, Co. Mayo (Raftery & Moore 1944, 171-2); Killaree, Co. Kilkenny and Sheastown, Co. Kilkenny and inside the cemeteries at Dooey Co. Donegal (O'Riordain & Rynne 1961, 58-64) and Westreave and Kilshane, Co. Dublin. She has also noted that a grave at Levitstown, Co. Kildare was found to contain burnt grain: a pagan Anglo-Saxon practice that is recorded historically and discovered elsewhere in England. A later possible Anglo-Saxon burial was also excavated at Mayfield, Co. Waterford in advance of the Bord Gáis Cork-Dublin Pipeline 1986 (O'Donnell, 1986 excavations bulletin). A small stone-lined burial pit was excavated which contained a small amount of cremated bone, a bronze strap-tag comparable to similar 9th century Anglo-Saxon types ornamented in the Trewhiddle style as well as a vertical sided pot. The site remains enigmatic and it is unclear if it represents the burial place of an Anglo-Saxon or even Viking along the bank of the River Suir in county Waterford.

Finally, O'Brien (1993 & 2003) has suggested that a number of very rare penannular burial enclosures such as Westreave, Colp West and Greenhills could attest to further early Anglo-Saxon influences in places in Ireland that are known to have had historical contacts with these people. While, it is clear that one could argue that this type of monument simply represents a variation of a ring-ditch with Irish prehistoric antecedents, it is nevertheless worth bearing in mind, particularly as the great majority of these sites have been excavated in eastern counties like Meath – precisely where these Anglo-Saxon connections are strong. This is a subject of interest, whatever the agents behind such burial practices; whether they be the ongoing cultural contacts and exchange of ideas and practices between Ireland and Britain or actual Saxon immigrants into Ireland.

**Early Medieval Settlement/Cemetery Sites**

**Introduction**

In recent years, there has emerged a growing body of evidence for ‘settlement/cemetery sites’ (often alternatively called cemetery/settlements) which are neither exclusively ecclesiastical or secular in character. Early medieval settlement/cemeteries include Millockstown, Co. Louth (Manning 1986); Westreave, Co. Dublin (1988); Mount Offaly, Co. Dublin (Conway 1998); Cherrywood, Co. Dublin (O'Neill 1999); Balriggan, Co. Louth (Delaney and Roycroft 2003); Johnstown, Co. Meath (Clarke 2002; Carlin, Clarke and Walsh 2008; Clarke and Carlin 2008); Dunmisk Fort, Co. Tyrone (Henderson and Ivens 1992), Dooey, Co. Donegal (A. O Riordain & Rynne, 1961); Corbally, Co. Kildare (Tobin 2002; Coyne 2003); Carrowkeel, Co. Galway (O'Sullivan 2006); Clongowan II, Co. Meath (Baker 2007); Site M Knowth, Co. Meath (Stout and Stout 2008); Ninch, Co. Meath (McConway Excav. Bulletin), Colp West, Co. Meath (Gowen 1989; O'Brien 1992, 133), Gracedieu (Gowen 1989);
Augherskea, Co. Meath (Baker 2002:1422), Parknahown, Co. Laois (O’Neill 2006) and Raystown, Co. Meath (Matt Seaver pers comm.). The excavation reports for a number of these sites have been fully published; Knowth site M, Co. Meath; Millockstown, Co. Louth and Johnstown, Co. Meath (Clarke and Carlin 2008).

**Excavated early medieval settlement/ cemeteries 1930-2008**

A range of sites, including those above and others, could now potentially be categorised as ‘settlement/cemeteries’ (see Table 5:1 below). In general these sites comprise of a large, rounded or oval enclosure, but generally, not circular that contains evidence of burials but also of occupation, or at least non-funerary activity. There are often a series of enclosures, some concentric to each other and perhaps representing expansion of the settlement as in the case of Knowth, Site M (Stout and Stout 2008). In other instances, such as Johnstown, Co. Meath the secondary ditch cut the earlier one and thus replaced the earlier ditch without significantly expanding the site’s area (Clarke 2002, 14).

**Table 5:1 Excavated early medieval settlement/cemeteries 1930-2008**

<table>
<thead>
<tr>
<th>Site name</th>
<th>County</th>
<th>Burial evidence</th>
<th>Ref</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balriggan</td>
<td>Louth</td>
<td>Enclosure, burials, post-structures and second enclosure</td>
<td>Delaney 2003:1226, Delaney and Roycroft 2003</td>
</tr>
<tr>
<td>Castlefarm</td>
<td>Meath</td>
<td>Early medieval settlement(?) enclosure with associated burials</td>
<td>O’Connell 2006, 19-21. Seanda</td>
</tr>
<tr>
<td>Carrowkeel</td>
<td>Galway</td>
<td>Early medieval enclosure with 128 burials (minimum), radiocarbon dates, 8th-11th century AD</td>
<td>J. O’Sullivan, 2006; J. O’Sullivan 2007</td>
</tr>
<tr>
<td>Cherrywood</td>
<td>Dublin</td>
<td>Iron Age enclosure, used for early medieval burials and then re-used as ‘Norse’ settlement</td>
<td>O’Neill 1998:127; O’Neill 1999:169.</td>
</tr>
<tr>
<td>Colp West</td>
<td>Meath</td>
<td>Pennanular burial enclosure, with outer enclosure, burials</td>
<td>O’Brien 1999; O’Brien 2003; Gowen 1988)</td>
</tr>
<tr>
<td>Coldwinters</td>
<td>Dublin</td>
<td></td>
<td>Opie 2001: 244</td>
</tr>
<tr>
<td>Corkagh</td>
<td>Dublin</td>
<td></td>
<td>Carroll 2001:340</td>
</tr>
<tr>
<td>Faughart Lower</td>
<td>Louth</td>
<td>Multivalllate enclosure, burial ground, souterrains and settlement</td>
<td>Stout and Stout (2008, 165-6)</td>
</tr>
<tr>
<td>Gracedieu</td>
<td>Dublin</td>
<td></td>
<td>Gowen 1988:16; Conway 1999: 248</td>
</tr>
<tr>
<td>Gneeevebeg</td>
<td>Westmeath</td>
<td></td>
<td>Wallace 2002:1864</td>
</tr>
<tr>
<td>Knoxspark</td>
<td>Sligo</td>
<td>Iron Age/early medieval burial ground in enclosed promontory</td>
<td>Mount 2004:206</td>
</tr>
<tr>
<td>Harristown</td>
<td>Louth</td>
<td>Iron Age/early medieval burials (4th-7th cent. AD) under mound, followed by early medieval burials, with enclosure (5th-7th cent. AD) with associated settlement and ironworking</td>
<td>Clarke 2002:1470; Clarke 2002, 13-15; McCormick and Murray 2007, 243-245.</td>
</tr>
<tr>
<td>Johnstown I</td>
<td>Meath</td>
<td>‘Ringfort’ with burials in ditches and outside enclosure</td>
<td>Keeley 1990:113; Keeley 1991:126</td>
</tr>
<tr>
<td>Loughboy</td>
<td>Kilkenny</td>
<td></td>
<td>Cotter 1998:392</td>
</tr>
<tr>
<td>Mount Offaly</td>
<td>Dublin</td>
<td>Large cemetery of 1553</td>
<td>Conway 1998:124</td>
</tr>
</tbody>
</table>
Site name | County | Burial evidence | Ref
--- | --- | --- | ---
Ninch (Laytown) | Meath | Multivallate enclosure, dated to 5th-12th century; metalworking activity | Eogan 2000:0760; McConway 2001:1007; McConway 2002:1489
Parknahown | Laois | Bivallate enclosure with burial ground, souterrains and settlement | O'Neill 2006, 32 (Seanda); O'Neill 2007, 133-139 NRA Mono
Parkwest | Dublin | | Purcell 1999: 246; Purcell 2000:299
Raystown | Meath | Multivallate enclosure, with enclosed burial ground, watermills, corn-drying kilns and agricultural settlement | Seaver 2006

There is great variation in the archaeology, chronology, organisation and material culture of these sites, but they are all essentially early medieval burial grounds with accompanying settlement evidence, neither of which are explicitly associated with any known ecclesiastical site. It might seem strange to us that people would bury their dead beside them; or more to the point, that they would choose to live beside a burial ground when it might be expected by a superstitious community that spirits and ghosts might pervade the area. It could be suggested that this occurred because only a select number (people of high status, clerics, monks) of the community were allowed to be buried in ecclesiastical sites as the church slowly became established. It might also be suggested that people's sense of ancestry and memory lead them to desire to be buried 'with their own people'. However, it is also possible that early medieval communities preferred to bury their dead 'on the land', close to crops, animals and the homestead, thus reflecting their strong sense of connection to places associated with daily life, work and practice. There is anthropological evidence (from early Christian Greece, for example) that rural, farming communities buried their dead beside the agricultural homestead rather than in a nearby church.

O'Brien (1992) had highlighted the probability of such burial sites existing noting that burial in non-ecclesiastical sites was tolerated up until the 8th century. There are numerous references to burials before his taking place in the ancestral burial grounds ferta (ibid) or what might be termed 'familial burial grounds'. Thereafter, Church legislation required that people be buried in consecrated ground. O'Brien (1999) noted how the early Irish sources indicated that the Irish were reluctant to abandon their ancestral or familial burial grounds. There has been a general tendency to translate this term ferta as a 'burial mound' from very scanty historical evidence, but O'Brien noted that Tírechán, in his life of St. Patrick, states that the ferta had a 'rounded ditch' (ibid., 133). Charles-Edwards (1993, 260) expanded upon the definition of the term ferta believing that it was a 'collective' burial place enclosed by a bank and ditch. Stout and Stout (2008) have recently published their excavation of such a site at Site M, Knowth, Co. Meath. In this publication they review the evidence for such sites, which they refer to as 'secular cemeteries', in northern Leinster. They (ibid, 74) publish simplified plans of 16 sites that they believe belong to this group which shows that they are generally of sub-circular plan, containing between one and three enclosures, and ranging greatly in size. These sites do not display most of the criteria outlined by Swan (1983) in his definition of an ecclesiastical site. Stout and Stout (2008) believe that their 'secular cemeteries' are the ferta of the early medieval sources. They do not believe, however, that they were settlement sites and (ibid., 78) interpret the animal bones from the site as being the remains of funerary meals associated with feasting during the burial ceremonies.

Already some assumptions about early medieval settlement/cemeteries have emerged that could already be challenged by the known archaeological evidence. There has been a tendency to assume that early medieval settlement/cemetery sites emerge from the Iron Age. Certainly, some of these 'settlement/cemetery' sites seem to be associated with Iron Age and
other prehistoric funerary monuments and may have provided continued ancestral burial foci for the local populace. However, a more complete analysis of the radiocarbon dates does not indicate that they spring from very long lived traditions from the Iron Age and that the sense that they are ‘ancient family burial grounds’ does not stand up when it is noted that they are no older than contemporary church burial grounds (Matt Seaver, pers. comm.). Indeed, after the fifth or sixth century A.D. they also show great variability, and the developmental sequence of individual sites varies dramatically in the scale of burial and settlement and also the longevity of use. It is clear that many of the Late Iron Age/Early Medieval transitional burial sites (see above) developed into cemeteries with (or without) accompanying settlement evidence and continued to be used up to the twelfth century and beyond. The limited settlement and burial evidence uncovered at other sites, however, suggests that these were only used for a short period of time. It is not clear why some continued to remain focal points of burial and settlement activity, while others disappeared from use. The best explanation may be the ‘messiness’ of life - i.e. the way that people buried their dead according to the contingencies of their community’s own experiences of political events, waxing and waning of social and economic fortunes and other factors - rather than some rigid archaeological categories.

At Knowth Site M, the burial area, consisting of 52 graves, lay within an inner ditched enclosure measuring 40x48m. Two burials dated to AD579-673 and AD 782-989 (2 sigma) (Stout and Stout 2008, 79). This was surrounded by a second ditch which had a diameter of 74x63m and produced a date of AD573-568. In the area between the ditches there was some limited evidence for habitation in the form of ‘a compacted surface with embedded pebbles (Ibid. 79). The only evidence for a structure comprised four irregular shallow pits that ‘could represent the remains of a trapezoidal structure’ (Ibid.). An outer enclosure, consisting of two banks with intervening ditch, had an overall diameter of 110m. The excavators argue that the enclosures represent a gradual expansion of the site between the seventh and 9th/10th centuries. The site produced evidence of bone working with cinders, possibly representing ironworking, dating to about AD700 (Ibid. 76). The excavators noted that the site produced contradictory evidence for ‘status’. An imported 7th Anglo-Saxon mount and a perforates sperm whale tooth are interpreted as being indicative of high status while the dominance of oats in the charred grain assemblage is interpreted as being of low status (Ibid. 80-1). The excavators noted that cultivation occurred within the inner enclosure during the period it was in use as a burial ground. The furrows cut, and were cut by, burials. Radiocarbon dates of AD548-654 and AD690-886 were provided by two furrows (Ibid. 80).

Millockstown, Co. Louth was interpreted by its excavator (Manning 1986, 163) as a sequence of settlements from between the 4th and 8/9th centuries. The first phase, dating to the late Iron Age comprised an oval enclosure, of 60m diameter. The suggested early date for the phase is based on an early pennanular brooch terminal which was found in the site interior, rather than the ditch (Ibid. 154-5). The radiocarbon date (AD 240-620 2 sigma) likewise was not from the ditch but from a habitation layer. This phase as then succeeded by a ringfort of 37m diameter. The final phase comprised a large oval enclosure, 40x100m which enclosed a lintel-grave cemetery and contained two souterrains. The lintel grave cemetery was confined to the centre of the site and enclosed by all three enclosures and Manning (1986, 144) admits that there is no direct evidence to associate the cemetery with the largest enclosure. The excavator views the sequence as that of a ringfort being locates on the site of an Iron Age enclosure which during its final phase was transformed into an ecclesiastical site. Stout and Stout (2008, 69-70) re-interpret the site as being a ‘secular cemetery’ evolving in the same way as Site M, Knowth. There was no dating evidence for the ‘ringfort’ stage at Millockstown and the author’s interpretation was based on the circularity of the ditch, in contrast to the other, larger, enclosures. There is also no direct dating evidence for the Phase 1 ditch. It may well be that it is the earliest enclosure, contemporary with the cemetery and the enclosures developed outwardly as at Site M, Knowth.

Dunmisk, Co. Tyrone, may also be a settlement cemetery (Ivens 1989). The enclosure on this hilltop site was created by the levelling and scarping of a drumlin summit, producing a heart-
shaped enclosure with a maximum diameter of about 50m. The eastern part of the site comprised a cemetery of at least 535 graves, and a rectangular structure 7x3m with a roughly e-w orientation that may have been a church. The structure, however, has been destroyed by grave digging. Ivens notes that the greatest concentration of burials, and some of the most elaborate were located immediately east of the building (*Ibis.* 61). Elaborate burials were also found immediately east of the church on High Island, C. Galway (White Marshall and Rourke 2000,104) so it is likely that the structure is church. If this is the case, the site is clearly not a ‘settlement cemetery’. The western part of the site provided evidence for intensive metalwork and glassmaking.

There is huge variation within the type. Stout and Stout (2008, 74) published plans of sixteen sites that they considered to be of this type and they range from sites with enclosures of diameters of nearly 100m such as Knowth, Site M, Co., Ninch, and Balriggan, Co. Meath to sites such as Westereave, Co. Dublin where the enclosure has a diameter of only 25m. In general the sites range from 50m - 70m, similar in size to many non-circular enclosures such as Killickaweeny, Co. Kildare (Walsh and Harrsion 2003, 34-6) and Ballyconneely, Co. Clare (Breen 200: 047). Ecclesiastical sites in contrast typically measure on average between 90m and 120m and contain one enclosing element (Swan 1983, 274) though there are examples present that measure from 140-400m in size. The average size of these enclosures is therefore generally a good deal less than that of ecclesiastical sites.

Some, as in the case Knowth, Site M, seem to show a chronological progression of increasingly sized enclosures. At Faughart Lower, Co. Louth. The first enclosure had a diameter of 29m, followed by an enclosure of 40m and finally by an enclosure of 55m (Stout and Stout 2008, 165). Balriggan consists of an inner enclosure of c.50 diameter and an outer enclosure ditch of 80x90m (*Ibid.* 165; Delaney and Roycroft 2003, 17-18) although it is not clear if this represents chronological expansion. The site certainly underwent periodic reconstruction as the inner ditch had been re-cut to make it deeper and wider (*Ibid.* 17). Castlefarm, C. Meath (O’Connell 2006, 19-21 Seanda) displayed concentric ditches with a secondary annex added to the outer enclosure.

The burial areas were generally located within the inner enclosure or was confined within the single enclosure if only one existed. Stout and Stout (2008, 74) comparative plane show that the burial areas at Millockstown, Co. Louth Knowth, Site M (Stout and Stout, 74) an Balriggan, Co. Louth are all within the inner enclosure, but generally not central within it. At Ninch, Co. Meath and Cherrywood, Co. Dublin, the burial area is within the single enclosure (*Ibid*). In some instances, such as Loughinstown, Co. Dublin, however, the burial area extends across the enclosure ditches, although in that instance was constrained by the third, outer, ditch.

The number of burials present varied greatly. Mount Offaly, Co. Dublin produced at least 1,500 burials (Conway 1998:124) while Cherrywood, in the same county produced only six, although the burial area was not completely excavated (Stout and Stout 163, 163). Other sites produced the following numbers of burials: Butterfield, Co. Dublin, 200+; Cherrywood, Co. Dublin 38, Gracedieu, Co. Dublin, 58; Oldtown, Co. Dublin, 120; Balriggan, Co. Lout, 47; Faughart Lower, Co. Louth, 772; Johnstown, Co. Meath, 346; Raystown, Co. Meath 133 (Stout and Stout 2008, 162-169); Parknahown, Co. Laois, 472 (O’Neill 2007, 137). The graves tended to consist of a mixture of males and females, mature, immature and infants.

The burials tended to occur in discrete areas within the settlements. In some cases the burial areas were confined within enclosures. At Raystown, Co. Meath, the burials were for the most part confined within two concentric enclosures, but some were inserted in to the ditches and some were located outside the enclosures (Seaver 2005, 10). At Parknahown, Co. Laois, the burials were enclosed within an internal enclosure located next to the ditch of the main enclosure. The cemetery ditch was much less substantial than the outer ditch and unlike the Raytown examples was rectangular in shape (O’Neill 2007, 135-138). In other sites the
burials have less formal, if any, boundaries. There was no formal boundary, for instance, to cemetery in the enclosure at Carrowkeel, Co. Galway (O’Sullivan 2007, 90-92).

**Chronology**

These sites are generally characterised by large enclosures, a mixture of both burial and ‘habitation’ evidence, and the absence of a church and other typical ‘ecclesiastical’ features. The dating evidence to date as most been derived from the burial evidence and this may not necessarily coincide with the habitation dating evidence. In some instances burial continues long after settlement ceased. At Johnstown, for instance, the site continued to be used as a *cillín* until relatively recent times (Clarke 2002, 15). It is also likely that burial pre-dated the settlements at some of these sites.

One of the most extensive series of radiocarbon dates are from Raytown, Meath. The earliest burial provided a date of AD260-540 (2 sigma; O’Sullivan and Stanley 2006, 133). Most of the burials can be dated to the 5-7th centuries but there are a few later examples, the latest providing a date of AD700-950; *ibid.*. The settlement evidence, which includes souterrains, kilns and a mill-complex, extends from the 5/6th century until after AD 1000. The earliest date is derived from cereal from a kiln (AD410-560: 2 sigma) with the latest, from the backfill of a mill, providing a date of AD 1020-1170 (2 sigma: *ibid* 132-134). At that site burial decline rapidly from the 8th century which probably coincides with the transfer of burial to consecrated ecclesiastic burial grounds. This pattern, however, is not universal. At Carrowkeel, Co. Galway the burials only begin in the eighth century and continue until the later medieval period. The earliest burial provided a date of AD 667-861 (2 sigma) with the latest providing a date of AD1400-1477 (O’Sullivan and Stanley 2007, 155-167). The majority are of 8th-11th century date. It is interesting that the three latest burials (AD1400-1477; 1284-1396;1169-1269:- 2sigma) are all foetuses suggesting that the site was beginning to develop into a *cillín* at this stage. There are presently no radiocarbon dates for the settlement on the site.

The dates from Johnstown, Co. Meath were provided by Beta Analytic and therefore tend to have a much larger error date than those from Raystown and Carrowkeel which were provided by different radiocarbon laboratories. The earliest date is of AD 370-640 with the latest being dated to AD 1500-665 (both 2 sigma: O’Sullivan and Stanley 2005, 151-152. The majority seem to date between the 7th and 11th century. In this instance there are no published dates for the settlement of the site. At Parknahowen, Co. Laois, a date of AD 420-640 (2-sigma) was obtained from the main enclosure ditch but to date no date are available for the burials (O’Neill 2007, 135). It is possible that burial on some of these sites may have been episodic rather than continuous. At Mount Offaly, Co. Dublin, for instance, the excavator noted that “During its last two stages the site was possible no longer used as a cemetery, and during these periods cobbled surfaces were constructed ... before it reverted back to a burial ground (Conway 1999, 34). At Site M Knowth, Co. Meath, the use of the site for agricultural cultivation (Stout and Stout 2008, 80) might imply that the site had temporarily ceased to function as a burial ground.

The suggestion has already been made that these burials were the equivalent of the *ferta* burial grounds mentioned in the texts. These are regarded as tradition ‘ancestral’ burial grounds. Ownership of the deceased remained with the living, unlike ecclesiastical consecrated grounds where the church took over ownership of the body and ‘curated’ until that anticipated ‘second coming’ and resurrection of the dead. However, as the radiocarbon dates above show, these ‘ancestral’ burial grounds do not, however, seem to have their origin in the pre-Christian era. There are no burials that can be unequivocally dated before the fifth century and there is little evidence for Iron Age ring ditch type burial monuments associated with these enclosures. Stout and Stout’s (2008, 169) statement that ‘burials within the innermost enclosure dated to between 260AD and 990AD’ at Raystown is a misleading
misrepresentation of the radiocarbon-dating evidence. The evidence suggests that these ‘cemetery settlements’ are a fully Christian phenomenon.

**Settlement evidence**

The settlement evidence in ‘cemetery settlements’ for the for the most part comprises, artefacts, food refuse, industrial material and activity associated with the processing for crops. Evidence for houses is limited but souterrain frequently occur. The low incidence of house remains may be attributable to the fact that most of the sites, especially, those discovered during road buildings, tend to be plough-truncates which would have removed such evidence. It is ‘negative feature’ such as ditches, pits, souterrains, grain drying kilns, and burials that have tended to survive. Stout and Stout (2008, 76) suggested that the actual settlement evidence for these sites was rather limited hence their choice of the term ‘secular cemeteries’ for the sites. They saw them as burial and industrial sites suggesting that “the primary function of the sites under discussion was burial but also other dirty and dangerous pursuits took place, like iron smelting and corn working’ (Ibid. 77). This implies a Roman-like pagan attitude to the dead, but without the desire to celebrate remembrance. The dead were shunned and kept away from the living, outside the walls of the town. There is certainly some evidence that this was the case during the early centuries of Christianity in Ireland (McCormick 1997, 63-67) but the association between burial and ‘dirty and dangerous pursuits’ is more difficult to demonstrate and the abundant evidence for settlement on many of these sites belies a sense of ‘shunning the dead’.

Where soil conditions permit, these settlement cemeteries, or secular cemeteries, have tended to produce large quantities of animal bones, e.g. Knowth, site M, Co. Meath (Bonner 2008; Hughes 2008), Raystown, Co. Meath (Seaver 2006, 83), Parknawhown, Co. Laois (O’Neill 2007, 136), Johnstown, Co. Meath (McCormick and Murray 2007, 243-5). In the case of Knowth, Site M, Stout and Stout (2008, 78) interpreted the animal bone as ‘suggestive of feasting associated with the burial ceremony’. Ceremonial feasting as part of burial ritual is not something that has been considered as part of Christian burial practice before, and the documentary evidence is silent on the matter. The survival of feasting at the graveside, at the time of burial or on anniversaries, was a Roman practice that survived into the early years of the church in Europe often including offerings and libations to the dead (Effros 2002, 74-79). In early Gaulish hagiography they are sometimes portrayed positively because it allowed the distribution of food among the poor. The Gaulish church, however, eager to promote the symbolic feast of the mass as being the appropriate method of honouring the dead began to denounce such feasting from the sixth century onwards (Ibid. 75). Edicts against the practice were still being issued by the sixth century (Ibid. 79) indicating the enduring nature of the practice. There is therefore possibility, if not a probability, that such ritualistic activity was occurring in Ireland, especially in the cemeteries under discussion where burial rite may not have been under the control of the church.

Ceremonial activity cannot, however, explain much of the other activity on such sites. The processing of agricultural produce commonly noted on these sites. Raystown, Co. produced five cereal drying kilns and up to eight watermills (Seaver 2006, 83). Corbally, Co. Kildare (Tobin 2002:0899) produced sixteen kilns. Johnstown, Co. Meath, The exceptional nature of this activity can be appreciated when one remembers that cereal drying kilns are virtually absent from excavated ringforts. The evidence for cereal processing was much less intensive at other sites. Only one drying kiln was present at Balriggan, Co. Louth (Delaney and Roycroft 2003, 19) and they were absent from several sites.

There was also extensive evidence for metalwork – particularly ironworking - on some of these sites. Some two tons of waste slag and furnace bottoms were present at Johnstown I, Co. Meath (Clarke 2002, 15). At other sites the evidence was more limited. The evidence form Balriggan implied ‘a small-scale industry, perhaps forging/iron tool making, and repair work (Delaney and Roycroft 2003, 19). Marlinstown, Co. Westmeath produced crucible
fragments, vitreous material (Keeley 1990:113; 1991:126). Carrowkeel, Co. Galway seems to have only produced small quantities of slag (O’Sullivan 2007, 91) while there does not appear to have been any evidence for metalwork a Raystown, Co. Meath. In summary, industrial activity and agricultural processing were important on some sites but not on others.

The paucity of structural evidence on these sites has already been mentioned. Raystown, however, produced two souterrains and a possible house (Seaver 2006,80) and what appears to be a round house was present at Parknahown, Co. Laois (O’Neill 2007, 134). It is not clear, however, if the evidence for houses is much greater on the many plough-truncated ringforts that have been excavated in recent years. Most of them have produced a wide range of artefacts that compare favourably with material from ringforts.

Early medieval settlement/cemeteries - some emerging research questions
A classic term used in post-procession archaeology is ‘contingency’, meaning that every population group experiences historical and cultural processes differently. Some social groups prosper, while others suffer – and every archaeological site has been created by unique circumstances and historical events. Early medieval settlement/cemeteries are different from each other, because they were used by different peoples whose fortunes waxed and waned across centuries. We need to appreciate the complexity and diversity in the chronology and character of these sites that we have dubbed settlement/cemetery sites - and be wary of classifying them too dogmatically as a ‘type’ of archaeological site (and many of the sites we list above have been discussed elsewhere both in this chapter and elsewhere in this report). Notwithstanding this, there is a range of questions that we can begin to ask. Why did some people either bury their dead beside them - or live on a place previously used as a burial ground - or bury their dead in a place previously used as a dwelling place? We should probably be aware that the boundaries between life and death may have been permeable and for a society used to death in all its forms, death may have held the terrors that it does today, where it is pushed to the edge of our experience and our landscapes. However, the question remains; how did people regard these places and why did people bury their dead there, as opposed to in neighbouring ecclesiastical cemeteries (at Raystown, Co. Meath, there are probable early medieval church sites not too far from the site)? This is an interesting archaeological phenomenon and it will repay further investigation (Matt Seaver, is currently pursuing a PhD on this with INSTAR EMAP funding support and his analyses will undoubtedly explore this topic in much great and fruitful detail).

Early medieval ecclesiastical burial grounds - the emerging role of church graveyards in Christian burial practice

Background
Despite the various practices outlined above, Irish society was gradually converted to Christianity from the fifth century AD onwards, and the conversion of aristocracy and the common people shifted burial practices by at least the 7th century AD. Yet it is clear the ‘Pagan’ practices and beliefs persisted. The writings of ecclesiastical scholars like Tire Chan and Muirchu of Armagh and Adomnán of Iona make clear their antipathy to the continued practice of burial within circular ditched enclosures described as ferta cemeteries during the 7th and even 8th century. In other words, people buried their dead in a range of ways. Hughes (1966) originally argued that it was not until the 7th century AD that the church was sufficiently integrated into Irish society to enjoy an influencing role over the burial practices and beliefs of the great majority of the people on the island. It was during this period that the church sought to establish formal consecrated Christian burial-grounds to attract patronage and burial from the secular community. This attempt to increase the status of Christian burial grounds was intimately linked to the growth of the cult of saints.
The importance of long-dead saints that had reputedly established monasteries in the fifth and sixth centuries was strengthened in the seventh century through the translation of their remains or the enshrinement of their relics (O’Brien 1992, 136; Ó Carragáin 2003, 134). This latter process was closely linked to the establishment of consecrated burial grounds, a relationship highlighted by the use of the word *reliquiae* or ‘remains of saint’ to denote a cemetery or ‘reilig’ (Doherty 1984, 53; Ó Carragáin 2003, 147).

Ecclesiastical cemeteries appear then to have developed by the seventh century A.D. There is continuing debate about who was buried at these sites; were they the burial places of ecclesiastical and a Christian elite (See Etchingham 1999; Swift 2003) or were ecclesiastical cemeteries more widely used by the general populace? Furthermore, how did the character of ecclesiastical sites change over time and can we examine the differentiation of status in these cemeteries through examining the character of burial cross-slabs? Firstly, we should examine another significant area of research - the origins of these sites and their potential relationship with earlier *ferta* cemeteries.

**The origins of Christian ecclesiastical cemeteries and their relationship with earlier *ferta* cemeteries**

The foundation date of ecclesiastical cemeteries is still a matter of debate. It is likely that the majority were formally organized from the seventh century A.D. when the church made a concerted effort to promote this form of burial practice. However, it is clear that ecclesiastical cemeteries existed perhaps from the late fifth century though the forms of these early sites is not yet completely clear.

One of the earliest cemeteries excavated thus far was at Scotch Street on the summit of Armagh hill, Armagh where the possible remains of ‘Temple na Ferta’ was uncovered (Lynn 1979; McDowell 1985, Excavations Bulletin). A cemetery of upwards of 60 east-west inhumations, one of which was interred within a wooden coffin and marked out by wooden posts, was uncovered. Ó Carragáin (2003) has suggested that the unique coffin demarcated by two wooden posts might represent evidence for a translation of a saint’s corporeal remains. A radiocarbon determination for one grave returned a date spanning the mid fifth-mid seventh century (cal. A.D. 430-640) (Edwards 1990, 130). It is instructive to note that Lynn also excavated a Neolithic ring-ditch 11m in diameter at the site in 1979. Taking this into consideration, as well as the obvious place-name element ‘Temple na *Ferta*’ and the early dates of the cemetery, it is possible that we have evidence here for the Christianisation of a pagan *ferta* cemetery used potentially by ecclesiastics in these early years. Ó Carragáin (2003, 140) has made the suggestion that Armagh, like Canterbury sought to imitate the topography of Rome by establishing St. Patrick’s at the summit of Armagh hill and surrounding it with a number of reliquary churches which were extramural in function. Could the foundation of the principal liturgical building of St. Patrick’s cathedral at the summit of the hill have also amounted to a conscious break with the prehistoric pagan past from which Temple na *Ferta* could potentially have developed? It is worth noting that the ecclesiastical site at Reefert at Glendalough has been interpreted as meaning *Ríogh-Fearta* (Corlett & Medlycott 2000, 161), ‘the *ferta* of the kings’? Lorcan Harney (2006) has suggested that Reefert may represent an early high-status or royal cemetery at Glendalough that then evolved into an extramural church when the cathedral was constructed in the main monastic complex at the lower lake (Harney 2006).

Further interesting examples where potential continuity between the late Iron Age and the early medieval period can be found at the ecclesiastical sites of Durrow, Co. Offaly and Omey, Co. Galway. Durrow is another example where an early cemetery was located in close proximity to the ecclesiastical site. O’Brien (1992, 133) has noted that a cemetery of extended unprotected inhumations were uncovered within a circular enclosure (25-30m in diameter) c.200m south-east of the ecclesiastical enclosure at Durrow. Further burials were also uncovered 100m northeast of the site. Radiocarbon dates suggest however that burials at Durrow were ninth century AD in date.
An ecclesiastical cemetery located on a potential Late Iron Age/early medieval transitional cemetery that in turn succeeded Bronze Age activity was uncovered on Omey Island (O’Keeffe, 1992 & 1993, Excavations Bulletin). A number of burials were uncovered containing beads of blue and red glass which could, as the author postulated, date ‘close to the interface between paganism and Christianity’ (O’Keeffe 1993, Excavations Bulletin). The site appears to have developed into an important ecclesiastical site containing a number of leactha and a lintel cemetery that continued to be used up to the twelfth century.

Another example of an ecclesiastical cemetery being founded close to a transitional Iron Age/early medieval burial site was excavated at Killtullagh Hill (Cill Tulach – ‘Church of the burial mound’; tulach being translated as burial mound) that straddles the boundaries of Cos. Roscommon, Mayo and Galway. Early excavations focused on the transitional Iron Age/early medieval cemetery (McCormick 1995; McCormick 1994, Excavations Bulletin; Coombs & Maude 1996, Excavations Bulletin). More recent excavations by Coombs, Maude, Robinson & Gregory (1998, 1999 & 2000, Excavations Bulletin) focused on the adjacent early medieval cemetery that was found to contain a possible early wooden structure beneath the medieval church ruins.

A last, very tentative example of a possible prehistoric monument being re-used in a nearby ecclesiastical context can be found at Derry naflan monastery, Co. Tipperary. Following the discovery of the famous Derrynaflan hoard, a number of rescue excavations were undertaken by the National Museum first by Mary Cahill and then Raghnaill Ó Floinn and Elizabeth O’Brien to recover missing pieces. A small ring-barrow, c.6m in diameter and 10m to the north of the medieval cemetery was excavated as it was close to the area where the hoard was recovered. Two pits which contained small quantities of charcoal, cremated bone and unburnt animal bone – one inside and one outside the ditch – were interpreted as possible undisturbed burials (Ó Floinn 1985, Excavations Bulletin). The excavations bulletin contained no further information about these burials.

It is evident that some of these examples, particularly those at Durrow (although 9th century in date) and Derrynaflan are based on very tentative evidence. However, they serve to throw up some interesting questions concerning the spatial proximity of ferta cemeteries to formal consecrated ecclesiastical burial-grounds. These examples such as Killtullagh Hill or Armagh suggest that some significant 5th/6th century cemeteries with possible prehistoric origins may have been Christianized by the ecclesiastical authorities in the early medieval period. It could also be suggested that the presence of a ring-barrow adjacent to an ecclesiastical cemetery is just a coincidence and that simple topographical rather than ancestral or historical considerations may have determined the location of some ecclesiastical sites. What is needed then is a systematic examination of the location of both ferta and reilig cemeteries to understand why some were situated in close proximity to each other while in other cases, a determined and conscious decision was made to found a church in a new site.

**Early Medieval Ecclesiastical Cemeteries**

It has been argued that ‘burial near the bones of the saint’ became a substitute for ‘burial near the bones of the ancestors’ during the 7/8th century A.D. (O’Brien 1992, 136; Ó Carragáin 2003, 147). It appears that the ecclesiastical authorities may have been largely successful in persuading people to be buried in formal consecrated burial-grounds from the 8th century although there is growing evidence for continuing internment in ancestral ferta through the early medieval period as discussed above.

One of the defining characteristics of an ecclesiastical site was an enclosure that served to symbolically demarcate the boundary between the dead and the living; and the holy and unholy ground. Indeed Doherty (1985, 57) has suggested that Irish ecclesiastical sites sought to model themselves upon the idea of the city of refuge (civitas refugii) from the bible and by clearly demarcating the settlement into areas of varying sanctity. This resulted in the ‘creation
of an idealised form, a schema, which allowed a monastic site to have a holy of holies at the core, around which were areas of sanctuary that decreased in importance the further they were from the centre’ (Doherty, 1985, 57). The cemetery and ecclesiastical buildings was situated inside the holiest core of the settlement.

O’Brien (2003, 67) has argued that the standard burial rite by the seventh/eighth century was that of extended east-west inhumation usually but not always necessarily wrapped in a shroud and interred in lintel and/or unprotected dug graves, located in ecclesiastical cemeteries. The lintel grave of the 7th/8th century appears to have evolved from the slab and stone-lined cists which date principally to the 5-7th centuries A.D.

**Excavated early medieval ecclesiastical cemeteries 1930-2004**

The EMAP survey has identified that a total of 188 ecclesiastical sites with early medieval historical origins were excavated between 1970-2002 and research is ongoing for the period 1930-2004. A further 42 ecclesiastical sites whose early medieval origins could not also be established were also excavated. A total of 80 excavations were undertaken in this period that uncovered burial evidence of varying amounts inside these ecclesiastical sites. With the exception of 3 sites, they all came from ecclesiastical sites with known historical or archaeological early medieval origins. A total of 77 out of 188 (41%) of excavations at definite early medieval ecclesiastical sites then revealed some form of burial evidence comprising disarticulated human bone as well as unprotected and protected dug graves.

**Significant Excavated Ecclesiastical Cemeteries**

Significant early medieval cemeteries were excavated at St. Brendan’s, Ardfert, Co. Kerry (Fionnbar Moore 1989-92, Excavations Bulletin; Martin Reid 1995) and two undocumented sites at Butterfield, Rathfarnham (Judith Carroll 1997, Excavations Bulletin- 97E0140) and at Dunmisk (Ivens 1988). The last two are believed however to be ecclesiastical in origin.


Other significant cemeteries have been excavated at Gallen, Co. Offaly (Kendrick 1939): Derry, Co. Down (Waterman 1967) and more recently at a mainly medieval cemetery at Ballykilmore, Co. Westmeath (Channing and Randolph-Quinney 2006, 115), while excavations of human remains have also been carried out on early monastic sites at Clonfad, Co. Westmeath (Stevens 2006) and also at a probable early medieval ecclesiastical enclosure at Killeany, Co. Laois (excavated by Kenny Wiggins of ACS, and recently reported by Niall Kenny 2007).

**Ecclesiastical Cemeteries and Burial Rites**

Burial rites in ecclesiastical cemeteries began to become more standardised. Unprotected burials comprise the majority of the evidence recovered from ecclesiastical cemeteries. Lintel burials and graves containing ear-muffs and very occasionally pillow-stones were also a feature of many burials. Lintel burials have been dated to the seventh/eighth centuries A.D. or after (O’Brien 67). Ear-muffs are difficult to date because they were used in a variety of
early contexts as illustrated at Cherrywood (John O’Neill 1998, Excavations Bulletin- 98E0526) and as from a number of early medieval levels at the settlement/cemetery at Mount Offaly, Co. Dublin (Malachy Conway 1998, Excavations Bulletin- 98E0035). Earmuffs can therefore be found across the early medieval period. The Excavations Bulletin reports have also revealed a small number of instances of burials in ecclesiastical cemeteries that were stone/slab-lined. It is difficult to be certain if the authors were referring to what were actually lintel burials in these instances so no discussion will take place about this potential evidence until full excavation reports have been consulted.

High status recumbent slabs have also been recovered from a large number of significant early medieval ecclesiastical sites particularly at Clonmacnoise and Gallen, Co. Clare, Iniscealtra, Co. Clare, Glendalough, Co. Wicklow, Nendrum, Co. Down, Inishmurray, Co. Sligo, the Aran Islands, Co. Galway, Kilpeacan and Kilberrihert, Co. Tipperary and Tullylease, Co. Cork (Lionard 1961). A number of high status burials at Iniscealtra and Glendalough were lined with slab that project over the surface. They were then covered with recumbent slabs, many of which were decorated with incised and carved crosses. Small socket-holes were present at the head or foot of the graves and would have held upright crosses (Lionard 1961, 150). These burials tend to date to after the 8th century and may represent the burial places of high status ecclesiastics and secular individuals.

In other words, burial in churchyards is probably the dominant practice after the eighth century – if not early. Undoubtedly, there is huge potential for researching this topic in much more detail. Is it possible to discern patterns in the planning and practice of burial in church graveyards? Are there zones of particular activity? Are there burials of more or less important people? Did graveyards expand and change across time – how do burials relate to other features; such as saint’s shrines, churches, entrances, cathedrals, cross and high crosses? Most importantly, is there archaeological evidence for other activities in church graveyards – such as metalworking, fairs and markets, or are these exclusively ritual spaces?

**Viking/ Norse furnished burial practices**

**Background**

In recent years, Harrison’s (2001) and Ó Floiinn’s (1998) research and publications have enabled new insights into Viking or Norse burials, these being ‘defined as those containing individuals, buried according to traditions, which are recognizably Scandinavian in inspiration and which date from the ninth and tenth centuries’ (Harrison 2001, 61). Furnished Viking burials have been found across Ireland since the 19th century, although the details recorded by antiquarians can be patchy. Harrison (2001, 63) has noted that the distribution pattern of Viking graves in Ireland differs remarkably to that in Scotland, Cumbria and the Isle of Man where the vast majority of burials are located in isolated single graves.

In early medieval Ireland in contrast, 80% of known Viking/Norse graves have been excavated from within five kilometres of the Dublin city centre. A total of 75% or (c.60% of all Irish graves) were found to have come from the two cemeteries of Kilmainham and Islandbridge. Altogether, it has been suggested that there are approximately 80-90 burials from the Dublin evidence (O’Floinn 1998, 142): a figure that can be slightly increased to due to excavations. This suggests that a country-wide figure maybe somewhere between 90-100 burials.

**Viking Burials in Viking/ Hiberno-Norse Dyfiín**

The concentration of Viking burials in the area around the Dublin city centre attests to the significance of this site in the 9/10th centuries A.D. The four Viking cemeteries of Kilmainham, Islandbridge, Castleknock to the west of Dublin city and Palace Row on the north side have been discovered since the 19th century (O’Floinn 1998, 132; Harrison 2001, 65). Discoveries
of isolated Viking burials have been made at College Green, Parnell Square, Cork Street, Bride Street and Kildare Street, Dollymount Strand and Donnybrook (Alyesbury Road) from the 19th century.

These have been augmented by excavations at Ship Street Great and Stephen Street, Dublin (Simpson 2002) which revealed a single ninth century Viking male with accompanying grave-goods adjacent to the church of St. Michael le Pole and St. Peters to the south of the subsequent walled Hiberno-Norse town. Four further Viking burials dating to around the 9th century A.D. were discovered during excavations again by Linzi Simpson at South Great George's Street in 2003 (http://www.mglarc.com/projects/viking_dublin/south_great_georges_street.htm). The site was located just 200m east of Ship Street Great on the south-eastern rim of the Black Pool which the town of Dublin takes its name from.

A further ninth-century Viking furnished grave was finally excavated at Golden Lane, Dublin immediately outside the possible ecclesiastical enclosure at St. Michael le Pole’s church in 2005 by Edmond O’Donovan (2005). Simpson has suggested that the combined evidence attests to the burial of high status Viking warriors around the southern edges of the Black Pool to the south of the confluence of the Liffey and Puddle in the ninth century (http://www.mglarc.com/projects/viking_dublin/conclusion.htm). The distribution of 9/10th century Viking burials then suggests the presence of a number of cemeteries in the environs of the subsequent Hiberno-Norse settlement at the confluence of the Liffey and Puddle as well as a number of ninth century high-status Viking warriors spread out along the southern banks of the Blackpool.

**Viking/Norse burials in Dyflinarskiri**

A number of unusual burials have been discovered in the regional hinterland of Dublin known in the historical sources as Dyflinarskiri (Harrison 2001, 65-66). Burials containing the remains of humans and horses have been recorded at Athlumney near Navan, Co. Meath and at an unknown site between Milltown and Newbridge, Co. Kildare. An iron spear-head was found at the upper level of a prehistoric burial mound at Croghan Erin, Co. Meath, while an iron axe-head was found at Barnhall near Leixlip (Lax hlaup or Salmon’s Leap) near a possible Viking outlying settlement.

Excavations in 2004 by Icon archaeology near the early medieval ecclesiastical site of Finglas (Fionn Gall) in north Co. Dublin revealed a ninth-century Viking female burial with accompanying Scandinavian oval brooches confirming the presence of Vikings in this area.

**Viking/Norse burials in coastal and rural Ireland**

Outside this area, further swords have been discovered at Tybroughney, Co. Kilkenny and Murgesty, Co. Tipperary and may represent other furnished Viking burials.

A furnished Viking grave was also discovered at Eyrephort, Co. Galway while two other potential burial sites, dating to the 10th century, were excavated at False Bay, Co. Galway. They were laid with their heads to the west; a tradition not found in Christian graves and were found to date to a slightly later period than a possible Viking house and settlement ((Gibbon & Kelly 2003; O’Sullivan & Breen 2007, 121).

A further potential Viking burial was discovered near Rinnarraw Cashel along the northwest coast at Kinnegar Strand, Lough Swilly (Comber 2006).

Recent excavations at Woodstown 6 in advance of the N25 Waterford Bypass have revealed a Viking furnished burial immediately outside the ditched enclosure on the south banks of the River Suir.
The greatest concentration of Viking burial evidence outside Dublin can be found along the northeast coast in the counties of Antrim and Down. Here a number of potential burials have been discovered at Leger Hill, Larne & Ballyholme, Co. Antrim and St. John’s Point Church, Co. Down. A possible cemetery has also been excavated at Rathlin Island (Harrison 2001, 66).

**Viking/Norse Burial Rite**

Extended inhumation in unlined graves appears to have been the dominant rite of Viking burial in Ireland. Grave goods are common, and of course in ‘furnished burials’ are there by definition. It is possible that the cist at Mayfield along the banks of the River Suir could represent the internment of a Viking or as mentioned above, Anglo-Saxon. No skeleton was found within the cist though some cremated bone appears to have been discovered (O’Donnell 1986).

Burials also appear to have been located in flat cemeteries as opposed to mound burials or even Viking boat burials as has been discovered in Scandinavia and the Isles of Scotland. A possible ship burial was however excavated at Ballywillin, Co. Antrim (Edwards 1990, 189) but there is now some certainty due to the discovery of Edwards III coins (O Floinn 1998, 146). A possible re-use of a prehistoric mound for a Viking burial can be found at Croghan Erin, Co. Meath although the evidence is less than clear. A further possible mound burial was once extant at College Green although the monument does appear to conform to any recognizable prehistoric monument examples (Harrison 2001, 74).

A large ‘sepulchral mound’ was excavated in the 19th century at Donnybrook, Co. Dublin (Hall 1978). It contained a furnished Viking burial accompanied by two other inhumations in a mound that contained 600-700 Christian burials and has been regarded in the past as a burial in a mass grave of victims of Viking raids. O’Brien (1992) in a paper in *Medieval Archaeology* has subsequently re-appraised this evidence and it is likely that it simply represents the burial of a Viking individual in an earlier or contemporary ‘Irish’ burial ground.

**Viking Burial and ‘Irish’ ecclesiastical Sites**

Some Viking/Norse burials appear to display some Christian influences. It is worth noting the concentration of Viking burials around a number of ecclesiastical sites including St. Michael le Pole’s and St. Peter’s in Dublin city centre, Finglas, north Co. Dublin and St. John’s Point, Co. Down which throws up interesting ideas about the relationship between these churches and the pagan Viking authorities in this period. It appears that Christianity may have emerged as the dominant religion of the Hiberno-Norse by the 11th century when a number of churches including Christchurch at Dublin and Waterford were founded.

**The living and dead in early medieval Ireland: some future research areas**

**The people of early medieval Ireland - in life and death**

The emerging archaeological evidence for burial in early medieval Ireland then is characterised by diversity and variety in both burial rite and context. The traditional description of the entire period as ‘Early Christian’ is perhaps then a misnomer, in that it fails to reflect the real chronological, cultural and ideological complexity lying behind the older and the newly emerging archaeological data. There is now a large corpus of excavated data that suggests that people were interred in quite a variety of different ways between the 5th-12th centuries A.D. or throughout the early medieval period.

At an early stage, between the 4th-6th centuries AD, there is a sense of people burying their dead in familial or ancestral burial grounds, occasionally involving small annular enclosures,
mounds, standing stones, ring-ditches and other features. These early graves often are slab-lined, but not always. Some burial places become abandoned; others are used over long periods. Some burial places become the focus for settlement, industry and agriculture - the 'settlement/cemeteries' discussed in the settlement chapter above. Some of these have Iron Age origins, but in fact, the radiocarbon dating evidence places most fully within the 'Christian era'. Some of these places remain a focus for burial throughout the early medieval period, from the 6th to the 11th centuries AD, indicating that it is not always a question of 'early' or 'later' practice. Early medieval churches also become a focus for burial practices - but not all the population is buried in them, neither at the early stage, or in the latter (early medieval settlement/cemeteries were being used well after the establishment of ecclesiastical burial grounds). Furthermore, the burial evidence from 'settlement/cemetery' sites, caves, coastal middens as well as known Viking burials all points to a variety of other contexts in which people continued to be buried outside the authority of the church during the early medieval period. There are a number of important implications of this new set of evidence.

EMAP’s analysis of the published and unpublished data points towards a complex maelstrom of burial practices in the Iron Age/early medieval transitional period. A few questions can be posed:

- Can we identify regional archaeological variations in the burial practices across the island from the 5-7th centuries A.D.?
- Does the distribution of distinctive burials in such monuments such as the very rare 'pennanular' enclosure and the more common 'annular burial enclosure' attests to Anglo-Saxon influences in eastern Ireland in particular during the 7th century A.D. or do these monuments have a common origin in the Irish prehistoric funerary tradition - or both?
- How long did early ferta cemeteries continue to be used through the early medieval period and who were being buried in these places and were they Christian?
- What is the evidence for unenclosed cemeteries in the early medieval period and can they be described as a separate site type?
- What was context in which enclosed ‘settlement/cemetery’ sites evolved; how did they vary; how were they used and were they used throughout the period?

EMAP’s archaeological review also suggests a slow and often complex period of conversion from paganism to Christianity

- What is the evidence for the Christianisation of pagan ferta during the emergence of the cult of the relics in the 7/8th centuries A.D?
- How did the character of ecclesiastical cemeteries through the early medieval period; how were they organised and laid out - and what else were they used for?
- Who was being buried in ecclesiastical cemeteries in the early medieval period - and were they ever truly representative of all the population?

The increasing corpus of ‘Pagan’ and Viking burial evidence has also raised issues concerning

- The possible survival of ‘Pagan’ burial practices in caves and other contexts well into the Christian era
- The location of Viking burials in relation to ecclesiastical sites
• The influence of Christianity in the 9/10th century and the process of conversion of the Hiberno-Norse to Christianity?

It is also clear that the living often lived with the dead in early medieval Ireland - and we need to explore how cemeteries were used as places in the landscape.

• How were all burial places, enclosures, ecclesiastical cemeteries and ‘settlement/cemeteries used across time’ - are there chronological patterns or does each site have its own unique history of burial practices?

• Were cemeteries used for other purposes; crafts, industry; ceremony; economic and political actions?

Finally, there is also a subject of enormous importance that has not been touched on here. In these early medieval burials and cemeteries, we as Irish archaeologists have uncovered a potentially very large population of human skeletons from over a thousand years ago, of huge significance for osteology and cultural biology. This is a ‘body’ of archaeological evidence that could be hugely informative about early medieval population and demographics; patterns of gender, age and childhood mortality; questions of diet and health and the foods they people ate (or didn’t during famine); problems of disease and illness - including the endemic plagues and diseases referred to in early medieval historical sources, and how people's lifestyles and physical efforts were reflected in their skeletons. Given the interest in identity and ethnicity, there is also much to be done and clarified in terms of genetics, immigrant populations and the ‘origins of the Irish’. Early medieval cemeteries should enable us to explore the very lives and bodies of the peoples of early medieval Ireland.
Chapter 6. Early medieval agriculture and economy

Introduction

Early Medieval Ireland was an overwhelmingly rural landscape, with individual farmsteads (raths and crannogs), fields and routeways through a highly managed agricultural landscape. In this rural landscape, farming was the constant in people's daily lives. Most of the community, especially the ordinary and un-free members of society, such as the low-status commoners, hereditary serfs and slaves, would have spent most of their lives at work in the fields - herding cattle, sheep and pigs, ploughing, sowing and harvesting crops or building and repairing field-walls. In the home, the daily lives of men and women would also have been dominated by domestic activities relating to agriculture, whether this was in terms of preparing milk and cheeses, grinding grain for flour, smoking or salting meats and other foods for winter storage or spinning and weaving wool.

Agriculture, however, was not only important in terms of subsistence. It was also the key element in the organisation of early Irish society. Whether they were a lord or a slave, most people would have depended for their social status, subsistence and livelihood on the agricultural produce of the land. Kinship and community, social status and gender roles – these were all organised around the patterns of land-use and agricultural labour. For these reasons, agriculture and economy have to be seen as key aspects in the study of early medieval Irish society.

Sources of evidence

The evidence for early Irish agriculture is wide ranging, and includes archaeology, palaeoenvironmental studies and early Irish history. A multi-disciplinary approach can help to reconstruct full picture of farming in the landscape. Sources for early Irish agriculture include:

- Early Irish law tracts, typically dated to c. A.D. 700 (seventh to eighth century), that provide information on such aspects as land value, social status and cows, labour organisation, aspects of fishing, milling, bee-keeping, etc. They reflect Irish society during the earlier centuries of the period but caution should be exercised when using the laws to interpret the latter half of the Early Medieval period. Doherty (1980, 70) has noted “as a mirror of society from the eighth century onwards ... they become increasingly irrelevant”

- Saint's lives that provide information on general farming practices, on daily diet and provide revealing anecdotes about daily work. The saint's lives, dated from the late-seventh century onwards often provide descriptions of aspects of rural life.

- Annals, originating in the seventh century, with contemporary records by the late-ninth to early-tenth century, tend to be less useful about farming, but they do provide occasional information on climatic events, such as storms, famines, cattle murrains and abundant harvests.

- Landscape archaeological evidence for farming - ringforts, enclosures, field-patterns, kilns and mills - and artefacts including agricultural tools and equipment, such as plough irons, querns and other items; all these indicate the organisation of agricultural labour.
• Plant macrofossil evidence for tending and growth of crops and cultivated fruits, and for identifying the presence of many weed species which can inform us about crop management. They are of limited value in providing evidence about cultivated vegetables.

• Faunal remains that provide evidence for livestock and herd management and the role of cattle, pigs, sheep, goats and other animals in the farming economy; in dairying, beef and pork production and in the exploitation of other animal products (hides, tallow, bone, etc).

• Palynological evidence provides information about the local and regional change in the landscape. There are, however, methodological problems with pollen analysis that can make interpretation of the evidence difficult. Hazel pollen, for instance, invariably exaggerates the cover of the shrub while the level of cereal pollen can be greatly underrepresented (Hall 2000, 437). Some species, such as flax, are almost invisible in the pollen record and modern experiment has shown that flax pollen is uncommon more than a few metres from the edge of cultivation (ibid. 348). It is therefore unsurprising that it is infrequently encountered in pollen cores taken from blanket bogs. The plant has, however, a higher profile in charred seed assemblages (Monk 1993, 34).

Living with plant and animals: reconstructing the early medieval environment and agricultural landscape.

The early medieval environment has largely been reconstructed on the basis of pollen evidence, but excavated evidence for animal bone, plant remains, charcoal and proxy indicators (e.g. beetles, insect remains) will undoubtedly be increasingly important as major archaeological excavation reports are published with their specialist analyses. Aspects of the pollen evidence for Early Medieval Ireland have recently been reviewed by Cole and Mitchell (2003), Hall (2000; 2005) and Plunkett (2007). There is general consensus that after a period of agricultural decline, forest clearance and agricultural expansion can be seen over most of the country during the third and fourth centuries A.D. This clearly predates the arrival of Christianity in the fifth century. Occasionally, however, wholesale forest clearance does not occur until much later. Hall et al. (1993) noted significant woodland clearance in Co. Antrim in the ninth century indicating that there was still some land available for agricultural reclamation in the latter part of the Early Medieval period. Parkes and Mitchell (2000) suggest similar clearance in Co. Offaly at about A.D. 800 but the profiles were not independently dated. Subsequent work in the same area casts doubts on this interpretation but indicates some decline in the mid-thirteenth century (Hall 2003). Hall (2005) has deliberately sampled areas near monastic settlements to see if the foundation of such monasteries affected farming intensity, especially in crop cultivation. She found no evidence for this - indeed the evidence indicates that monasteries were generally established in places where arable farming was already established. It was also noted that ‘a comparison of evidence from the monastic and secular sites does not indicate change unique to monastic landscapes’ (ibid.). The suggestion that monasteries would have had a higher emphasis on arable farming is not presently supported. Kerr (2007) and McCormick and Murray (2007) have suggested a shift in emphasis from livestock rearing to arable farming from the ninth century onwards, but Hall has not been able to substantiate this. Significant increase in arable farming is only noted from the twelfth or thirteenth centuries, change which can be attributed to the coming of the Anglo-Normans along, perhaps, with the introduction of the mould-board plough.

The pollen evidence for Early Medieval Ireland, apart from the areas of highlands and extensive bog cover, indicates a landscape of scrubby woodland and mixed farming, almost invariably dominated by pastureland. Large areas of extensive forest were rare. Ryan (2000, 33) draws attention to a ninth-century text that refers to only three forest wildernesses in Ireland - the
woods of Cooley; Deicsiu in Tuirtre; and the Wood of Moithre in Connacht. Arable farming is present to some extent in nearly all areas. Although there is considerable local variation, significant regional or chronological trends are difficult to identify.

There is obvious conflict between the palynological data and other archaeological evidence concerning agriculture at this time. Faunal evidence indicates a diversification in livestock rearing from the ninth century onwards, characterised primarily by a decline in the importance of cattle (McCormick & Murray 2007). Kerr (2007) shows a change in the settlement pattern at the same time with a growing preference, at least in the north of Ireland, for high-status settlement in good arable areas. Finally, the ninth century is marked by a significant expansion in horizontal mill construction (Brady 2006). Much of this evidence implies an increase in the importance of arable farming. The documentary evidence, especially the Saint’s lives, suggests a strong association between monasteries and arable farming (Stout 1997, 129-30). Archaeological evidence for this association is provided by the presence of mills at monasteries such as Nendrum, Co. Down (McErlean & Crothers 2007) and High Island, Co. Galway (Rynne 2000). Indeed it has been noted that the early laws indicate that a miller is one of the ‘functional grades’ of the church and that mills ‘should be seen as a characteristic component of an early Irish monastery’ (McErlean & Crothers 2007, 433). The same cannot be said of secular sites.

How is this conflict to be resolved? Hall notes that modern studies ‘demonstrate that, when a few metres from the edge of a cereal field, the value of cereal pollen falls sharply from levels as high value of 20% to about 1%, and still detectible even at many hundred metres distance’ (2000, 348). This might suggest that the pollen evidence from blanket bog cores, which would be expected to be a considerable distance from the arable fields, can only record the extremes of cereal production and is incapable of recording more subtle, yet significant, changes and differences in farming economy. It is extremely desirable, if possible, that pollen samples from the immediate vicinities of secular and monastic settlements are studied so that more valid comparisons can be made.

**Crop Cultivation**

The early documentary sources provide a wealth of information on the cultivation of cereals, vegetables, fruit and herbs (Kelly 1997, 219-271). The detail provided by these sources is unrivalled anywhere in Europe at this time. This evidence is augmented by macroscopic plant remains from individual. Monk (1986) and Monk et al. (1998) have produced overviews of this evidence, with an emphasis on Munster. Most recently Monk (2005) has presented the evidence from several corn drying kilns, although these also include later medieval examples.

The *Bretha Déin Chécht*, an eighth century law tract, lists seven cultivated cereals although not all can be identified with confidence; bread-wheat (*cruiðnecht*); rye (*seca*); spelt wheat? (*suillech*); two-rowed barley? (*ibdach*); emmer wheat? (*rúadán*); six-row barley (*éornae*), and oats (*corcae*) (Kelly 1997, 219). It also notes that bread-wheat was of the highest regard and oat the lowest. This is an idealised list, and the crops cultivated at different sites will often reflect localised crop-growing capabilities. There are many places in Ireland where it would be extremely difficult to grow wheat. As yet, however, the macroscopic evidence has not demonstrated clear regional variations. In Munster, barley and oats, characterised as lower-status cereals in the documentary sources, were the main cereals encountered. There was much variation, however, between sites and even in different samples from a single site (Monk et al. 1998, 72). The presence of wheat, or at least wheat straw, at Lagore Crannog (Hencken 1950, 242) would tend to demonstrate the association between wheat and consumers of high status but wheat remains, although in relatively small quantities, were found in most of the Munster assemblages.

It is relatively easy to determine if a grain assemblage has been processed or not. In the study of the Munster material unprocessed grain is rare indicating that winnowing and cleaning
tended to take place away from the habitation sites. Plunkett (2005) noted the same at the early monastery at Illaunloughan, Co. Kerry. Secondary evidence for grain production can be provided by the presence of sickles, plough parts, quern stones, corn-drying kilns and mills. Some of this evidence will be considered later in this chapter.

Evidence for fruit and vegetable growing is again provided by the documentary sources and archaeobotanical study. The historical sources indicate that the range consumed was rather limited. The most important vegetables seem to have been beans and peas (Kelly 1997, 248-49) but the exact translation of terms used for other vegetables is unclear. The term ‘cainnenn’ has been identified as onion, garlic or leek, although Kelly (1997, 251) prefers onion. He suggests that ‘borrlus’ refers to leek. Cabbage is also identified and, perhaps, celery. The documentary sources also identify chives. The texts do not refer to herbs as such, apart from a single reference to some unidentified ‘foreign herbs’ used for medicinal purposes which Kelly (ibid. 257-8) feels may have been confused with mineral remedies. According to the documentary sources the only cultivated fruits consumed were apple and plum (ibid. 259-50). Non-food cultivated plants comprise wood, madder and flax (ibid. 264-270).

Most of these cultivated plants are not represented in the pollen or macroscopic early medieval plant record. In the survey of the Munster material Monk et al. (1996, 68) did not note any cultivated species other than cereals. The gathered wild species comprise hazel nuts, blackberry and very occasionally elder and sloe. The most comprehensive study of macroscopic plant remains are from tenth-early-eleventh century deposits from the Viking settlement in Fishamble Street, Dublin (Geraghty 1996). The main cereal noted was barley, followed by oat and wheat. The only other cultivated seeds present were flax, horse-pea, and apple (although some of the apple seed may be pear (ibid. 40)). A range of wild edible plants were also present as well as walnut, which must have been imported.

The cultivation of vegetables implied the presence of gardens, which would have to have been fenced to protect the crop from livestock. Since vegetables need a high degree of maintenance in the form of thinning, weeding and continual cropping, it is likely that they were located near the settlements. The small annexes associated with many ringforts and other enclosed settlements are quite likely to be such gardens. Gardens seem to have been especially important in monasteries. Kelly (1997, 251) notes that the gardener is listed as one of the seven officers of the church but there is no mention of gardeners being among the servants employed by a king or lord. The rich organic soils on the small island monastery at Illaunloughan, Co. Kerry were artificially made plaggan soils, which must have been derived primarily from organic material brought onto the island, augmented and enriched by discarded food waste. This can only have been deliberately imported in order to create a garden soil (Murray & McCormick 2005, 76).

It could also be assumed that the soils on the terraced gardens on Skellig Michael (Horn et al. 1990, 36) are of Early Medieval date but this has not been proven. Additionally Hughes and Hamlin (1977, 108) note the presence of deepened soils at the site of the early monastic foundation at Kilnasaggart, Co. Armagh. They interpreted the artificially heightened ground as being for the provision of an adequate depth of soil for burials, but it seems more likely that this represents a garden soil which may also be of Early Medieval date. A rich garden soil of considerable depth also underlay a spread of shells at the early ecclesiastical site of Mainistir Chiaráin, Inis Mór, Co. Galway (Ní Ghabhláin 1998:259). The fact that such artificial garden soils to date have only been identified on monastic sites emphasizes the importance of gardens in early monasteries. It can also be noted that the Irish Saint Fiachra, who founded a monastery with a fine garden at Breuil near Meaux in France, was later became the patron saint of gardeners in that country (Reeves-Smyth 1999, 108).
Livestock and Dairying

Cattle, more specifically cows, were of exceptional importance in the lives of the early Irish (Lucas 1989, 3-4). The cow was the basic unit of wealth and one's social status in this rigidly hierarchical society was to a large extent on the number of cows that one had at their disposal. The giving and receiving of cows formed the basis of the contracts between members of different social ranks in society. These contracts formed the basis of stability within society. Fines, tribute, and dowries were generally paid in cows, and cattle raiding were regarded more as a form of political competition than criminal activity. Some payments could also be made in silver, but the authors of the law tracts assume a consistent exchange-value for cattle (Kelly 1997, 57), thus acknowledging their position at the core of the value system. The by-products of dead cattle - i.e. meat, hides, and tallow – appear to be of less importance than live cattle and their by-products. McCormick (1995), for example, argues that ringforts were primarily built to protect cattle during times of raiding, thus reflecting the central role of cattle, and especially the milch cow, in the wealth system. Contemporary writings suggest that early cattle-farming was dominated by dairying, an impression confirmed by the age-slaughter pattern and sex-ratio of cattle from archaeological sites (McCormick 1982), and by the wide range of dairy products consumed during this period (Kelly 1979, 323-30).

In the past the vast quantities of cattle bones from excavations such as Lagore have led to the impression that livestock farming was completely dominated by cattle rearing, and that other livestock were kept in relatively minor quantities. Advances in zooarchaeological methodology, however, has shown that the livestock economy was of a more balanced nature the previously thought. The zooarchaeological evidence from Early Medieval Ireland has recently been re-appraised by McCormick and Murray (2007). The evidence shows that there are clear differences between the livestock economy of the sixth-eighth centuries, and that from later centuries. The distribution of livestock from sites dated to c. A.D. 600-800 displays a remarkable consistency (ibid. Fig 5.1). During these centuries there was an almost nationwide livestock economy, with cattle being of primary importance, followed by pig, and then sheep. Goat played a very minor role. From about A.D. 800 onwards, distribution of livestock from various sites begins to show much more diversity and cattle, in many places, begin to lose their dominant role (ibid. Fig 5.3). This change is equated with a decline in cattle being used as the currency standard and general basis of the wealth system. Other currencies, especially silver, began to gain significant economic importance around this time. As a consequence of this it has been argued that there is an expansion in grain production, which is superior way of generating independent economic wealth than cattle rearing (Kerr 2007; McCormick & Murray 2007). The great activity in mill building from the end of the eighth century onwards (Bradley 2006) provides complimentary evidence for the expansion in arable farming, although admittedly the supporting evidence form pollen analysis has yet to be demonstrated (see above). The change in the livestock economy coincides with the beginning of the decline of the ringfort and the emergence of the raised rath in the northern part of the island (Kerr 2007, 98-99). Slaves too, previously kept only on a domestic scale, became a commercial commodity with warfare now being characterized by the mass taking of prisoners (Holm 1986). This is likely to have led to the expansion of the souterrain (Clinton 2001; McCormick 2007, 111-12) often located in new, unenclosed settlements.

Early Medieval Farming

The decline in the social value of cattle has profound implications for the settlement patterns of the period. At Knowth, Co. Meath, for instance, the enclosed bivallate ringfort of the seventh/eighth centuries gives way to an unenclosed settlement which provided evidence for no less than nine souterrains and fifteen houses. This is a settlement created with an emphasis on the protection of people rather than cattle, and seems, at least superficially, to validate the settlement change proposed by McCormick and Murray (2007) and Kerr (2007). It is also likely
that settlement change occurred earlier in Leinster where the influence of the Vikings, and their silver, was greatest. Stout (1997, 54) has shown that density of ringforts is lower in Leinster than elsewhere in the country. The hypothesis outlined above would suggest the ringfort went out of use earlier in Leinster and may have continued to have been build for considerable periods elsewhere in Ireland.

Livestock also need housing although in general the relative mildness of the Irish climate allowed cattle to be kept outdoors throughout the year. The Saxon cleric Bede noted in the early eighth century that: ‘there is no need to store hay in summer for winter use’ (Sherley-Price 1965, 39); and a similar statement was made in the Konung’s Skuggsjá, a Norwegian work written c. 1250 - ‘all through the winter [the livestock] find their feed in the open’ (Larson 1917). The Críth Gablach lists farm buildings as comprising the dwelling house, the cow-house, the pig-sty, the calf-pen and the sheep-pen (Kelly 1997, 365). There is very little definite archaeological evidence for these structures. A lean-to at Ballyknockan, Co. Wicklow was identified as an animal house (Macalister 1943, 147), and an indeterminate number of ‘outhouses’ were identified from stake holes at Lisnagun, Co. Cork (O’Sullivan et al. 1998, 39). These structures, however, tend to be labelled as outhouses because they cannot be identified with human occupation. The presence of high levels of dung beetles – e.g. Carpelimus bilineatus, Aphodius prodromus and Cercyon analis – in a structure at Deer Park Farms, Co. Antrim, however, strongly suggest that this building must either have been used as an animal pen, or a slaughter house (Alison et al. 1999).

Monastic and secular farming

The archaeobotanical evidence has yet to demonstrate a clear difference in the arable agriculture between the arable economy of ecclesiastical and secular settlements, primarily because published evidence from ecclesiastical sites is so limited. As noted above, the documentary implies an emphasis on arable farming in the hagiographical literature but the archaeological evidence has yet to support this. Grain drying kilns have been identified on several ecclesiastical sites but they have also been note on secular settlements. While the presence of water mills at High Island, Co. Galway, Nendrum, Co. Down and Inishmurray (above) emphasise the importance grain processing at monasteries the evidence from Raystown, Co. Meath (Seaver 2006) indicates that intensive grain processing also occurred on secular sites. That said Raystown is an exception, as far as secular sites. The necessity of building mills on isolated offshore island monasteries, would suggest that in general arable farming and grain processing was more important than in the secular world.

The faunal evidence from monastic settlements in somewhat more extensive and can allow some valid comparisons to be made. The material form Illaunloughan, Co. Kerry and Iona, Argyll indicate a much higher dependence of wild species of meat (Murray et al 2004) than has been notes in secular sites, even those, such as Rathgureen, Co. Galway (Comber 2002, that were located on coastal locations. The evidence is more equivocal on inland sites. While fish and wild fowl exploitation was very limited at Moyne, Co. Mayo (McCormick 1987, 67) the site produced a higher incidence of red deer than at any other medieval settlement n Ireland. In the case of Clonmacnoise, Co. Offaly, the data for bird and fish are as yet unavailable so the level of exploitation is unknown.

The mammal bone evidence from Clonmacnoise has been published, at least in summary form (Soderberg 2004; McCormick and Murray 2007, 209-217) and one aspect of the material was extremely unusual. The age slaughter patter of cattle can indicate if a site is a producer/consumer or simply a consumer site. The former is characterised by significant number of immature cattle being slaughtered while the latter tends to be dominated by older animals. Thus, the majority of cattle slaughtered in Viking period Dublin were of older animals (McCormick and Murray 2007, 46) thus indicating that it was a consumer settlement and not producing the beef that it consumed. Clonmacnoise produced a similar age/slaughter pattern indicating the site was provisioned by outside producers and not by their own herds.
Early Medieval Fields and Enclosures

Relict field patterns associated with Early Medieval settlements may also throw further light on the contemporary farming economy. Early laws, such as the Bretha Comaitchesa, mention areas around ringforts called faithche and gort faithche (Richey 1879, 108-9). Faithche is generally translated as ‘green’ or ‘infield’ and refers to an area in front of the ringfort; whereas gort faithche seems to refer to a tilled field within the more general faithche (Kelly 1997, 370). The relict curvilinear enclosures would appear to be unsuitable for crop cultivation or even gardening, since cereals and vegetables are almost invariably grown in lines to facilitate soil preparation, planting and maintenance. The location of linear and curvilinear fields in respect to dwellings may therefore help understand the agricultural geography of early farms.

The study of farm implements, in general, and plough parts, in particular, is also important in trying to understand the shapes and sizes of fields used for cultivation. Very small fields would be suitable only for spade work. Niall Brady's (2004) archaeological research has explored the character of the early medieval plough used for larger fields. Most arable fields would have been ploughed, probably in the spring time. The ownership of ploughs would have been a co-operative enterprise and as ploughs were expensive pieces of equipment, individual farmers were expected to contribute separate parts of a plough and an ox to joint or co-operative ploughing ventures. We still have little idea what these ploughs actually looked like. There are no actual depictions of early medieval ploughs on high crosses or art. In fact our only evidence for early Irish ploughs are the separate implements inserted into wooden plough to cut sod or to protect the ard share. In the past, there has been a range of different proposals and ideas about introduction of ploughs into early medieval Ireland, most of them now known to be incorrect. Frank Mitchell's work was most influential as he believed that the ard and share were introduced in the 4th century AD, as part of agricultural explosion that can be seen in the pollen record.

It is only recently, through the work of Niall Brady (1994) that major advances have been made in understanding the technology of ploughing in early medieval Ireland. Brady (2004) has shown that there were at least 35 plough irons known from Ireland, 12 found from dateable contexts, typically found on crannogs and ringforts. The major developments in plough technology included the use of a share (placed over the wooden shoe that cut under the sod) and then in the 10th century by a coulter (a knife like implement that hung down from the frame). These new ploughs may have lead to an expansion of arable farming.

The earliest plough before the early medieval period was a simple ard, with a small stone or wooden plough share used to cut the sod, similar to examples known from Iron Age Europe. In the 7th to 8th century, this wooden plough was improved by the introduction of a iron plough share - small sock-like objects that would have been placed on the sole at base of the plough frame and used to undercut the sod vertically. This plough would have been best suited to light, easily tilled soils. The second major advance in plough technology was the introduction of the share and coulter plough, probably originating in the 10th century, possibly due to contacts between Ireland and Scandinavia. Plough coulters (iron objects shaped like a very large, heavy knife) hang down from the frame and were used to slice sod vertically, and enabled ploughing of heavier soils. A plough coulter from Ballinderry 1, Co. Westmeath, dated to late 10th century, had a short tang, with scratches at 45 degree angles. This indicated that the coulter hung down at an angle, just above the share, cutting sod before it. What did the early medieval plough look like, at c.900 AD? Brady (1994) suggests that our best insights are provided by ethnomological or folklife studies of ploughs on the western seaboard of Scotland, where a simply share and coulter plough was still used in the Orkney Islands until the 20th century to drill potato ridges. The plough was drawn by oxen, a man walked ahead to properly steer the animals, a second man walked behind, holding a goad or switch.

Cultivation ridges have been use in Ireland since at least the Early Bronze age (Mitchell & Ryan 1990, 206), and it is extremely difficult to ascertain how a cultivation ridge was constructed by its visual appearance (although the literature contains many claims to the contrary). Such
ridges are also extremely difficult to date - those that are sealed by an overlay of peat can often be provided with a *terminus post quem* date by radiocarbon dating the basal peat deposits, but other methods of dating are less secure.

Several recently excavated sites produced evidence for potential Early Medieval ridges and furrows. A fragment of a lignite bracelet was recovered from cultivation furrows at a settlement/cemetery site at Augherskea, Co. Meath that contained the burials of 187 inhumations (Baker 2002:1422). Potential early medieval ridge-and-furrow was also excavated at an Early Medieval settlement landscape at Ballyconneely and Ballygirreen, Co. Clare (Breen 2000:0046). Pieces of shale bracelet, a glass bead and an iron knife blade were found in their fill though it was stated that they could also represent early modern lazy bed cultivation. Further potential sites with cultivation evidence were revealed at the upland transhumance settlement at Ballyutoag, Co. Antrim (Williams 1984); outside a souterrain at Ferganstown & Ballymacon, Co. Meath (Hanley 1999-687) and at an unenclosed settlement beneath Maynooth Castle (Hayden 1999:405). Excavations at Clonmacnoise also uncovered an extensive area of cultivation furrows containing some finds that may be of Early Medieval date (Murphy 2003, 2-4). Ridges and furrows have been identified in close proximity to many early medieval sites such as ringforts including Carrigrohane, Co. Cork (Moloney 2003:0188), early ecclesiastical sites such as Kill St. Lawrence, Co. Waterford (Corcoran 2002:1812) and at a significant settlement enclosure complex at Rosepark, Ballyrothery, Co. Dublin (Baker & Swan 1999:162) but this does not prove that they are early medieval in date. Cultivation ridges, however, are extremely difficult to date so caution is needed when ascribing them to the early medieval period. Early finds can be found in muck later furrows. The most convincing evidence for Early Medieval cultivation furrows are from Site K Knowth, Co. Meath. In that instance furrows cut, and were cut by, the burials and some of the furrows produced radiocarbon dates of a clear Early Medieval date (Stout and Stout 2008, 80).

Table 6.1 Examples of Excavated Early Medieval Ridge & Furrow 1930-2004

<table>
<thead>
<tr>
<th>Name</th>
<th>County</th>
<th>Year</th>
<th>Pub.</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballyconneely</td>
<td>Clare</td>
<td>2000</td>
<td>N</td>
<td>Associated with pits and gullies south of E.M. enclosure</td>
<td>Breen 2000:0046</td>
</tr>
<tr>
<td>Ballyutoag</td>
<td>Antrim</td>
<td>1981-82</td>
<td>Yes</td>
<td>Upland Transhumance Site</td>
<td>Williams 1984</td>
</tr>
<tr>
<td>Clonmacnoise</td>
<td>Offaly</td>
<td>1999-2000</td>
<td>Y</td>
<td>Associated with Ecclesiastical Site</td>
<td>Murphy 2003</td>
</tr>
<tr>
<td>Ferganstown and</td>
<td>Meath</td>
<td>1999</td>
<td>N</td>
<td>Associated with unenclosed souterrain and structure</td>
<td>Hanley 1999:687</td>
</tr>
<tr>
<td>Ballymacon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowth, Site M</td>
<td>Meath</td>
<td>2002-2003</td>
<td>Y</td>
<td>Associated with Cemetery/Settlement Site</td>
<td>Stout &amp; Stout 2008</td>
</tr>
<tr>
<td>Maynooth Castle</td>
<td>Kildare</td>
<td>1999</td>
<td>N</td>
<td>Associated with unenclosed settlement</td>
<td>Hayden 1999:405</td>
</tr>
</tbody>
</table>

It is clear that the Early Medieval agricultural landscape was highly organised, with fields divided by banks and ditches, wooden fences or stone walls (O’Corrain 1983; Kelly 1997, 372-378). Field fences were necessary for the separation of livestock from crops and, as importantly, for the regulation of grazing. This was especially important in Ireland where hay was not saved, and where un-grazed ‘preserved grass’ (*etham ndíguin*) was used for winter fodder (Kelly 1997, 45-6), necessitating that cattle be kept away from this pasture during the summer months. Few excavations have ever been undertaken to establish the dates of field boundaries and their potential association with archaeological monuments. The *Cambridge Air Survey of Ireland*, undertaken in the 1950s and 1960s by J. K. S. St. Joseph, recorded examples
of irregular fields apparently associated with Early Medieval sites such as the destroyed ringfort at Rathangan, Co. Kildare (Norman & St. Joseph 1969, 64 (Pl. 35)), or the irregular field walls around the cashels at Corrofin, Co. Clare (Norman & St. Joseph 1969, 61 (Pl. 32)). Williams (1983) noted the presence of irregular fields, defined by both linear and curvilinear banks, which are associated with ringforts and hut circles in Co. Antrim, for example at Ballyshee, Killyland and Ballyutoag. Aalen (1970, 212 (Pl. XX)) shows a similar pattern at Oldcastle, Co. Meath where the modern rectangular field pattern overlies a mosaic of smaller fields – not exceeding 0.5 hectares on average – and often of irregular hexagonal or pentagonal shape. Potential Early Medieval field patterns were also noted in association with the Early Medieval hut site at Beginish, Co. Kerry (O’Kelly 1956), and on many parts of Valentia Island in the same county (Mitchell 1989).

These field patterns are dated by association, rather than by any independent dating evidence. Field fences are notoriously difficult to date, and rarely produce diagnostic datable objects or suitably stratified samples for radiocarbon analysis. At Cush, Co Limerick, O’Riordain (1940, 143) argued that some of the field fences had been dug while the ringfort ditches were still un-silted. If this interpretation is accepted the ringforts are set within a pattern of rectangular fields of 0.2 - 0.3 hectares. O’Riordain also argued that the fields around the hut sites known as ‘The Spectacles’, Lough Gur, Co. Limerick were contemporary with the huts they enclosed (1949, 58-58). House B was built into the field wall, while a metalled path from House A ran up to, but not under, the field wall. The fields here are extremely small, being no more than 0.05 hectares. Circumstantial evidence suggests that at least part of the upland field pattern at Ballyutoag, Co. Antrim is of Early Medieval date (Williams 1984). The two main curvilinear enclosures contain groups of several hut platforms, and radiocarbon dating showed that one of the excavated the huts was Early Medieval in date. Like the Co. Limerick fields, the enclosures at Ballyutoag are again relatively small (0.14 and 0.15 hectares). Comparable upland sites have also been discovered in several other parts of Co. Antrim (Williams 1983, 239-245) but these have not been independently dated.

The field patterns at Cush, Ballyutoag and Lough Gur, however, are unlikely to be representative of fields in Early Medieval Ireland. Cush is a conglomeration of eleven ringforts, located closely together; Ballyutoag, is likely to be an Early Medieval upland booley site - the only one so far identified; and the Lough Gur sites are among the very few known unenclosed house site settlements of the period. More recently large industrial, gas, and road infrastructural projects have uncovered field patterns in many parts of the country. Many were found in association with Early Medieval monuments, especially ringforts and other enclosures, but some are associated with unenclosed Early Medieval settlements.

A series of rectangular fields - between 0.13 and 0.17 hectares - were discovered at Marshes Upper, Co. Lough. There was evidence for ditch re-cutting and souterrain ware was found in the ditch bottom. Radiocarbon dates placed these fields to the eighth or ninth centuries A.D. (Mossop 2002:1335). A series of field fences at Carrigoran, Co. Clare - including one complete 0.11 hectare field enclosed by stone wall and ditch (Breen 1999:046; Reilly 1999:047 & 2000:0055) – were dated to the Early Medieval period by the presence of a fragment of comb of early medieval date (Reilly 2000:0055). The field pattern associated with a 10m circular structure at Ballygeale (Site 1), Co Clare has been ascribed to the ‘medieval’ period, but the basis for this was unstated (Eogan & Turrell 1999:485).

The large scale nature of development-driven excavation has meant that areas surrounding Early Medieval enclosures are now being explored, occasionally resulting in the discovery of associated field boundaries. A series of outer enclosures and small annexes - about 0.1 hectares each - surrounded the ringfort at Baronstown, Co. Meath (Linnane & Kinsella 2007, 57) while two rectangular stone-and-earth-bank enclosures were located close to a early medieval ditched enclosure at Ballycasey More, Co. Clare (Murphy 2001:045; O'Neill 2002:0079). A bronze ring-pin was retrieved from the rubble of the wall of the southern enclosure and it was suggested that they may have possibly represented animal pins associated with the nearby enclosure. Similar small annexes have been found on other Early Medieval sites, such as Castlefarm, Co Meath (O'Connell 2006, 19), and may represent vegetable garden plots, or animal pens. Excavations at Corbally, Co. Kildare revealed extensive evidence for enclosures and linear field patterns associated with a large enclosure (Tobin 2001:631 & 2002:0899; Tobin 2003; Coyne 2004:0818 & 2004:0817).


Recent excavations have also revealed growing evidence for apparent early medieval field boundaries not directly associated with enclosures or unenclosed settlement sites. Excavations at Grange near Clondalkin, Co. Dublin revealed a number of curving ditches (McConway 1996:068; O'Brien 1997:087), from one of which a one-sided decorated bone comb gave a terminus ante quem of the eleventh or twelfth century. Excavations at Balriggan 1, Site 15, Co. Louth revealed possible ditches, pits and a possible stone-lined grave (Delaney 2002:1291), and among the finds were a rotary quern fragment, and crude, bucket-shaped pottery, possibly souterrain ware, potentially giving the site an Early Medieval date. A series of dry stone-walled fields at Ballynacragga, Co. Clare may date to the early medieval period due to discovery of a rotary quern stone during excavations at the site (Quinn 2000:0051) and a charcoal sample taken beneath a stone wall from Clonmoney West, Co. Clare returned a radiocarbon date of A.D. 350-610 (Murphy 2001:055). Excavations at Ardclone, Co. Kilkenny uncovered a hearth, located on a backfilled ditch containing animal bone, a bone bead and a piece of blue glass (Neary 2000:0514). Charcoal from the hearth returned an uncalibrated radiocarbon date of 1080±50 BP. Finally an unusual complex linear arrangement of stake-holes was traced for 406m across Derryville Bog (54), Killoran, Co. Tipperary. Intriguingly, the site was situated roughly parallel to the Kilkenny–Tipperary border and was dated to AD 668–884 (Murray 1997:546). It could suggest the demarcation of bogland in the early medieval period.

Table 6:2 Excavated Field Boundaries/Systems 1930-2004 and associated contexts

<table>
<thead>
<tr>
<th>Name</th>
<th>County</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardclone</td>
<td>Kilkenny</td>
<td>Backfilled Ditch</td>
<td>Neary 2000:0514</td>
</tr>
<tr>
<td>Balgatheran 1</td>
<td>Louth</td>
<td>Petal shaped field with enclosure complex</td>
<td>Chapple 2000:0638</td>
</tr>
<tr>
<td>Balriggan 1</td>
<td>Louth</td>
<td>Field Ditches</td>
<td>Delaney 2002:1291</td>
</tr>
<tr>
<td>Baronstown</td>
<td>Meath</td>
<td>With ringfort</td>
<td>Linnane &amp; Kinsella 2007</td>
</tr>
<tr>
<td>Ballycasey</td>
<td>Clare</td>
<td>Rectangular field enclosures with</td>
<td>Murphy 2001:045; O'Neill 2002:0079</td>
</tr>
<tr>
<td>Name</td>
<td>County</td>
<td>Comments</td>
<td>Reference</td>
</tr>
<tr>
<td>------------------</td>
<td>----------</td>
<td>-----------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Ballynacarriga 1</td>
<td>Cork</td>
<td>With Enclosure</td>
<td>Noonan 2001:115</td>
</tr>
<tr>
<td>Ballynacragga</td>
<td>Clare</td>
<td>Dry-stone Walls</td>
<td>Quinn 2000:0051</td>
</tr>
<tr>
<td>Ballyutoag</td>
<td>Antrim</td>
<td>Upland Transhumance Site</td>
<td>Williams 1984</td>
</tr>
<tr>
<td>Beginish</td>
<td>Kerry</td>
<td>With unenclosed settlement</td>
<td>O’Kelly 1956</td>
</tr>
<tr>
<td>Betaghstown</td>
<td>Meath</td>
<td>Ditches with enclosure</td>
<td>Lehane 2004:1187</td>
</tr>
<tr>
<td>Cahircalla More</td>
<td>Clare</td>
<td>With enclosure</td>
<td>Taylor 2004:0141</td>
</tr>
<tr>
<td>Carrigoran</td>
<td>Clare</td>
<td>Field fences &amp; Stone walls</td>
<td>Breen 1999:046; Reilly 1999:047 &amp; 2000:0055</td>
</tr>
<tr>
<td>Castlefarm</td>
<td>Meath</td>
<td>With enclosure complex</td>
<td>O’Connell 2006</td>
</tr>
<tr>
<td>Castle Upton,</td>
<td>Antrim</td>
<td>Ditches with E.M. Pottery &amp; penannular ring-ditch</td>
<td>Gahan 1997:006</td>
</tr>
<tr>
<td>Clonmoney West,</td>
<td>Clare</td>
<td>Stone Walls</td>
<td>Murphy 2001:055</td>
</tr>
<tr>
<td>Site 42C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cush</td>
<td>Limerick</td>
<td>With ringforts</td>
<td>O Riordáin 1940</td>
</tr>
<tr>
<td>Dalkey</td>
<td>Dublin</td>
<td>With early medieval Promontory fort</td>
<td>Liversage 1967-68</td>
</tr>
<tr>
<td>Derryville 54,</td>
<td>Tipperary</td>
<td>Stake Row in Bogland</td>
<td>Murray 1997:546</td>
</tr>
<tr>
<td>Killoran</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dowdstown 2</td>
<td>Meath</td>
<td>With enclosure complex</td>
<td>Deevey 2005 &amp; 2006</td>
</tr>
<tr>
<td>Gliebe, Site 43</td>
<td>Dublin</td>
<td>With Ringfort</td>
<td>Seaver &amp; Keeley 2001:425; Seaver 2002:0594</td>
</tr>
<tr>
<td>Tully</td>
<td></td>
<td></td>
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<tr>
<td>Grange</td>
<td>Dublin</td>
<td>Field Boundaries</td>
<td>McConway 1996:068; O’Brien 1997:087</td>
</tr>
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<td>Magheralane,</td>
<td>Armagh</td>
<td>Field Ditches with Structure</td>
<td>O Baoill 2004:0057</td>
</tr>
<tr>
<td>Aghalislone &amp;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magheralave</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marshes Upper</td>
<td>Louth</td>
<td>Rectangular Fields</td>
<td>Mossop 2002:1335</td>
</tr>
<tr>
<td>Rahally</td>
<td>Galway</td>
<td>With ringfort</td>
<td>O’Sullivan 2004:0706</td>
</tr>
<tr>
<td>Roestown 2</td>
<td>Meath</td>
<td>With enclosure complex</td>
<td>Dempsey 2004:1336; O’Hara 2007</td>
</tr>
<tr>
<td>Balrothery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘Spectacles’,</td>
<td>Limerick</td>
<td>With unenclosed Huts</td>
<td>O Riordáin 1949</td>
</tr>
<tr>
<td>Lough Gur</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whiteriver</td>
<td>Louth</td>
<td>With enclosure</td>
<td>Bolger; 2004:1128; McConway 2004:1129</td>
</tr>
</tbody>
</table>
Early Medieval Horizontal and Vertical Mills

A. T. Lucas’s ‘The Horizontal Mill in Ireland’ (1953), was the first paper to examine in detail the construction and operation of the many water mills discovered and recorded by the National Museum. Colin Rynne later challenged the accepted view that vertical water mills were introduced into Ireland by the Cistercians in the twelfth century. He re-examined Lucas’s previous work, and suggested that the seventh-century mills at Little Island, Co. Cork and Morrett, Co. Laois represented the remains of such structures (1989, 30). Rynne’s re-examination of milling in the Munster area in particular resulted in a revised timeline of Early Medieval mills (1998).

Brady (2006) has provided the most recent overview of Early Medieval mills in Ireland, building on the previous work of Rynne (2000), with a chronology founded on dates from the dendrochronology laboratory at Queen’s University Belfast. The list compiled by Brady records all known early and later medieval sites - a total of 97 mill sites. Early Medieval horizontal mills constitute the majority of these sites. Rynne (2007) considers this figure to be an underestimate because Brady does not include incidences of power-driven millstones found near streams in his corpus. The most recent published list of dated mills can be found in McErlean and Crothers (2007, 11). This work, on the horizontal tidal mill at Nendrum, Co. Down, comprises the most comprehensive publication of any Irish Early Medieval water mill to date. It lists three vertical mills of Early Medieval date - Little Island, Co. Cork; Morrett, Co. Laois; and Ardcloney, Co. Cork - of which the earliest is Little Island (A.D. 630). The earliest securely dated horizontal mill, in contrast, is Nendrum (A.D. 619) – although a mill at Killoteran, Co. Waterford has recently returned two calibrated radiocarbon dates of A.D. 410-650 and A.D. 340-600 (Murphy & Rathbone 2006) - suggesting that both forms were introduced and developed around the same time.

Brady noted that the most intense period of mill building is between A.D. 750-850 (2006, 49). This time frame coincides with a change in emphasis from livestock to arable farming (McCormick & Murray 2007, 112-115). There appears to have been a concentration of milling activity in the south and south-east of the island (Brady 2006), although Rynne (2007, 34) considers this distribution to be artificial, due to systematic fieldwork in search of mills being undertaken in this area by Winedale, Fahy and O’Kelly, along with extensive drainage schemes occurring in that area during the last decades of the twentieth century. A number of milling complexes, such as Raystown, Co. Meath (Seaver 2005), have recently been excavated outside the south and south-east, adding credence to Rynne’s claim.

The remains of at least 18 early medieval mill sites have been excavated between 1930-2004 (See Table 6:3). Radiocarbon dates for many of these have been published by Brady (2006) and McErlean & Crothers (2007) in recent years. The most intriguing site is Raystown, Co. Meath, a preliminary overview of which has been published by Seaver (2005). This site contains a series of eight watermills, found in association with grain-drying kilns, souterrains and a cemetery, and seems to be specialised milling site involved in the processing of grain on an almost industrial scale. Recent excavations have shown some mills were rebuilt or modified over extended periods of time. Nendrum was built in circa AD 619 with a second mill replacing it circa AD 789 (McErlean and Crothers 2007, 25; 80). The tidal pond for the later mill was smaller than the first. A mill-race and a dry stone mill undercroft were excavated at the Island/Martin’s Row near the medieval church of Chapelizod. It was rebuilt on at least three occasions. The complex appears to date to the 10th–11th century (Walsh 2002:0492).

The role of ecclesiastical communities in milling has been previously noted and recently examined though recent publications by Rynne (2000, 185-213) at High Island and McErlean and Crothers (2007) at Nendrum are a welcome advance. Rynne (2000, 197, 201-03) has noted a number of references to water milling at a number of ecclesiastical sites including St. Moling’s, Fore, Armagh and Kildare in the hagiographical sources.
Along with the significant excavated evidence for iron and other metalworking within the middle enclosure at Nendrum, excavations by McErlean and Crothers (2007) have identified a significant milling complex associated with this important monastery. One of the earliest dated mills was excavated at Nendrum and dated to A.D. 619. The third and final mill at the complex was dated to A.D. 788 from retaining timbers. A mill-race and a dry stone mill undercroft were excavated at the Island/Martin's Row near the medieval church of Chapelizod. It was rebuilt on at least three occasions. Though radiocarbon dates were pending, it was suggested that the mill dated to the late 10th–11th century (Claire Walsh 2002, Excavations Bulletin- 00E0878). A vertical water mill and mill-race were excavated at the base of a small valley leading towards the river Suir at Killoteran, county Waterford. Two radiocarbon ranges of A.D. 340-600 and A.D. 410-650 were secured from an associated yew post and an oak plank suggesting that it was in operation sometime between the fourth-seventh centuries (Murphy 2006). It has been suggested that the mill may have been associated with the early ecclesiastical establishment of St. Otteran, one mile to the north-east in the same townland (Murphy 2006, 26). Perhaps, an interesting study would be to examine if any of the other early medieval mills noted in Brady's (2006) survey were situated in close proximity to ecclesiastical settlements.

The remains of a horizontal mill undercroft was also partially examined on another western ecclesiastical site in 1999 at Fál an Mhuillinn on Inishmurray though no radiocarbon dates could not be established for burnt sediments behind the wall of the mill undercroft (O’Sullivan & Ó Carragáin 2008, 246-51). The surviving water milling complex at High Island has also been the subject of an important study by Rynne (2008). The level of labour investment involved in constructing and maintaining these complexes at Inishmurray and High Island suggests that western monasteries were not peripheral to agricultural developments across the country. The evidence also suggests that while some sites (e.g. Nendrum) may have been engaged in agricultural production at very advanced regional level, island communities like those on High Island may have also been able to engage themselves in water power technology to meet the needs of a self-sufficient ‘community of monks and their tenants, who lived on the island the whole year round’ (Rynne 2000, 206).

<table>
<thead>
<tr>
<th>Name</th>
<th>County</th>
<th>Year</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arddoyne</td>
<td>Cork</td>
<td>1996</td>
<td>1 Horizontal Water Mill</td>
<td>Cleary 1996:036</td>
</tr>
<tr>
<td>Ballykilleen</td>
<td>Offaly</td>
<td>1953</td>
<td>1 Horizontal Water Mill</td>
<td>Lucas 1955</td>
</tr>
<tr>
<td>Ballyine</td>
<td>Limerick</td>
<td>1959</td>
<td>1 vertical Water Mill</td>
<td>Walsh 1965; Rynne 2007</td>
</tr>
<tr>
<td>Barryscourt</td>
<td>Cork</td>
<td>2000</td>
<td>Horizontal Mill</td>
<td>Pollock 2000:0120</td>
</tr>
<tr>
<td>Chapelizod</td>
<td>Dublin</td>
<td>2002</td>
<td>Mill undercroft</td>
<td>Walsh 2002:0492</td>
</tr>
<tr>
<td>Clonlea Church</td>
<td>Clare</td>
<td>2000</td>
<td>Mill Wheelhouse</td>
<td>Rooney 2000:0060</td>
</tr>
<tr>
<td>Cloontycarthy</td>
<td>Cork</td>
<td>1981</td>
<td>Horizontal Mill</td>
<td>Rynne 1980-84:0050; Rynne 1989</td>
</tr>
<tr>
<td>Coolock Church</td>
<td>Dublin</td>
<td>1990</td>
<td>Lower Horizontal Water Mill Stone</td>
<td>Swan 1990:033</td>
</tr>
<tr>
<td>Crushyree</td>
<td>Cork</td>
<td>1994</td>
<td>1 Horizontal Water Mill</td>
<td>Cotter 1994:027</td>
</tr>
<tr>
<td>Killoteran 9</td>
<td>Waterford</td>
<td>2004</td>
<td>1 Vertical Water Mill</td>
<td>Murphy 2004:1681; Murphy &amp; Rathbone 2006</td>
</tr>
<tr>
<td>Killylane</td>
<td>Antrim</td>
<td>1962-83</td>
<td>Possible Horizontal Water Mills</td>
<td>Williams &amp; Yates 1984</td>
</tr>
<tr>
<td>Knocknagranshy</td>
<td>Limerick</td>
<td>1955</td>
<td>Mill House and Mill Pond</td>
<td>Lucas 1969</td>
</tr>
</tbody>
</table>
Early Medieval Corn-Drying Kilns

Ireland’s damp climate makes it necessary to dry grain before it is stored, consequently, corn-drying kilns were necessary wherever cereals were harvested and processed. Early documentary sources make frequent reference to their use (Kelly 1997, 241-242), and the Crith Gablach indicates that some kilns were part-owned by multiple owners (ibid.). These structures tend not to be located within ringforts, so were rarely encountered during excavation before the development of road construction projects in recent years. The first overview of the archaeological evidence for Irish corn-drying kilns was published by Monk and Kelleher (2005).

Corn-drying kilns were in use along the fringes of Atlantic Europe from the prehistoric period until the late-nineteenth century, when they were gradually replaced by more advanced grain-drying machinery. At its most basic form, a kiln consists of a furnace with a flue that supplies hot air to the drying chamber. Archaeologists have defined kilns by their shape in plan, and there are five major typological groups - keyhole-shaped; figure-of-eight shaped; dumbbell shaped; ‘L’- or comma-shaped; and pit and irregular shaped kilns (Monk & Kelleher 2007). This typology is not rigid and there can be considerable overlapping of the types, for example the ‘figure of eight’ and ‘dumbbell’ differ only in the degree to which they are ‘waisted’ (ibid. 80).

Excavated Cereal-Drying Kilns 1930-2004

Approximately Forty three excavated sites have revealed likely candidates for early medieval cereal-drying Kilns (See Table 6:4 and 6:5). At least 14 of these sites have been radiocarbon dated to the early medieval period (See Table 6:4). A significant number of potential early medieval excavated kilns were also identified (See Table 6:5) and further research will be required to establish there date. The distribution of excavated early medieval Kilns shows a concentration in Leinster with Dublin, Meath, Louth and Kildare providing many sites. While arable farming was likely to have been of more significance in these eastern counties, it is evident that the bias in modern development may have affected this distribution. The radiocarbon dated early medieval cereal-drying kilns show a particular concentration in the 5-7th century and throws up interesting ideas about the extent of tillage production in this period.

Table 6:4 Early Medieval Radiocarbon Dated Cereal-Drying Kilns: A Provisional List

<table>
<thead>
<tr>
<th>Name</th>
<th>Site Type</th>
<th>Dated</th>
<th>Type</th>
<th>N</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballyman, Dublin</td>
<td>Ecclesiastical</td>
<td>A.D 336-620 (no sig stated)</td>
<td>Dumb-bell</td>
<td>1</td>
<td>O’Brien 2005</td>
</tr>
<tr>
<td>Ballynacarra 2, Cork</td>
<td>Near Enclosure Complex</td>
<td>AD 650–890 2 sigma</td>
<td>Unidentifie d</td>
<td>1</td>
<td>Noonan 2001:116</td>
</tr>
<tr>
<td>Bray Head, Valentia, Kerry</td>
<td>Unenclosed settlement</td>
<td>934 + 110 AD (no sig stated)</td>
<td>Unidentifie d</td>
<td>1</td>
<td>Hayden 1993:117</td>
</tr>
<tr>
<td>Bray Head, Valentia,</td>
<td>Unenclosed settlement</td>
<td>c. 10th century</td>
<td>Unidentifie d</td>
<td>1</td>
<td>See Hayden 1993:117 for reference</td>
</tr>
</tbody>
</table>
## Table 6:5 Excavated Early Medieval Cereal-Drying Kilns 1930-2004

<table>
<thead>
<tr>
<th>Name</th>
<th>Site Type</th>
<th>Dated</th>
<th>Type</th>
<th>No</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardreigh, Kildare</td>
<td>Ecclesiastical</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1</td>
<td>Opie 2002:0856</td>
</tr>
<tr>
<td>Balgatheran 1, Louth</td>
<td>Enclosure</td>
<td>Likely</td>
<td>Oval</td>
<td>1</td>
<td>Chapple 2000:0638</td>
</tr>
<tr>
<td>Ballyegan, Kerry</td>
<td>Cashel</td>
<td>Likely</td>
<td>Key-Hole</td>
<td>1</td>
<td>Byrne 1991:065</td>
</tr>
<tr>
<td>Ballygalley, Antrim</td>
<td>Souterrain &amp; Pits</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1</td>
<td>Farrimond 2002:0004</td>
</tr>
<tr>
<td>Ballymacash, Antrim</td>
<td>Ringfort</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1</td>
<td>Jope &amp; Ivens 1998</td>
</tr>
<tr>
<td>Ballynacarra 1, Cork</td>
<td>Enclosures</td>
<td>Likely</td>
<td>Key Hole</td>
<td>3</td>
<td>Noonan 2001:115</td>
</tr>
<tr>
<td>Ballynacarra 1, Cork</td>
<td>Enclosures</td>
<td>Likely</td>
<td>Unidentified</td>
<td>2</td>
<td>Noonan 2001:115</td>
</tr>
<tr>
<td>Ballynamona 4, Kilkenny</td>
<td>Isolated</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1-10</td>
<td>Wren 2003:982</td>
</tr>
<tr>
<td>Balriggan 1, Louth</td>
<td>Cem. &amp; Sett.</td>
<td>Likely</td>
<td>Figure of Eight</td>
<td>1</td>
<td>Delaney 2003:1226</td>
</tr>
<tr>
<td>Blanchfieldsland, Kilkenny</td>
<td>Ringfort</td>
<td>Likely</td>
<td>Figure of Eight</td>
<td>1</td>
<td>Lennon 2004:0868</td>
</tr>
<tr>
<td>Blanchfieldsland, Kilkenny</td>
<td>Ringfort</td>
<td>Likely</td>
<td>Oval</td>
<td>1</td>
<td>Lennon 2004:0868</td>
</tr>
<tr>
<td>Castletown, Celbridge, Kildare</td>
<td>Isolated</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1</td>
<td>Opie 2001:609</td>
</tr>
<tr>
<td>Name</td>
<td>Site Type</td>
<td>Dated</td>
<td>Type</td>
<td>No</td>
<td>Reference</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------</td>
<td>--------------</td>
<td>------------</td>
<td>----</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Cherryhound, Dublin</td>
<td>Isolated</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1</td>
<td>McGowan 2004:0483</td>
</tr>
<tr>
<td>Cherryhound, Dublin</td>
<td>Isolated</td>
<td>Likely</td>
<td>Key Hole</td>
<td>1</td>
<td>McGowan 2004:0483</td>
</tr>
<tr>
<td>Cherrywood &amp; Loughlinstown, Dublin</td>
<td>Cemetery &amp; Settlement</td>
<td>Likely</td>
<td>Key Hole</td>
<td>1</td>
<td>O Neill 1999:169</td>
</tr>
<tr>
<td>Corcagh, Clondalkin, Dublin</td>
<td>Cemetery &amp; Settlement</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1-10</td>
<td>Carroll 2001:340</td>
</tr>
<tr>
<td>Corrstown, Derry</td>
<td>Enclosure</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1</td>
<td>Conway 2002:0387</td>
</tr>
<tr>
<td>Creevykeel, Sligo</td>
<td>Megalith</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1</td>
<td>Hencken 1939</td>
</tr>
<tr>
<td>Fish Lane, Limerick</td>
<td>Viking Limerick</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1</td>
<td>Hanley 1997:351</td>
</tr>
<tr>
<td>Hughes’ Lot East &amp; Kilscobin, Tipperary</td>
<td>Ringfort</td>
<td>Likely</td>
<td>Unidentified</td>
<td>27</td>
<td>Fairburn 2003:1759</td>
</tr>
<tr>
<td>Inishkea North, Mayo</td>
<td>Ecclesiastical</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1</td>
<td>Henry 1951</td>
</tr>
<tr>
<td>Kilbane, Limerick</td>
<td>Enclosure</td>
<td>Likely</td>
<td>Key Hole</td>
<td>1</td>
<td>Purcell 2004:1008</td>
</tr>
<tr>
<td>Kilgobbin, Dublin</td>
<td>Ecclesiastical</td>
<td>Likely</td>
<td>Figure of Eight</td>
<td>1</td>
<td>Larrson 2004:0646</td>
</tr>
<tr>
<td>Kilgrovan, Waterford</td>
<td>Ecclesiastical</td>
<td>Bii ware</td>
<td>Unidentified</td>
<td>3</td>
<td>Purcell 2003:1882</td>
</tr>
<tr>
<td>Ninch, Laytown, Meath</td>
<td>Enclosures</td>
<td>Likely</td>
<td>Key-hole</td>
<td>2</td>
<td>Eogan &amp; Reid 2000:0760; McConway 2001:1007 &amp; 2002:1489</td>
</tr>
<tr>
<td>Rathbeg, Antrim</td>
<td>Ringfort</td>
<td>Likely</td>
<td>Unidentified</td>
<td>1</td>
<td>Warhurst 1969</td>
</tr>
<tr>
<td>Ratoath, Meath</td>
<td>Cemetery &amp; Settlement</td>
<td>Likely</td>
<td>Figure of Eight</td>
<td>1-10</td>
<td>Wallace 2003:1455 &amp; 2004:1324; Dehaene 2004:1328</td>
</tr>
<tr>
<td>Ratoath, Meath</td>
<td>Cemetery &amp; Settlement</td>
<td>Likely</td>
<td>Key Hole</td>
<td>1-10</td>
<td>Wallace 2003:1455 &amp; 2004:1324; Dehaene 2004:1328</td>
</tr>
<tr>
<td>Raystown 21, Meath</td>
<td>Cemet. &amp; Sett.</td>
<td>Likely</td>
<td>Figure of Eight</td>
<td>47</td>
<td>Seaver 2004:1334</td>
</tr>
<tr>
<td>Whiterath 2, Louth</td>
<td>Ringfort</td>
<td>9/10th</td>
<td>Key hole</td>
<td>1</td>
<td>O Drisceoil 2000:0721</td>
</tr>
<tr>
<td>Woodstown 6, Waterford</td>
<td>Longport</td>
<td>Likely</td>
<td>Unidentified</td>
<td>2</td>
<td>Russell 2004:1705</td>
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</table>
Table 6:6 Excavated Early Medieval Drying Kiln Types 1930-2004

<table>
<thead>
<tr>
<th>Kiln Type</th>
<th>Sites</th>
<th>Total Kilns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key-Hole</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Dumb-Bell</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Unidentified</td>
<td>25</td>
<td>51</td>
</tr>
<tr>
<td>Figure of Eight</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Oval</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Figure 6:1 Excavated Early Medieval Drying Kilns 1930-2004

<table>
<thead>
<tr>
<th>Kiln Type</th>
<th>Sites</th>
<th>Total Kilns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key-Hole</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>L (Comma)</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Unidentified</td>
<td>66</td>
<td>81</td>
</tr>
<tr>
<td>Figure of Eight</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td>Oval</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 6:7 Possible Early Medieval Excavated Drying Kiln Types 1930-2004

<table>
<thead>
<tr>
<th>Kiln Type</th>
<th>Sites</th>
<th>Total Kilns</th>
</tr>
</thead>
<tbody>
<tr>
<td>L (Comma)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Unidentified</td>
<td>66</td>
<td>81</td>
</tr>
<tr>
<td>Figure of Eight</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td>Oval/Rectangular</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Key-Hole</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Figure 6:2 Possible Early Medieval Excavated Drying Kiln Types 1930-2004
**Context of Early Medieval Cereal-Drying Kilns**

Cereal-drying kilns have been excavated in a variety of contexts. The association between ecclesiastical and arable farming has already been discussed and it has been noted that several grain drying kilns were located on ecclesiastical sites (See Craft & Industry Chapter). Excavations in the townland of Laughanstown in advance of the M50 South-eastern motorway revealed four figure-of-eight corn drying kilns. They were associated with a cluster of post-hole and stake-hole groups that were radiocarbon dated to the sixth and seventh centuries. It was suggested that they may represent the remains of a timber structure that supported a field granary (Seaver 2006, 58-59). The site was situated 480m south of the ecclesiastical complex at Tully (Hill of the Bishops or Telach na n-Espac) as well as being close to the early church site of Rathmichael to the south. Other Excavated examples include the ecclesiastical site of Killenderdruin, Co. Tipperary which revealed part of a corn-drying kiln. A grain sample dated it to c. A.D. 1000. The kiln is comparable to others at Ballycatteen, Cork and Kilpatrick, Westmeath. The site was later used as a burial-ground (Manning 1984).

A growing number of kilns have been excavated at the significant multivallate enclosed settlement sites including Ballynacarriga, Co. Cork (Noonan 2001:115) and Ninch, Laytown, Co. Meath (Eogan & Reid 2000:0760; McConway 2001:1007 & 2002:1489). Both these sites contained extensive evidence for Early Medieval iron and agricultural evidence dating from approximately the fifth century A.D. onwards. Cereal-drying kilns are also a frequent discovery on at a large number of cemetery/settlement complexes including Cherrywood, Co. Dublin (Ó Neill 1999:169) and Raystown (Seaver 2004:1334) and Ratoath, Co. Meath (Wallace 2003:1455 & 2004:1324; Dehaene 2004:1328). Though a significant number of classic ringfort sites have been excavated, relatively few have yielded evidence for early medieval cereal-drying kilns. An excavations of a bivallate ringfort at Whiterath 2, Co. Louth revealed a key-hole pit, provisionally dated on artefact evidence to the ninth/tenth century (Ó Drisceoil 2000:0721). Kilns finally can also be found in unenclosed contexts and examples include a possible site at Castletown, Celbridge, Co. Kildare (Opie 2001:609).

**Cereal-Drying Kiln Chronology**

There are problems in establishing a chronological framework for the development of kiln types in Ireland. Most of the kilns considered in Monk and Kelleher’s survey are undated and may be of either early or later medieval date. Many that have been attributed to the Early Medieval period have been so dated on the basis of their proximity to other known Early Medieval monuments. Since kilns function better if there is an incline in the flue between the heat source and the bowl, there had been a tendency to build them in earlier existing features such as banks and field fences. The presence of a keyhole kiln in the court tomb at Creevykeel, Co. Sligo (Hencken 1939) provides an extreme example of the danger of dating kilns by their association. Similarly, the keyhole kiln excavated in the bank of the ringfort at Rathbeg, Co. Antrim (Warhurst 1969) may well date to the later medieval period, since the presence of wheel-thrown medieval pottery provides evidence for later activity on the site. Where available, radiocarbon dates are not necessarily reliable, since the context and material used to provide a sample is often not stated (Monk & Kelleher 2005, 105). This, however, is a recurring problem in archaeology as a whole. The kilns in the present review are therefore included on their potential to be of Early Medieval date, and the chronological frameworks outlined below must be treated with due caution.

Monk & Kelleher (2005, 105) noted that most excavated keyhole kilns tend to date to the later and post medieval periods, although this shape of kiln seems to have its origin in late-Roman Britain (ibid.). They also noted that the figure-of-eight kilns and dumbbell kilns were, ‘in evolutionary terms, earlier than the key-hole types’ (ibid). This chronology is not, however, definitive, for example the keyhole kiln at Leggetrath West, Co. Galway gave a calibrated radiocarbon date of A.D. 790-1030 (Lennon 2006, 47); and one of the five keyhole kilns excavated at Solsborough, Co. Tipperary produced a radiocarbon date of AD 563-659 (Murphy 2000). A series of five figure-of-eight shaped kilns were found in association with a succession of horizontal mills at Raystown, Co. Meath (Seaver 2005, 82), and radiocarbon dates from
cereal grains from three of these - A.D. 410-560; A.D. 570-660; A.D. 380-550 - indicate that they are Early Medieval (O'Sullivan & Stanley 2006, 134).

There are few dated examples of specific types of Early Medieval kilns. The origins of the Irish kiln types may be better understood when the details of a large series of Iron Age kilns from Colp West, Co. Meath are published (Clarke & Murphy 2003). Radiocarbon dates range from the Iron Age until the transition to the Early Medieval period. No details of their morphology, however, have been published, and it must be concluded that the chronological development of Irish Early Medieval kilns will only be more fully known after further investigations.

**Early Medieval Burnt Mounds**

**Previous Studies**

Burnt mounds or *fulacht fiadh* are one of the most frequently excavated archaeological monuments in Ireland. A huge number of these sites have been excavated in recent years, especially due to development and road scheme projects. They are typically identified by a horse-shoe shaped mound of burnt and broken stones with an associated trough and hearth and are frequently found in close proximity to water. They have been interpreted as temporary shelters and cooking places by roving bands of hunters for the purpose of boiling meat (O'Kelly 1954), but other interpretations suggest they may have been sweat baths or saunas (Barfield & Hodder 1987), or were used in a range of industrial activities including brewing (Quinn & Moore 2007), textile and leather processing (Coles 1979; Hodder & Barfield 2003).

O'Kelly (1954) suggested that the *fulacht fiadh* may have been in use from the Bronze Age through into the sixteenth century A.D, although radiocarbon dates have since shown that the vast majority are Bronze Age. There is limited evidence that they were used into the Early Medieval period (Brindley, Lanting and Monk 1989/90), and reconsideration of the dating evidence suggests that only about 5 % date to the whole medieval period (Ó Neill 2004, 83). At Ballinrobe, Co. Mayo (Walsh 1994:184), an iron sickle was excavated from inside the burnt mound material suggesting that the monument dated to a period when iron was in use.

Excavations at Cloongownagh, Co. Mayo revealed a *fulacht fiadh* dated to the fourth century A.D, which was later buried under a ringfort (Henry 1999:765; Lennon 2000:0849). Excavations at Parksgrove 1, Co. Kilkenny revealed an ironworking site with an associated possible burnt mound in the western flood plain of the River Nore, but this is an ironworking site of early medieval significance and not a burnt mound in the fulachta fiadh tradition (Stevens 1999:458; Stevens 2005; Paul Stevens pers comm.). The Lisheen Bog Project investigated a site known as Killoran 24, Co. Tipperary which was a burnt mound trough without the mound and “as such represents a single use fulachta fiadh...dated to the early medieval period at AD 660-800” (Gowen et al 2005, 303; Paul Stevens pers. comm.)

Excavations at Castle Street/Quay Street, Dungarvan revealed a *fulacht fiadh* that returned a calibrated date of A.D. 540–660 (2 sigma) from associated charcoal (Pollock 1997:566). Burnt stones, however, are not always associated with formally recognisable burnt mounds. Heat shattered stones and charcoal were found in a number of hearths and pits near a river at Kilmurry 2, Co. Wicklow (Mossop 2001:1372). One pit was dated to A.D. 1000-1240, while one hearth was dated to A.D. 900-1160. The purpose of this enigmatic site is uncertain. The latest date is returned from a *fulacht fiadh* at Ballymount Great, Co. Dublin which produced a calibrated date of A.D. 1400-1630 (Stout 1983, 217-218).

**Early Medieval Trackways in Wetlands**

The first systematic study of the archaeological potential of bogland was undertaken at the Mount Dillon Bogs in Co. Longford from 1985-91 (Raftery 1996). Excavations were undertaken initially at the large Iron Age track way known as Cornea 1 but it soon became apparent that a
large collection of other brushwood and wooden *togs* were present in the exposed sections of nearby drains. The discoveries of this complex of track ways lead to the establishment of the Irish Archaeological Wetland Unit (IAWU) in 1990, and since then the IAWU have conducted a survey of the raised bogs owned by Bord Na Mona and produced a number of publications. In the last few years, excavations have also been undertaken by a number of commercial companies, particularly Archaeological Development Services (ADS), and during the Lisheen Mine Archaeological Project from 1996-1998, Margaret Gowen (Gowen, Phillips & O’Neill 2005).

Provisional statistics indicate that there are about thirty known wooden track ways from 25 EMAP defined sites that can be dated to the Early Medieval period (Table 6:8). Many of these have now been radiocarbon or dendrchronologically dated. A significant number of other track way sites of early medieval potential have also been identified and will be the subject of future research. Several were found within Hiberno-Norse towns and are not included in the Table below. One possible early wooden track way platform was excavated at the ecclesiastical site of Dromiskin, Co. Louth while a number of other early medieval dated examples were investigated by IAWU members and may have been built to connect Lemanaghan monastery, founded by St. Manchán, to the dry land. A potential pilgrim’s road towards Clonmacnoise was also excavated in Bloomhill Bog, Co. Offaly (Breen 1988). Altogether wooden track ways were excavated in rural wetland contexts, the majority of which were discovered in Cos. Offaly and Tipperary.

Table 6:8 Examples of Excavated Early Medieval Track ways 1930-2004

<table>
<thead>
<tr>
<th>Name</th>
<th>County</th>
<th>No.</th>
<th>Date</th>
<th>Context</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballinderry II</td>
<td>Offaly</td>
<td>1</td>
<td>Early Med Crannóg Site</td>
<td>Hencken 1941-42</td>
<td></td>
</tr>
<tr>
<td>Ballinvally, Monettia Bog</td>
<td>Offaly</td>
<td>1</td>
<td>AD 760±9 yrs</td>
<td>Bogland</td>
<td>O’Carroll 2000:0803</td>
</tr>
<tr>
<td>Ballylennon, Barnaboy &amp;</td>
<td>Offaly</td>
<td>3</td>
<td>AD 544 to AD 816 ± 9</td>
<td>Bogland</td>
<td>McDermott 2001:1085</td>
</tr>
<tr>
<td>Rathdrum, Daingean Bog</td>
<td></td>
<td></td>
<td>or later (No Sig)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barnaran &amp; Lullybeg, Lullybeg</td>
<td>Kildare</td>
<td>1</td>
<td>Early Med Bogland</td>
<td>Whitaker 2004:0798</td>
<td></td>
</tr>
<tr>
<td>Bloomhill</td>
<td>Offaly</td>
<td>1</td>
<td>A.D. 605-762 (1 Sig.)</td>
<td>Pilgrim Road</td>
<td>Breen 1988</td>
</tr>
<tr>
<td>Castlearmstrong</td>
<td>Offaly</td>
<td>1</td>
<td>AD 665±9</td>
<td>Bogland</td>
<td>Bermingham 1996:326</td>
</tr>
<tr>
<td>19, Lemanaghan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Castlearmstrong, Killaghinto</td>
<td>Offaly</td>
<td>1</td>
<td>AD 596-7</td>
<td>Bogland</td>
<td>McDermott 1998:553; O’Carroll</td>
</tr>
<tr>
<td>Bog, Lemanaghan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1999:742; 1999:743</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(No Sig)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corlea 5</td>
<td>Longford</td>
<td>1</td>
<td>A.D. 587±9</td>
<td>Bogland</td>
<td>Raftery 1996</td>
</tr>
<tr>
<td>Corlea 7</td>
<td>Longford</td>
<td>1</td>
<td>A.D. 438-572 (1st Sigma)</td>
<td>Bogland</td>
<td>Raftery 1996</td>
</tr>
<tr>
<td>Derrynagun Bog, Lemanaghan</td>
<td>Offaly</td>
<td>1</td>
<td>AD 653 ± 9 &amp; AD 1158 ± 9</td>
<td>Bogland (Ecclesiastical)</td>
<td>O’Carroll 1996:327</td>
</tr>
<tr>
<td>Dromiskin</td>
<td>Louth</td>
<td>1</td>
<td>Likely Ecclesiastical</td>
<td>Murphy &amp; Conway</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1999:590</td>
<td></td>
</tr>
<tr>
<td>Kellysgrove</td>
<td>Galway</td>
<td>1</td>
<td>Likely Bogland</td>
<td>Prendergast 1946-47</td>
<td></td>
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<tr>
<td>Lisdermot, Corhill Bog</td>
<td>Offaly</td>
<td>1</td>
<td>AD 626±9</td>
<td>Bogland</td>
<td>O’Carroll 2000:0829</td>
</tr>
<tr>
<td>Lisdermot, Corhill</td>
<td>Offaly</td>
<td>1</td>
<td>AD 783-1149</td>
<td>Bogland</td>
<td>O’Carroll 2000:0829 &amp;</td>
</tr>
</tbody>
</table>
The research into Early Medieval trackways is still in its infancy. It is likely that the numbers of Early Medieval wooden trackways will increase as more radiocarbon dates are obtained, and thus a systematic review of the different wetland projects will be required to establish an accurate figure. It will also be necessary to appraise the character of brushwood and wooden trackways to understand how they were constructed and used over time, and to understand how they functioned as routeways, and what sites they connected.

### Early Medieval Coastal and Estuarine Fishweirs

Early Medieval historical sources indicate that the seashore was a place of intense activity (O’Sullivan & Breen 2007). The early Irish laws of the sea, ‘Muirbretha’ dating to the seventh and eighth century, discuss rights to inshore and offshore sea-fishing, and the ownership of seaweed and driftwood (O’Mahoney & Richey 1873, 422-433); while the Saint’s lives describe the work of fishermen, the moving back and forth of boats and ships and occasionally the hunting of marine mammals. The seventh-century ‘Life of Columba’ clearly states that the monks of Iona were trapping seals, and these were probably butchered for skins and meat (Anderson & Anderson 1961, 294). Seal bones have been recovered from Early Medieval coastal sites at Church Island and Inishkea; and whalebone has been found on Early Medieval sites such as Raheens, Co. Cork, Rathmullan, Co. Down, Inishkea, Co. Mayo and Lough Faughane crannog, Co. Down. Although it is possible that these were hunted, it seems more likely that they represent the use of accidentally stranded animals, for example in A.D. 753, the ‘Annals of Ulster’ note that a whale (with three gold teeth) was cast ashore at Baireach in Ulster. In contrast, for A.D. 827, there is a reference to a ‘great pig-slaughter of sea-pigs (probably porpoises) by the foreigners’ on the coast of Ard-Cianachta (in modern Co. Louth, on Ireland’s east coast). This could again simply represent the opportunistic slaughter of a large group of stranded animals, but it may also imply hunting out at sea using boats and harpoons. Certainly, the fact that they refer to it at all and the use of the term ‘foreigners’ indicates that the Irish annalists found this to be a unique and extraordinary event, perhaps indicating too that seal hunting was something that was more actively practiced by Scandinavians. By the eleventh century A.D., the Muslim geographer Al-Qazwini, drawing on the writings of Al-Udri (1002-1085), noted that the Irish hunted young whales between the months of October and January (James 1978, 5-9). Such hunting activities would leave little tangible evidence, however recent intertidal archaeological surveys on the Shannon estuary (O’Sullivan 2001a, 2003, 2005) and Strangford Lough (McErlean et al. 2002, 144-185) have revealed physical traces - in the form of fish traps and mills - of what we might call maritime taskscapes - i.e. landscapes of marine-oriented labour that were intended to provide both food and income to local populations.

Fish traps are artificial barriers of stone or wood built in rivers or estuaries to deflect fish into a lagoon where they could be trapped in nets or baskets. In coastal and estuarine waters, fish tend to move up the shore with the flooding tide and drift back down with the ebbing tide, being attracted by feeding in the shallow water and by the nutrients in freshwater streams and
rivers moving into the estuary. Thence, it is possible to trap them by erecting fish traps across these routes, with ebb-weirs catching fish moving down with the ebbing tide and flood-weirs catching fish moving up the shore with the flooding tide. Upon encountering these barriers, the fish would tend to move along the fences into the trapping mechanism, from where they could be removed later.

The fish traps typically consisted of two (or more) converging vertical fences or walls, thus forming a large V-shaped structure (McErlean et al. 2002, 150). At the apex or ‘eye’ of the two fences there would be a woven wicker basket supported on a framework, a net, or a rectangular or curvilinear enclosures of wooden posts or nets. However, medieval fish traps vary significantly in location, form, size, and style of trapping mechanism, depending on the relative size of the catch intended, the foreshore topography and current conditions and the customs and practices of local fishermen. Indeed, it is now clear that there is a significant local and regional variation in the use of fish weirs around medieval Britain and Ireland.

The Strangford Lough fish traps were mostly concentrated in Grey Abbey Bay and around Chapel Island in the north-east part of the Lough. At least fifteen wooden and stone-built fish traps have been recorded - the wooden traps have been radiocarbon dated to between the eighth and thirteenth centuries AD. During this period, Strangford Lough would have had a wide range of fish species, including salmon, sea-trout, plaice, flounder, mackerel, cod, grey mullet and skate, with large numbers of eels in the abundant kelp growth. The Strangford Lough fish traps were ebb-weirs, intended to catch fish drifting down with the falling tide, and usually have two long stone walls or wooden fences that converged in a V-shape to a point on the lower foreshore.

The fences were made of single lines of posts, and complex arrangements of paired posts that created an inner and outer fence. Post-and-wattle panels could have been carried out to the traps and slotted between these paired uprights and pinned in position using bracing props and horizontal pegs. Wooden fish traps at Cunningburn (McErlean et al. 2002, 155-156) and Gregstown (ibid. 162-164), near Newtownards, Co. Down also had stone walls along the base of the fence to protect them from erosion and undercutting. At the ‘eye’ of the converging fences, baskets or nets were probably hung on rectangular structures.

Wooden fences would have deteriorated quickly and needed periodic repair, and it is obvious that a significant amount of labour was required for their construction. The nature of the ebb-weirs, however meant that at every low tide they were exposed for about two to three hours, and while they enclosed a large area of foreshore, their owners and users had sufficient time to remove the fish and repair the structures.

At Chapel Island (McErlean et al. 2002, 159-162), a large wooden fish trap has provided a radiocarbon date of A.D. 711-889. It has a lower, ‘flood fence’ 147 metres in length running parallel to the shore, with a second, shorter fence running up towards the island. Archaeological excavations suggest that it was the subject of frequent repairs or that there was an attempt to make the fences ‘fish-tight’ through the use of hundreds of closely-spaced posts. Interestingly, there is archaeological evidence for settlement on the island, including a possible church structure within a promontory enclosure defined by a substantial bank and ditch. Traces of stone field-walls can also be seen on the nearby slopes. The Chapel Island fish traps may have been used by an island community associated with the adjacent chapel or this island may have been used as a hermitages associated with the larger monasteries like Nendrum in the lough (McErlean, McConkey & Forsythe 2002, 182-183).

In Grey Abbey Bay (McErlean et al. 2002, 180-185), 1.5 kilometres to the east, three wooden traps and four stone traps have been recorded. At South Island, a large V-shaped wooden trap crosses a tidal channel. This structure measures over 100 metres in length, was constructed of at least 500 posts and has a rectangular structure and possible basket at the eye. It has provided two separate radiocarbon dates of A.D. 1023-1161 and A.D. 1250-1273 (McErlean et al. 2002, 183). Similar V-shaped wooden traps found elsewhere in the bay have produced
radiocarbon dates of A.D 1037-1188 and A.D. 1046-1218 (*ibid.*). The traps may have used nets, baskets or rectangular pounds, post-and-wattle enclosures inside of which the fish remained until removed. McErlean, McConkey & Forsythe (2002, 182-183) have also suggested that three wooden fish traps radiocarbon dated to the 11th and 12th centuries in Greyabbey bay were part of the southern portions of the monastic estate of Movilla, a few miles to the north. It is possible that this fishery was maintained by a small community of fishermen who brought their harvest a short distance up the coast with the rising tide to the ecclesiastical settlement in this period. The Strangford Lough fish traps were clearly in use in the bay throughout the Middle Ages. Some of the large wooden and stone fish traps may have been the property of the Cistercian community of Grey Abbey, which was founded in 1193 A.D. It is known that the early Cistercian communities were determinedly self-sufficient and the use of fisheries in the bay probably intensified after their arrival.

On the Shannon estuary, archaeological surveys have revealed evidence for several medieval wooden fish traps, dated to between the fifth and the thirteenth century A.D (O’Sullivan 2001a, 2003, 2005). The Shannon estuary fish weirs tend to be small, V-shaped post-and-wattle structures (with fences 20-30m in length) with basket traps, hidden away within the narrow, deep creeks that dissect the estuary’s vast expanses of soft, impenetrable muds. Despite being relatively small, they would have been undoubtedly effective as even a small barrier in these creeks could have literally sieved the water of all fish moving around with the tides. They were oriented to catch fish on the flooding or ebbing tide and could in season have taken large catches of salmon, sea trout, lampreys, shad, flounder and eels (the latter in October-November).

The earliest known fish trap is a small post-and-wattle fence - about 8 metres in length - on the Fergus estuary, Co. Clare, a tributary of the Shannon estuary. It has been radiocarbon dated to A.D. 442-664, making it one of the earliest known fish traps in Ireland. It was probably part of a series of fish traps that would have been used by the inhabitants of Early Medieval ringforts on the low hills adjacent to the estuary. Early Medieval fish traps have also been located on the mudflats of the Deel estuary, Co. Limerick (which flows into the upper Shannon estuary). Deel 1, dated to A.D. 1037-1188 is a small V-shaped fish trap, oriented to catch fish on the flooding tide with two converging post-and-wattle alder wood fences measuring over 30m in length.

A cluster of posts at the apex of the two fences probably represents the surviving remains of a trap. It may have been associated with nearby settlements on the neighbouring land, including Early Medieval ringforts and other earthworks. There are other, later medieval fish traps on this foreshore (see below), that provide intriguing evidence for local continuity of size, form and location, suggesting that they essentially replaced each other between the eleventh and the late-fourteenth century A.D.

Recent studies of Early Medieval fish weirs around the coastline of Britain and Ireland also indicate that there can be strong continuities of form over centuries. Anglo-Saxon fish traps on the estuaries of the Essex coastline were built, repaired and reactivated through the sixth to eighth centuries AD. Similarly Saxon and Norman fish traps on the Severn estuary indicate local continuities of form, so much so that it might be suspected that the fish traps themselves acted to preserve local memories of good fishing grounds. This broader perspective also reveals that Early Medieval fish traps were most in use in the seventh century A.D., and also again in the thirteenth to fourteenth centuries A.D., presumably relating to some social and cultural processes such as population growth and perception of fish as an economic resource.

**Conclusions**

A substantial amount of new archaeological evidence for agriculture in Early Medieval Ireland has been discovered in recent years. The general character of Early Medieval agriculture; the role of dairying; the role of arable crops and the place of farming in early Irish society have all been reconstructed from archaeological, environmental and historical evidence. However, there
is also good evidence for Early Medieval field-patterns and enclosures, for kilns and mills, for track ways and fisheries and other features. It could be argued that the well-known revolutions in early Irish farming could now be matched with a revolution of the scale and intensity of settlement and land-use in the Irish landscape and the real role of farming in social life and practice.
Chapter 7. Early medieval crafts and technology

Introduction

Early medieval crafts and industry were crucially important elements of early Irish society. The identification and extraction of raw materials, the various stages of craft production and the distribution of artefacts through trade and exchange, and finally the use, repair and abandonment of objects can all be traced in the archaeological record. Early medieval crafts and industry also influenced the organisation and layout of settlements, with ironworking and copper-alloy working clearly important, if small-scale activities on many sites, while others appear to have been largely devoted to such activities. It should be recognised that crafts and industry in early medieval Ireland, like settlement, agriculture and other activities, would have been organised in social terms – especially in terms of gender, social rank and status. Certainly, the early Irish sources attest to the relative status and importance of different crafts. For example, the early Irish laws indicate that carpenters, copper-workers and smiths were all of high-status, occasionally having a similar honour-price to that of lower grade of nobility, while in contrast, comb-makers were of quite low social status and were scoffed at by the jurists who compiled the laws. It is also the case that manual labour had to be avoided if you were above a certain social rank. Clearly, all this evidence for crafts and technology has great potential to add new insights into the organisation of labour and the economy of early medieval society.

In the past, a number of general archaeological studies (e.g. de Paor & de Paor 1978; Hughes & Hamlin 1977; Hamlin 1985; Edwards 1990; Mytum 1992; Edwards 2005, 235-96) have dealt with evidence for industry and craft working in their general discussions of the archaeology of early medieval Ireland, the most notable being Mytum (1992, 210-251) and Edwards (1990, 73-98). Recent archaeological excavations have thrown up a growing body of evidence for both the manufacture and production of iron, copper alloys, bone, antler, lignite, leather and textile products at a range of early medieval ecclesiastical and secular sites. Evidence for highly specialised activities including glass-working, enamelling and copper-alloying have also being discovered on a number of sites through the years. Of all of these, metalwork has received the most attention with key monographs on ironworking being produced by Scott (1990) and on non-ferrous metalwork (Comber 2004). Most recently Comber’s (2008) monograph on the economy of the period has provided an overview of the evidence for the full range of craft working activities in early medieval Ireland and this will undoubtedly be the baseline for future investigations. These works are also of particular interest as their emphasis is on the evidence from archaeological excavations, which will also be the particular focus of this chapter. It will review the key evidence for ironworking, non-ferrous metalworking, glass-working and the use of organic materials such as bone, antler, wood and textiles. This chapter will also use extensive Tables of evidence, to publish for the first time a comprehensive review of the ranges and types of evidence recovered from early medieval archaeological excavations, 1930-2004.

Early medieval ironworking

Background

There have been few systematic studies of early medieval Irish ironworking. The first major publication of on the subject was B.G. Scott’s (1990) Early Irish Ironworking. It examined the evidence for the transition to iron in the later prehistoric period and the development and consolidation of this technology in the Iron Age and in the earliest phases of the early medieval period. Scott was one of the first to examine the potential evidence for smelting, smithing and mining and the artefacts and technology used behind these processes. Both Scott (1990, 157) and Edwards (1990, 86) were one of the first to recognise the problems of previous Irish metallurgical studies on important early medieval sites that often failed to make a distinction between smithing and smelting furnaces or failed to collect slag in a systematic way.
However, despite these publications, our understanding of early medieval ironworking was not significantly advanced until very recently through the work of a few archaeometallurgical specialists on Irish material. Recently, Comber (2008, 111-132) has summarised the previous evidence. The recently discovered material from several early medieval ironworking sites on the M4 roadway in Co. Meath has been considered by Carlin (2008). However, our current understanding of early medieval ironworking is still largely based on a few earlier published and quite specific sites all of which are potentially in need of re-evaluation. It is certainly the case that previous studies of early medieval ironworking have tended to overemphasise the technical processes at the expense of the social, economic and the ideological, but even in terms of the technological processes, there is still a lack of understanding concerning the evidence for the early medieval sourcing of iron ore, the structure and form of charcoal kilns, the character of smithing and smelting hearths and the range of artefacts used behind these processes. There is also a lack of knowledge concerning the scale of iron production, the distribution networks behind the circulation of iron ore, the locations of high status forges and the status, power and relationship of the blacksmith to local communities.

**The Technological Process**

Iron is produced through a process which involved

- Sourcing Iron Ore
- Producing Charcoal
- Separating iron bloom and slag from ore using charcoal (Smelting)
- Refining and hammering out impurities (Smithing)

**Sourcing and mining Iron Ore**

There is currently a complete lack of knowledge and evidence for the initial extraction of iron ore for industrial purposes from its primary context. There was some evidence for the extraction of iron ore from surface outcrops near Garryduff I ringfort, Co. Cork (O'Kelly 1963, 103). Few other sites with the exception of the copper mines at Ross Island, Co. Cork (William O'Brien 2004) has revealed evidence for early medieval mining across the island. It is believed however that bog iron was the principal source of iron in early medieval Ireland as evidence from the ringfort at Cush, Co. Limerick (Ó Riordáin 1940), the ringfort at Mullaghbane, Co. Tyrone (Harper 1972) and iron ore evidence at Reask (Fanning 1981), Co. Kerry suggests.

**Charcoal Production**

Early medieval ironworking was also dependant on charcoal production and recent discoveries suggest that this involved the use of carefully constructed small pits in which timbers were placed against a central vertical post c.1m high that were then covered by straw, bracken and layers of earth and turf were built to turn the timbers into charcoal. Charcoal was created ‘by carbonising smouldering wood in an oxygen-limited environment; the amount of air was carefully controlled so that the wood was roasted but not burnt’ (Carlin 2008).

**Smelting**

The charcoal was then used for the smelting of bog iron ore as it was through burning charcoal within a furnace that iron bloom and slag are separated from the ore.

**Smithing**

After the smelting process, the produced bloom was further refined, reheated and hammered in a smithing hearth to remove excess slag and impurities not previously separated during the smelting phase. Slag was a by-product and consequence of both smelting and smithing processes. Microscopic analysis of the slag can yield important information about whether smelting or smithing was undertaken at the site.

**The social and ideological contexts: The role of the blacksmith in early Irish society**

Early Irish laws indicate that blacksmiths were high status individuals in Irish society, but they would also have worked under the protection and patronage of local secular or ecclesiastical
authorities. Early Irish sources also indicate that the blacksmith was held in high esteem by community, occasionally figuring as a mythological figure. This high-status is common in many small-scale or traditional communities, due largely to the smiths role in transforming materials, through heat, violence and smoke. The blacksmith, unlike other craftsmen, would have been a permanent resident on a settlement site. Blacksmiths worked with large amounts of raw materials, at high temperatures and probably produced a wide range of goods for a large clientele (e.g. farm equipment, weaponry, domestic vessels). The blacksmith's forge was therefore an important place in the landscape.

Excavations at a small crannog at Bofeenaun, Co. Sligo revealed few finds except for large quantities of iron slag and furnace linings (Aonghus Moloney & Margaret Keane 1992, Excavations Bulletin). O'Sullivan (2004) and Van de Noort and O'Sullivan (2006) have suggested that specialized ironworking may have been undertaken by early medieval blacksmiths in these marginal places of the landscape. Excavations at Dooey, Co. Donegal have also revealed a coastal dwelling place in which extensive evidence for the production of iron and bronze objects as well as dye extraction activities were found. It has been suggested by O'Sullivan & Breen (2007, 119) that the site may have been the work-place of a high status blacksmith and have been used as a beach-market for traders moving down the North Atlantic seaways between Northwest Ireland and Scotland.

While it is likely that the majority of ironworking was being undertaken on high status settlements and ecclesiastical sites, it is possible that specialized ironworking may have been undertaken in certain marginal sites, many of which have been described above as the ironworking sites of the poor. More work is then required to establish if other marginal sites could represent specialized ironworking centres or were instead just visited periodically by local people with a lower means of living? Examining these research questions will help establish the character of the economy and patterns of trade and commerce in the early medieval period.

**Excavation of early medieval ironworking sites/ evidence, 1930-2004**

The main evidence for ironworking on individual early medieval Irish sites comprises the presence of furnaces and iron slags (Table 7:1). Further evidence is provided by the presence of ores, blooms, hammerscale and tuyères and ironworking hearths. The main difficulty with interpreting the material is that the most common evidence, i.e. slags, can be produced at different stages of iron processing and not all of these occur on individual sites. Slag can be produce at the smelting, bloom-smithing and forging stages of production (Scott 1990, 151).

**Table 7:1. Evidence for ironworking from Early Medieval excavations 1930-2004**

Undated material from Scott's (1990, 221-223) list have been omitted.
<table>
<thead>
<tr>
<th>Site</th>
<th>Site type</th>
<th>Metalworking features</th>
<th>Artefacts</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballycasey, Co. Clare</td>
<td>Enclosures</td>
<td></td>
<td>Iron slag</td>
<td>O’Neill 2002:0079</td>
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<td>Ballycatteen, Co. Cork</td>
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<td>None</td>
<td>Iron slag, furnace bottoms</td>
<td>Ó Riordáin and Hartnett 1943, 30.</td>
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<tr>
<td>Ballyhenry, Co. Antrim</td>
<td>Ringfort</td>
<td></td>
<td>Ore – haematite</td>
<td>Scott 1990, 154</td>
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<td>Ballywee, C. Antrim</td>
<td>Settlement</td>
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<td>Balriggan, Co. Louth</td>
<td>Enclosure</td>
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<td>Slag</td>
<td>Delaney and Roycroft 2003, 19.</td>
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<tr>
<td>Beginish, Co. Kerry</td>
<td>House site</td>
<td></td>
<td>Slag, tuyère</td>
<td>O’Kelly 1956, 182.</td>
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<tr>
<td>Big Glebe, Co. Londonderry</td>
<td>Raised rath</td>
<td></td>
<td>Iron slag</td>
<td>Scott 1990, 222.</td>
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<tr>
<td>Bofenaun, Co.</td>
<td>Crannog</td>
<td>Possible furnace</td>
<td>Iron slag (74kg),</td>
<td>O’Sullivan 1998, 122</td>
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<td>Boho, C. Fermanagh</td>
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<td>Iron slag</td>
<td>Proudfoot 1953, 55-5</td>
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<td>Butterfield, C. Dublin</td>
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<td>Iron slag</td>
<td>Carroll 1997:184</td>
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<td>Hencken 1938, 54-5.</td>
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<td>Cahergal, Co. Kerry</td>
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<td>Iron slag and tuyère</td>
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<td></td>
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<td>Taylor 2004:0141</td>
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<td>Sheehan 1996:165</td>
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<td>Brannon 1982, 64</td>
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<tr>
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<td>Crothers 1996:015</td>
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<td>Chapelizod, The Island/Martins Row, Co. Dublin</td>
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<td>Furnace and smitthing hearth</td>
<td>Slag</td>
<td>Walsh 2002:0492</td>
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<td>Bowl furnace</td>
<td>Iron Slag (4kg), tuyère, furnace bottom</td>
<td>O Floinn and King 1998, 130-132. O</td>
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<td>Clonmacnoise, Co. Offaly</td>
<td>Early medieval bridge</td>
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<td>Iron slag</td>
<td>O’Sullivan and Boland 1997:447</td>
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<td>'nearly two metric tons of archaeometallurgical residues', production of hand bells</td>
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<td>Conva, C. Cork</td>
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<td>'furnace bottoms and iron slag' – date uncertain</td>
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<td>Furnace bottoms, iron slag</td>
<td>Williams 1985, 71, 77</td>
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<td>Iron slag</td>
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<td>Taylor 2007, 77</td>
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<td>Corcagh Demense, Co. Dublin</td>
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<td>Iron slag</td>
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<td>Caroll 2001:340</td>
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<td>Iron slag</td>
<td></td>
<td>Shee 1977, 32</td>
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<td>Cush, Co. Limerick</td>
<td>Ringforts 4, 6 and 7</td>
<td>Slag</td>
<td></td>
<td>O Riordáin 1940, 83</td>
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<td>Dalkey Island, Co. Dublin</td>
<td>Promontory fort</td>
<td>Iron smelting pit</td>
<td>Slag, tuyère</td>
<td>Loversage 1967, 135-6</td>
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<td>Deer Park Farms, Co. Antrim</td>
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<td>Scott 1990, 221</td>
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<td>Bratt 1975:04</td>
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<td>Derryloran, Co. Tyrone</td>
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<td>MacManus 2003:1843</td>
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<td>Downview Park, Belfast, Co. Antrim</td>
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<td>Davidson 1964, 127</td>
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<td>Seaver 201:425, Seaver 2005, 60</td>
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<td>De Paor 1070:06</td>
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<td>Island McHugh, C. Tyrone</td>
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<td>Davies 1950, 44.</td>
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<td>Keeloguesbeg, Co. Galway</td>
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<td>Slag, anvil, unfinished iron object</td>
<td>Macalister 1935, 5</td>
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<td>Kiltiernan, Co. Galway</td>
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<td>Slag (unstratified)</td>
<td>Waddell and Clyne 1995, 180</td>
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<td>Two ironworking areas, furnaces and smithing hearths.</td>
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<td>Carlin et al 2008, 40-4</td>
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<td>Furnaces</td>
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<td>Mount 1995, 138-140, 146</td>
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<td>Cleary 1995:035</td>
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<td>O Riordáin and Foy 1941, 93</td>
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<td>O’Sullivan 1987-9, 54</td>
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<td>Evans 1946, ref needed</td>
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<td>Bersu 1947, 50</td>
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<td>‘Bog ore, iron slag and iron blooms’</td>
<td>Proudfoot 1955, 75 (Appendix 1 excavation report)</td>
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<td>Davis and Gaffikin 1938,</td>
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<td>Iron slag</td>
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<td>Carlin 2008, 88</td>
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<td>Harper 1972, 43</td>
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<td>Bowl furnace</td>
<td>O’Hara 2002:1499, Carlin 2008, 88</td>
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<td>Crannog</td>
<td>Iron slag</td>
<td>Scott 1990, 223</td>
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<td>Westmeath</td>
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<td>Site</td>
<td>Site type</td>
<td>Metalworking features</td>
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<td>Iron slag</td>
<td>McConway 2002, 18</td>
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<td>Oldcourt, Co. Cork</td>
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<td>Iron ore, iron slag</td>
<td>Murphy and Ó Cuileannáin 1961, 90.</td>
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<td>Iron slag</td>
<td>Reynolds 1972:0030</td>
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<td>Iron slag? (May be the unstratified slag referred to by Lynn 1982, 145)</td>
<td>Scott 1990, 222</td>
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<td>Shaneen Park, Co. Antrim</td>
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<td>Scott 1990, 221</td>
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<td>Warhurst 1971, 63</td>
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<td>Kelly 1974:33</td>
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<td>Slag</td>
<td>Scott 1990, 222</td>
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<td>Sluggary, Co. Limerick</td>
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<td>Delaney 2001:1004</td>
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<td>O’Brien 1990:043</td>
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<td>McSparron 2004:0078</td>
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<td>Furnace</td>
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<td>Carlin 2008, 88</td>
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<td>Tuyères? slag</td>
<td>Ivens 1987, 72, 76, 104-106</td>
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<td>Williams 1991:011</td>
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<td>Furnace, smithing hearth</td>
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<td>O Droma 2008, 54</td>
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<td>Twomilwborris B, Co. Tipperary</td>
<td>'Plectrum shaped' enclosure</td>
<td>'ceramic crucible and iron-working residues'</td>
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<td>O Droma 2008, 51</td>
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<td>Scott 1971:0034</td>
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<td>Whiterath, C. Louth</td>
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<td>O Drisceoil 2000:0721</td>
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<td>Viking settlement</td>
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<td>Furnace bottom, slag, tuyère</td>
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Iron ore production
Iron ore has been found on only a small number of sites. Bog ore has been found at Ballyvourney, Co. Cork and Lough Faughan, Co. Meath (ibid.). Photos-Jones (2008, 186) concluded that ore fragments found on several early medieval M4 sites, which included Killickaweeney 1 and Johnstown 1, were also most likely to have been of bog ore because of their high manganese content. The iron slag from Mullaghbane, Co. Tyrone was also thought to have been derived from bog ore (Harper 1974, 43). Limonite has been recorded at Garryduff I and Oldcourt, Co. Cork, haematite at Ballyhenry, Co. Antrim while ironstone nodules have been found at Nendrum, Co. Down (Scott 1990, 154). Scott observed that it is likely that iron ore was found on many other sites but was not recognised as such by the excavators.

Furnaces and smelting
Furnaces provide the main evidence for smelting, the evidence of so called ‘furnace bottoms’ being less clear (Scott 1990, 155). Scott (ibid. 159) believed that the simple bowl furnace was the only type used in Ireland at this time. More recent evidence, however, shows that the more efficient shaft furnaces were also used. This comprises a clay shaft built over a furnace pit (Carlin 2008, 92). The remains of vitrified clay fragments on several of the M4 sites are thought to be the remains of these shafts (ibid. 94), but it should also be noted that bowl furnaces also had clay covers which could have become vitrified during smelting.

It is also theoretically possible to differentiate between the slags used in both bowl furnaces and shaft furnaces. The tapped slags from shaft furnaces have a ‘characteristic drip like surface texture’ (Photos-Jones 2008, Harwood 3 slag report). While the non-tapped slag, characteristic of the slag-pit bowl furnace, tends to form into rounded ‘furnace bottoms’ although can be easily confused with the ‘smithing hearth bottoms’. In general the latter are differentiated on the basis of size the larger being from the smelting process (Scott 1990, 155-60). On the basis of their size Scott re-identified the furnace bottoms from Ballyvourney, Co. Cork, as representing smithing rather than smelting activity, and thought that the same applied to the material from Garranes (ibid 161-2) and cast doubt on the identification of ‘furnace bottoms’ on several other sites. Tuyères too can be indicative of both smelting and smithing (ibid.).

Charcoal production
Large quantities of charcoal are needed for the smelting or iron. Several rectangular charcoal kiln pits have recently been identified. Some of these, such as Hardwood 3, Co. Meath, have produced early medieval dates (Carlin 2008, 91). The charcoal kiln was found in association with a series of smelting furnaces (Photos-Jones 2008, CDROM). A charcoal production site of early medieval date has also been discovered at Kilmaniheen West, Co Kerry (Taylor 2004:0767).

Ironworking on sites
It is clear that the degree of intensity of ironworking varied greatly between sites. Aside from mining and charcoal, the four separate processes included in ironworking were ore processing, smelting, bloomsmithing and forging. It was likely that few sites were involved in all these processes. Some sites specialised in stages of iron production. The crannog at Bofeenaun, Co. Mayo, which produced volumes of slag seems to have been a specialised smelting site, exploiting bog ore from nearby sources. The site at Hardwood 2, Co. Meath, seems to have also been a specialised ironworking site producing no evidence for any other type of activity. The site comprised four bowl smelting hearths, a charcoal kiln and three possible smithing hearths (Carlin et al 2008 CD-ROM).

The large quantities of slag found at the ringforts at Ballyvolland, Co. Antrim (170kg) and Lisleagh, Co. Cork (800Kg) identified them to Scott (1990, 101) as being of ‘the upper tier of iron smelting ... specialist sites’ despite the fact that Ballyvolland did not produce any actual evidence for furnaces. The ‘settlement cemetery’ at Johnstown, Co. Meath also clearly specialised in ironworking producing some 2,000Kg of metallurgical waste, presumably slag (Carlin et al 2008, 73). The slags were derived from bog ores which were probably found in the bogs located close to the site. Most of the evidence from the site was associated with smelting.
and the processing of bog ore may have formed the economic basis of the site. It is interesting to note that there was evidence for ironworking as late as the 15-17th century indicating that the site was the focus of ironworking over about 1000 years (ibid. 74). The evidence for ironworking at Killickaweeneey, Co. Meath, with 86kg of slag, was more limited than at Johnstown. Evidence for smelting and smithing slags, along with hammerscale, indicate that all phases of processing occurred there (ibid. 40-2).

On most sites ironworking tended to be an outdoor activity. Possible windbreaks were found in the metalworking areas at Killickaweeneey (ibid.). In some monastic sites there is evidence that ironworking activity was confined to the periphery of the sites, as evidenced by the presence of material within the vallum ditches, e.g. Tallaght and Butterfield, Co. Dublin, Tullylish, Co. Down and Derryloran, Co. Tyrone (Table 7:1). At Nendrum, Co. Down there was evidence for ironworking within the middle enclosure (Bourke 1997, 419) but also outside the vallum close to the site of the horizontal mill (Crothers and McErlean 1997:154). This confirm Ryan's (1988, 45) conclusion that monastic metalworking was kept well away from the sacred centres of these settlements. Ironworking occurred at several locations at Clonmacnoise. King (1998, 132) noted one location at the periphery of the monastery had been chosen in order to be ‘away from dwellings where sparks could cause devastating fires’. No such health and safety concerns were demonstrated by the smiths at Reask and Church Island, Co. Kerry and Ballyourney, Co. Cork where the ironworking took place within the actual houses (O’Kelly 1952, 32-5, 1958, 69, Fanning 1981, 106-8). One wonders if in some of these cases that the ironworking occurred after the houses became derelict, as was the case in Illaunloughan, Co. Kerry where the church was subsequently used for ironworking (Marshall White and Walsh 2005, 46).

On secular sites ironworking sometimes occurred in the ditches of the enclosures, as was the case at Johnstown, Co. Meath (Carlin et al 57), Petitswood, Co Westmeath and Rathgureen, Co. Galway (Comber 2008, 121). Comber (ibid) noted that when located within ringforts, ironworking tended to be away from the buildings. At Killickaweeneey, Co. Meath, there two areas of ironworking. One was at some distance form the dwellings in a separate annex while the second was separated from the dwellings by an internal division (Carlin et al 2008, 28). There is no a growing evidence for isolated ironworking sites which are not close to habitation. Examples of this have been identified at Dollas Lower and Kiltiernan South, Co. Limerick (Grogan et al 2007, 273-4, 291) and Hardwood 3, Co. Meath (Carlin et al 2008, 91). The crannog at Bofeenaun can also be regarded as an isolated ironworking site (O’Sullivan 1998, 122).

Table 7:1 indicates that evidence for ironworking has been found on a large number of early medieval sites in Ireland. The evidence is not confined to any site type and is found across the whole spectrum of site types known from the period. There is evidence for ironworking at clearly high status secular sites as the trivallate Garranes, Co. Cork (Ó Ríordáin 1942, 105-7) as well as numerous univalate ringforts (Table 7:1). There is also evidence for ironworking at the most important monastic sites, such as Clonmacnoise, Co. Offaly, as well the smallest isolated monastery at Church Island, Co. Kerry. It is clear that on most sites ironworking was undertaken on a non-specialist subsistence level but this indicates that knowledge of ironworking, or at least smithing, was commonly held skill. It is also clear that there were specialist ironworking centres where production occurred on a much larger scale. The problem is identifying such sites. One approach could be to regard any sites where all process between ore roasting and forging might have occurred as being a ‘specialist’ site, but the identification of the different stages is extremely difficult.

It seems to be very difficult to identify evidence for roasting in the archaeological record. A ‘roasting hearth’ was identified at Balriggan, Co. Louth (Delaney and Roycroft 2003, 19) while Reilly (2001:651) has suggested the presence of roasting pits at the undated iron-working site at Kilmacrechadock Mor, Co. Kildare. Scott (1990, 155), however, did not recognise any evidence for roasting in his survey. Since it is implied that roasting of ore was necessary before smelting (ibid. 151) the presence of ore could be taken as a proxy for this stage of the procedure. Only
5.2% of sites producing evidence for ironworking have produced evidence for ore, but, as already noted, iron ore is likely to be under-identified on archaeological sites.

Smelting furnaces are more common with 18.8% of sites producing evidence, or possible evidence, for their presence (Table 7:1). Smithing hearths have been identified on only 6.8% of the sites, with actual evidence for forging, i.e. hammerscale, being present only 2.3% of the sites. Furnace bottoms, which as discussed above, can represented either smelting or bloomsmithing, are found on 14.3% of sites. Finally, tuyère fragments have been noted on 11.3% of sites. These figures, however, are of little value in trying to identify the different stages of ironworking practices on individual sites. It is clear that unless there ironworking specialists involved with the excavation, and especially the post- excavation analysis, the identification of various aspects of the process are usually a matter of guesswork. During the 1970's and 1980's Brian Scott visited and studied the material from a selection of sites that produced reliable information on the different stages of the process. More recently Effie Photo-Jones work on the M4 motorway excavations in County Meath (reports in Carlin et al 1998) has led to great steps forward in our understanding of the subject. Hopefully and informed overview will be published in the near future.

The social, economic and political contexts of early medieval ironworking

What were the significance, scale and character of the ironworking at these sites? Were most people engaged in ironworking during their daily lives or was the activity a preserve of the well to do and wealthy? Where did these activities take place and what was the status of the blacksmith? It is likely that ironworking was undertaken by people of different status within a variety of different contexts as the above graph suggests. It is likely that ironworking occurred in a range of contexts. It is likely that ironworking was done by local people at a very low intensity to meet basic subsistence needs. The second and third contexts occurred at high status/royal sites and important ecclesiastical sites where iron working was undertaken by smiths in tandem with other specialised activities such as copper and glass production.

Isolated ironworking sites and modest settlements: The ironworking of the lower classes?

Basic subsistence levels of ironworking are likely to have been undertaken on the settlements of the semi-free and lowest grades of free-men in the early medieval period. It is also likely that many isolated ironworking sites containing a small number of hearths, furnaces and associated charcoal pits were visited periodically by local farmers to meet their basic subsistence needs. The site at Knockbrack, Co. Kerry could represent one example where small scale ironworking complex with evidence for both smelting and smithing was undertaken (Hull & Taylor 2006, 20). Similar sites were discovered along the M4 including Hardwood 3 and Rossan 4 where there were evidence for contemporary smelting and smithing furnaces. (Carlin et al 2008).

Some ironworking sites may have been sited to exploit bog ore. Potential examples include Shallon 1 & 3, Co. Meath excavated along the M1 road scheme (Ian Russell 2001, Excavations Bulletin- 01E0195). It revealed an Iron Age/early medieval transitional ironworking site (cal. AD 240-540) comprising an oval furnace with associated slag. Nearby, a small metalworking dump was recovered comprising a flint blade, nineteen fragments of flint debitage and seventeen fragments of a possible clay tuyère.

Excavations at Tullaghedy, Co. Tipperary in advance of the N52 Nenagh Bypass Road revealed 3 fulachta fiadh, one of which contained evidence for subsequent smelting and metalworking (Richard O’Brien 1998 & 1999, Excavations Bulletin- 98E0540). A large quantity of iron slag, iron nails, burnt and unburnt animal bone and a ring headed pin were discovered in this later phase of activity. These examples illustrate that small-scale ironworking were often undertaken at a low level of intensity in marginal places near iron ore and fuel resource most likely by small farmers to meet their basic subsistence needs.

Limited ironworking at a very low level of intensity many have also been undertaken on modest ringforts and cashels. Excavations at a large number of ringforts, cashels and crannogs have
revealed limited ironworking evidence often represented by the discovery of a small quantity of slag or perhaps a number of furnace bottoms. Excavations at a univallate ringfort at Croom East and Sluggary Co. Limerick revealed a small quantity of iron slag (E. Shee 1974, Excavations Bulletin). Shee (1973 & 1974, Excavations Bulletin- E131) also undertook an excavation at another Limerick ringfort at Sluggary. The excavation revealed a central building as well as slag, furnace bottoms, bronze-ring headed pin, bone comb and clay moulds which were found along this internal bank. Excavations at a small crannog at Sroove, Co. Sligo revealed some domestic artefacts and a limited evidence for slag indicative of ironworking (Christina Fredengren 1997-99, Excavations Bulletin- 97E0209). It has been suggested by Fredengren (2002) that such crannogs may have been the homesteads of the poor.

Iron Production and the prosperous Farmer
It is likely that the homesteads of the better-off farmer or free-man were engaged in ironworking at a higher level of intensity. Carlin (forthcoming) has cited a number of examples including Lisnagun, Co. Cork (O’Sullivan, Hannon and Tierney 1998) and Coolcran, Co. Fermanagh (Williams 1985) where evidence for small-scale ironworking as well as domestic activity has been uncovered on a number of ringfort settlements.

Excavations at Scrahane 1, Co. Kerry also revealed considerable evidence for ironworking on a ringfort (Mary O’Donnell 1997 & 1998, Excavations Bulletin- 96E0153). Extensive amounts of slag and industrial waste were discarded into the ditch of the ringfort. Extensive evidence for smelting was uncovered in a number of areas inside the ringfort.

Excavations at a raised ringfort at Altanagh, Co. Tyrone revealed a considerable amount of ironworking evidence in the northern portion of the site (Brian Williams 1986). Two bowl furnaces were found and contained charcoal, slag and a shard of coarse pottery. A stone pavement appears to have served as a working area for four simple bowl furnaces on its west side. Strong evidence for ironworking including slag, hammer scale and furnace bottoms were found in phase 2. The site is then likely to have contained both evidence for smelting and smithing. It is then likely to have been a ringfort of a modestly well-off family with a means greater than that of families living at a basic subsistence level but likely not at the same level found at high status sites.

Excavations at a raised ringfort at Dunsilly, Co. Antrim were undertaken by Tom McNeill (1974 & 1975, Excavations Bulletin). It was revealed that the ringfort was re-used as a motte in the later 12th century. A series of phases of buildings were excavated and a number of hearths, furnace bottoms and a quantity of slag were recovered.

Excavations at a large coastal enclosure at Shandon, Dungarvan, Co. Waterford revealed several hearths, an ironworking area and pits containing traces of iron and copper production (Deirdre Murphy & Stuart Elder 2001 & 2001, Excavations Bulletin- 00E0442). The site had potentially Viking associations.

Excavations at a bivallate ringfort (62 meters diameter) at Lisleagh 1, Co. Cork with stratified evidence for a series of buildings, structure, defences as well as trade, craft working and intensive levels of ironworking (Monk 1980-84, Excavations Bulletin- E218).

Evidence for smelting and smithing furnaces as well as textile production and other activities have been excavated at a well-documented enclosure at Killickaweeny, Co. Meath. It has been suggested that the enclosure represents the ‘home of one or more generations of a wealthy farmer family such as a bóaire as described in the early medieval law tracts’ from the 8-10th century A.D. (Walsh 2008). The excavation revealed clear evidence a central round house surrounded by two possible outouses or workshops as well as the organization of the space into distinct for iron and textile production and animal corral. A range of the enclosed ‘settlement/cemetery’ sites have also revealed often considerable evidence for ironworking through the early medieval period.
Johnstown 1, Co. Meath is one striking example where seven different metalworking areas were discovered containing both smelting and smithing hearths (Clarke & Carlin 2008). While a massive quantity of slag was recovered from the site, it was found that this was probably due more to the longevity of the practice and the inefficiency of the low temperature furnaces that were used (Clarke & Carlin 2008). Ironworking was instead more intermittent and was perhaps undertaken at a scale similar to that at the nearby settlement at Killickawaeny, Co. Kildare. A number of other ‘settlement/cemetery’ sites including Mount Offaly, Cabinteely, Co. Dublin (Malachy Conway 1998 & 1999, Excavations Bulletin- 98E0035) have also revealed evidence for significant ironworking evidence in some ways comparable to the above two sites.

Specialised iron working: ecclesiastical sites, royal sites and Viking towns

It has been suggested that specialised iron production by professional blacksmiths only occurred in association other specialised craft working including glass and copper working at high status sites (Walsh forthcoming).

Paul Steven’s excavations at Clonfad, Co. Westmeath uncovered examples of specialised metalworking and craft working activities undertaken at an intensive level at this ecclesiastical site close to Lough Ennell. Tim Young’s specialist analyses have revealed that the scale of ironworking on the site indicates that ecclesiastical bells were being produced on the site (Stevens 2006; Tim Young pers comm.).

Excavations at Kilpatrick, Co. Westmeath (Swan, D.L. 1973-81, Excavations Bulletin- E124) also revealed considerable evidence for ironworking and the potential production of a number of high status metalworking objects. Other ecclesiastical sites that have produced ironworking evidence include Downpatrick, Co. Down; Clonmacnoisne, Co. Offaly; Tullylshy, Co. Down (Ivens 1987); Glen Munire, Ballyman, Co. Dublin (O’Brien 1977-86, Excavations Bulletin- E182); Dunmisk, Co. Tyrone (Ivens 1988) and Tully, (Glebe, Site 43), Co. Dublin (Matthew Seaver & Valerie Keeley 2000-2002, Excavations Bulletin- 00E0758).

Evidence for ironworking in association with a whole range of other activities including bronze, bone, antler, leather, textile and woodworking have been discovered in a large number of excavations within the Viking Urban towns. Examples in Dublin that have produced ironworking evidence include Fishamble Street II (Wallace 1974-79, Excavations Bulletin- E172) and Winetavern Street (Brendan Ó Riordáin 1970-72, Excavations Bulletin- E81). The excavations in this part of Dublin may have exposed evidence for specialised areas in which different crafts were undertaken. It is possible, although still not confirmed, that ironworking was in some ways specialised in Viking towns in the latter half of the early medieval period.

There is also good evidence for ferrous and non-ferrous metallurgy from the early medieval royal sites at Garranes, Co. Cork; Clogher, Co. Tyrone; Lagore, Co. Meath as well as Moynagh Lough crannog, Co. Meath. These sites are likely to have been of some status where both ironworking and other specialised activities such as glass production were undertaken in tandem with each other. An early medieval enclosure at Roestown, Co. Meath that was probably a high status site has revealed evidence for ferrous and non-ferrous metalworking as well as possible glass working, which were all undertaken in tandem with each other (Kinsella 2007a, 15).

Early medieval copper and bronze working.

The evidence for non-ferrous working from archaeological excavations has recently been reviewed by Comber (2004 and 2008, 133-149). As well as reviewing the evidence from individual sites the earlier work published the crucibles from Lagore which had been omitted from the original excavation report. An earlier review of metal working from monastic sites was produced by Ryan (1988). The evidence for the production of bronze is much less extensive than iron (Table 7:2).
Table 7.2 Excavated Non-ferrous metalworking Evidence 1930-2004

<table>
<thead>
<tr>
<th>Site</th>
<th>Site type</th>
<th>Metalworking features</th>
<th>Artefacts</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardcloon, Co. Mayo</td>
<td>Ringfort</td>
<td>Hearth/furnace?</td>
<td>Lead ore</td>
<td>Rynne 1956 J RSAI – page refs?</td>
</tr>
<tr>
<td>Armagh Scotch Street,</td>
<td>Cemetery</td>
<td></td>
<td>Crucible, copper wire</td>
<td>Lynn 1988, 82.</td>
</tr>
<tr>
<td>Armagh, English Street</td>
<td>Ecclesiastical</td>
<td></td>
<td>Crucible</td>
<td>Crothers 1999, 63, 67.</td>
</tr>
<tr>
<td>Beal Boru, Co. Clare</td>
<td>Earthwork</td>
<td></td>
<td>Motif piece</td>
<td>O’Kelly 1062</td>
</tr>
<tr>
<td>Ballycatteen, Co. Cork</td>
<td>Ringfort</td>
<td></td>
<td>Crucibles</td>
<td>O Riordáin and Hartnett 1943, 35</td>
</tr>
<tr>
<td>Cavanapole, C. Armagh</td>
<td>Ringfort</td>
<td></td>
<td>Crucible, tuyère</td>
<td>Crothers 1996:015</td>
</tr>
<tr>
<td>Cherryhound, Co. Dublin</td>
<td>Industrial</td>
<td></td>
<td>Crucibles, fragments of copper and copper alloy</td>
<td>McGowan 2004:0483</td>
</tr>
<tr>
<td>Clea Lakes, Co. Down</td>
<td>Crannog</td>
<td>2 crucible frags</td>
<td></td>
<td>Collins and Proudfoot 1959, 86.</td>
</tr>
<tr>
<td>Clonfad, Co. Westmeath</td>
<td></td>
<td></td>
<td>‘non –ferrous coating of iron bells’, crucibles, stone and clay moulds</td>
<td>Stevens 2006, 10</td>
</tr>
<tr>
<td>Site</td>
<td>Site type</td>
<td>Metalworking features</td>
<td>Artefacts</td>
<td>Reference</td>
</tr>
<tr>
<td>--------------------------</td>
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<td>---------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Co. Offaly</td>
<td></td>
<td></td>
<td>alloy ingot, gold scarp</td>
<td>Taylor 2007, 77</td>
</tr>
<tr>
<td>Coonagh West, Co. Limerick</td>
<td>Ringfort</td>
<td></td>
<td>Cruible frag</td>
<td></td>
</tr>
<tr>
<td>Corranneary, Co. Cavan</td>
<td>Crannog</td>
<td></td>
<td>5 crucibles, two mould fragments</td>
<td>Davies, 1942 page ref needed</td>
</tr>
<tr>
<td>Dooey, Co. Donegal</td>
<td>Unenclosed sand hill site</td>
<td></td>
<td>Crucibles, moulds, motif piece</td>
<td>O Riordáin and Rynne 1961 J RAS page ref needed</td>
</tr>
<tr>
<td>Downpatrick, Cathedral Hill</td>
<td>Ecclesiastical</td>
<td>Metal working hearths and furnaces</td>
<td>Mould and crucible fragments, bronze ingots, molten lead splashed</td>
<td>Ryan 1988, 43</td>
</tr>
<tr>
<td>Dublin, Christchurch Place</td>
<td>Urban</td>
<td></td>
<td>Cruibles</td>
<td>O Ríordáin 1974:0014</td>
</tr>
<tr>
<td>Dunnyneill, Co. Down</td>
<td>Island trading post</td>
<td></td>
<td>Crucible</td>
<td>McCormick and Macdonald 2004, 8</td>
</tr>
<tr>
<td>Garranes, Co. Cork</td>
<td>Ringfort</td>
<td>Workshop debris area</td>
<td>Unfinished brooch and pin, lumps of tin, stone ingot moulds, crucibles, tuyères.</td>
<td>O Riordáin 1942, 86, 93, 98, 107-9, 121-2, 134-139.</td>
</tr>
<tr>
<td>Granagh, Co. Galway</td>
<td>Inauguration site?</td>
<td></td>
<td>Cruible</td>
<td>Rynne 1971:18</td>
</tr>
<tr>
<td>Ilaunloghan, Co. Kerry</td>
<td>Ecclesiastical site</td>
<td></td>
<td>Motif piece, moulds, tuyère</td>
<td>White Marshall and Walsh 2005, 19</td>
</tr>
<tr>
<td>Iniscealtra, Co. Clare</td>
<td>Ecclesiastical</td>
<td>‘copper working area and a furnace’</td>
<td>Motif-piece</td>
<td>Ryan 1988, 44.</td>
</tr>
<tr>
<td>Island McHugh, Co. Tyrone</td>
<td>Crannog</td>
<td></td>
<td>Cruibles</td>
<td>Davies 1950, 44</td>
</tr>
<tr>
<td>Kilgobbin, Stepaside, Co. Dublin</td>
<td>Ecclesiastical</td>
<td></td>
<td>Cruibles, slags (type unstated), clay mould</td>
<td>Bolger 2004:0647</td>
</tr>
<tr>
<td>Kilpatrick, Co. Meath</td>
<td>Ecclesiastical</td>
<td>Ironworking and non-ferrous working seem to have been undertaken in same area – see table xx</td>
<td>Mould, crucible</td>
<td>Swan 1995, 5,</td>
</tr>
<tr>
<td>Kiltiernan, Co.</td>
<td>Ecclesiastical</td>
<td>None</td>
<td>Cruibles, slag?</td>
<td>Waddell and</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Site</th>
<th>Site type</th>
<th>Metalworking features</th>
<th>Artefacts</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowth, C. Meath</td>
<td>Enclosed settlement</td>
<td>Metalworking hearth</td>
<td>Crucibles (one for gold work), heating trays</td>
<td>Eogan 1974 pro refs needed</td>
</tr>
<tr>
<td>Lisdoon, Co. Fermanagh</td>
<td>Ringfort</td>
<td>None</td>
<td>Crucibles</td>
<td>Brannon 1982, 57</td>
</tr>
<tr>
<td>Lisduggan 2, Co. Cork</td>
<td>Ringfort</td>
<td></td>
<td>Crucible</td>
<td>Twohig 1989, 19</td>
</tr>
<tr>
<td>Lough Faughan, C. Down</td>
<td>Crannog</td>
<td>None</td>
<td>Crucibles (traces of copper and tin), moulds, slag (copper).</td>
<td>Collins 1955, 58-9, 66, 74.</td>
</tr>
<tr>
<td>Nendrum, C. Down</td>
<td>Ecclesiastical</td>
<td>None</td>
<td>Crucibles, ingot, bronze nodules, clay mould, motif pieces</td>
<td>Bourke 2007, 406-11.</td>
</tr>
<tr>
<td>Platin, C. Meath</td>
<td>Occupation site</td>
<td></td>
<td>Crucible and tuyère fragments</td>
<td>Lynch 2000:0774</td>
</tr>
<tr>
<td>Raheennamadra, Co. Limerick</td>
<td>Ringfort</td>
<td>None</td>
<td>Crucible</td>
<td>Stenberger 1967, 49</td>
</tr>
<tr>
<td>Rathinaun, Co. Sligo</td>
<td>Crannog</td>
<td>None</td>
<td>Crucibles, mould fragments</td>
<td>Comber 2008, 131</td>
</tr>
<tr>
<td>Rathmullen, C. Down</td>
<td>Raised rath</td>
<td>None</td>
<td>Crucible fragment 'perhaps of early Christian date'</td>
<td>Lynn 1982, 145</td>
</tr>
<tr>
<td>Reask, Co. Kerry</td>
<td>Ecclesiastical</td>
<td>Metalworking areas, furnaces</td>
<td>Crucibles, furnace bottoms, tuyères, slag</td>
<td>Fanning 1981, 105-110, 117-120.</td>
</tr>
<tr>
<td>Roestown, Co. Meath</td>
<td>Enclosures</td>
<td></td>
<td>'crucible fragments, ingot moulds and bone trial pieces'</td>
<td>O’Hara 2007, 149</td>
</tr>
<tr>
<td>Sluggary, Co. Limerick</td>
<td>Ringfort (bivallate)</td>
<td>None</td>
<td>Moulds</td>
<td>Shee 1974:29</td>
</tr>
<tr>
<td>Tullylish, Co. Down</td>
<td>Ecclesiastical</td>
<td>Hearth, furnaces?</td>
<td>Crucibles, moulds, tuyères</td>
<td>Ivens 1987, 72, 76, 104-106</td>
</tr>
</tbody>
</table>

Copper ore has only been found at Lagore, Co. Meath Hencken 1950, 240-1) while lead ore has only been noted at Ardcloon, Co. Mayo (Rynne 1956). The meagre available evidence suggests
that the processing of copper ore is more likely to have taken place at its source. Two Early medieval smelting furnaces were found at the Ross Island copper mines near Killarney, Co. Kerry (O’Brien 2004). A furnace was also found at Moynagh crannog, Co. Meath but Bradley (1993, 77-80) believed that it was used for melting copper rather than smelting on the basis that there was very little slag on the site. A furnace at Movilla Abbey, Co. Down may also have been used for melting as it was found in association with crucibles and scrap copper alloy (Ivens 1984, 77). Slag was also present but it is not clear if this was from iron or copper smelting. Iron slag, however, has definitely been identified on the site Yates (1983, 62). De Paor (1970:06) describes the discovery of a ‘bronze working furnace at Iniscealtra but it is not stated if it was for smelting or melting. He does not, however, the presence of either clay mould or crucible fragments.

It would seem therefore that most raw bronze was acquired in ingot form. Bronze ingots have been found at Nendrum (Bourke 1997, 407) and Downpatrick (Ryan 1988, 43), Co. Down and Clonmacnoise, Co. Offaly (Ó Floinn and King 1998, 123). Recycling bronze is evidence by the scarp found on several sites and is the likely reason for the presence of stone ingot moulds on several sites. The importance of scrap and recycling is shown most strikingly by the metal worker’s hoard from the River Blackwater, Co Tyrone (Bourke 1993) which contain a collection of cut-up pieces of ecclesiastical objects. Some of the bronze scrap at Clonmacnoise was also decorated (King 1998:485).

The main evidence for bronze-working on early medieval sites comes from the presence of crucibles, clay moulds and stone ingot moulds, with secondary evidence in the form of motif pieces and scrap metal. Most of the evidence is bronze working but evidence for gold-working was present at Clonmacnoise, Co. Offaly, Knowth, Co. Meath and Clogher, Co. Tyrone (Table 7.2). This table also shows that this evidence is much more limited than for iron-working during this period. There is also a clear bias towards high status secular sites and the monasteries. Most of the larger monasteries that have been extensively excavated have produced evidence for fine metalwork, including Clonmacnoise, Co. Offaly, Armagh, Downpatrick, Nendrum and Movilla, Co Down. Small monasteries, such as Reask and Illaunloughan Co. Kerry have also produced evidence.

Relatively little work has been undertaken on the analysis of crucible residues in Ireland since the initial overview of the subject by Moss (1927). The most extensive work was on the material from Lagore (Hencken 1950, 237-239). Surprising, a few of the crucibles provided evidence for the presence of iron but not copper, while most tended to show traces of iron along with copper. Hencken argues that this was not evidence of the crucibles for ironworking as the melting and casting of iron did not develop until the Middle Ages (ibid.) although Scott (1990, 3) suggests that it may have occasionally occurred at an earlier stage. Hencken (1950, 239) concluded that the traces of iron ‘would have come into the crucibles as impurities in the crudely smelted copper’. Crucibles with residues of gold have been found at Knouth and Clonmacnoise (Comber 2008, 140). There has been much discussion of the possible uses of the various shaped crucibles and associated objects, such as ‘heating trays’ (e.g. Ó Riordáin 1942, 134-9) but no clear picture has emerged. The subject has most recently been summarised by Comber 2004, 33-36: 2008,139-141).

Comber (ibid., 146-148)) has also analysed the location of fine metal-working areas and concluded that they are found within the enclosures but usually away from houses. At Dunnisk, Co. Tyrone and Knowth, Co. Meath the ironworking and bronze-working areas were located at different of the site (ibid.). At Reask, however, ironworking and bronze-working seems to have taken place within hut G (Fanning 1981, 89). This is also one of the few sites where bronze-working appears to have been an indoor activity. At Iniscealtra (de Paor 1974:0009) bronze-working seems to have taken place within a flimsy circular wooden hut.

Evidence for bronze and copper-alloy working have been identified in a diverse range of ecclesiastical contexts from western monastic contexts (e.g. Illaunloughan) to established
significant centres of early medieval religious worship (e.g. Armagh, Downpatrick, Iniscealtra, Dunmisk and Clonmacnoise).

Some of these important sites including Armagh, Clonfad, Clonmacnoise, Movilla and Dunmisk were clearly engaged in highly specialised metalworking in the early medieval period. Extensive metalworking evidence in the form of a copper-working area and a furnace was uncovered during De Paor’s excavations at Iniscealtra (Ryan 1988, 44). The excavations at Clonfad (Stevens 2007, 43) uncovered considerable evidence for the production of high quality wrought iron bells and ornamental bronze-working (Stevens 2007, 43). The excavations at Cathedral Hill, Armagh have uncovered evidence for decorative moulds, trial pieces and enamel working suggesting high quality craftsmanship which can be paralleled with broadly contemporary evidence from high status ringforts and crannogs like Lagore crannog, Co. Meath (Hencken 1950), Moynagh Lough crannog (see above), Garranes ringfort, Co. Cork (Ó Ó Riordáin 1942).

**Early medieval glass, amber, vitreous materials and stone**

Glass appears to have been a substance of some status in the early medieval period. There is some evidence to suggest that glass was directly imported into Ireland and was melted and reworked on a number of select important secular and ecclesiastical sites (Henderson 1984, 98-99). However, evidence for working with vitreous material is in general, extremely limited (Table 7:3). It had long been thought that glass-working in Ireland comprised the recycling of old pieces of glass cullet (Edwards 1990, 92). The glass fragments found at Barranes, Ballycatteen and Lagore are often described as scrap glass (ibid Harden 1956). Bourke (2004, 180) takes issue with this. He notes that the beads and studs on these sites differ in colour from the vessel glass. He believes that the vessels were imported in a complete state for drinking purposes.

Henderson (1988) has for the first time identified the manufacture of glass from its constituent components at Dunmisk, Co. Tyrone, on the basis of crucible residues. Glass working and bronze-working were found in the same part of the site at Dunmisk (Ivens 1989, 57) and it is likely that similar type crucibles were used in both cases. Further analysis of crucible residues from other Irish sites in needed to provide more information on the manufacturing process. A growing number of ecclesiastical sites have also uncovered some evidence for glass-working. There is evidence for the working of glass at a number of ecclesiastical sites including Movilla Abbey (Henderson 1984, 98-99), Dunmisk (Ivens,1989, 57) and Cathedral Hill, (Harden 1984, 135) and Scotch Street (Lynn & McDowell 1988, 60-61; Swift 1998, 117) in Armagh. It appears that specialist smiths may have been employed by these secular and ecclesiastical classes for the production of decorative iron, bronze, copper and glass objects in this period.

<table>
<thead>
<tr>
<th>Site</th>
<th>Site type</th>
<th>Evidence</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armagh, Cathedral Hill</td>
<td>Ecclesiastical</td>
<td>Enamel and glass rods</td>
<td>Gaskill-Brown and Harper 1984, 122, 135-</td>
</tr>
<tr>
<td>Armagh, English Street</td>
<td>Ecclesiastical</td>
<td>Glass rods</td>
<td>Crothers, 1999, 63.</td>
</tr>
<tr>
<td>Cahercommaun, Co. Clare</td>
<td>Cashel</td>
<td>Fragment of bangle with traces of two perforations – possibly broken during manufacture</td>
<td>Hencken 1938, 39</td>
</tr>
<tr>
<td>Carrag Aille II, Co. Clare</td>
<td>Cashel</td>
<td>‘Flattened tear-drop shaped piece of glass’, glass vessel fragments - scrap?</td>
<td>Ó Ó Riordáin 1948, 91, 102</td>
</tr>
<tr>
<td>Site</td>
<td>Site type</td>
<td>Evidence</td>
<td>Reference</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Dunmisk, Co. Tyrone</td>
<td>Cemetery with settlement</td>
<td>A failed glass stud, failed glass beads, monochrome glass rods, reticella rods, scrap glass, glass making crucible fragments for making opaque yellow glass.</td>
<td>Henderson 1988, 115-7, 122</td>
</tr>
<tr>
<td>Garranes, Co. Cork</td>
<td>Ringfort</td>
<td>Millefiori glass rod, millefiori glass attached to bronze tube, Several small pieces of glass vessel - scrap? Lumps of enamel that had cooled after being molten.</td>
<td>Ó Riordáin 1942, 118-9, 121</td>
</tr>
<tr>
<td>Knowth, Co. Meath</td>
<td>Settlement site</td>
<td>‘enamel working’.</td>
<td>Eogan 1972:0006. <strong>Is this in 1974 pub</strong></td>
</tr>
<tr>
<td>Lagore, Co. Meath</td>
<td>Crannog</td>
<td>Moulds for glass studs, blue glass rods, millefiori glass rod, scrap glass? Roman or post Roman.</td>
<td>Hencken 127-30, 132</td>
</tr>
<tr>
<td>Lough Faughan, Co. Down</td>
<td>Crannog</td>
<td>Glass vessel fragment - scrap?</td>
<td>Colling 1995, 63</td>
</tr>
<tr>
<td>Movilla, Co. Down</td>
<td>Ecclesiastical</td>
<td>Glass rods, glass globules</td>
<td>Ivens 1984, 100</td>
</tr>
<tr>
<td>Moynagh crannog</td>
<td>Crannog</td>
<td>Lump of yellow enamel</td>
<td>Bradley 1987:39</td>
</tr>
</tbody>
</table>

Table 7:4 presents the stone working evidence from early medieval excavations. Lignite working is the main activity represented along with the making of spindle whorls and querns.

**Table 7:4 Excavated Early Medieval Stone working evidence 1930-2004**

<table>
<thead>
<tr>
<th>Site</th>
<th>Site type</th>
<th>Evidence</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armagh, English Street</td>
<td>Ecclesiastical</td>
<td>Unfinished lignite objects and off-cuts</td>
<td>Crothers 1999, 63, 66.</td>
</tr>
<tr>
<td>Ballyvegan, Co. Kerry</td>
<td>Cashel</td>
<td>Unfinished quern stone</td>
<td>Byrne 1991:065</td>
</tr>
<tr>
<td>Ballybrolly, Co. Armagh</td>
<td>Enclosure</td>
<td>Lignite central waste pieces</td>
<td>Lynn 1983, 50</td>
</tr>
<tr>
<td>Cahercommaun, Co. Clare</td>
<td>Cashel</td>
<td>Lignite central waste pieces; Incompletely perforated stone spindle whorls</td>
<td>Hencken 1938, 41-4.</td>
</tr>
<tr>
<td>Carraig Aile II, Co. Limerick</td>
<td>Cashel</td>
<td>Unfinished spindle whorls.</td>
<td>Ó Riordáin 1948, 86.</td>
</tr>
<tr>
<td>Cush, Co. Limerick</td>
<td>Ringforts</td>
<td>Unfinished spindle whorls.</td>
<td>Ó Riordáin 1940, 158.</td>
</tr>
<tr>
<td>Dublin, Fishamble St.</td>
<td>Urban</td>
<td>Amber work shop</td>
<td>Wallace 1977-9:0037 <strong>better ref anyone?</strong></td>
</tr>
<tr>
<td>Site</td>
<td>Site type</td>
<td>Evidence</td>
<td>Reference</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>-----------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Feltrim Hill, Co. Dublin</td>
<td>Cashel</td>
<td>Lignite central waste pieces</td>
<td>Hartnett and Eogan 1964, 28-9?</td>
</tr>
<tr>
<td>Lislear, Co. Tyrone</td>
<td>Ringfort</td>
<td>Unfinished lignite bracelet fragment</td>
<td>Simpson 1987:46</td>
</tr>
<tr>
<td>Moynagh, Co. Meath</td>
<td>Crannog</td>
<td>Unfinished quern stones</td>
<td>Bradley 1997</td>
</tr>
<tr>
<td>Oldcourt, C. Cork</td>
<td>Ringfort</td>
<td></td>
<td>Murphy and Ó Cuileanáin 1961, page ref</td>
</tr>
<tr>
<td>Reask, Co. Kerry</td>
<td>Ecclesiastical</td>
<td>Spindle whorl discarded before use.</td>
<td>Fanning 1981, 125.</td>
</tr>
</tbody>
</table>

**Early medieval craft working with organic materials: wood, textiles and leather:**

**Background**

Early medieval crafts also involved the manufacturing of objects in wood, leather, bone and antler and the use of various types of textiles. Table 7.5 presents the evidence for woodworking, leatherworking and textile working. The table does not include tools as some tools can be used for a variety of crafts. The only exception is the spindle whorl which can be exclusively associated with textile working. Comber (2008) has discussed the evidence for these craft-working activities that includes consideration of the tools that might have been used. Pieces of antler hat were not ‘objects’ are taken as evidence for antler working and considered as off cuts. Evidence for woodworking is confined to sites with waterlogged deposits and there is a clear bias towards crannogs. Even on these sites, however, the evidence may be under-represented as evidence for craft-working waste may not have been recorded.

**Textile Production**

Early medieval textiles and dress rarely survive archaeologically except in very extremely waterlogged conditions such as at Lagore, Co. Meath (Edwards 1990, 81). The equipment used in the production of cloth and very occasional representations of dress on stone sculpture and manuscripts represent the principal surviving archaeological forms for this activity. Evidence for the harvesting and spinning of cloth have been identified in the form of iron shears, spindle whorls, stone loom weights. Archaeological evidence for the processes of textile production has been identified at a number of sites including Clonfad, Co. Westmeath (Stevens 2007, 43). Excavations at this site revealed an iron shears and a bone object known as a weft-beater which was used in the production of textiles and wool in the early medieval period (Stevens 2007, 43). Evidence for the extraction and production and of dog whelk shells for dying of clothing has been identified at on the island of Inishkea North, C. Mayo (Henry 1952, 163-78) while other forms of dyes such as wood pods were recovered from the raised ringfort at Deer Park Farms, Co. Antrim (Lynn 1989, 197).

Hodkinson (1987) considered the evidence for weaving in Ireland during his period and noted the paucity of loom weights compares with Anglo-Saxon England. He concluded that the Irish used a loom that did not utilise loom weights and the so-called loom weights from were used for a different purpose. The evidence is spread across both ecclesiastical and secular sites and there is no clear difference between high and low status sites. I may well be that certain aspects of this activity was concentrated on high status sites. It is perhaps surprising to find
the manufacture of quern stones occurring at Lagore and Moynagh crannogs. It is not clear if the intensity of some aspects of the evidence, e.g. spindle whorls at Carraig Aille, is due to the fact that these sites were centres for such activity or simply because more of the site was excavated.

Table 7.5. Excavated Early Medieval Craft working evidence (organic materials) 1930-2004

The quantification of spindle whorls is based on Hodkinson 1997, 49-50.

<table>
<thead>
<tr>
<th>Site name</th>
<th>Site type</th>
<th>Craft type</th>
<th>Evidence</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armagh, Cathedral Hill</td>
<td>Ecclesiastical</td>
<td>Antler working</td>
<td>Sawn antler waste</td>
<td>McCormick and Murray 2007, 196</td>
</tr>
<tr>
<td>Balriggan, Co. Louth</td>
<td>Enclosures</td>
<td>Textile working</td>
<td>Whorl</td>
<td>Delaney 2003:1226</td>
</tr>
<tr>
<td>Ballinderry II, Co. Offaly</td>
<td>Crannog</td>
<td>Leather working</td>
<td>Leather fragments (scraps?)</td>
<td>Hencken 1942, 58.</td>
</tr>
<tr>
<td>Ballinderry II, C. Offaly</td>
<td>Crannog</td>
<td>Textile working</td>
<td>Bone (6) and stone (4) whorls</td>
<td>Hencken 1942, 55, 64.</td>
</tr>
<tr>
<td>Ballycateen, Co. Cork</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Stone whorl (1)</td>
<td>(Ó Ríordáin and Hartnett 1943, 31</td>
</tr>
<tr>
<td>Ballyfounder, Co. Down</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Stone whorls (number not specified)</td>
<td>Waterman 1958, 49</td>
</tr>
<tr>
<td>Ballymacash, Co. Antrim</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Stone whorl (1)</td>
<td>Jope and Ivens 1998, 120</td>
</tr>
<tr>
<td>Ballyvourney, Co. Cork</td>
<td>House site</td>
<td>Textile working</td>
<td>Spindle whorl (1)</td>
<td>Kelly 1952, 31</td>
</tr>
<tr>
<td>Bowling Green, Co. Tipperary</td>
<td>Ring fort?</td>
<td>Textile working</td>
<td>Stone whorl (1)</td>
<td>Fanning 1971, 14-15</td>
</tr>
<tr>
<td>Cahercommaun, Co. Clare</td>
<td>Cashel</td>
<td>Textile working</td>
<td>Whorls of stone, antler and bone (53)</td>
<td>Hencken 1938, 43-4</td>
</tr>
<tr>
<td>Cahercommaun, Co. Clare</td>
<td>Cashel</td>
<td>Antler working</td>
<td>Antler off cuts</td>
<td>Hencken 1938, 63</td>
</tr>
<tr>
<td>Caherlehillan, Co. Kerry</td>
<td>Ecclesiastical</td>
<td>Textile working</td>
<td>Spindle whorls</td>
<td>Sheehan 1993:118</td>
</tr>
<tr>
<td>Carn, Co. Fermanagh</td>
<td>Cashel</td>
<td>Textile working</td>
<td>Bone whorl (1)</td>
<td>Brannon 1982, 63</td>
</tr>
<tr>
<td>Carraig Aille, Co. Limerick</td>
<td>Cashel</td>
<td>Textile working</td>
<td>Carraig Aille I: Bone whorls (12), stone whorls (10); Carraig Aille II, bone (12), stone (14) + 5 unfinished, Spectacles, bone (3), stone (2).</td>
<td>Ó Ríordáin 1948, 83, 86, 94, 99-100.</td>
</tr>
<tr>
<td>Carraig Aille II, Co. Limerick</td>
<td>Cashel</td>
<td>Bone working</td>
<td>Unfinished bone pins</td>
<td>Ó Ríordáin 1948, 83</td>
</tr>
<tr>
<td>Castlescreen I, Co. Down</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Stone whorl (1)</td>
<td>Dickinson and Waterman, 1960, 72</td>
</tr>
<tr>
<td>Church Island, C. Kerry</td>
<td>Ecclesiastical</td>
<td>Textile working</td>
<td>Stone whorl (1)</td>
<td>O’Kelly 1958, 113.</td>
</tr>
<tr>
<td>Clea Lakes, Co. Down</td>
<td>Crannog</td>
<td>Textile working</td>
<td>Stone whorls (2)</td>
<td>Collins and Proudfoot 1959, 98</td>
</tr>
<tr>
<td>Site name</td>
<td>Site type</td>
<td>Craft type</td>
<td>Evidence</td>
<td>Reference</td>
</tr>
<tr>
<td>---------------------------</td>
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</tr>
<tr>
<td>Clonfad, Co. Westmeath</td>
<td>Ecclesiastical</td>
<td>Bone/antler working</td>
<td>Bone off cuts</td>
<td>Stevens 2006, 11</td>
</tr>
<tr>
<td>Clonmacnoise, Co. Offaly</td>
<td>Ecclesiastical</td>
<td>Antler working</td>
<td>Antler off-cuts</td>
<td>McCormick and Murray 2007, 217</td>
</tr>
<tr>
<td>Cush, Co. Limerick</td>
<td>Ringforts</td>
<td>Textile working</td>
<td>Stone whorls (4), loom weights (2)</td>
<td>Ó Riordáin 1940, 158.</td>
</tr>
<tr>
<td>Deeppark Farms, C. Antrim</td>
<td>Raised rath</td>
<td>Leatherworking</td>
<td>Wooden lasts, leather shoe fragments</td>
<td>Neil 2001, 14-15</td>
</tr>
<tr>
<td>Deeppark Farms, C. Antrim</td>
<td>Raised rath</td>
<td>Antler working</td>
<td>Antler off cuts</td>
<td>McCormick and Murray 2007, 221</td>
</tr>
<tr>
<td>Dublin, Christchurch Place</td>
<td>Urban</td>
<td>Textile working</td>
<td>'Weaving tablets and bone spindle whorls'</td>
<td>O' Riordain 1974:0014</td>
</tr>
<tr>
<td>Dublin, Fishamble St.</td>
<td>Urban</td>
<td>Antler working</td>
<td>Antler waste</td>
<td>McCormick and Murray 2007, 231</td>
</tr>
<tr>
<td>Dún Eoghanachta, Inis Író, Co. Galway</td>
<td>Cashel</td>
<td>Antler working</td>
<td>Antler waste fragments</td>
<td>McCormick and Murray 2007, 237</td>
</tr>
<tr>
<td>Feltrim Hill, Co. Dublin</td>
<td>Ringfort?</td>
<td>Textile working</td>
<td>Stone whorl 1</td>
<td>Hartnett and Eogan 1964, 32.</td>
</tr>
<tr>
<td>Garranes, Co. Cork</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Stone whorls (3) and loom weights (3)</td>
<td>Ó Riordáin 1942, 111</td>
</tr>
<tr>
<td>Garryduff, C. Cork</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Whorls (27 stone and 1 bone)</td>
<td>Ó’Kelly 1993, 66 89-90.</td>
</tr>
<tr>
<td>Grange, Co. Limerick</td>
<td>Hit site?</td>
<td>Textile working</td>
<td>Whorl 1</td>
<td>Ó Riordáin 1949,</td>
</tr>
<tr>
<td>Gransha, Co. Down</td>
<td>Raised rath</td>
<td>Textile working</td>
<td>Whorls (number unspecified)</td>
<td>Lynn 1985, 88.</td>
</tr>
<tr>
<td>Illaunloughan, Co. Kerry</td>
<td>Ecclesiastical</td>
<td>Antler working</td>
<td>Antler waste</td>
<td>McCormick and Murray 2007, 239</td>
</tr>
<tr>
<td>Inishcealtra, Co. Clare</td>
<td>Ecclesiastical</td>
<td>Bone/antler working</td>
<td>Comb blanks</td>
<td>De Paor 1971:10</td>
</tr>
<tr>
<td>Iniskea North, Co. Mayo</td>
<td>Sand hill site</td>
<td>Textile working</td>
<td>Bone (1) and stone whorls (1)</td>
<td>Henry 1945, Fig. 10.</td>
</tr>
<tr>
<td>Kells, Co. Meath</td>
<td>Ecclesiastical</td>
<td>Textile working</td>
<td>Stone whorl</td>
<td>Byrne 1988:57</td>
</tr>
<tr>
<td>Killeenradadrum, Co. Tipperary</td>
<td>Ecclesiastical</td>
<td>Textile working</td>
<td>Stone whorls (2)</td>
<td>Manning 1984, 258</td>
</tr>
<tr>
<td>Killickaweeny, Co. Meath</td>
<td>Enclosure</td>
<td>Textile working</td>
<td>Antler (1) and stone (1) whorls</td>
<td>Carlin et al 2008, 44.</td>
</tr>
<tr>
<td>Site name</td>
<td>Site type</td>
<td>Craft type</td>
<td>Evidence</td>
<td>Reference</td>
</tr>
<tr>
<td>-----------------</td>
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<td>-----------------------------------------------</td>
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<tr>
<td>Fermanagh</td>
<td>Settlement</td>
<td>Textile working</td>
<td>‘Spindle-whorls’</td>
<td>Eogan 1991, 120.</td>
</tr>
<tr>
<td>Lagore, Co. Meath</td>
<td>Crannog</td>
<td>Woodworking, leather working</td>
<td>Cone shaped lathe turning wasters, rough out bowl, leather scraps</td>
<td>Hencken 1950, 157, 165, 181</td>
</tr>
<tr>
<td>Lagore, C. Meath</td>
<td>Crannog</td>
<td>Textile working</td>
<td>Stone (8) and bone whorls (20) - excludes old finds.</td>
<td>Hencken 1950, 175, 194.</td>
</tr>
<tr>
<td>Leacanabuaile, Co. Kerry</td>
<td>Cashel</td>
<td>Textile working</td>
<td>Stone whorl (1), loom weight (1)</td>
<td>Ó Riordáin and Boy 1941, 93</td>
</tr>
<tr>
<td>Lisduggan I, Co. Cork</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Stone whors (number not specified)</td>
<td>Twohig 1989, 17</td>
</tr>
<tr>
<td>Lissachigel, Co. Louth</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Stone whorl (1)</td>
<td>Davis 1939, 225</td>
</tr>
<tr>
<td>Lough Faughan, Co. Down</td>
<td>Crannog</td>
<td>Textile working</td>
<td>Stone whors (4)</td>
<td>Collins 1955, 68</td>
</tr>
<tr>
<td>Moynagh, Co. Meath</td>
<td>Crannog</td>
<td>Woodworking</td>
<td>Cache of staves</td>
<td>Bradley 1997, check</td>
</tr>
<tr>
<td>Millockstown, Co. Louth</td>
<td>Settlement cemetery</td>
<td>Textile working</td>
<td>Stone whorl (1)</td>
<td>Manning 1986, 160</td>
</tr>
<tr>
<td>Nendrum, Co. Down</td>
<td>Ecclesiastical</td>
<td>Textile working</td>
<td>Whors</td>
<td>Lawlor 1925,</td>
</tr>
<tr>
<td>Oughtymore, Co. Derry</td>
<td>Sand hill site</td>
<td>Textile working</td>
<td>Antler spindle whorl (1)</td>
<td>Mallory and Woodman 1984, 53-4</td>
</tr>
<tr>
<td>Rathbeg, C. Antrim</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Stone whorl? (1)</td>
<td>Warhurst 1979, 96-7</td>
</tr>
<tr>
<td>Rathmullen, Co. Down</td>
<td>Raised rath</td>
<td>Textile working</td>
<td>Stone spindle whorls (8) and possible loom weights (2)</td>
<td>Lynn 1982, 132-134</td>
</tr>
<tr>
<td>Raystown, Co. Meath</td>
<td>Cemetery settlement</td>
<td>Textile working</td>
<td>Bone spindle whorl</td>
<td>Seaver 2004:1334</td>
</tr>
<tr>
<td>Seacash, Co. Antrim</td>
<td>Ringfort</td>
<td>Leatherworking, textile working</td>
<td>Leather scrap, stone whorl (1)</td>
<td>Lynn 1978, 67, 69,</td>
</tr>
<tr>
<td>Shaneen Park, Co. Antrim</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Stone loom weight (1)</td>
<td>Proudfoot 1958, 30-31</td>
</tr>
<tr>
<td>Smithstown, Co. Meath</td>
<td>Souterrains</td>
<td>Textile working</td>
<td>Bone whorl</td>
<td>Gowen 1998:55</td>
</tr>
<tr>
<td>Spittle Ballee, Co. Down</td>
<td>Ringfort</td>
<td>Textile working</td>
<td>Stone whorl (1)</td>
<td>Waterman 1958, 63</td>
</tr>
</tbody>
</table>
Bone, antler and horn

Objects made from animal skeletal remains were very common throughout the early medieval period. A whole range of objects used for general domestic activities (e.g. bone knives and handles), textile production (e.g. spindle whorls and needles), as well as items of personal adornment and recreation (e.g. pins, combs and gaming pieces) were produced principally using bone. Antler tines were collected in the woods in late winter and early spring when the deer had shed their old antlers. It was also used to produce a range of domestic items though the most characteristic object produced using it was the comb (Edwards 1990, 84). Evidence for antler working in the form of antler waste, cut, and reworked tines has been identified at a growing number of sites including the unenclosed cemetery at Dooey, Co. Donegal. Excavations in more recent years have also uncovered a growing body of evidence for bone and antler working though much of this information still awaits complete publication.

Excavation beside Clogher cathedral uncovered the remains of a bronze working site and a stone-lined well (Warner, R 1974, Exc. Bulletin). It was suggested that sawn antlers tines, bones recovered from the well was early medieval in date. Traces of bone and antler working were identified at St. Peter's church, Waterford (Hayden 1998-8 E435) and at Cormac's Chapel, Cashel, Co. Tipperary (Hodkinson 1994, 171). Antler waste has also been identified inside the fill of ditches at Derrynaflan, Co. Tipperary (Flinn 1986 & 87, Exc. Bulletin), Kells, Co. Meath (Byrne, G 1988, Exc. Bulletin). Evidence for antler working and the production of bone combs have also been excavated at Iniscealtra, Co. Clare (de Paor 1970-76 & 1980-84, Exc. Bulletin) and in a number of contexts at Clonmacnoise including the New graveyard (King, H 1990-98, Exc. Bulletin), beneath the Cross of the Scriptures to the west of the Cathedral (King, H 1994, Exc. Bulletin) and close to the medieval castle (Murphy, D 1999, Exc. Bulletin). A number of contexts at Scotch Street and Market Street (Gilmour, S 1997, Exc. Bulletin) in Armagh City have also uncovered extensive evidence for early medieval bone and antler working debris. The excavations at Scotch Street were significant because the evidence was found to have been preceded by an earlier 5-7th century ecclesiastical cemetery described in the historical sources as Temple na Fertae (See Lynn 1988, 69). Evidence for antler and bone working at Kilpatrick, Co. Westmeath has been discussed by Swan (1994-95). The recent excavations at Clonfad have also brought to light considerable evidence for both bone and antler-working during the early medieval period (Stevens 2007, 43).
Chapter 8. Early medieval trade and exchange

Introduction

The early medieval economy was variously social, ideological and economic in character, and revolved around the distribution and periodic exchange of objects, food, raw materials, slaves and some exotic commodities. Most of this undoubtedly revolved around essentially local and regional trading territories, as cattle and bags of grain were brought by client farmers to their lord's residence or as raw materials were exchanged for finished objects. Almost all of the local trade is probably impossible to trace, although there are some objects that seem to be far from their origins (e.g. penannular brooches, souterrain ware) and we might be able to identify places where large quantities of grain was stored. Our archaeological evidence can only trace the movement of more exotic goods, particular pottery, glass and some objects such as weaponry.

Imports and exports to and from Ireland are often treated as peripheral to the development of trade in Early Medieval Europe. In one recent major work, 'Origins of the European Economy' (McCormick 2001), only passing reference is given to Ireland, or the Irish trade. It is necessary, nevertheless, to understand how Western European trade routes developed in the latter half of the first millennium in order to recognise their implications on Irish archaeology from this period. The thesis outlined by Henri Irene in the early-twentieth century is still substantially accepted as the basis for subsequent study. Irene argued that Western European trade routes during the Early Medieval period continued to be dominated by the economic sphere of influence of the Western Roman Empire (Irene 1925, 14). These trade routes survived the collapse of the empire in the west in A.D. 476 and struggled on for another century, aided and assisted by trade with the Eastern Roman Empire. Muslim conquests around the shores of the Mediterranean, however, cut off the Byzantine and Levantine trade with northwest Europe by the eighth century (ibid. 17). Although his theory of a northward shift in the centre of trade from the Mediterranean to northern Europe is still widely accepted - and is strongly supported by the Irish evidence - Irene's rationale for this movement has been attacked for being oversimplistic (McCormick 2001, 575). Alternate factors, ranging from economic sanctions imposed by the Byzantine Empire (Lewis 1951, 89-131), to the development of the silver currency standard, rather than the former gold standard (Diehard 1971, 350-1), have also been argued as reasons for this northward shift in trade.

Irene's study was predominantly focused on the rise of the Carolingian Empire, and thus other paradigms must be sought to explain trading patterns in the later part of the first millennium. In Ireland this is especially marked by the arrival of the Vikings and the establishment of Norse (and latterly Hiberno-Norse) towns. It is tempting to view the subsequent change in trade routes to and from Ireland as being solely due to the Vikings, but other factors, such as the creation of a market-based economy in Carolingian Europe, may have been equally influential (Hodges 1989, 152; Hodges 2004).

Evidence for trade in Ireland during the Early Medieval period comes from two main sources - archaeological evidence; and literary evidence. The former is largely representative of imports into Ireland from overseas, whereas the latter gives indications of the sort of material exported from Ireland, as well as the types of goods which have left no material remains. Certain exotic goods - especially pottery, glass and coinage - are datable, and these suggest that there were three phases of trade in Early Medieval Ireland - Mediterranean trade (c. A.D. 400 - 600); Gaul-Frankish trade (c. A.D. 600 - 800); and Anglo-Norse trade (c. A.D. 800 - 1150). Contemporary documentary sources such as Irish legal tracts or various Lives of the saints, can be used to elaborate these trading phases, especially by describing trade goods which otherwise leave no archaeological record. The nature of some exotic material - for example, jet
and amber - means that they cannot be so easily dated, and these goods will be dealt with separately.

External trade - i.e. imports and exports - during the earlier phases - c. A.D. 400 - A.D. 800 - have been the subject of most academic interest (Wooding 1996; Campbell 2007), but there is also evidence for substantial external trade during the later phase. It is also possible that internal trade - i.e. trade between the various tuath on the island of Ireland - may have played a more significant role than hitherto recognised in reinforcing social relationships as well as a means of distributing various goods throughout the community. The nature of this trade makes it often difficult to distinguish in the archaeological record, and further work is still required in this area. As such this chapter will focus primarily on external trade, and internal trade will be discussed at the end of the section.

**Early Medieval Ireland and trade with the Mediterranean (c. AD 400 - 600)**

**Background**

The archaeological evidence for Mediterranean imports into Ireland has been described and discussed by Wean Campbell (1996, 2007). The early medieval ringfort at Garranes, Co. Cork (Ó Ríordáin 1942); and the cemetery/settlement at Cabinteely (Mount Offaly), Co. Dublin (Conway 1998:124) (Table 8.1) are the only two sites in Ireland to produce sherds of Phocaean Red Slipware (PRS), which, along with African red Slipware (ARS), constitutes the pottery group formerly described as ‘A’-ware (Thomas 1954; Thomas 1959).

**Table 8.1: Sherds of Phocaean Red Slipware (PRS) - ‘A-Ware’ - found in Ireland**

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garranes, Co. Cork</td>
<td>Multivallate Rath</td>
<td>Forty sherds of Phocaean Red Slipware (A-ware)</td>
<td>Ó Riordáin 1942</td>
</tr>
</tbody>
</table>

Phocaean Red Slipware/Phocaean Red-Slipped Ware (PRS) originated in modern-day Turkey, and had a ‘soft orange-red, pink or brownish-red fabric’, covered by a dark red wash (Thomas 1959, 90). It is quite similar to the earlier Gaulish Samian ware, or *terra sigillata*, and it is possible that some of the Samian ware finds from Ireland may be misidentified PRS (Table 8.2). Phocaean Red Slipware was traded to Ireland, Britain and Spain from the mid-fifth to the mid-sixth centuries A.D (Laing & Longley 2006, 139), and that found in the British Isles coincides with Hayes ‘Form 3’ (1972, 464) which can be dated to A.D. 500 ± 25 (*ibid.* 14).

**Table 8.2: Sherds of Roman/Late-Roman Pottery found in Ireland**

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Ballinderry crannog No. 2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dundrum, Co. Down</td>
<td>Rath - re-modelled into castle</td>
<td>One sherd of Samian ware</td>
<td>Collins 1959, 12; Bateson 1973, 65.</td>
</tr>
</tbody>
</table>
The nature of this type of PRS suggests that it may have been imported as table ware. In contrast, the far more numerous sherds of Late Roman Amphorae - Thomas' 'B-ware' (1954; 1959) - belong to storage jars. It was most probably the contents of these amphorae which were being imported into Ireland at his time, and the ceramic containers were only incidental to this process.

Charles Thomas (1959, 92) subdivided ‘B ware’ into Bi, Bii, Biii and Biv - subsequently Bv and Bvi were also added. Excavations in Carthage have refined this typology - amphorae have been re-classified as ‘Late Roman 1-7’ (LR1-LR7) - and in many cases, have allowed the various subtypes to be identified with specific regions around the Mediterranean (Riley 1981). Late Roman Amphorae have been found on nineteen sites in Ireland (Table 8.3), and ecclesiastical sites dominate this assemblage (58%). In most cases the pottery has only been generally classified as ‘B-ware’, but sherds of LR1 (Bii) amphorae were identified at Blanchfieldstown, Co. Kilkenny (Lennon 2004:0868), Kilgrovan, Co. Waterford (Purcell 2003:1882), and Lurgoe (Derrynafian), Co. Tipperary (O Floinn 1985:53); and LR2 (Bi) amphorae at Cabinteely (Mount Offaly), Co. Dublin (Conway 1998:124), Clogher Demesne (Clogher), Co. Tyrone (Warner 1972:0031), and Reask, Co. Kerry (Fanning 1981, 113).

Table 8.3: Sherds of Late Roman amphorae - ‘B-ware’ - found in Ireland

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blanchfieldsland, Co. Kilkenny</td>
<td>Rath</td>
<td>Two sherds of LR1 amphorae (Bii)</td>
<td>Lennon 2004:0868</td>
</tr>
<tr>
<td>Cabinteely, Co. Dublin (Mount Offaly)</td>
<td>Ecclesiastical Site</td>
<td>Sherd of LR2 amphorae (Bi)</td>
<td>Conway 1998:124</td>
</tr>
<tr>
<td>Caherlihillan, Co. Kerry</td>
<td>Ecclesiastical Site</td>
<td>Sherd of B-ware</td>
<td>Sheahan 1994:118</td>
</tr>
<tr>
<td>Cashel, Co. Tipperary (Cormac’s Chapel)</td>
<td>Ecclesiastical Site</td>
<td>Sherd of B-ware</td>
<td>Hodkinson 1993:203</td>
</tr>
<tr>
<td>Cherrywood, Co. Dublin</td>
<td>Ecclesiastical site?</td>
<td>Sherd of B-ware</td>
<td>O Neill 1999:169</td>
</tr>
<tr>
<td>Clogher Demesne, Co. Tipperary (Clogher)</td>
<td>Multivallate Rath</td>
<td>LR/IA amphora/jug</td>
<td>Warner 1972:0031</td>
</tr>
<tr>
<td>Colp West, Co. Meath</td>
<td>Ecclesiastical Site</td>
<td>Sherd of B-ware</td>
<td>Gowen 1988:51</td>
</tr>
<tr>
<td>Garranes, Co. Cork</td>
<td>Multivallate Rath</td>
<td>Two hundred sherds of B-ware</td>
<td>O Riordáin 1942</td>
</tr>
<tr>
<td>Townland/ Site Name</td>
<td>Site Type</td>
<td>Comments</td>
<td>Reference</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>(Garryduff 1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilgrovan, Co. Waterford</td>
<td>Ecclesiastical Site</td>
<td>Sherd of LR1 amphorae (Bii)</td>
<td>Purcell 2003:1882</td>
</tr>
<tr>
<td>Lisnacaheragh, Co. Cork (Garranes II)</td>
<td>Rath</td>
<td>Sherd of B-ware</td>
<td>O'Donnell 1991:022</td>
</tr>
<tr>
<td>Lurgoe, Co. Tipperary (Derrynaflan)</td>
<td>Ecclesiastical Site</td>
<td>Sherd of LR1 amphorae (Bii)</td>
<td>O Floinn 1985:53.</td>
</tr>
<tr>
<td>The Point, Lambay Island, Co. Dublin</td>
<td>Burial Site</td>
<td>Sherd of B-ware</td>
<td>Cooney 1995:100</td>
</tr>
<tr>
<td>Randalstown, Co. Meath (St. Anne's)</td>
<td>Ecclesiastical Site</td>
<td>Sherd of B-ware</td>
<td>Kelly 1975:32</td>
</tr>
<tr>
<td>Reask, Co. Kerry</td>
<td>Ecclesiastical Site</td>
<td>Six sherd of LR1 amphorae (Bii)</td>
<td>Fanning 1981, 113</td>
</tr>
<tr>
<td>Reask, Co. Kerry</td>
<td>Ecclesiastical Site</td>
<td>One sherd of LRA amphorae (Biii)</td>
<td>Fanning 1981, 113</td>
</tr>
<tr>
<td>Reask, Co. Kerry</td>
<td>Ecclesiastical Site</td>
<td>Two sherds of unclassified B-ware</td>
<td>Fanning 1981, 113</td>
</tr>
</tbody>
</table>

LR1 (Bii) was probably manufactured in south-east Asia Minor (Empereur & Picon 1989); and LR2 (Bi) was produced in the Peloponnese in southern Greece (Megaw & Jones 1983; Munn 1985), and possibly the islands of Chios and Kos (Vroom 2003, 143). Sherds of ‘Bii’ were recovered from Dalkey Island, Co. Dublin (Liversage 2003, 143). Sherds of LR2 amphorae (Bi) means that they were used for transporting olive oil (1959, 92), and that the shape of LR2 amphorae (Bi) means that they were used for transporting wine (ibid.). Work on the late Roman ship wreck off the island of Yassi Ada (which sank off the coast of Kos) has shown, however, that form did not necessarily follow function with amphorae, and some of the amphorae recovered from the wreck showed evidence for having been used to carry various materials at different times (Bass & van Doorninck 1982).

There is no available archaeological evidence to identify the materials which were traded with the Mediterranean merchants, however it seems possible that many of the intangible imports and exports referred to in seventh and eighth century writings may have also been the subject of trade during this earlier period. These items will be discussed in greater detail in the following section.

**Early Medieval Ireland and Gaulo-Frankish Trade (c. A.D. 600-800)**

**Background**

By the seventh century AD, the visible archaeological evidence suggests that there is a shift in emphasis in trade away from the Mediterranean and to continental Europe. Indeed, there is also evidence that early medieval Ireland, with its growing population, wealthy lordly classes and ‘booming’ agricultural economy, becomes a significant region in the western European economy. Our principal archaeological evidence consists of E-ware, glass and weaponry being imported from Gaul and the Anglo-Saxon world. By the seventh century Irish missionaries were working their way through continental Europe, and the hagiographies of these individuals allow for further information about trade between Ireland and Western Europe. Irish law tracts, such
as the ‘Muirbretha’ (‘Sea-Laws’), also give some hint as to what material was being shipped around the coasts of Ireland.

**Imported Pottery:**

‘E-ware’ pottery is the most frequently discovered type of imported pottery in the British Isles, and has been identified on over 40 Irish sites (Table 8.4; Doyle 1998, 93). As with the earlier imported pottery, E-ware tends to be recovered from ecclesiastical sites and high status sites (multivallate raths and crannogs). A regional variation is also evident in the distribution of E-ware in Ireland, and almost half of the sites that contained E-ware are located in eastern/central Ulster (Campbell 2007, 115).

**Table 8.4: Sherds of E-ware found in Ireland**

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballynahinch, Co. Offaly (Ballinderry 2)</td>
<td>Crannog</td>
<td>Sherds of E1-ware</td>
<td>Hencken 1942.</td>
</tr>
<tr>
<td>Balrothery, Co. Dublin (Rosepark)</td>
<td>Enclosure</td>
<td>Large number of sherds of E-ware</td>
<td>Carroll 2000:0209; Carroll 2001:334</td>
</tr>
<tr>
<td>Cabinteely, Co. Dublin (Mount Offaly)</td>
<td>Ecclesiastical Site</td>
<td>Sherds of E3-ware</td>
<td>Conway 1998:124</td>
</tr>
<tr>
<td>Cahirhillilan, Co. Kerry</td>
<td>Ecclesiastical Site</td>
<td>Sherds of E-ware</td>
<td>Sheahan 1994:118</td>
</tr>
<tr>
<td>Colp West, Co. Meath</td>
<td>Ecclesiastical Site</td>
<td>Sherds of E-ware</td>
<td>Gowen 1988:51</td>
</tr>
<tr>
<td>Corbetstown, Co. Westmeath (Kilpatrick/Killucan)</td>
<td>Ecclesiastical Site</td>
<td>Sherds of E-ware</td>
<td>Swan 1980-4:0199</td>
</tr>
<tr>
<td>Townland/ Site Name</td>
<td>Site Type</td>
<td>Comments</td>
<td>Reference</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------------</td>
<td>------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>Cullybackey, Co. Antrim (Markstown)</td>
<td>Souterrain</td>
<td>One sherd of E-ware</td>
<td>McSparrron 2001:014</td>
</tr>
<tr>
<td>Dalkey Island, Co. Dublin</td>
<td>Emporium</td>
<td>Multiple sherds of E3-ware</td>
<td>Liversage 1968, 165-168</td>
</tr>
<tr>
<td>Dalkey Island, Co. Dublin</td>
<td>Emporium</td>
<td>Multiple sherds of E3-ware</td>
<td>Liversage 1968, 165-168</td>
</tr>
<tr>
<td>Dalkey Island, Co. Dublin</td>
<td>Emporium</td>
<td>Multiple sherds of E3-ware</td>
<td>Liversage 1968, 165-168</td>
</tr>
<tr>
<td>Garranes, Co. Cork</td>
<td>Multivallate Rath</td>
<td>Seven sherds of E-ware</td>
<td>O Riordáin 1942</td>
</tr>
<tr>
<td>Gracedieu, Co. Dublin</td>
<td>Ecclesiastical Site</td>
<td>Sherd of E-ware</td>
<td>Gowen 1988:16</td>
</tr>
<tr>
<td>Lackenavorna, Co. Tipperary (Killederdadrum)</td>
<td>Ecclesiastical Site</td>
<td>One sherd of E2-ware</td>
<td>Manning 1984, 252.</td>
</tr>
<tr>
<td>Marshes Upper, Co. Louth</td>
<td>Unenclosed Settlement</td>
<td>Three sherds of E-ware</td>
<td>Gowen 1992, 105</td>
</tr>
<tr>
<td>Nendrum, Co. Down</td>
<td>Ecclesiastical Site</td>
<td>Sherd of E1-ware</td>
<td>Lawlor 1925.</td>
</tr>
<tr>
<td>Ninch, Co. Meath</td>
<td>Multi-period site</td>
<td>Several sherds of E-ware</td>
<td>Eogan &amp; Reid 2000:0760; McConway 2001:1007</td>
</tr>
<tr>
<td>Randalstown, Co. Meath (St. Anne's)</td>
<td>Ecclesiastical Site</td>
<td>Sherd of E-ware</td>
<td>Kelly 1975:32</td>
</tr>
</tbody>
</table>
Early medieval trade and exchange

<table>
<thead>
<tr>
<th>Townland/Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reask, Co. Kerry</td>
<td>Ecclesiastical Site</td>
<td>Three sherds of E-ware</td>
<td>Fanning 1981, 113</td>
</tr>
</tbody>
</table>

‘E-ware’ is thought to have originated in northwest Gaul - although the production sites have yet to be identified - and comprises jars (E1), beakers (E2), bowls (E3), pitchers (E4) and storage jars (E5) (Thomas 1959, 96-98). It has been suggested that, unlike ‘B-Ware’ - which was largely imported as containers for the trade goods - ‘E-Ware’ was principally traded as a ceramic commodity (Doyle 1998, 93), and it is believed to have been imported around A.D. 525-700.

Sherds of dérivées sigillées paléochrétiennes (DSPA/D-ware) (Rigoir 1968) have been recovered from two sites in Ireland – Clógher, Co. Tyrone (Campbell 2007, 31) and Carbinteely (Mount Offaly), Co. Dublin (Conway 1998:124) (Table 8.5). This was a product of the Bordeaux area (Soulas 1996, 252), and is dated to the sixth/seventh century (Campbell 2007, 28).

Sherds of ‘F-ware’ pottery have been recovered from two sites in Ireland – Corbetstown (Kilpatrick), Co. Meath (Swan 1980-84:0199), and Smithstown, Co. Meath (Gowen 1988:55) (Table 8.5). Campbell argues that ‘F’ and ‘G’ wares should be reclassified as ‘miscellaneous’ since they cover heterogeneous material, and ‘not all [are] of proven early medieval date, and some [are] now known to be of medieval or Roman origin’ (Campbell 2007, 52).

**Table 8.5: Sherds of DSPA, and F-ware found in Ireland**

<table>
<thead>
<tr>
<th>Townland/Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cabinteely, Co. Dublin (Mount Offaly)</td>
<td>Ecclesiastical Site</td>
<td>Sherds of DSPA</td>
<td>Conway 1998:124</td>
</tr>
<tr>
<td>Corbetstown, Co. Westmeath (Kilpatrick/Killucan)</td>
<td>Ecclesiastical Site</td>
<td>Three sherds of F-ware</td>
<td>Swan 1980-4:0199</td>
</tr>
</tbody>
</table>

**Imported Glass:**

The evidence for glass importation into Ireland is less easily traced because of the more fragmentary nature of the archaeological material (Table 8.6).

**Table 8.6: Imported Glass found in Ireland**

<table>
<thead>
<tr>
<th>Townland/Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Site Type</td>
<td>Artifacts</td>
<td>References</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ballycatteen, Co. Cork</td>
<td>Multivallate Rath</td>
<td>Pale blue vessel glass</td>
<td>Ó Riordáin &amp; Hartnett 1943.</td>
</tr>
<tr>
<td>Ballynahinch, Co. Offaly (Ballinderry 2)</td>
<td>Crannog</td>
<td>Sherds from two glass vessels.</td>
<td>Hencken 1942, 58; Bourke 1994, 195.</td>
</tr>
<tr>
<td>Corranearry, Co. Cavan (Kilbride)</td>
<td>Ecclesiastical Site</td>
<td>Sherds of two glass vessels</td>
<td>Bourke 1994, 199.</td>
</tr>
<tr>
<td>Dungarvan, Co. Waterford (Dungarvan Castle)</td>
<td>Re-used castle site</td>
<td>?</td>
<td>Campbell 2007, xviii.</td>
</tr>
<tr>
<td>Dunnyneill Islands, Co. Down (Dunneenl Island)</td>
<td>Emporium</td>
<td>Base of claw-beaker</td>
<td>Campbell 2007, 60.</td>
</tr>
<tr>
<td>Garranes, Co. Cork</td>
<td>Multivallate Rath</td>
<td>Fragments of five glass vessels</td>
<td>Ó Riordáin 1942</td>
</tr>
<tr>
<td>Garranes, Co. Cork</td>
<td>Multivallate Rath</td>
<td>Three pieces of millefiori</td>
<td>Ó Riordáin 1942</td>
</tr>
<tr>
<td>Garryduff, Co. Cork (Garryduff 1)</td>
<td>Rath</td>
<td>Sherds of four glass vessels</td>
<td>O’Kelly 1962.</td>
</tr>
<tr>
<td>Lagore, Co. Meath</td>
<td>Crannog</td>
<td>Sherds from five glass vessels</td>
<td>Hencken 1950; Bourke 1994, 204.</td>
</tr>
<tr>
<td>Larrybane, Co. Antrim</td>
<td>Promontory Fort</td>
<td>Imported glass armlet</td>
<td>Childe 1936, 194-5.</td>
</tr>
<tr>
<td>Mullaroe, Co. Sligo</td>
<td>Souterrain</td>
<td>Complete glass phial</td>
<td>Harden 1956, 154; Bourke 1994, 205.</td>
</tr>
<tr>
<td>Randalstown, Co. Meath (St. Anne's)</td>
<td>Ecclesiastical Site</td>
<td>Sherd of glass cone-beaker</td>
<td>Kelly 1976, 12; Bourke 1994, 206.</td>
</tr>
<tr>
<td>Randalstown, Co. Meath (St. Anne's)</td>
<td>Ecclesiastical Site</td>
<td>One Saxon glass bead</td>
<td>Kelly 1976, 12; Bourke 1994, 206.</td>
</tr>
</tbody>
</table>

Campbell identifies seven sites in Ireland on which ‘Group B: Germanic tradition’ glass sherds have been found (2007, 73). A greenish-blue fragment of a seventh/eighth century claw beaker was recovered at Dunnyneil Island, Co. Down (Campbell 2007, 60). Two complete phials of yellowish or yellow-green glass were recovered from a seventh-century context at Moynagh Lough, Co. Meath (Bourke 1994, 168), and a similar phial was recovered from an undated context in a souterrain at Mullaroe, Co. Sligo (Harden 1956, 154).
Nine Irish sites from which ‘Group C: decorated Atlantic tradition’ glass has been recovered have been identified (Campbell 2007, 69). These are differentiated from ‘Group D: undecorated Atlantic tradition’, by the presence of marvered, opaque white decoration, which often decay in acidic soils. This decoration is caused by the addition of tin oxide as an opacity agent, rather than calcium antimonite which was used at a later date in Scandinavia (Henderson 1993, 47). There are two main sub-classes of Group C, based upon differences in decorative styles. Those with horizontal bands are dated to the mid-sixth century (Campbell 2007, 68), and make up the bulk of Group C material found in Ireland. Vertical chevron decoration appears in the late-sixth/early-seventh century, and in Ireland is only found at Armagh (ibid. 69). The excavations at Whithorn, on the Solway Firth, would suggest that Group C and Group D glass may have been imported along with ‘E-ware’ pottery (ibid. 73).

It is possible that both complete vessels and broken glass fragments were being imported into Ireland. The phials from Moynagh Lough and Mullanroe presumably contained some precious liquid, but there is also chemical evidence from at least eleven sites in Ireland to show that imported broken glass was melted and reworked into ‘glass bosses, millefiori rods, cables and beads’ (Henderson & Ivens 1992, 57).

**Coins:**

Two early-sixth century Frankish coins - one from Maryborough, Co. Laois (Hall 1973-74, 82); and one from Trim, Co. Meath (ibid.) - are recorded as having been found in Ireland (Table 8.10). These date from the period of the importation of E-ware from western France, and may have arrived in Ireland during this process.

### Table 8.7: Anglo-Saxon Coins Found in Ireland

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>26-29 Castle Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>76 Anglo-Saxon coins - ‘Ethelred II’</td>
<td>Byrne 1993:057</td>
</tr>
<tr>
<td>26-29 Castle Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>237 Anglo-Saxon coins - ‘Ethelred II’</td>
<td>Byrne 1993:057</td>
</tr>
<tr>
<td>Armagh City, Co. Armagh</td>
<td>Ecclesiastical Site</td>
<td>One Anglo-Saxon coin - ‘Offa’</td>
<td>Hall 1973-74, 82.</td>
</tr>
<tr>
<td>Ballycastle, Co. Antrim</td>
<td>Megalith</td>
<td>70 coins in total – Anglo-Saxon</td>
<td>Hall 1973-74, 80.</td>
</tr>
<tr>
<td>Broad Street, Limerick, Co. Limerick</td>
<td>Hiberno-Norse Urban site</td>
<td>Anglo-Saxon coin – ‘Cnut’</td>
<td>O’Donovan 1999:515</td>
</tr>
<tr>
<td>Townland/ Site Name</td>
<td>Site Type</td>
<td>Comments</td>
<td>Reference</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Co. Dublin ‘Eadgar’</td>
<td></td>
<td></td>
<td>Hall 1973-74, 76.</td>
</tr>
<tr>
<td>Castlebellingham, Co. Louth ‘Eadgar’</td>
<td></td>
<td></td>
<td>Hall 1973-74, 73.</td>
</tr>
<tr>
<td>Christchurch Place, Dublin, Co. Dublin ‘Two Anglo-Saxon coins – ‘Edward the Elder’</td>
<td></td>
<td></td>
<td>O’Riordáin 1975:15</td>
</tr>
<tr>
<td>Christchurch Place, Dublin, Co. Dublin ‘Two Anglo-Saxon coins – ‘Æthelred’; ‘Cnut’</td>
<td></td>
<td></td>
<td>O’Riordáin 1973:0017</td>
</tr>
<tr>
<td>Drogheda, Co. Louth ‘One Anglo-Saxon coin – ‘Æthelstan’</td>
<td></td>
<td></td>
<td>Hall 1973-74, 82.</td>
</tr>
<tr>
<td>Townland/ Site Name</td>
<td>Site Type</td>
<td>Comments</td>
<td>Reference</td>
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<tr>
<td>---------------------</td>
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<tr>
<td>Townland/ Site Name</td>
<td>Site Type</td>
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<td>Reference</td>
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</tr>
<tr>
<td>Werburgh Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>125 Anglo-Saxon coins – late-10th C.</td>
<td>Hayden 1994:087</td>
</tr>
</tbody>
</table>
There are various hints and allusions in the written sources to the types of goods being imported into Ireland during the early part of the Early Medieval period. The different types of imported pottery and glass may also give some indication of whether the container or the content was the originally traded item.

Wine
The importance of the imported wine trade to Early Medieval Ireland was set out a century ago (Zimmer 1909). Although Zimmer's theorisation based on the dominance of the wine trade have since been refuted (James 1982; Wooding 1996), it is nevertheless clear that some of the archaeological remains may be a result of this trade. Thomas argued that LR2 amphorae (Bi) were used for transporting wine (1959, 92); and it has been suggested that 'E-ware' jugs and bowls (E1-E4) may have been imported as part of the wine trade (James 1982, 383; Wooding 1996, 69).

The documentary sources mention importation of wine into Ireland during this period, perhaps originally as part of the Eucharist. The 'Life of Ciaran of Clonmacnoise' mentions the arrival of Gaulish wine merchants:

‘In illis diebus…mercatores cum vino Gallorum venerunt ad S. Kiaranum…’ (Plummer 1910, 214). 
['In those days...merchants came to St. Ciaran with Gaulish wine' (Trans. Author)].

It has, however, been argued that this entry, coming from a fifteenth-century manuscript, may be a projection of the contemporary medieval wine trade with France back into the sixth century (James 1982, 375; Thomas 1990, 4). The regular Gaulish trade hinted at by Adomnán in his ‘Life of Columba’ has also been associated with the French wine trade (James 1982, 377):

‘Et antequam praesens finiatur annus, Gallici nautae, de Galliarum provinciis adventantes, haec eadem tibi enarrabunt’ (Anderson & Anderson 1961, 265). ['And before the present year will be over, Gaulish ships from the province of Gaul, will announce this to you...'] (ibid. 266).

The importance of the wine trade for liturgical reasons may explain why the associated pottery is predominantly found on ecclesiastical sites, and the change in the pottery-types may therefore indicate a change in sourcing wine from the eastern Mediterranean to the Loire Valley. Wine must still have been imported for similar reasons even after the disappearance of 'E-ware' in the late seventh century. There is no archaeological evidence to support this claim, although James argues from saga literature that wine was imported in ‘large vessels, or butts, presumably of wood’ (1982, 382), which would then rot away, leaving no archaeologically identifiable trace.

Olive Oil
Thomas (1959, 92) suggests that the globular LR1 amphorae (Bii) were used for olive oil containers. As stated above the form and provenance of the amphorae cannot necessarily be used to identify possible trade goods, and although oil may be used in certain liturgical rites, there is no clear indication that olive oil was imported into Ireland at this period.
**Other Food Stuffs**

Late Roman amphorae were not only used to transport liquids such as wine and oil, they were also used to transport dry goods such as ‘garum’ (‘fish sauce’), nuts, fruits, seeds and spices. *Garum* is not mentioned in any Irish text, but ‘foreign nuts’ (‘*mará cnó gnae*’) are included in the list of flotsam in the *Bretha Étgid* (O’Mahoney & Ritchie 1873, 427). This reference, however, could equally apply to large tropical nuts and seeds washed up occasionally on the shoreline of the west of Ireland by the Gulf Stream, rather than to any aspect of deliberate trade (Kelly 1997, 306). Traces of imported spices such as cardamom and fennel have been recovered on Scottish sites from this period (Wooding 1996), and presumably similar material would have been traded to Ireland as well. Honey (‘*mil*’) is also mentioned amongst the flotsam listed in the *Bretha Étgid* (O’Mahoney & Ritchie 1873, 427), suggesting that it too was traded to Ireland.

The ‘*Letter to Waldebert and Bobolenus*’, which appears at the start of the ‘*Life of Abbot Columbanus and His Disciples*’, mentions a cargo loaded onto an Ireland-bound ship in Nantes:

> ‘Centum modia esse vini ducentaque frumenti, sed et braces centum idemque modia’ Liber I, §22 (Krusch 1902, 97).

[‘One hundred measures of wine, two hundred of wheat, and one hundred of beer’ (Trans: Author)].

This shipment was as a parting gift for Columbanus, and has been interpreted as implying that wheat and beer were regularly exported to Ireland from Gaul in the seventh century (Doehaerd 1978, 153; Doherty 1980, 77). The fact that beer may have been imported into Ireland from Gaul is rather intriguing, since ‘Columban certainly introduced its use throughout what is now France’ (Nelson 2005, 93). Another entry in the ‘*Life of Columbanus*’ mentions ‘*cervisia*’, ‘which is boiled from the juice of wheat or barley’ (*ibid.* 94), and may imply that the wheat aboard the ship at Nantes would be used for malting in Ireland.

The emporium, or trading post, at the mouth of the Loire River, Noirmoutier was known for its salt pans, and ‘Baiesalt’ was well distributed along the Loire valley and the interior of the Frankish empire (Hodges 1989, 128). Noirmoutier appears to have been the centre for the Irish trade to continental Europe (see exported goods below), and as such it would be highly improbable that trading ships would not return to Ireland with a cargo of salt, especially when salt was not mined in Ireland until the later medieval period (Scott 1981, 115-6)

**Animals**

There are few references to animals or animal products being imported into Ireland at this time. A recension to the *Bretha Étgid* (Trinity H5.15 - *Corpus Iuris Hibernicis* 2155, 1.20) adds ‘feathers’ or ‘furs’ (’*clúman*’) to the list of flotsam (Binchey 1978; Wooding 1996, 69); and O’Davoren’s ‘*Glossary*’ includes ‘*laire breathnacha*’ (‘British horses’) (Stokes 1862, 95).

**Slaves**

There is evidence for slave raiding on Britain during this period, for example the story of St. Patrick. In his, ‘*Letter to the Soldiers of Coroticus*’, St. Patrick’s also suggests an element of slave trading between Britain and Ireland: ‘Far from the love of God is a man who hands over Christians to the Picts and Scots’. (Hanson 1971). Although slaves are mentioned throughout the Irish Law tracts (Kelly 1988, 112), little archaeological evidence of slavery has been recognised. The iron slave collar from Lagore, Co. Meath (Hencken 1950, 115-117) is regularly mentioned, and shackles from Knowth, Co. Meath; Oldgrange, Co. Kildare; Corcreevy, Co. Tyrone; Lough Sheelin, Co. Cavan; and Coagh, Co. Sligo (Barton 2000, 22) have been interpreted as slave chains. These objects show similarities to Central European slaving artefacts from the same period, such as the slave collar from Staré Zámky or the slave shackle from Krivina (McCormick 2001, 742-3). There is no indication, however, whether the slaves were imported from outside Ireland, or were captured within Ireland.
Exported Goods

Although there is a reasonable amount of information on imported material in Ireland from this early phase, there is little information about what was being exchanged for it, or what, if any material was being exported outwards from Ireland to Britain and the nearby Continent. The classical authors, such as Strabo, wrote of ‘hides, slaves and hunting dogs’ (Jones 1969, 255) being the prime exports of the British Isles, and ‘over the centuries it was undoubtedly slaves which were the most important merchandise in this trade’ (Doenhaerd 1978, 200). The sixth-century ‘Life of Germanus’ (§LXXII (193)) mentions Scottish [i.e. Irish] slaves being sold in Marseilles, although there is no similar reference found in the Irish sources; and the same work mentions Scottish (i.e. Irish) slaves receiving their freedom from Germanus:

‘Unde sunt contiguae gentes in testimonium, Hispanus, Scottus, Britto, Wasco, Saxo, Burgundio, cum ad nomen Beati concurrerent, undique liberandi iugo serviti.’ Vita Sancti Germani §41 (Acta Sanctorum May VI, 776).

[‘There were peoples held in slavery, Spanish, Irish, Britons, Gascons, Saxons, Burgundians - when the came to the name of the Lord, they were freed from their slavery’ (Trans: Author)]

The eastern Mediterranean seemed to have almost a monopoly on the merchants operating in Gaul at this period; there were a number of Greeks and Syrians, but Jews predominated, a number of whom appear to have made a living from the slave-trade serving Muslim North Africa (Doenhaerd 1978, 172).

The only other good reference to specific Irish exports at this time comes from the seventh-century ‘Life of Philabert’ of Noirmoutier in southern Brittany which mentions:

‘Scottorum navis diversis mercionis plenus ad litus affuit, quae calciamenta ac vestimenta fratribus larga copia ministravit’ §42. (Krusch & Levison 1910, 603)

[‘The arrival of Irish ships with various goods aboard which supplied the brethren with ample quantity of shoes and clothes’ (trans: Author)].

An entry in the ‘Life of Columbanus’ mentions ‘a vessel which had brought Scottish [i.e. Irish] wares’ to the mouth of the Loire: ‘Reperta ergo navis quae Scottorum commercia vexerat…’ §23 (Krusch 1902, 97)); and a similar statement is made in Notker’s ninth century ‘Life of St. Gall’:

‘Cumque navem, quae de Scotorum terra ad litus Galliae cum mercionisi venerat et redire parabat, ingressi fuissent…’ (de Winterfeld 1899, 1105)

[‘And when the ship, which had come from the land of the Scots [i.e. Ireland] to the Gallic shore with its merchandise prepared to leave, they got on board...’ (Trans. Author)].

Both these references to Irish ships date to around the floruit of ‘E-ware’, suggesting that there may have been a two-way trade between parts of Ireland and western and northwest Gaul at this time. Although the wine trade from France to Ireland may have continued after the start of the eighth century, there is no information on the reciprocal trade from Ireland to France.

The ‘Letter to Waldebert and Bobolenus’, found in the prologue to Jonas’ ‘Life of Columbanus’, can be internally dated to the 640s. In this Jonas compares the ascetic conditions at Bobbio, in northern Italy, to the more luxurious conditions at other monastic sites by contrasting the imported materials:

‘Illi dites balsami lacrimam ex Engaddi, floresque aromatum ex Arabia; nobis ex Hibernia vix butyrum pinguiscit. Illi piper nardumque sumunt ex India...’ Liber I, §23 (Krusch 1902, 63).
[‘They have tears of balsam from Engaddi, and aromatic flowers from Arabia; but we have a scarcity of Irish butter. They have pepper and nard from India...’ (Trans: Author)].

The nature of Jonas’ rhetoric suggests that Irish butter was both a common-place and cheap export to Continental Europe, in contrast to the more exotic goods from the Levant and the Orient.

Trading and exchange locations on the Irish coast, AD 400-800

In the early medieval period around the North Sea and the Atlantic, particular islands or sheltered locations along the coast seem to have been used as places where pottery and glass was brought ashore by coastal traders. On the other hand, it may well be that such beach markets were established by maritime traders along the east coast themselves – in co-operation with local elites or with the church.

The early medieval coastal settlement at Dalkey Island, Co. Dublin seems to have been one of these places. Dalkey Island is a promontory fort on this small island on the south side of Dublin bay. It was excavated by David Liversage in the 1950s and produced evidence for Mesolithic, Bronze Age and early medieval occupation. The early medieval settlement on the island was concentrated on a narrow promontory at the north-west end of the island, adjacent to a natural landing place. The promontory fort was probably built in the sixth or seventh century, and probably succeeded a previous unenclosed settlement. The promontory fort has produced the largest amount of imported pottery and glass known from any site in Ireland. It includes fifth and sixth century Bi, Bii, B misc. pot shards and sixth to seventh century E-ware pottery, glass bowls and glass beakers. It is unlikely that Dalkey Island was a high status settlement site; neither the enclosure or finds evidence would indicate this. However, Dalkey Island would have been ideal for a trading place. It was strategically situated on the Irish Sea maritime routeways and was also located on an offshore island on the south side of Dublin Bay, where it could have served as a safe and secure landing place for merchants working under the protection of a local king.

E-ware pottery is also found elsewhere up along the Irish Sea coast. Recent archaeological excavations at Ninch, Co, Meath – to the south of the Boyne estuary - have produced some E-ware associated with a multi-period, enclosed settlement on this coastal site, implying the use of natural landing places along the Irish Sea coastline.

The largest concentration of E-ware on the Irish Sea coast is found around Strangford Lough, Co. Down. This pottery may have been introduced into the territory of the local Dál Fiatach via the small island of Dunnyneill Island, situated at the southern end of the lough, opposite its entrance and the mouth of the Quoile estuary. Finbar McCormick and Phillip McDonald’s recent archaeological excavations on Dunnyneill Island indicated the presence of an early medieval enclosure, E-ware pottery, Mediterranean and Anglo-Saxon glass, as well as evidence for high-status feasting, iron-working, copper-working and glass-working. It is likely then that Dunnyneill Island was both a high-status seasonally occupied island, as well as a beach trading station, and was probably also a location for feasting and entertainment.

Both Dalkey Island and Dunnyneill Island as offshore, marine islands could also be seen as usefully neutral places (indeed, this is implied in an early medieval annalistic reference to a royal political encounter on Inis na Righ, another Irish Sea island on the north Dublin coast, which is described as being usefully ‘neither sea nor land’ and thence capable of being used for negotiating a political agreement). Early medieval trade and exchange was structured around gift giving and reciprocity, so it is likely that local kings or other secular elites sent emissaries out to the these islands (or went out themselves) to meet Gaulish traders, exchanging their own locally sourced hides, slaves or other goods for foreign pottery, glass and exotic foods. These exotic goods could then have been brought back to the royal residence for redistribution to royal kin and clients in local political territories.
Early medieval Ireland and Hiberno-Norse Trade (c. A.D. 800 - 1150)

Background
In the Viking Age, Ireland was drawn again into another maritime trading network, but now with a focus on the north Atlantic. In particular, the Irish Sea had become a major Atlantic seaway, serving as the axis for sea-going trade and exchange between the Mediterranean and northern Europe. Dublin was a particularly significant stopping point or port on the east-west routeways between early medieval Europe and the Scandinavian colonies of the Faroes, Iceland and Greenland. We can see the role of both the native Irish and Dublin Vikings in the North Atlantic by the frequent reference in the Icelandic sagas to Irish slaves and women, while the discovery of Irish type ringed pins at the tenth-century Norse settlement at L’Anse Aux Meadows also indicates the far flung maritime connections between Ireland and elsewhere.

Strongly influenced by contemporary annalistic references to Viking raids, most modern scholars tend to emphasise violence, fleets of warships and raiding around Irish coastal waters in the ninth century AD. However, it is likely that other, perhaps even peaceable, types of activities that went under the radar of monastic scribes were also going on. It is possible that Scandinavian rural settlements such as the Cherrywood, Co. Dublin site or even the Dublin longphort of AD 841, were the residences of Scandinavian men and women engaged in trade, manufacturing and rural agricultural labour.

However, particularly striking is the development of Hiberno-Norse ports and harbours from the tenth centuries onwards in Dublin, Wexford, Waterford, Cork and Limerick. All these ports appear to have located at places that had a number of suitable topographic features and landscape characteristics; proximity to the coast, situation on large natural havens at the confluence of rivers. These locations would also have provided natural defence, sheltered by the surrounding topography and the river barriers and with a ready escape route to the sea. These ports were often at the boundaries of existing expansive socio-economic and political hinterlands and also provided ready access to a wide and varied hinterland. This is especially true when one considers the mobility that the surrounding seascapes gave these Scandinavian peoples.

In any case, by the tenth and eleventh century AD, Dublin was one of the most important trading ports in Atlantic Europe, with its own ships being the key to trade and commerce with the Baltic, Mediterranean and Russia. Between AD 920-1170, Dublin had trading links with York, Scandinavia, Anglo-Saxon England and other parts of Ireland. Gold and silver ingots and a large number of imported coins indicate the importance of trade with England, particularly the Chester area, and with the north west of France. The presence of walrus ivory (available only in the Arctic circle), soapstone vessels and amber indicates that trade was maintained with Scandinavia while the discovery of silks show that Dublin was part of a trading network which stretched as far as the Silk Road to China. Silver coins from Samarkand, Taskent and Baghdad, Iraq have all been found in Dublin.

What was Dublin exporting? Almost certainly, the town’s major exports were wool, hides and slaves (as slavery was to be the source of Bristol’s and Liverpool’s wealth in the post-medieval period). Some slaves were probably obtained in raids, but the most common way of obtaining slaves was by trade. In early medieval Ireland, the lives of captives taken in battle were forfeit to the victors. If the captives were not aristocratic and capable of paying a ransom, it was more profitable to sell the captives as slaves, than it was to kill them. The majority of individuals in the Dublin slave markets then were probably purchased from one victorious Irish king or another. Ireland was not the only source of slaves. England, Scotland and Wales supplied their share. Indeed even in the 1100s the merchants of Dublin were condemned for selling English Christians into slavery in Ireland.
Archaeological evidence for trade, AD 800-1150

Our knowledge of early medieval trade between Ireland and the rest of Europe in the Viking Age (AD 800-1150) is of course dominated by the discoveries from our Hiberno-Norse Dublin, and particularly from Dublin. This period - c. 800 to the c.1100 - coincides with the arrival of the Vikings, and through them, the development of the Hiberno-Norse towns and marketplaces. Although exotic materials have been found in the Hiberno-Norse towns (such as Dublin or Cork), or Norse longphorts (such as Woodstown, Co. Waterford), they are often linked to Viking settlers, rather than trade with the native Irish. As the Viking settlements become more established, the ability to differentiate between material brought in by a settler, material sold to a settler, or material produced by the later Hiberno-Norse population, becomes increasingly difficult. By contrast contemporary rural 'native' sites, such as Balriggan, Co. Louth (Delaney & Roycroft 2003, 16-19), or Killickaweeny, Co. Kildare (Walsh & Harrison 2003, 33-36) do not show evidence of external trade.

In reality a fourth trade phase emerges in the late-eleventh century and carries on through to the effective failure of the English colony in Ireland in the later medieval period. Only the start of this phase falls within the delimited time frame. Substantial work has been done by Clare McCutcheon (2006) in identifying the (largely English) pottery that was imported into Ireland during the early years of the Anglo-Norman colony, and in some cases before this date.

Imported Pottery:

There is little evidence for imported pottery for a large part of this period. This may partly be due to the expansion of native-made material such as souterrain ware, everted-rim ware, crannog ware and Leinster cooking ware. The suggested change from ceramic amphorae to wooden butts for wine transportation would also have had a major impact on the spread of exotic pottery in Ireland.

Specialist reports from excavations at the Hiberno-Norse/Medieval towns of Dublin (McCutcheon 1994; McCutcheon 1995b; Gahan & McCutcheon 1997b; McCutcheon 2006); Cork (McCutcheon 1995a; McCutcheon 1996a; McCutcheon 1997; Gahan, McCutcheon & Twohig 1997) and Waterford (Gahan & McCutcheon 1997a) have indicated a large import trade, predominantly from the southwest of England (Table 8:8), from the late-eleventh century onwards. Excavations in Hiberno-Norse Dublin have also uncovered sherds of various forms of French pottery (Table 8:9) which may pre-date the Anglo-Norman settlement (Hurst 1988). There is clear evidence for importation of pottery from both England and France after A.D. 1150, and this has been most recently discussed by Clare McCutcheon (2006). This chapter, however, is concerned with importation prior to this date, and there are therefore a limited number of identified pottery types (Tables 8:9 & 8:13) from this phase.

Table 8.8: Imported English Pottery – 11th/12th C.

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CORK</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Barrack Street,</td>
<td>Hiberno-Norse</td>
<td>Sherd of medieval pottery, late-11th to early-</td>
<td></td>
</tr>
<tr>
<td>Co. Cork</td>
<td>Urban site</td>
<td>12th C</td>
<td>Lane 2000:0122</td>
</tr>
<tr>
<td>Kyrl's Quay, Cork,</td>
<td>Hiberno-Norse</td>
<td>41 sherds of South-East Wiltshire-Ware</td>
<td>McCutcheon 1996c, 44</td>
</tr>
<tr>
<td>Co. Cork</td>
<td>Urban site</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kyrl's Quay, Cork,</td>
<td>Hiberno-Norse</td>
<td>Two sherds of Ham Green Cooking-Ware</td>
<td>McCutcheon 1996c, 44</td>
</tr>
<tr>
<td>Co. Cork</td>
<td>Urban site</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lady Lane, Waterford</td>
<td>Hiberno-Norse</td>
<td>Sherd of South-East Wiltshire-ware</td>
<td>Moore 1983; Hurst 1988,242</td>
</tr>
<tr>
<td>Co. Waterford</td>
<td>Urban site</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Street South,</td>
<td>Hiberno-Norse</td>
<td>Sherd of Ham Green Cooking Ware</td>
<td>Ni Loingsigh 2003:0225</td>
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<tr>
<td>Co. Cork</td>
<td>Urban site</td>
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<td>Site Type</td>
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</tr>
<tr>
<td>North Gate, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>One sherd Ham Green Cooking-Ware</td>
<td>McCutcheon 1997, 77.</td>
</tr>
<tr>
<td>North Gate, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>Two sherds Ham Green Glazed Ware</td>
<td>McCutcheon 1997, 77.</td>
</tr>
<tr>
<td>Skiddy's Castle, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>99 sherds South-East Wiltshire Ware</td>
<td>Gahan, McCutcheon &amp; Twohig 1997, 110.</td>
</tr>
<tr>
<td>Skiddy's Castle, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>Eleven sherds Coarse London Ware</td>
<td>Gahan, McCutcheon &amp; Twohig 1997, 110.</td>
</tr>
<tr>
<td>Skiddy's Castle, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>299 sherds Ham Green 'A'-Ware</td>
<td>Gahan, McCutcheon &amp; Twohig 1997, 110.</td>
</tr>
<tr>
<td>Skiddy's Castle, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>919 sherds Ham Green Cooking Ware</td>
<td>Gahan, McCutcheon &amp; Twohig 1997, 110.</td>
</tr>
<tr>
<td>South Main Street, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>Ham Green Ware</td>
<td>Twohig 1975:10</td>
</tr>
<tr>
<td>Tobin Street, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>Ham Green Ware</td>
<td>Papazian 1985, 213</td>
</tr>
<tr>
<td>Washington Street, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>Ham Green Ware</td>
<td>Cleary 1996.</td>
</tr>
<tr>
<td><strong>DUBLIN:</strong> Christchurch Place, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Sherds of Chester-ware</td>
<td>O Riordáin 1972:5; Hurst 1988, 242.</td>
</tr>
<tr>
<td>Essex Street West, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Five sherds of South-East Wiltshire-Ware</td>
<td>McCutcheon 1995b, 42</td>
</tr>
<tr>
<td>Essex Street West, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Nine sherds of Ham Green 'A'-Ware</td>
<td>McCutcheon 1995b, 42</td>
</tr>
<tr>
<td>Essex Street West, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Eleven sherds of Ham Green Cooking-Ware</td>
<td>McCutcheon 1995b, 42</td>
</tr>
<tr>
<td>High Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Ham Green Ware jug</td>
<td>O Riordáin 1972:0014</td>
</tr>
<tr>
<td>Isolde's Tower, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Thirteen sherds of Ham Green Ware</td>
<td>McCutcheon 1994, 53</td>
</tr>
<tr>
<td>Isolde's Tower, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>One sherd of Ham Green Cooking-Ware</td>
<td>McCutcheon 1994, 53</td>
</tr>
<tr>
<td>Patrick Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Thirteen vessels (minimum number)- Ham Green Glazed</td>
<td>Gahan &amp; McCutcheon 1997b, 112</td>
</tr>
<tr>
<td>Patrick Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Three vessels (minimum number)- Ham Green Cooking-Ware</td>
<td>Gahan &amp; McCutcheon 1997b, 112</td>
</tr>
<tr>
<td>Patrick Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Two vessels (minimum number)- Wiltshire-Ware</td>
<td>Gahan &amp; McCutcheon 1997b, 112</td>
</tr>
<tr>
<td>Townland/ Site Name</td>
<td>Site Type</td>
<td>Comments</td>
<td>Reference</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------------------</td>
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</tr>
<tr>
<td>Patrick Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>One vessel (minimum number)- Redcliffe-Ware</td>
<td>Gahan &amp; McCutcheon 1997b, 112</td>
</tr>
<tr>
<td>Patrick Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>One vessel (minimum number)- Chester-Ware</td>
<td>Gahan &amp; McCutcheon 1997b, 112</td>
</tr>
<tr>
<td>Winetavern Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Three vessels (minimum number)- Ham Green Glazed</td>
<td>Gahan &amp; McCutcheon 1997b, 112</td>
</tr>
<tr>
<td>Winetavern Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>One vessel (minimum number)- Ham Green Cooking-Ware</td>
<td>Gahan &amp; McCutcheon 1997b, 112</td>
</tr>
<tr>
<td>Winetavern Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>One vessel (minimum number)- Wiltshire-Ware</td>
<td>Gahan &amp; McCutcheon 1997b, 112</td>
</tr>
<tr>
<td>Winetavern Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>One vessel (minimum number)- Redcliffe-Ware</td>
<td>Gahan &amp; McCutcheon 1997b, 112</td>
</tr>
<tr>
<td>Wood Quay, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>307 sherds Ham Green A Ware</td>
<td>McCutcheon 2006, 40.</td>
</tr>
<tr>
<td>Wood Quay, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>437 sherds Ham Green Cooking Ware</td>
<td>McCutcheon 2006, 40.</td>
</tr>
<tr>
<td>Waterford, Co. Waterford</td>
<td>Hiberno-Norse Urban site</td>
<td>898 sherds Cornish Ware</td>
<td>Gahan &amp; McCutcheon 1997, 288.</td>
</tr>
<tr>
<td>Waterford, Co. Waterford</td>
<td>Hiberno-Norse Urban site</td>
<td>64 sherds Dyfed gravel-tempered Ware</td>
<td>Gahan &amp; McCutcheon 1997, 288.</td>
</tr>
<tr>
<td>Waterford, Co. Waterford</td>
<td>Hiberno-Norse Urban site</td>
<td>863 sherds Proto-Ham Green Ware</td>
<td>Gahan &amp; McCutcheon 1997, 288.</td>
</tr>
<tr>
<td>Waterford, Co. Waterford</td>
<td>Hiberno-Norse Urban site</td>
<td>1003 sherds South-East Wiltshire Ware</td>
<td>Gahan &amp; McCutcheon 1997, 288.</td>
</tr>
<tr>
<td>Waterford, Co. Waterford</td>
<td>Hiberno-Norse Urban site</td>
<td>19119 sherds Ham Green Ware (A &amp; B)</td>
<td>Gahan &amp; McCutcheon 1997, 288.</td>
</tr>
<tr>
<td>Waterford, Co. Waterford</td>
<td>Hiberno-Norse Urban site</td>
<td>16 sherds Coarse London Ware</td>
<td>Gahan &amp; McCutcheon 1997, 288.</td>
</tr>
</tbody>
</table>
The predominant imported pottery came from kilns near Bath - Ham Green A is dated from the early-twelfth century to the late-twelfth century. South East Wiltshire ware, which was not widely traded until the mid- to late-twelfth century, is also found in large numbers on these sites. Other West Country pottery found in Ireland from this period include West Wiltshire ware (early twelfth century), and Cornish ware (late-eleventh to mid-twelfth century). Some sherds of Stamford ware (pre-1150) were found at Waterford, and a number of sherds of Course London-type (twelfth century), which is more usually associated with the Scottish market, were also found at Cork, Waterford and Dublin. Sherds of Dyfed gravel-tempered ware (mid- to late-twelfth century), suggest trading links with south-west Wales. In most of these cases the imported pottery represents cooking or table ware, rather than storage jars for other goods, and the implication must be that the pottery was being imported for domestic use (McCutcheon 2006, 38-57).

Dates for the imported French pottery are often more vague, and the two sherds of ‘French cooking vessel’ identified by the excavator at Harristown, Co. Louth (Murphy 1994:181), were dated to the 9th-12th century. This remains, to date, the only Early Medieval French pottery to be found in a non-urban site. Imported English wares and also Rhenish Paffrath-ware were recorded from the rath at Ballyfounder, Co. Down (Waterman 1958, 48; Hurst 1988, 243), but this comes from the later re-occupation of the site as an Anglo-Norman motte.

Table 8.9: Imported French Pottery – 11th/12th C.

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORK:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kyrl's Quay, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>Three sherds of Normandy Gritty-Ware</td>
<td>McCutcheon 1996c, 44</td>
</tr>
<tr>
<td>Kyrl's Quay, Cork, Co. Cork</td>
<td>Hiberno-Norse Urban site</td>
<td>Nine sherds of Normandy Smooth-Ware</td>
<td>McCutcheon 1996c, 44</td>
</tr>
<tr>
<td>DUBLIN:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christchurch Place, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Sherd of Andenne-ware</td>
<td>O’ Riordáin 1974:0014</td>
</tr>
<tr>
<td>Christchurch Place, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Sherd of Normandy Gritty-Ware</td>
<td>O’ Riordáin 1974:0014</td>
</tr>
<tr>
<td>Winetavern Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>One vessel (minimum number) - Normandy-Ware</td>
<td>Gahan &amp; McCutcheon 1997, 112</td>
</tr>
<tr>
<td>Wood Quay, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>127 sherds Rouen-type Ware</td>
<td>McCutcheon 2006, 88.</td>
</tr>
</tbody>
</table>
Imported Glass:

There is, as yet, no complete study of glass imports into Ireland during the Hiberno-Norse period. This may partly be because glass was being manufactured in Ireland from base materials at sites such as Dunmisk, Co. Tyrone (Henderson 1988; Henderson & Ivens 1992), and these sites could supply the native glass and enamel industry.

Imported Coins:

A large percentage of the coin hoards recorded from Ireland during the Hiberno-Norse period have poor provenance (Tables 8:10-8:11). The assumption must be made that these predominantly represent the proceeds of raiding, rather than trading. It is possible, however, that small-scale finds, such as the single coin of Anlaf Guthfrithsson, king of York (Table 8.9), found at the ecclesiastical sites of Armagh, Co. Armagh (Hall 1973-74, 76), or Durrow, Co. Offaly (ibid. 74); or the coin of Harald Hardrada, king of Norway, found at High Island, Co. Galway (Scally 1999:305), may be the result of trade. Similarly the eleventh century Norman coin (Table 8.11) found at Dalkey Island, Co. Dublin (Liversage 1968, 179-181) may also be the result of some unknown trading enterprise, rather than Viking raiding. Although the nine hoards that included Kufic coins (Table 8.12), almost certainly have no connection with an Irish-Arabic trade, they are indicators of the extent of the wider Viking trade networks.

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drogheda, Co. Louth</td>
<td>?</td>
<td>Hoard of Norse coins (lost)</td>
<td>Hall 1973-74, 73.</td>
</tr>
<tr>
<td>Durrow, Co. Offaly</td>
<td>Ecclesiastical Site</td>
<td>One Norse coin (Jorvik) - ‘Anlaf Guthfrithsson’</td>
<td>Hall 1973-74, 74.</td>
</tr>
<tr>
<td>Dysert, Lough Ennell, Co. Westmeath</td>
<td>?</td>
<td>Sixteen Norse coins (Jorvik)</td>
<td>Kenny 1987, 521</td>
</tr>
<tr>
<td>Location</td>
<td>Type</td>
<td>Coins Details</td>
<td>Reference</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Geashill, Co. Offaly</td>
<td></td>
<td>Five Norse coins from Jorvik</td>
<td>Hall 1973-74, 73.</td>
</tr>
<tr>
<td>Glasnevin, Co. Dublin</td>
<td></td>
<td>Four or five Norse coins - Northumbria</td>
<td>Hall 1973-74, 73.</td>
</tr>
<tr>
<td>Glasnevin, Co. Dublin</td>
<td></td>
<td>One Norse coin - East Anglia</td>
<td>Hall 1973-74, 73.</td>
</tr>
<tr>
<td>High Island, Co. Galway</td>
<td>Ecclesiastical Site</td>
<td>Norse coin – ‘Harald Hardrada’</td>
<td>Scally 1999:305</td>
</tr>
<tr>
<td>Mohil, Co. Kilkenny (Dunmore Cave)</td>
<td>Cave</td>
<td>Ten coins in total – Norse coins - Jorvik</td>
<td>Hall 1973-74, 73.</td>
</tr>
<tr>
<td>Mohil, Co. Kilkenny (Dunmore Cave)</td>
<td>Cave</td>
<td>Ten coins in total – Norse coins (Lincoln)</td>
<td>Hall 1973-74, 73.</td>
</tr>
<tr>
<td>Mungret, Co. Limerick</td>
<td>Ecclesiastical Site</td>
<td>Nine coins in total – Norse coins (Jorvik) – ‘Regnald II Guthfrithsson’</td>
<td>Hall 1973-74, 75.</td>
</tr>
<tr>
<td>Unlocated, Co. Dublin</td>
<td></td>
<td>One Norse (Jorvik)</td>
<td>Hall 1973-74, 73.</td>
</tr>
</tbody>
</table>

Those hoards with Hiberno-Norse coins (Table 8.11) are an obvious indicator of the problems with trying to identify trade during this phase. Coins of Sihtric (Silkbeard) III, for example, found outside the Hiberno-Norse kingdom of Dublin (e.g. Armagh, Co. Armagh (Heslip 1984, 134), may represent trade, or raiding, or the adoption of the Hiberno-Norse coinage as a common form of currency in other parts of Ireland.
Table 8.11: Hiberno-Norse Coins found in Ireland

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ardagh, Co. Longford</td>
<td>?</td>
<td>One Hiberno-Norse coin</td>
<td>Hall 1973-74, 82.</td>
</tr>
<tr>
<td>Ardfer, Co. Kerry (St. Brendan’s)</td>
<td>Ecclesiastical Site</td>
<td>Hiberno-Norse coin – ‘Sihtric III’</td>
<td>Moore 1990:066</td>
</tr>
<tr>
<td>Armagh City, Co. Armagh</td>
<td>Ecclesiastical Site</td>
<td>Three Hiberno-Norse coins</td>
<td>Hall 1973-74, 81.</td>
</tr>
<tr>
<td>Ballycastle, Co. Antrim</td>
<td>Megalith</td>
<td>70 coins in total – Hiberno-Norse</td>
<td>Hall 1973-74, 80.</td>
</tr>
<tr>
<td>Ballyvally, Co. Cork (Beal Boru)</td>
<td>Rath</td>
<td>Two Hiberno-Norse coins</td>
<td>O’Kelly 1962; Hall 1973-74, 82.</td>
</tr>
<tr>
<td>Christchurch Place, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Fourteen Hiberno-Norse coins</td>
<td>O Riordáin 1973:0017</td>
</tr>
<tr>
<td>Christchurch Place, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>One Hiberno-Norse coin – ‘Sihtric III’</td>
<td>O Riordáin 1974:0014</td>
</tr>
<tr>
<td>Christchurch, Dublin, Co. Dublin</td>
<td>Ecclesiastical Site</td>
<td>Seven Hiberno-Norse coins</td>
<td>Hall 1973-74, 81.</td>
</tr>
<tr>
<td>Clonmacnoise, Co. Offaly</td>
<td>Ecclesiastical Site</td>
<td>Hiberno-Norse coin hoard</td>
<td>O Floinn 1977-79: 0063</td>
</tr>
<tr>
<td>Downpatrick Demesne, Co. Down (Cathedral Hill)</td>
<td>Ecclesiastical Site</td>
<td>Two Hiberno-Norse coins</td>
<td>Brannon 1988.</td>
</tr>
<tr>
<td>Dunamase, Co. Laois</td>
<td>?</td>
<td>Several hundred Hiberno-Norse coins</td>
<td>Hall 1973-74, 81.</td>
</tr>
<tr>
<td>Fishamble Street II, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Two Hiberno-Norse coins</td>
<td>Wallace 1977-79: 0037</td>
</tr>
<tr>
<td>Glendalough, Co. Wicklow</td>
<td>Ecclesiastical Site</td>
<td>Hoard of Hiberno-Norse coins</td>
<td>Hall 1973-74, 81.</td>
</tr>
</tbody>
</table>
## Early medieval trade and exchange

<table>
<thead>
<tr>
<th>Townland/Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gortgole, Co. Antrim (Ferrystown)</td>
<td>River dredging</td>
<td>Fragment of Hiberno-Norse ring money</td>
<td>Bourke 1995:005</td>
</tr>
<tr>
<td>High Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Hiberno-Norse coins</td>
<td>Ó Riordáin 1972:0014</td>
</tr>
<tr>
<td>Rathlin Island, Co. Antrim</td>
<td>?</td>
<td>Seven/eight Hiberno-Norse coins</td>
<td>Hall 1973-74, 80.</td>
</tr>
<tr>
<td>Scrabo Hill, Co. Down</td>
<td>Hill Fort</td>
<td>100+ Hiberno-Norse coins</td>
<td>Hall 1973-74, 81.</td>
</tr>
<tr>
<td>Shandon, Co. Waterford</td>
<td>Enclosure</td>
<td>Fragment of Hiberno-Norse coin - 11th C.</td>
<td>Elder 2002:1790</td>
</tr>
<tr>
<td>Unlocated, Co. Wexford</td>
<td>?</td>
<td>Three Hiberno-Norse coins</td>
<td>Hall 1973-74, 82.</td>
</tr>
<tr>
<td>Unlocated</td>
<td>?</td>
<td>One Hiberno-Norse coin</td>
<td>Hall 1973-74, 82.</td>
</tr>
</tbody>
</table>

Imported coins are also known from elsewhere in continental Europe, including Frankish coins from Maryborough, Co. Laois and Trim, Co. Meath and (Hall 1973-4, 82) and Carolingian coins from Coghlansstown West, Co. Kildare, Derrykeighan, Co. Antrim, Knockmaon, Co. Waterford (Table 8.12). A ‘Norman’ coin found at Dalkey Island, Co. Dublin (Liversage 1968, 179-181) may also be the result of some unknown trading enterprise, rather than Viking raiding.
Table 8.12: Continental European Coins found in Ireland

<table>
<thead>
<tr>
<th>Townland/Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coghlanstown West, Co. Kildare (Mullaghboden)</td>
<td>?</td>
<td>Eleven Carolingian coins - 'Louis the Pious'; 'Pippin I/II'; 'Charles the Bald'</td>
<td>Hall 1973-74, 71; Dolley &amp; Morrison 1963, 78.</td>
</tr>
<tr>
<td>Derrykeighan, Co. Antrim</td>
<td>Ecclesiastical Site</td>
<td>280 coins in total – Carolingian – 'Peppin II'</td>
<td>Hall 1973-74, 78.</td>
</tr>
<tr>
<td>Lough Lene, Co. Westmeath</td>
<td>?</td>
<td>Twenty eight coins in total – Carolingian – 'Louis the Pious'; 'Charles the Bald'.</td>
<td>Hall 1973-74, 76.</td>
</tr>
</tbody>
</table>

Amongst the most remarkable coins hoards are those that included Kufic coins (Table 8.13). Although these are not evidence for a direct Irish-Arabic trade, they are indicators of the extent of the wider Viking trade networks across western Europe and particularly with the eastern Mediterranean and the way the such coins could find their way out from the Norse towns into the rural hinterland.

Table 8.13: Arabic/Kufic Coins found in Ireland

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drogheda, Co. Louth</td>
<td>?</td>
<td>Hoard of Kufic coins (lost)</td>
<td>Hall 1973-74, 73.</td>
</tr>
<tr>
<td>Dysert, Lough Ennell, Co. Westmeath</td>
<td>?</td>
<td>Six Kufic coins – Abbasid dynasty</td>
<td>Kenny 1987, 521</td>
</tr>
<tr>
<td>Townland/ Site Name</td>
<td>Site Type</td>
<td>Comments</td>
<td>Reference</td>
</tr>
<tr>
<td>---------------------</td>
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<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Mohil, Co. Kilkenny (Dunmore Cave)</td>
<td>Cave</td>
<td>Ten coins in total – Kufic (Armenia) – ‘Caliph Al-Mu’tamid’</td>
<td>Hall 1973-74, 73</td>
</tr>
<tr>
<td>Unlocated, Co. Londonderry</td>
<td>?</td>
<td>Hoard of Kufic coins</td>
<td>Hall 1973-74, 82.</td>
</tr>
</tbody>
</table>

**Other Material:**

The period A.D. 800 – A.D. 1000 has very little documentary information on external trade – the Irish Law tracts are out-of-date and there are no Lives of pioneering Irish saints to fall back on. From the start of the second millennium, however, there is more evidence available in the form of harbour taxations, laws and trade regulations which throw further insight into the types of goods being traded between Ireland and the rest of Europe at this time.

**Wine:**

The ninth-century ‘Teocosca Cormaic’ (Meyer 1909, 4-5) draws upon the earlier Bretha Étgid when it notes that wine is one of the treasures that a king will attract to his court (Wooding 1996, 69). Doherty (1980, 78) argues on etymological grounds that the wine trade still carried on through the Viking period, since the Irish word for a wine ship – ‘fíncharb’ – is derived from the Irish for wine – ‘fín’ – and the Old Norse word for ship – ‘karfi’.

The French wine trade was flourishing in the late-twelfth century. Giralbus writes that:

‘Vina tamen transmarine, ratione commercii, tam abunde terram replent, ut vix propaginis proventusque naturalis in aliquot defectum percipias. Pictavia namque de plenitudine sua el copiose vina transmittit. Cui at animalium coria, et pecundum ferarumque tergora, Hibernia non ingrata remittit’ Topographia Hibernica Book I, §VI (Dimmock 1867, 28).

[‘Imported wines…are so abundant that you would scarcely notice that the vine was neither cultivated, nor gave its fruit here. Poitou…sends plenty of wine’ (O’Meara 1951, 15)].

Thus in the 1180s western France still appears to be the main source of wine to Ireland, as it was six centuries earlier.

**Other Food Stuffs:**

Along with wine, the Teocosca Cormaic also mentions mead, as being among the treasures attracted to a royal court (Wooding 1996, 69). Honey was recorded among the flotsam in the Bretha Étgid, and it is possible that mead was also imported into Ireland, presumably from Anglo-Saxon England. A definite import from England, however, would seem to be salt. The ‘Vision of MacConglinne’, dating from the eleventh or twelfth century, is probably the greatest repository of information on the contemporary Irish diet. In one episode, MacConglinne, prepares a meal of:

‘…olar sen-shaille , maeth bishaille , lán-charna muilt , mil ’n-a criathraib , salann Saxanach’ (Meyer 1892, 23)

[‘…juicy old bacon, and tender corned-beef, and full-fleshed wether, and honey in the comb, and English salt’ (Meyer 1892, 60)].

Although salt is mentioned in the early-eighth century Crith Gablach (Ritchie 1879, 325), there is no evidence for native salt production prior to the late-twelth century – for example all Irish
place-names associated with salt production during the later medieval period are ultimately English in derivation (Scott 1981, 115-6).

Walnuts, which would have originated in southern Europe; and sweet plums, which have been argued to have come from southern England (Wallace 1987, 215) are indicators that exotic food-stuffs were also imported into Hiberno-Norse Dublin.

**Silk:**
Approximately sixty pieces of silk have been recovered from Hiberno-Norse Dublin. These have been interpreted as probably coming from Byzantium (Wallace 1987, 220), although it is possible that they originated in the Muslim east. These finds may represent trade at Dublin, but they may equally represent material brought to Dublin from farther afield by arriving townsfolk.

**Slaves:**
Although the slave trade may have been equally important before the arrival of the Vikings in Ireland, more information is available on the imported slave trade from the ninth century onwards. There are numerous references in the Irish annals to slaves being brought into Ireland as a result of Viking raids. ‘Amlaíb and Ímar returned to Áth Cliath from Alba with two hundred ships, bringing away with them in captivity to Ireland a great prey of Angles and Britons and Picts (Annals of Ulster 871)’. The Dublin-based slave trade seems to have extended as far south as northern Africa:

> ‘Then they [i.e. Hiberno-Norse] brought a great host of them [i.e. Mauritanians] captive with them to Ireland, i.e. those are the black men. For Mauri is the same as nigri; “Mauritania” is the same as nigritudo. Hardly one in three of the Norwegians escaped, between those who were slain, and those who drowned in the Gaditanian Straits. Now those black men remained in Ireland for a long time’. Fragmentary Annals of Ireland 867.

The Danish (or Ostmen) settlement at Limerick, established in 922, for a time rivaled ‘Dublin as the key market for slaves’ (Forte et al. 2005, 105), but in later documents Dublin appears to have re-established its supremacy. From the tenth to the twelfth century, there was a trade in slaves between Chester and Dublin (Doherty 1980, 84), and the slave trade between Bristol and Ireland that was banned by Wulfstan in the early-eleventh century (Darlington 1928) has also been assumed to have been based in Dublin (Gwynn 1947, 277).

The importation of English slaves into Ireland seems to have still been common practice through to the late-eleventh century when Giralda record that the Council of Armagh banned the trade and announced that English slaves throughout Ireland should be set at liberty (Mansi 1902, 123). The Council of Armagh mentions pirates involved in the slave trade (suggesting that some slaves were acquired by raiding), but also mentions merchants who purchased, *inter alia*, children from their parents, suggesting that some slaves may have been the subject of more deliberate enterprise (Scott & Martin 1978, 69-71).

The Dublin-based slave trade would appear to have been the most important aspect of import trade during this period. Such an interpretation, however, is influenced by the sensational nature of this trade, which may have meant that it was more worthy of recording than the wine trade or the salt trade which also existed at this time.
Exported Goods

As with the earlier trading phases, there is little information about what goods were being exported from Ireland over this period. William of Malmesbury, writing c. 1125, for example, mentions ships from Germany and Ireland trading at York - *‘naves a Germania et Hibernia venientes...’* (Preest 2002, 139) - but does not give any description of their cargoes:

There is substantial evidence for the exportation of pelts and animal skins from Ireland to England in the post-Norman period. *‘The Libelle of Englyshe Polycye’* written between 1436 and 1438 comments on Ireland’s great trade wealth in skins - specifically marten, deer, otter, squirrel, hare, sheep, lamb, fox, kid and rabbit (Warner 1926). It is possible, with the exception of the introduced rabbit, that the fur trade was a traditional Irish export in earlier centuries. Giraldus Cambrensis, writing in the late-twelfth century, mentions that ‘the hides of animals and the skins of flocks and wild beasts’ were traded from Ireland in exchange for Poitevin wine (O’Meara 1951, 15). He also comments on the abundance of martens in Ireland: *‘Martinarum copia abundant hic silvestre’. Topographia Hibernia Vol. I, § 24 (Dimmock 1867, 58);* and describes how they were caught. The trade in marten pelts can be chronicled farther back than this. A charter of Rouen dated to 1150 or 1151, and reissued in 1199, states that:

‘Quaecunque navis de Hibernia venerit...Rothamagum veniat, unde ego habeam de unaquaque nave unum tymbrium de marris aut decem libras Rothamagi...’ *[‘Whenever a ship should come from Ireland...and come to Rouen, I [i.e. Duke Henry of Normandy (1150), and later King John (1199)] shall have from every ship one ‘timber’ [i.e. a parcel of 40 skins] of martens, or ten Rouen pounds...’]*

(quoted in Round 1909, 467).

There appears to have been a marten trade between Chester and Dublin (*‘Dunelina’*), dating back to the reign of Henry I (1100-1135) (Round 1909, 465), and there is a ‘curious allusion’ to Chester’s Irish marten trade in Domesday Book (*ibid.* 467). The suggestion that Viking Dublin was the centre of the Irish fur trade, or at least the marten fur trade, is supported by the fact that a small number of marten bones were found in tenth century contexts in the town (McCormick 1999, 363). Marten bones were also found at Ballynahinch (Ballinderry II), Co. Offaly (Hencken 1942), and Tullycommon (Cahercommaun), Co. Clare (Hencken 1938). These presumably represent fur-hunting, although possibly for domestic manufacture, rather than trade.

Ireland was not only an importer of slaves, but also an exporter. Most of the slaves brought into Dublin appear to have been processed there and then sent off to their final destinations. There is evidence of slaves being sent from Ireland to Rouen c. A.D. 1000 (Doehard 1978, 206), and the assumption is that the Moorish slaves captured in 867 were also sent on to other destinations. The slave trade in Dublin was not, however, merely a transfer point for slaves from England, Spain or North Africa, and a large number of the slaves exported from Dublin at this period would have been native Irish (Holm 1986).

Other Materials

Amber:

Amber, whether in the form of beads, or of un-worked lumps, was found in eighteen Early Medieval sites in Ireland prior to 2004 (Table 8.14). It would be tempting to interpret the presence of amber in Ireland as either evidence for Viking trading, or even as evidence for Hiberno-Norse settlement. The vast majority of the amber found in Ireland comes from the excavations at Fishamble Street in Dublin - over 4,000 pieces were recovered from workshops in this area (Wallace 1987, 215) – and this may represent the source of much of the rest of the amber found in Ireland.
Table 8.14: Amber material from Ireland

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballycatteen, Co. Cork</td>
<td>Multivallate Rath</td>
<td>One amber bead</td>
<td>Ó Ríordáin &amp; Hartnett 1943.</td>
</tr>
<tr>
<td>Cherrywood, Co. Dublin</td>
<td>Hiberno-Norse occupation site</td>
<td>One amber bead</td>
<td>O Neill 1999:169</td>
</tr>
<tr>
<td>Dooey, Co. Donegal</td>
<td>Sand hills Enclosure</td>
<td>Amber settings in locally made bronze</td>
<td>Ó Ríordáin &amp; Rynne 1961</td>
</tr>
<tr>
<td>Dunnisk, Co. Tyrone</td>
<td>Rath/Monastic Site</td>
<td>One amber bead</td>
<td>Ivens 1989, 53.</td>
</tr>
<tr>
<td>Garranes, Co. Cork</td>
<td>Multivallate Rath</td>
<td>Two fragments of amber</td>
<td>Ó Ríordáin 1942, 121.</td>
</tr>
<tr>
<td>Garranes, Co. Cork</td>
<td>Multivallate Rath</td>
<td>One amber bead</td>
<td>Ó Ríordáin 1942, 121.</td>
</tr>
<tr>
<td>Garreryduff, Co. Cork (Garryduff 1)</td>
<td>Rath</td>
<td>One piece of amber</td>
<td>O'Kelly 1962.</td>
</tr>
<tr>
<td>Glencull, Co. Tyrone</td>
<td>Rath</td>
<td>Amber hemisphere in decorated bronze disc</td>
<td>Collins 1960, 78-79.</td>
</tr>
<tr>
<td>Lagore, Co. Meath</td>
<td>Crannog</td>
<td>One amber bead</td>
<td>Hencken 1950.</td>
</tr>
<tr>
<td>Larrybane, Co. Antrim</td>
<td>Promontory Fort</td>
<td>One amber bead</td>
<td>Childe 1936, 192.</td>
</tr>
<tr>
<td>Lough-a-Trim, Co. Westmeath</td>
<td>Crannog</td>
<td>Part of amber ring</td>
<td>Falkiner 1899, 216.</td>
</tr>
<tr>
<td>Loughgur, Co. Limerick (Carraig Aille I)</td>
<td>Cashel</td>
<td>Two fragments of amber</td>
<td>Ó Ríordáin 1949.</td>
</tr>
<tr>
<td>Poulacapple, Co. Tipperary</td>
<td>Rath</td>
<td>Amber button</td>
<td>Reynolds 1972:0030</td>
</tr>
</tbody>
</table>

Amber, however, is found on a number of sites which clearly pre-date the arrival of the Vikings, such as the early phases of Lagore, Co. Meath (Hencken 1950), or Garranes, Co. Cork (Ó Ríordáin 1942, 121). It must, therefore, be assumed that there was some low level importation of amber into Ireland before A.D. 800. This does not necessitate the presence of a Baltic trade, however, and may have been accomplished through middle-men in Saxon England.

Jet:

Jet has been found on twenty-six Early Medieval sites in Ireland prior to 2004 (Table 8.15). Fragments of jet bracelet predominate among finds of jet, although some un-worked jet lumps have been found at Fishamble Street in Dublin (Wallace 1987, 216). These were sourced to near Whitby, in Yorkshire (ibid.), and it is possible that this may represent the origin of most Irish jet pieces. There are, however, some difficulties with the identification of jet on a number of sites. In certain cases ‘jet’ is included as a possible stone-type, along with ‘shale’ or ‘lignite’ - e.g. Drumaroad, Co. Down (Waterman 1956): Ballyaghagan, Co. Antrim (Proudfoot 1958) - and it is clear that further petrological research is required before a definitive list of jet finds in Ireland may be produced.
Table 8.15: Jet objects from Ireland

<table>
<thead>
<tr>
<th>Townland/ Site Name</th>
<th>Site Type</th>
<th>Comments</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballycetteen, Co. Cork</td>
<td>Rath</td>
<td>Fragment of jet bracelet.</td>
<td>Ó Riordáin &amp; Hartnett 1943.</td>
</tr>
<tr>
<td>Dressogagh, Co. Armagh</td>
<td>Rath</td>
<td>Fragment of jet bracelet</td>
<td>Collins 1966.</td>
</tr>
<tr>
<td>Drumaroad, Co. Down (White Fort)</td>
<td>Cashel</td>
<td>Fragment of jet/shale/lignite bracelet</td>
<td>Waterman 1956.</td>
</tr>
<tr>
<td>Duneight, Co. Down</td>
<td>Raise Rath</td>
<td>Fragment of jet bracelet</td>
<td>Waterman 1963</td>
</tr>
<tr>
<td>Feltrim Hill, Co. Dublin</td>
<td>Cashel</td>
<td>Jet bead</td>
<td>Hartnett &amp; Eogan 1964, 31</td>
</tr>
<tr>
<td>Feltrim Hill, Co. Dublin</td>
<td>Cashel</td>
<td>Jet spindle whorl</td>
<td>Hartnett &amp; Eogan 1964, 31</td>
</tr>
<tr>
<td>Feltrim Hill, Co. Dublin</td>
<td>Cashel</td>
<td>Jet disk</td>
<td>Hartnett &amp; Eogan 1964, 31</td>
</tr>
<tr>
<td>Fishamble Street, Dublin, Co. Dublin</td>
<td>Hiberno-Norse Urban site</td>
<td>Unworked jet nodules</td>
<td>Wallace 1987, 216.</td>
</tr>
<tr>
<td>Kilbrin, Co. Down</td>
<td>Raised Rath</td>
<td>Fragment of jet bracelet</td>
<td>Boal &amp; Moffit 1959</td>
</tr>
<tr>
<td>Knowth, Co. Meath</td>
<td>Raised Rath</td>
<td>Fragments of jet armlets</td>
<td>Eogan 1975:30; Comber 2008, 168</td>
</tr>
<tr>
<td>Lackan, Co. Wicklow (Quinn’s Rath)</td>
<td>Rath</td>
<td>Piece of jet.</td>
<td>O’Connor 1944.</td>
</tr>
<tr>
<td>Letterkenny, Co. Mayo</td>
<td>Rath</td>
<td>Eight fragments of jet bracelets</td>
<td>Ó Riordáin 1951.</td>
</tr>
<tr>
<td>Loughgur, Co. Limerick (The Spectacles)</td>
<td>Unenclosed Hut Site</td>
<td>Four fragments of jet bracelet.</td>
<td>Ó Riordáin 1949.</td>
</tr>
<tr>
<td>Mullaghbane, Co. Tyrone</td>
<td>Multivallate Rath</td>
<td>Fragments of three jet bracelets</td>
<td>Harper 1972, 78.</td>
</tr>
<tr>
<td>Ninch, Co. Meath</td>
<td>Multi-period site</td>
<td>Fragments of two jet bracelets</td>
<td>Eogan &amp; Reid 2000:0760</td>
</tr>
<tr>
<td>Rathnew, Co. Westmeath (Usineath)</td>
<td>High Status Enclosure</td>
<td>Fragments of four jet bracelets</td>
<td>Macalister &amp; Praeger 1928.</td>
</tr>
</tbody>
</table>
Porphyry:

Fragments of porphyry have been found on a number of Irish sites, and these have been discussed in detail by Lynn (1984). All examples were green in colour, and were sourced to Greece, with the exception of a single piece of red porphyry from Armagh, which was sourced to Egypt (ibid. 19). Porphyry was used mostly by the Romans as a decorative building material, and may have been seen as an appropriate material for inclusion in portable altars. Lynn noted that fragments have been found at the ecclesiastical sites of Armagh, Co. Armagh; Downpatrick, Co. Down; Movilla Abbey, Co. Down; and Kilteel, Co. Kildare. Generally, they were found in contexts that post-dated A.D. 1000. There were also seven separate finds of the material from Fishamble Street and Christ Church Place, Dublin (Wallace 1987, 220). Since Lynn’s survey, further examples of green porphyry have been found at Clonmacnoise (King 1992:157) and Derrynaflan, Co. Tipperary (O Floinn 1985:53). The bias of the material towards ecclesiastical sites would tend to support the theory that it had some religious function.

Relics:

The trade in the remains of saints was a major business concern in medieval Europe (McCormick 2001, 283-318). Although a large number of shrines have been recovered from Early Medieval Ireland, the vast majority of these appear to be related to local or regional saints, and thus would be unlikely to be part of this broader European trade. An Anglo-Saxon ivory plaque found in Dublin (Wallace 1987, 220), has been interpreted as representing this trade, and it is possible that some of the Samian ware found in Ireland may have arrived through this trade (ibid.). The ‘Gospel of St. Martin’ that was taken from ‘Dunbo in Dal Riada’ (Dunboe, Co. Londonderry) in 1182 (Annals of the Four Masters) may also have arrived in Ireland through the relics trade.

Internal Trade

Our archaeological evidence for local and regional internal trade, unlike external trade, is almost non-existent or at least non-visible for this period. Material culture is reasonably homogenised throughout the island of Ireland, and even where there are substantial differences at this period – for example the presence of souterrain ware in northeast Ulster in an otherwise aceramic island – only two sites, Killegar, Co. Wicklow (Ryan 1973, 641), and Millockstown, Co. Meath (Manning 1986), from outside this core area have, to date, produced evidence of souterrain ware (although, souterrain ware has recently been identified artefacts excavated on an early medieval settlement by Francois Henry in the Iniskeas, Co. Mayo; Sharon Greene, pers. comm.)

It has been argued that concentrations of certain products, such as the 524 whetstones/honestones from Tullycommon (Cahercommaun), Co. Clare (Hencken 1938), may represent internal trading centres (Comber 2008, 159). It is equally possible that these items may have been produced for the export trade. The sheer numbers of extant goods found on the site may suggest that neither trade was successful.

Some work has been done in trying to identify the provenance of millstones and quern stones on sites in Co. Down. The origin of the stones from Nendrum has been located to the ‘upper reaches of Bloody Bridge River’ in the Mourne Mountains in the south of Co. Down (Meighan 2007, 205); a quern stone from Ballynarry, has also been traced to the Mourne Mountains (Davidson 1962, 73); and one of the millstones from Rathmullan was sourced to Scrabo Hill, in north Co. Down (Lynn 1981-2, 136). These stones were quarried and transported across different polities, suggesting that some form of mutual exchange was involved in their procurement, rather than the compulsion of the local secular or religious authority.

The establishment of permanent Norse settlements in Ireland appears to have acted as a catalyst to internal trade. Foodstuffs, such as grain (or bread), cattle and sheep, would have
been brought in from the ports’ hinterlands. The faunal evidence from Hiberno-Norse Dublin, for example, shows quite clearly that there was a different age-slaughter pattern operational in the urban area from that prevalent on the producing farms (McCormick & Murray 2007, 116). Clothes would also have been necessary for the urban settlements, and this has been argued as a driving force behind the movement from cattle to sheep farming in some areas (ibid. 107).

There is also the possibility that a reasonable percentage of the Irish slaves traded through the slave-market in Dublin were the result of slaving amongst the native tuatha themselves. There is a reference in Keating to an Irish king raiding another province and taking off captives, for example:

'It was in the reign of Flann Sionna [877-914], king of Ireland, that the following events took place. For this king plundered and wasted all Munster and carried off captives there from.' (Comyn & Dineen 1902, 193)

Provincial kings also received slaves as part of their tribute:

'Mael Brigte thereafter received his own award and compensation for the insult to Pátraic’s honour from the provinces of Ireland, as well as taking their hostages, thirty-seven cumals, and four of the Ulaid hanged, not counting churches and monastic tenants.' (Chronicon Scotorum 893).

There are problems, however, with misinterpreting slave-raiding, with slave-trading, and other factors must also be considered, such as the fact that slavery was accepted as a common alternative to the death penalty (Kelly 1988, 216). The nature of tribute between both clients and patrons, and also between client states and provincial kings, further exacerbates the problem of identifying internal trade in Ireland. The Leahbar na g-Ceart (Book of Rights) was composed sometime after A.D. 900 (O'Donovan 1847, xi), and this mentions drinking horns, slave-women, hounds, weaponry, chess-sets, and clothing all changing hands as part of this procedure, as well as the livestock dues (ibid. 69-71).

Conclusion

The various phases of external trade across the early medieval period not only highlight a change in overseas trading partners, but also a significant shift in the way in which trade is organised in Ireland. In the earlier phases - up to c. A.D. 800 - external goods appear to have been arrived at specific coastal emporia, and then moved inland. The Dublin Bay islands of Lambay and Dalkey (Doyle 1998, 101), and the coast of Co. Down and Strangford Lough - especially Dunnyneill Island (McCormick & Macdonald 2004) - played a substantial role in the import trade, and a similar, unidentified site, most likely existed in the area around Cork harbour. From these emporia the exotic material was moved inland to its ultimate destination - ecclesiastical sites and high status sites. The exact nature of this relationship is not fully understood. Doherty (1980) favours the model of the ‘monastic town’, perhaps with a subsidiary port on the coast, which could then ‘redistribute,’ or ‘trade-on’, the imported goods at ‘senach’ (monastic fairs) such as that which gave the name to Nenagh, Co. Tipperary. This view was rejected by Valante (1988) who proposed a more European-style model based on the role of local magnates.

The establishment of the Hiberno-Norse towns marks a significant change in how external trade is managed in Ireland. In this scheme, the town plays the role of both emporium and marketplace. This may explain why so little exotic material finds its way out of the urban centres and into the ecclesiastical sites or high status sites which formerly constituted the market for such goods.

Although there are changes in the mechanisms by which trade operates in Ireland over the Early Medieval period, there are remarkable similarities in the type and nature of goods traded
during this period. Basic consumables appear to dominate the export market – clothing, leather shoes and butter are all mentioned, and there is an assumption that leather (or at least hides) was also exported (Hodges 1989, 33). In return salt, cereals, and beer appear to have been imported.

Slaves were both imported and exported during this period, and the establishment of a major slave-trading port in Ireland – i.e. Dublin – increased the profitability of slave-raiding and slave-trading by allowing excess slaves to be sold to an overseas market.

There is also evidence for a high-range set of imports. Wine was of great importance, both for liturgical reasons, and also as a status symbol for the nobility. Silks were discovered in Hiberno-Norse Dublin, and it seems highly probable that exotic spices and herbs may also have been brought into Ireland throughout this period.

Far from being peripheral to the development of trade in Western Europe, Ireland played her part as a minor, but enthusiastic, trading partner. Irish traders sailed from western France round to the east coast of England; and Irish slavers worked from North Africa to Iceland. External trade is now reasonably well understood, but further study is required to ascertain the level of internal trade in Ireland, and what, if any, impact this had on contemporary society.
Chapter 9. Conclusions and future challenges

Background
- The Early Medieval Archaeology Project has shown how the incredible richness, complexity and potential of the excavated archaeological evidence for the period 1930-2004, and in particularly the transformative nature of archaeological discoveries in the last decade.

- EMAP’s research, data capture, data analysis and first-stage archaeological interpretation presented in this report has shown that entirely new types and forms of early medieval archaeological sites have been discovered, investigated and recorded, that if made more fully available and integrated into archaeological research and publication will transform our understanding of this key period in Ireland’s past.

- EMAP has shown through its construction and analysis of a Microsoft Access database of 2,208 early medieval sites excavated (containing 3,047 excavations) between 1930-2004 how the character of Irish archaeology itself has been transformed. The location, character and density of archaeological excavations have been changed, almost entirely due to the onset of development-led archaeological investigations since the mid 1990s. However, the pace and extent of these excavations have varied across the island and the distribution of different types of excavated sites is biased by several factors.

- EMAP has also shown that there has been immense research capacity building in the commercial sector, and the standards of quality and range of investigative and analytical methods and techniques being used in archaeological projects are now undoubtedly at their highest in the history of Irish archaeology. However, EMAP has also shown that the human and financial resources devoted to research and interpretations in the Universities, Museum and state sector have largely remained static in 1930-2004 (despite immense growth and pressures in all these sectors).

- However, despite a general perception of a ‘crisis’ in Irish archaeology of non-publication, EMAP has shown that the problem may not be quite of the scale hitherto believed. EMAP suggests that of the 2,208 early sites, (where excavations were undertaken both on and in vicinity of, between 1930-2004; only 95 would be considered to be ‘Highly Significant’; 307 ‘Significant’; 485 ‘General Significant’, 302 ‘Uncertain’ while 1,019 site excavations were of ‘No Archaeological Significance’. Obviously the grading of sites is subjective and more information will change these figures, but the key point is that this is not an insurmountable problem. Irish archaeologists, through a well-funded collaborative research programme such as EMAP (and other projects for other periods) could easily cope with the publication and dissemination of this new archaeological evidence.

- Future initiatives to exploit this early medieval archaeological data will require both a step change in the funding of research in these bodies, but also a new collaborative research culture in Irish archaeology across all sectors. EMAP has provided one example of how a funded programme of research can enable high-quality reviews and reports.

Settlement and landscape
- EMAP has demonstrated that a wide range of new early medieval settlement types have been identified as excavations move beyond the confines of traditional SMR sites and into the landscape. Of the EMAP site categories investigated, a total of 346 sites were
‘settlement enclosures’; 101 were ‘settlement landscapes’; 129 were ‘unenclosed’ habitation sites, 12 were ‘settlement/cemeteries and 216 were earth agricultural/industrial structures or features. A total of 89 sites were in Viking/Hiberno-Norse towns.

- Early medieval dwellings and settlement activities were often situated within enclosures, typically but not exclusively, classic ringforts. In recent years, a much wider range of ‘settlement enclosures’ (e.g. ‘settlement/cemeteries’, palisaded enclosures, settlements within field enclosures, ecclesiastical enclosures) have been investigated that do not fit closely with modern categories of archaeological evidence, but reveal the varied and evolving character of settlement in the early medieval landscape. There is also evidence for local and regional variation; for the chronologies of continuity and change on sites and the potential shifting social, ideological and political factors behind the changing character of the cultural biographies of early medieval settlements. It would be important for future studies to bear this social and cultural variability in mind.

- Early medieval unenclosed habitation sites were also uncovered in 1930-2004, and in increasing numbers in recent years, across the island, of a range of different types and forms (e.g. early medieval houses in fields; early medieval occupation evidence, souterrains associated with unenclosed settlement; there was also evidence for early medieval dwelling activities in caves, early medieval occupation at shell middens, etc). These sites offer new insights into the organization of early Irish society, the dispersion of settlement across the land and potentially the processes of historical and social change across the period, AD 400-1200.

- EMAP has show the scale and extent of investigation of urban archaeological deposits dating to the Viking Age/Hiberno-Norse periods in such major cities and towns as Dublin, Waterford, Cork, Limerick and Wexford, with their well-known contribution to our understanding of urban origins, enclosures and defences, settlement, trade and exchange, crafts and economy and relationships with wider political and rural hinterlands.

- Finally, a large corpus of early medieval buildings has been investigated 1930-2004. The EMAP database indicates that over 480 buildings were excavated 1970-2002 on rural settlements and 566 Viking buildings. These could provide key insights into the social, economic and ideological organization of domestic and dwelling space.

### Church

- EMAP has demonstrated that an increasing range of evidence has been uncovered that will enable scholars to trace how the introduction of Christianity transformed the Irish landscape over the early medieval period. Of EMAP’s site categories, a significantly large proportion was ‘Church/Ecclesiastical’. New archaeological evidence has been uncovered to trace the function of ecclesiastical sites and how they related to settlement/cemetery sites, unenclosed cemeteries, ecclesiastical cemeteries and the wider landscape of secular settlement, travel and the economy. There is also a surprising range of evidence for the excavation of ‘early medieval monuments’ such as round towers, high crosses and leachta that needs to be integrated. Finally, the archaeological evidence outlined here certainly contributes to the ongoing debate about the ‘monastic town’ in Ireland.

- This EMAP report has focused on analyzing the known archaeological evidence for ecclesiastical enclosures, the character of the early church (5th-9th century AD), the evidence for wooden churches and structures and the evidence for agriculture, craftworking and trade.

- The EMAP database has also shown that there is growing archaeological evidence for the role of monastic enclosures in the growth of ‘towns’ in early medieval Ireland.
Finally, EMAP has shown that this emerging archaeological evidence can be used to trace the character of pastoral care and the organization of ecclesiastical estates.

Burial
- EMAP has shown that there is significant diversity and variety in burial rites and contexts in early medieval Ireland.
- During the late Iron Age/early medieval transition period, between the 4th-6th century AD, early medieval communities were burying their dead in a range of burial grounds (including penannular and annular ring ditches; mounds, standing stones and other unenclosed sites). Such burials speak strongly of people's sense of connection with the past and with particular places in the landscape and the range of beliefs and practices held to by the population, both ancient and new.
- By the 7th-8th century, early medieval ecclesiastical enclosures around churches became the focus for burial of some, but certainly not all, the population. Indeed, radiocarbon dates from ‘settlement/cemeteries’ reveal that many people continued to be buried close the land itself, beside dwellings and settlements well into the Christian era. Early medieval burial in caves, middens and other contexts also argues for the survival of ‘pagan’ or at the least, more complex forms of Christian burial around the island, raising intriguing questions of religious identities in the period.
- The 9th-11th centuries AD saw the re-introduction of ‘pagan’ burial rites and practices by Norse in Ireland, both in association with early longphort and the developed Hiberno-Norse towns, but also in isolated rural locations.
- An intriguing range of evidence has also shown that ‘settlement/cemeteries’ (also known in the literature as cemetery/settlements) were used from the 5th-11th century, and were not always phases of use in settlement enclosures.
- At the least, all this evidence analysed by EMAP demonstrates that early medieval burial practices were ‘messy’ and contingent, as local communities responded to the deaths of their people in various ways. In a sense, we can trace strong evidence for changes in burial practice across time – but that the evidence cannot easily be categorized in to ‘early’ and ‘late’ practices. It should also be acknowledged, although outside the scope of the EMAP project, that these excavations provide a unique opportunity to investigate the demographics and populations of early medieval Ireland, the diet, health, diseases and ways of life of the people of early medieval Ireland.

Agriculture
- The character and organization of early medieval agriculture is comparatively well-understood; the role of dairying and the role of arable crops and the place of farming in early Irish society have all been reconstructed from known archaeological, environmental and historical evidence.
- However, EMAP has revealed that there has been a significant amount of discoveries in 1930-2004, but particularly in recent years, for entirely new types of archaeological evidence for agriculture in early medieval Ireland that have yet to be integrated into our understandings. Of EMAP's site categories, large numbers were ‘Agricultural (mills, kilns, fields) while much of the other site categories had evidence for agricultural activities. It could be argued the well-known knowledge of the ‘revolutions’ in early Irish farming could now be matched with a revolution in the understanding of the scale and intensity of settlement and land-use in the Irish landscape and the real role of farming in social life and practice.
• EMAP has demonstrated the increasing evidence for early medieval field-systems (at least 30 early medieval sites were associated with field systems) and enclosures of varying sizes, types and shapes; for souterrains, corn-drying kilns and water mills, for bog trackways and coastal fisheries and other features associated with economy and the land. EMAP has shown that there is growing data for the scale and extent of arable production. There is also potentially evidence that could be used to reconstruct the regionality of agricultural practices across the country.

Crafts/ Industry and Trade/ Exchange

• EMAP briefly reviewed the evidence for crafts and technology, focusing in particular on ironworking, non-ferrous metalworking, stone, glass and vitreous materials and organic raw materials (e.g. wood, bone and antler, textiles), with tables of evidence outlining the potential for future research and investigation.
• EMAP’s review of the evidence for imported pottery, glass, coins, amber and other objects from early medieval excavations, 1930-2004 also arguably provides a valuable resource for future studies.
• It is also evident from more recent projects, that early medieval excavations in Ireland have uncovered potentially thousands of early medieval artefacts, with the wider contextual evidence for resource procurement, technological skills and crafts; manufacturing processes and the distribution and uses of different types of wooden, leather, antler/bone, textiles, glass, copper-alloy, iron, silver, gold and other objects all well-recorded.
• Artefact studies have proven to be less popular in this generation and EMAP’s review suggests that there is vast potential for a re-invigorated study of the material culture of our early medieval past. The use, repair, discarding and abandonment of these objects has led to their identification in the archaeological record and thus it should be possible to re-invigorate the study of early medieval material culture assemblages, within their widest social, ideological, economic and cultural contexts.
• For example, an analysis of ironworking on early medieval sites enables an investigation of the scale and context of ironworking evidence and the social and ideological status of the blacksmith and the scale of ironworking at various types of sites.
• The importation of exotic pottery can be revealing about the changing social and cultural contexts of trade and exchange and the perception and role of ‘distant places and objects’ in early medieval society.

In conclusion, Irish archaeologists have excelled in uncovering new data from early medieval Ireland and an extraordinary range of stories now need to be told about this time, place and its peoples. EMAP has laid out the bones of some of the stories - and has helped to show how we could begin to tell them.
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