Medieval Settlement Enclosures and Resource Management of Living Trees in Gaelic Ireland

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Abstract

The aim of this thesis is to problematise and investigate relationships between living trees and earthen settlement enclosures, mainly termed *ráth* and commonly used by Gaelic society in medieval Ireland (*c*. 8th – 17th century). For many centuries, the enduring *ráth* has been an inevitable host to a wide variety of flora, especially trees, and fauna, which must be brought to bear on how we view these monuments in their past and present landscapes.

Trees are presented and interpreted in this thesis as material culture, with agency, in the dialogue of Gaelic society with nature. Drawing mainly on the results of field-based investigation of a corpus of treed settlement enclosures in the four provinces of Ireland, combined with a review of the emic portrayal of trees in Gaelic historical and literary sources, relationships between people, trees, the *ráth*, and to a lesser extent the moated site, are investigated. Actor-Network theory is used to examine those relationships as a meaningful network of objects, ideas and texts.

The value of trees as a practical resource is well attested in Gaelic literature, but trees also had an important cultural role in the Gaelic world-view as living entities imbued with symbolic and ideological attributes. Hazel, for example, was valued for its rods and nuts and ideologically associated with wisdom, kingship and hospitality.

The remarkable survival of thousands of medieval earthen settlement enclosures in the Irish landscape is testimony to a long-lived culture of their curation and management. It is argued that the roles of trees, as important actors in the life-histories of enclosures, were fundamental to the sustained use of this common settlement form. Furthermore, it is proposed that the symbolic significance of the association between trees and the *ráth*, best exemplified by the *bile ráth* (the venerable tree of enclosures), was important to expressions of authority and identity among Gaelic elites.

The principal finding of this thesis is that considerations of the roles of the *ráth* should be broadened to include the potential of this settlement form as a place where trees were intentionally planted and managed for utility and aesthetic purposes.

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Abbreviations and conventions

ANT	Actor-Network Theory
AConn	Annals of Connacht
AFM	Annals of the Kingdom of Ireland by the Four Masters (ed. and trans. J. O'Donovan)
AU	Annals of Ulster (ed. and trans. W. M. Hennessey and B. Mac Carthy; new ed., to AD 1131, ed. and trans. S. Mac Airt and G. Mac Niocall)
CIH	*Corpus iuris Hibernici*, 7 vols, Dublin: Dublin Institute for Advanced Studies, (Binchy, D. A. [ed.], 1978)
CS	Chronicum Scotorum: A Chronicle of Irish Affairs, from the earliest times to AD 1135, with a supplement containing the events from 1141 to 1150. William M. Hennessy (ed), First edition [lvii + 349 pp] Longmans, Green, Reader, and Dyer, London (1866)
NFC	The Schools' Collection at The National Folklore Commission
OSI	Ordnance Survey of Ireland

The chronological framework used in this work is as follows:

Early medieval: 5th century to *c*.1100

High medieval: *c*.1100 to 1350

Late medieval: *c*.1350 to 1600

Post-medieval *c*.1600 to 1800

Modern *c*.1800 to present.

0 Introduction: Thinking about Trees

The genesis of this thesis lies in field observations of a notable presence of tree-cover dominated by the species hazel and hawthorn on many earthen-banked settlement enclosures (predominantly the *ráth*) throughout the counties of Mayo, Roscommon, Galway, Longford, Clare and Cavan. Similarities in the way that trees were arranged spatially on the banks of the enclosures, and a certain appearance that suggested that some trees of a significant age, were also noted. The initial questions that began to formulate related to whether or not these apparently widespread similarities reflected particular cultural practices relating to past use of the enclosures and the intentional planting of trees upon their banks.

These reflections were accompanied by an awareness of folkloric traditions and superstitions, which warned against interfering with, or causing damage to them (both the earthworks and the trees upon them), as it was believed to bring bad luck. Stories and folktales relating to the 'dangers' of interfering with the trees on 'ringforts' or 'fairy-forts', and the misfortunes that befell those who did, are very well attested to in the record of Irish folklore collected by the National Folklore Commission (NFC) in the 1930's throughout the whole of Ireland. Reading from a wide selection of these accounts provided by the older generation of the time, reveals a widespread occurrence of similar sentiments and phrases typically expressing that the trees have 'always been there' and that 'no-one ever cut the trees on a fort'. This provided reasonable grounds for suggesting that many sites have been under continuous tree-cover and that some of the trees may have been surviving on them since at least the early 1800's. When landowners were asked about the origins of these trees, the answers were invariably speculative. One farmer that I encountered while field walking in Claremorris, Co. Mayo supposed that they had always been there, 'perhaps since the place was left to go wild after the people moved out'. I cannot be sure how long ago he reckoned that may have been but he assured me that the trees had been there throughout his lifetime and was of the opinion that they were surely there a lot longer still. In the course of this investigation, similar accounts were given about hazel and hawthorn trees on the banks of enclosures as far north as Emyvale, Co. Monaghan in south Ulster and to the south in Rylane close to Ennis, Co. Clare.

A great proportion of these sites that are so numerous in the Irish landscape are, to varying degrees, covered with trees. This investigation explores the idea that trees were intentionally managed on the banks of these enclosures as a part of the processes and purposes of enclosure. The question posed, at its most basic, is 'What is the relationship between the trees and the sites that they are found upon?' Some of the sites investigated have certainly been intentionally planted with trees for particular purposes in the past, and others are treed solely because of wind, bird and mammal dispersed colonisation. Other sites of course, support trees that are a result of both of these processes, yet it appears that some trends and patterns regarding the species present at many sites, and the way that they were spatially arranged, were common to diverse parts of the country. This was especially true of the species hazel (*Corylus avellana*) and hawthorn (*Crataegus monogyna*). Both hazel and hawthorn can survive for several centuries through the process of persistent stem renewal (Rackham 1997, 102; Coppins and Coppins 2010) and thus, new questions began to emerge. How old could the hazel and hawthorn trees on these enclosures be? Could their presence be linked to the activities or legacy of people who occupied these sites in the past, are they the product of much later practices, or are they the result of natural colonisation?

A cursory investigation showed that there were many reasons to suggest significant relationships between these trees and their host monuments. Not only are both species frequently encountered on medieval settlement earthworks today, but there also exists a traditional folkloric association between the *ráth*, commonly known as the 'ringfort' and hazel and hawthorn trees or 'bushes' (0.4.3) connecting them culturally to their host enclosures. Both species are traditionally used in processes of enclosure as invaluable hedging resources, which indicates a high probability that relationships with the earthen banks of such enclosed settlement sites and these trees may be as old as the earthworks themselves. Indeed, the morphology of earthen banks and fosses is highly conducive to the incorporation, proliferation and survival of such trees.

0.1 Aims and Objectives

The overall aim of this thesis is to problematise and investigate perceived and observed relationships between living trees and Irish earthen settlement enclosures (predominantly the ráth) commonly used by Gaelic society from the early medieval through to the early modern period (*c*. AD700-1600). There are two propositions. The first is that trees were

cultivated and managed as components of the earthen banks of medieval settlement enclosures. The proposed motivations for this range from the practical incorporation of protective and decorative hedging to symbolic and aesthetic expressions of cultural identity (6.1). The second proposition is that there may be trees currently living upon the banks of settlement enclosures that have their genesis in intentional planting during the medieval period. In some cases, this may refer to intentionally planted individual trees that have survived on the earthen banks of enclosures for centuries but it may also refer to trees whose presence are due to the survival of certain continuous practices. Therefore, this thesis also aims to broaden considerations of the roles of Irish earthen settlement enclosures to include their potential as sites where trees were intentionally planted and managed for utility and aesthetic purposes.

The objectives are as follows:

Objective 1: To identify the roles of living trees within the Gaelic settlement environment.

Objective 2: To determine whether some trees exist on earthen settlement enclosures that can be considered relict of medieval tree management. This may apply to individual veteran or ancient tree specimens or to any type of tree-cover that can be shown to have had a significant continuous successional presence on a site.

Objective 3: To argue that living trees on the banks of medieval earthen settlement enclosures were a managed resource that open on to a network of relationships between people, trees and their host earthen enclosures.

Figure 1 Recording trees on a trivallate enclosure (A7) in Coolamber, Co. Westmeath. (Image by Elizabeth FitzPatrick)

0.2 Methodologies

Research methods used in this thesis are a combination of desk-based work that focuses on the roles of living trees within the Gaelic settlement environment, and fieldwork that focuses on relationships between trees and enclosures in the landscape today. Actor Network Theory (ANT) is also used as a method of studying and understanding the myriad combinations and interactions between people, enclosures and trees over time. As a loose intellectual 'toolkit' or 'sensibility'(Law 2004, 157), ANT gives due consideration to the role of 'non-humans' (in this case trees and their host enclosures) and can 'help to sensitise researchers to complex and multiple realities which might otherwise have remained obscure' (Nimmo 2011, 109). The importance of ANT as a methodology in this thesis is explored in detail in Chapter 2.

0.3 Layout of Thesis

Chapter 1 introduces and describes the range, origin, distribution, chronology and morphology of medieval earthen-banked enclosures (*ráth* and moated site) as the canvas upon which the roles of trees are investigated in this thesis. The theoretical perspectives that frame the research questions and research design of this thesis are outlined and discussed in Chapter 2. This chapter also introduces and explores the use of Actor Network Theory as a methodological template when considering the findings presented in Chapters 3, 4 and 5. Chapter 3 examines the representation of trees in the corpus of Irish medieval literature as a means of discerning their roles, both within the settlement landscape and in society, from the early medieval period through to *c*.AD1600. Chapter 4 describes the field methodology for recording living trees on earthen settlement enclosures. The rationale for site selection and the various methods for understanding the behaviour of trees in these contexts is also outlined. In order to address the question of whether living trees were intentional and integral managed resources of Ireland's medieval settlement environments, Chapter 5 presents the data generated from field surveys and observations recorded at the selected study sites in the four provinces of Ireland. Chapter 6 looks at the phenomenon of vallation in the Gaelic *ráth* with a view to broadening considerations of their roles to include their potential as sites where trees were intentionally planted and managed for utility and aesthetic purposes. The key findings and the implications for the study of medieval earthen enclosures and trees are discussed in Chapter 7.

0.4 Sources

This research was foregrounded by a broad reading of literature pertaining to trees, timber and settlement in Gaelic Ireland (Lucas 1963; Kelly 1976, 1999, 1997; Everett 2014; A. O'Sullivan 1993, 1994; Kerr et al. 2010; A. O'Sullivan et al. 2014), Anglo-Saxon England (Hooke 1989, 2010; Bintley and Shapland 2013; Bintley 2015; Gardiner 2013; Williamson 2013) and to the symbolic importance of trees in a wider European context (Pungetti, Oviedo, and Hooke 2012; Cusack 2011, 2013; Tolley 2013). The prominent and significant roles of trees and their management as valued resources in Gaelic culture is evidenced in the corpus of Irish medieval literature and elucidated, for instance, in Fergus Kelly's 'The Old Irish Tree-List' (1976), 'Trees in early Ireland' (1999), *Early Irish Farming* (1997) and A. T. Lucas' (1963) seminal investigation of 'The Sacred Trees of Ireland'. These studies, which are based mainly on the law-texts of the 7th and 8th centuries AD, have become the default starting block for almost every publication approaching the subject of Irish trees whether they are concerned with woodland and forestry, folk life and folklore or early medieval settlement. Their combined outline of the representation of trees in Gaelic literature clearly indicates that trees were indeed highly valued and carefully managed resources. Both authors provide a solid background and context for discussing the treatment of trees in Gaelic studies. After Lucas and Kelly, the attention given to this subject tends to be somewhat brief and often, as Lucas puts it, just 'referred to in passing' (1963, 16), with the focus often dominated by a sole concern for sacred or revered trees, a subject that has been revisited to varying degrees by Cusack (2011) and Zuchelli (2016). The broader subject of historical woodland and forestry has been the subject of study by Everett (2014) who has traced the history of Irish woodland between 700AD and 1800AD, however it does not address aesthetic, personal, and domestic uses of trees. Publications relating to Irish trees are otherwise botanical, horticultural (Hickie and O'Toole 2002; Nelson and Walsh 1994) or concerned with identifying and documenting notable trees and their associations with folklore, myth and legend (Mac Coitir and Langrishe 2008; Fennell 2013).

The key secondary sources used for medieval settlement enclosures are Stout (1997a) *The Irish Ringfort*, Stout (2017) *Early Medieval Ireland: 431-1169*, O'Sullivan et al. (2014) *Early Medieval Ireland AD 400-1100*, Kerr et al. (2010) *Early Medieval dwellings and settlements in Ireland: AD 400-1100*. Also important are Comber (2008), Comber and Hull (2010), FitzPatrick (2009) and FitzPatrick (2015a) who have queried orthodoxies

and proposed new approaches relating to settlement enclosures. These and other literature are reviewed, where pertinent, in each chapter.

0.4.1 Primary Sources

The location, evaluation, analysis and interpretation of historical literature and documentary sources was undertaken in order to identify references pertaining to relationships between trees, medieval settlement enclosures and people. Primary sources consulted include the Irish chronicles, saints' lives, bardic poetry, historic land surveys and inquisitions, maps and pictures. This material forms the bulk of the content of Chapter 3 where it is discussed in detail.

0.4.2 Excavation Reports

Trees and tree derivatives make up a vast portion of the finds excavated on Irish medieval archaeological sites and are extensively discussed in archaeological reports. The most frequent examples occur when charcoal and wood fragments are identified in contexts such as hearths, burnt mounds and spreads, charcoal pits and the remains of buildings. Burnt hazelnut shells are also a very common archaeobotanical find on medieval archaeological sites. Archival records of archaeological excavation reports were consulted for references to what could be interpreted as material evidence of relationships between trees and settlement enclosures. These include the database of Irish excavation reports at www.excavations.ie, the archives of The Digital Repository of Ireland (www.dri.ie), the journal of Eachtra Archaeological Projects at www.eachtra.ie and the archives of Transport Infrastructure Ireland (www.tii.ie).

0.4.3 National Folklore Commission: The Schools collection

The Schools' Collection of folklore and local tradition, which is a holding of the National Folklore Collection (NFC) compiled between 1937 and 1939 was consulted with regard to the folklore relating to settlement monuments in the areas where the fieldwork element of this thesis was carried out. This provided an insight into early 20th century local and traditional attitudes and practices pertaining to the settlement monuments and the trees upon them. It also provided the opportunity to make regional comparisons of how such

sites were traditionally treated. This material is discussed in Chapter 5 accompanying the site descriptions and survey.

0.4.4 Maps, Photographs and Aerial imagery

Historical and contemporary map and aerial photographic imagery was accessed via the Historic Environment Map Viewers WebGIS for Ireland and Northern Ireland which are available at www.archaeology.ie and www.communities-ni.gov.uk. Other digital maps and aerial imagery were sourced at www.google.ie/maps, www.bing.com/maps and the photographic collections captured in 1951-5 and 1963-73 and held by Cambridge University Unit for Landscape Modelling (formerly the Cambridge University Committee for Air Photography (CUCAP). These resources provide recent aerial photographic imagery of the entire country and were used throughout this research to identify archaeological sites and, where possible, trace their ongoing relationships with trees. The 1st edition OS maps of Ireland that were compiled by the British army (*c.*1840) were drawn at a scale of six inches to one mile and recorded all archaeological monuments as part of protocol. In many cases the trees upon featured earthworks were also recorded. When compared to the modern aerial imagery, these maps can provide a useful reference in discerning the recent life-histories and behaviours of some trees that are found upon them today. Photointerpretation, combining aerial imagery and ground-truthing photographs of the trees and the banks of selected study sites, was thus a valuable component of the research methodology.

0.4.5 Geographical Information System(s) (GIS)

GIS software (QGIS ver. 2.18) was used to collate, analyse and present spatial and geographical data captured in the course of field work. Selected clusters of sites were mapped showing their geographical and landscape settings and indicating the category of tree-cover upon them (4.1.1). Individual tree positions were captured through the combined use of a handheld Trimble V8 GPS device and the manual measuring and triangulating of distances between trees. These measurements were collated and overlaid onto map data using QGIS.

0.4.6 Placename Research

The online placenames database of Ireland**,** accessible at www.logainm.ie and developed by Fiontar & Scoil na Gaeilge (DCU) and The Placenames Branch **(**Department of Culture, Heritage and the Gaeltacht) was extensively consulted in this research to identify placenames that combined terms for both trees and settlements. The ordnance survey letters and namebooks compiled between 1824 and 1846 as part of the ordnance survey of Ireland accessible through www.askaboutireland.ie were consulted with regard to the placenames identified in the database (Ordnance Survey 1959).

1 Medieval Earthen Settlement Enclosures: Current Archaeological Knowledge

1.1 Introduction

Of the 120,000 archaeological monuments identified in the Irish landscape there are at least 47,000 medieval settlement enclosures (O'Sullivan et al. 2014, 1; Stout 1997, 2017, 51) that are characterised by various types and sizes of earthen banks, fosses, and stone walls (ibid. 48). These enclosures are, for the most part, the set of monuments that are popularly described as 'ringforts' and they represent one of the richest archaeological distributions of any settlement monument type surviving in Europe. Of the entire set, the earthen-banked enclosure (*ráth* in Old Irish) vastly outnumbers its stone-built counterpart (*caisel*), and several thousand remain in the landscape today, albeit in varied states of dilapidation.

This thesis is chiefly concerned with Irish medieval earthen-banked settlement enclosures and their capacity for accommodating trees. The monuments investigated are the various forms of earthen-banked settlement enclosures (see 1.2 below) which originated in the early medieval period, and moated sites that were introduced by Anglo-Norman society but built and used by Gaelic elites in the 14th century (1.6). The aim of this chapter is to outline the current state of knowledge about the forms, origins, chronologies and functions of these site types as the main monuments investigated in relation to trees in this thesis.

Early medieval settlement studies in Ireland took a quantum step forward with Matthew Stout (Stout 1997a). In *The Irish Ringfort* he produced a normative model of early medieval settlements that attempted to explain differences in 'ringfort' morphology and siting 'on the basis of social organisation. It interpreted the settlement landscape on the basis of 'interaction between different social groups' (O'Sullivan et al. 2008, 71). While Stout's (1997) pioneering work made an invaluable contribution to settlement studies in Ireland it has been criticised as only applying to some parts of Ireland and that it assumes contemporaneity of sites. He mainly considered the optimum period of *ráth* construction (7th – 9th C.) and not the whole period in which this settlement form was used. There is much more evidence available today indicating that many settlement enclosures were being inhabited in the 10th, 11th and 12th centuries (O'Sullivan et al. 2014, 71; 79) with sufficient evidence that some remained in use into the later-medieval period and that their abandonment as a settlement form was not a unilateral event but happened at different

points in time. For example, dating evidence from the enclosure at Ballymacash Co. Antrim revealed that it was occupied mainly in the 11th and 12th centuries and quite possibly extended into the 13th century (Jope and Ivens 1998, 122). Excavations of a bivallate enclosure at Loughbown, Co. Galway, evidenced phases of enclosure occupation and use ranging from the 5th to the 14th centuries (Dillon et al. 2007, 28) Metalworking activity at this site has been dated to cal AD1047 – 1257 (UB-7363) and a corn drying kiln returned a date of cal AD1294 – 1402 (UB-7365) (Bower 2008a, 31). A *ráth* in Mackney, Co. Galway, revealed four distinct phases of use and re-use upon excavation, with particularly excellent evidence for later-medieval (*c*.14th-17th century) occupation (Delaney 2009). Phase 1 consisted of pre-bank activity dated to AD 728-949. Phase 2 constituted the primary occupation of the *ráth* with a furnace feature providing a date range of AD988 -1153. Phase 3 was characterised by evidence for substantial occupation in the later medieval period. A series of fire pits/hearths provided charcoal that returned dates between cal AD1323 and 1631. A hearth associated with structural post-holes and pits returned a date of cal AD1449-1634 and another separate hearth returned a date of cal AD1446-1632. Artefacts uncovered included 2 silver coins dating from the reigns of Henry III and Henry VIII respectively. The final Phase 4 was characterised by post-medieval cultivation and use as a burial ground (Delaney 2009, 38–40). Rynne's (1964) excavation of Thady's fort at Shannon, Co. Clare, revealed an array of finds dating almost entirely to the late-medieval period. Based on the dating of finds, and that the rectangular house in the SW quadrant of the interior appeared to be built on the lowest levels of the site and that slip from the inner bank was against the outer face of the house wall and not under it, the excavator argued that the enclosure itself was constructed about AD1600 (Rynne 1964, 257). While this particular interpretation remains controversial, it is still doubtless that Thady's fort was occupied throughout the 17th century. Similarly, Walsh (2015) identified evidence for 16th and 17th-century re-use of a *ráth* at Carnmeen / Lisduff, Co. Down. The late use of medieval settlement enclosures, (the full extent of which has yet to be substantiated by excavation), is discussed further in Chapter 6 (6.6.2).

By 'not recognising the dynamic nature of ringfort construction, occupation and change' (Monk 1998, 35), normative ideas about Gaelic society have a tendency to pigeonhole enclosures into overly restrictive categories and ignore sensitivities to regional, local and individual differences. More recently, however, the ever-increasing body of evidence suggests a substantially more diverse and complex medieval settlement landscape across time than had been previously understood. Medieval settlement archaeology in Ireland

has benefitted greatly from the large-scale road and gas pipeline developments that took place during the so-called 'Celtic Tiger' years of *c*.1998 to 2008, through which an extraordinary degree of investigation, excavation and discovery has occurred. Particularly good evidence for settlements, burial, agriculture, crafts and economy (O'Sullivan 2011) has emerged, thus substantially widening the view of Gaelic society both in a specifically Irish context and within the broader context of medieval Europe. O'Sullivan et al. (2014) have produced the most comprehensive and up-to-date treatment of early medieval archaeological sites and their material culture in Ireland to date. Their primary focus is on 'the potential of the archaeological evidence to illuminate such matters as household organisation, community life and the roles of kinship and gender relationships in the household economy' (ibid, 79), which the traditional focus on morphology, size, distribution and siting tended to ignore (ibid). Today we benefit from 'a significantly richer archaeological dataset for the entire period, an emerging sense of regionality and a much stronger sense of chronology' (O'Sullivan et al. 2014, 320).

1.2 Definition and Morphology of the *Ráth*

The most common method of enclosing a settlement in medieval Ireland was to dig a fosse about a chosen space, usually on sloping ground, and cast the earth to the inside to create an earthen bank. In the early medieval period, such an earthen bank was called a *ráth* (6.3) which, over time, became the word to denote the entire settlement enclosure and its contents (FitzPatrick 2009, 273). The word *ráth* is a component of over 1200 placenames throughout Ireland and is still recognised and used today as a term that refers specifically to those archaeological monuments. Advances in archaeological knowledge are increasingly calling into question the usefulness of the term 'ringfort' in relation to Irish medieval enclosures (FitzPatrick 2009).[1] While medieval enclosures in Ireland are most-frequently circular, evidence from recent excavations indicate that an emphasis on circularity is somewhat misguided. A tendency towards circularity might be explained by the use of convenient methods for marking out a required space. However, deviating from the convenient method seems to have been perfectly acceptable. Quite often the topographical and geological features dictated the morphology of a site. Oval, rectilinear, D-shaped, plectrum shaped and other 'odd' shaped enclosures are more numerous than

[1] This is discussed in more detail in Chapter 6 (6.3)

was previously noted. Typology can be distinguished by the use of the old Irish words *ráth* for earth-built enclosures and *caisel* for stone built enclosures (often anglicised as 'rath' and 'cashel'), however, the term 'settlement enclosure', which can include a variety of shapes, has emerged as the preferred option to replace the term 'ringfort' (O'Sullivan et al. 2014; Kerr 2007). The designations 'univallate' and 'multivallate' are used in reference to the number of concentric banks and fosses that comprises an enclosure. The nomenclature used in this thesis for earthen-banked enclosures follows O'Sullivan et al. (2014, 50-53) who categorise the enclosures that they refer to as 'raths' into separate groupings which they label 'univallate', 'multivallate', 'counterscarp', 'Raised/platform' and 'other settlement enclosures'. O'Sullivan et al. (2014, 50) point out that these classifications have 'a superficial simplicity', which reminds us to bear in mind that all sites that are referred to as one type or another are not necessarily prescriptively the same. There is great variation of enclosure size and shape within each classification, and accommodation must also be made for distinct morphological differences in vallation height and width, the presence or absence of berms, the presence or absence of stone revetment, souterrains, and sloping sites. The acknowledgment of such diversity is important because it discourages the tendency to pigeonhole enclosures into overly restrictive categories while it encourages an approach that is ever more sensitive to regional, local and individual differences.

1.2.1 The Univallate Ráth

The single-banked, or univallate *ráth* is the most numerous type of medieval Irish enclosure. These enclosures are generally spaces enclosed by a single earthen bank and an external fosse. The enclosed spaces typically measured between 20-40m wide and contained timber houses and associated outbuildings. Stout (1997) estimated that they represent 80% of the total in most areas and the majority of them date from *c*.AD 600-900 (Kerr 2007). Although described by Kerr (2007) as protective farmsteads, such a blanket term has a tendency to preclude other societal roles of the occupants such as metalworkers, woodworkers and craftspeople. Some of the enclosures may have been purposefully built for use as animal shelters or cattle pens, such as at Lisdrumchar and Tullyallan in Armagh (A. E. P. Collins 1971a, 1971b) or Garryduff II in Co. Cork (O'Kelly 1963, 18). Counterscarp enclosures appear to be univallate sites that have an additional low bank surrounding an internal bank and fosse, and many bivallate sites appear to have originally been univallate but acquired a second bank and fosse at a later stage.

1.2.2 The Multivallate Ráth

It is estimated that 20% of Irish earthen-banked settlement enclosures are multivallate having two or more concentric sets of enclosing banks and fosses (Stout 2017, 51). They are generally larger structures in terms of the area occupied by the earthworks but the enclosed space of these sites tends to be of comparable size to univallate examples. Multivallate and counterscarp *ráth*s appear to have a slightly earlier starting date. Bivallate enclosures make up the greater share of them, while trivallate and quadrivallate enclosures are much rarer (O'Sullivan et al. 2014, 50). Very few examples have been archaeologically excavated, but some include Garranes, Co. Cork (Ó Ríordáin 1942); Ballycatteen, Co. Cork (Ó Ríordáin and Hartnett 1943); and Baunogephlure, Co. Carlow (Stafford and McLoughlin 2011). Multivallate *ráth* enclosures are generally considered high status sites (6.6.1). Bivallate *ráth*s may have been the product of long-term occupation of an original univallate *ráth*. Very few trivallate sites have been excavated. (O'Sullivan et al. 2014, 50). Multivallate *ráths* may be the earliest, potentially pre-dating AD 500 (ibid, 66).

1.2.3 The Platform / Raised Ráth

One view of the morphology of platform raths suggests that they 'seem to have been created by scarping a natural knoll or drumlin-top.' (O'Sullivan et al. 2014). They have large, flat topped central areas, raised some 2m or more above the surrounding countryside. These seem to have been created through the accumulation of occupational material over a long period and the deliberate importation of soil. This may have been carried out to raise the enclosed area above the water table. Most of these sites may have originally been common univallate sites but there are some platform enclosures, such as that at Big Glebe, Co. Derry that appear to have been built in a single phase of activity (Kerr 2007; O'Sullivan et al. 2014, 53). The Platform and raised type of enclosure have been interpreted as farmsteads more associated with arable farming and long occupation periods. Kerr (2007, 118–19), in his work in NW Ulster, found a close correlation between platform *ráth* enclosures and arable farming.

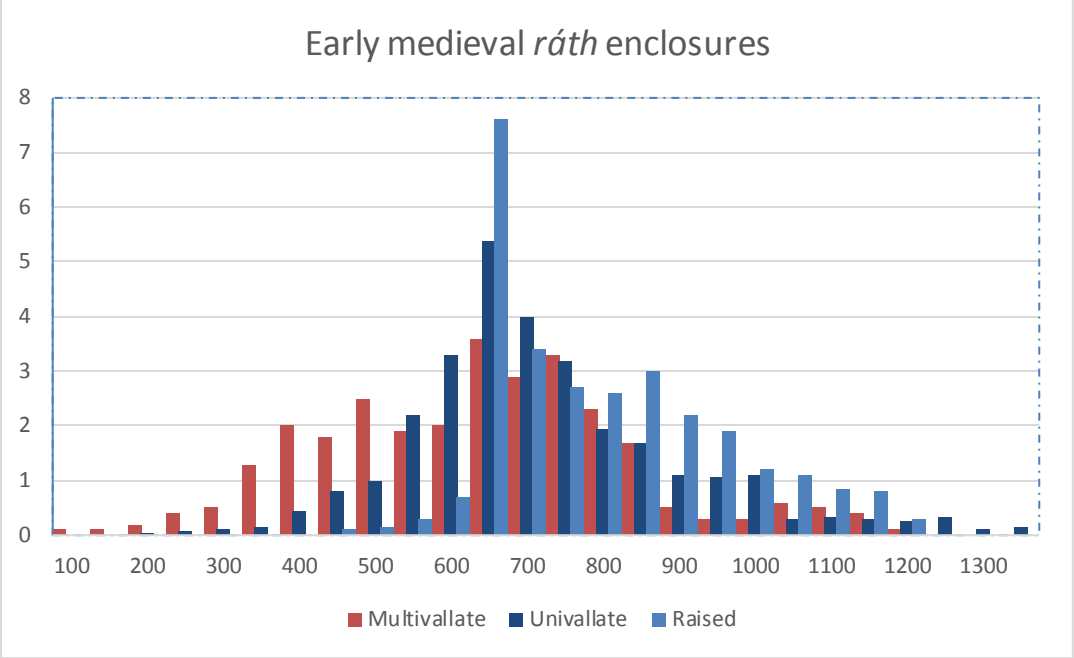

Figure 2 Sum graph of radiocarbon dates for types of settlement enclosures dating to the Irish early medieval period.

1.3 Origins

The Late Iron-Age saw a period of lapse in economic and agricultural activity which is visible in the pollen record as a period of marked forest regeneration (Becker, O'Neill, and O'Flynn 2008, 61). Pollen studies also show that this Late Iron-Age lull (Mitchell and Ryan, 1998, 248) came to an end about AD 300 and was followed by a new era of increased economic activity and landscape transformation marked by the cutting down of trees, the widespread creation of pasture and the appearance of settlement enclosures. This transformation of the landscape also saw a steady increase in the number of settlement sites (Becker, O'Neill, and O'Flynn 2008, 61), many of which were succeeded by enclosed settlement sites from AD 550 onward (ibid.) when the phenomenon of *ráth* building became ubiquitous over the next two and a half centuries (Stout 2017, 50) (see Figure 2). This upsurge in economic and agricultural activity occurs alongside the processes of Christian enculturation. However, there is no evidence that links those processes consequentially with the ubiquity of settlement enclosures in the centuries that followed other than that they were built by a Christian population. With no 'evidence for population intrusions, or for a different, more violent form of warfare that might provoke the construction of defended settlement enclosures' (O'Sullivan et al. 2014, 74), an exact understanding of the origins of the *ráth* in early medieval Ireland remains the subject of much discussion.

Lynn (2005, 16) has argued that a cataclysmic event that occurred *c*. AD 536 may have led to the construction of banks, fosses and palisades around settlements in an attempt to somehow protect the occupants from disease. Tree-ring studies or dendrochronology involves comparing and matching the pattern of tree rings from various sources to the exact year that they were formed and is thus an accurate method of dating. For example, undated oak timbers can be compared to a master chronology of Irish oak that spans 7,272 years (Brown and Baillie 2012, 85). It can also be used to analyse atmospheric conditions over time and reconstruct past climate (Briffa et al. 2002, 738); (Briffa et al 2001); Watson and Luckman 2001). Evidence from tree ring studies, ice-core studies (Larsen et al. 2008) and historical references attest to a period of global climatic deterioration between AD 536 and AD 545 which potentially lead to crop failure, periodic famine and plagues, such as the Justinian Plague of the 540s (Baillie and Brown 2011; Keys 2000). An annal entry for the year AD 543 reads, 'There was an extraordinary universal plague through the world, which swept away the noblest third part of the human race' (AFM 543:2). Such a series of events could undoubtedly have instigated the abrupt onset of enclosure creation and occupation, but it cannot alone explain the continued motivations to create enclosures over the next three centuries. Stout (2017, 51–52) sees the 'sudden adoption of these domestic enclosures' as 'a response to the increasing significance of the cattle economy', where they were 'designed to protect the principal asset of these early medieval farmers – the cow' (ibid, 52). Indeed, at Deerpark farms parasitic lice and dung beetles indicated the presence of cattle, sheep and pigs within the enclosure (Lynn and McDowell 2011, 135, 521). For Stout, the ubiquity of the 'ringfort' speaks of 'a common material culture that stands in stark contrast to Ireland's political fragmentation' while O'Sullivan et al. (2014, 323) note that both early Irish secular and ecclesiastical sources define enclosures as spaces for sanctuary and legal protection. In morphology they echo the earlier monuments, such as Bronze Age and Iron Age hillforts and barrows, which would have been familiar to the people and associated with kingship, history and ancestry - ideas that were hugely important to Gaelic identity. Indeed, Limbert (1996, 243) suggests that ringfort origins are to be found more deeply embedded in Irish (pre)history than is currently accepted. Thus, the onset of enclosure creation may be seen to have important underlying social and ideological implications that were shared across otherwise autonomous political divisions (6.4) and were perhaps requisite to the evolving political, economic and social organisation of Gaelic Ireland.

1.4 Chronology and Dating

Current assessment of the chronology of the Irish *ráth* indicates that 'there was no gradualist evolution of the monument type' (O'Sullivan et al. 2014, 77) and it is in fact an early medieval phenomenon. As shown in Figure 2 above, the collation of radiocarbon dates confirms that the period between AD 600 and AD 900 was the major phase of univallate *ráth* building (Stout 1997; Kerr 2007; Hull and Comber 2008; O'Sullivan et al. 2014). Multivallate *ráth* enclosures appear to have a slightly earlier genesis, however Kerr's (2007, 86-100) analysis of radiocarbon dates from excavations, mostly from Ulster, showed the dating of typical univallate and multivallate enclosures to be *c*. AD 600-850 (ibid, 98-9). Raised / platform *ráth* enclosures tend to be a bit later with construction and primary occupation dates ranging from AD 750 to AD 950 (ibid, 99).

1.5 Occupation

FitzPatrick (2009, 275) has pointed out that, although it is written in the 14th-century battle-roll *Caithréim Thoirdhealbhaigh*, the following extract, which refers to the period of peace after the battle of the Abbey of Corcomroe in 1317 AD, shows 'that some social distinction prevailed in relation to the use of different types of enclosed settlement' (ibid):

> 'Every king in his *ríglongport* and every chief in their strong places, and hospitallers in their dwellings, ollaves (learned men) in their *raith*, coarbs in their respective churches, every 'son of a good man' in his own *dúnad*, every layman in his *lios*, and every bishop in his noble *cathair'* (O'Grady 1929, 134).

While the use of some cashels as service family residences has been identified, for instance, in The Burren, Co. Clare (FitzPatrick 2015a, 165-189 ; Comber and Hull 2010, 133-171), it is still not entirely obvious how these distinctions are reflected in the archaeological record for earthen enclosures, but it does suggest that the range of enclosures that are today often grouped under the singular term 'ringfort' undoubtedly represents a variety of specific uses. For example, FitzPatrick (2015a, 176) has identified that park (*páirc*)[2] townland names and park field names and monuments are very common on, and in the vicinity of, former learned family landholdings and are often associated

[2] FitzPatrick (2015, 176) notes that native sources confirm that 'the term *páirc* had meaning in a Gaelic context before the intensive emparkment that occurred with English-style demesnes in the seventeenth and eighteenth century'.

with larger enclosures with diameters in excess of 30m. Such sites often contain souterrains and may have been associated with animal husbandry. Among morphologically similar earthworks, some perhaps projected a pastoral ideal while others may have signalled the civic roles of their occupiers as craftspeople for instance. Some were perhaps purposefully more defensive than others, and others again, purposefully less so. An intriguing case was revealed through excavation of Rathgurreen, a large diameter bivallate *ráth* on the Maree peninsula, Co. Galway. This site, excavated by M. V. Duignan in 1948 and 1949 with the final write-up completed by Comber (2002), was originally a univallate enclosure of 76m internal diameter built in the 5th century and saw extensive habitation for at least 400 years (Comber 2002, 183). Modification to the site, most likely undertaken in the 6th to early 7th century AD, saw the digging of a fosse internal to the bank with the upcast used to create a second internal bank and thus reducing the living space to *c*.49m diameter (ibid 143). The possibility that occupation of this site extends into the 9th -13th century is suggested by two bone combs dating to this period that were found in the excavation (Comber 2002, 183). While a desire to project the status of the occupier is the most common explanation for the creation of multivallate enclosures in the medieval period 'there is not (however) a precise correlation between the number of enclosing banks and the status of the inhabitant' (Warner 1988, 39). The early Law tracts also imply that the proper dwelling place of a king is a univallate *ráth* (O'Sullivan et al. 2008, 244). The morphology of the earthworks on their own do not provide enough information to indicate the specific status or use of an enclosure. In their contemporary settings their specific uses would also have been understood by the manner in which the site as a whole, the buildings it contained and its enclosing banks were presented.

There is very little evidence of *ráth* building after AD 825 (Stout 2017, 52) however, there is extensive evidence that they were being inhabited in the 10th, 11th and 12th centuries and their general occupation appears to have tapered off before the coming of the Anglo-Normans in the late 12th century (Stout 1997a, 26-30). Despite this, excavated cases that confirm late occupation such as at Mackney, Co. Galway and Thady's Fort, Co. Clare (1.1) and the fact that so many enclosures remain extant, testify that they remained important features of the landscape right up to the end of the Gaelic period in the early 17th century (2.6; 6.6.2). This is also reflected in the known use of high-status sites such as the enclosure at Tulach Óg, Co. Tyrone or the *ráth* in Rathangan, Co. Kildare both of which saw high status use into the 16th and early 17th centuries.

1.6 Morphology and Origins of the Moated Site in Ireland

The *ráth* is the main canvas for trees explored in this thesis. However, some moated sites which represent another type of earthen-banked enclosure were built and used by Gaelic elites in the late 13th / early 14th century. The very significant moated site at Cloonfree, Co. Roscommon (5.9) is one such site and is included among the sites investigated in this study. A moated site is typically a rectilinear area enclosed by an earthen bank and a wide wet or water-filled fosse or moat. They are sometimes raised above the surrounding ground and may have an outer bank surrounding the moat and a leat to supply and maintain its water content. The enclosed space can vary in size and shape with the length of their sides generally ranging between 25m and 30m. In this sense, they are comparable to *ráth* enclosures in terms of the area they occupy. The banks of moated sites are usually interrupted by a causewayed entrance upon which a gate or gatehouse may have been erected. Two large oak timbers were uncovered in the base of, and parallel to, the fosse at Coolmurry, Co. Wexford (one of the few excavated moated sites in Ireland). The larger one was set against the inner edge of the fosse and the smaller against the outer edge and they have been interpreted as the footings of a purpose-built wooden causeway or bridge. Two deep stone-lined post-holes were cut into the base of the fosse between these oak timbers which were clearly designed to hold substantial upright timbers. The overall configuration of these features strongly suggest that they are the remains of a drawbridge.

The banks of moated sites are generally assumed to have been surmounted by a wooden palisade (as depicted in Figure 3 below), but this assumption is not based on excavated results. They are primarily late 13th / early 14th centuries fortified residences or farmsteads 'mainly inhabited by the lesser nobility' (Barry 2016, 204) of Anglo-Norman society, but they were also built in areas where there was no significant Anglo-Norman settlement (Graham 1988, 36). Finan and O'Conor (2002,72-87) and Finan (2014, 180) have argued that they were constructed as high status fortifications by Gaelic lords in the same period and this view has been elaborated more recently by FitzPatrick (2015a, 187–88; 2016, 201–9) through her analysis of the distribution of the Gaelic place-name *pailís* (palace) (see 1.7 below). Finan (2014, 177) has noted that although moated sites in Anglo-Norman controlled areas and Gaelic controlled areas are morphologically similar they differ both in their respective pattern of distribution and in their function. He also notes that 'while the moated site at Cloonfree was described in somewhat militaristic terms in Bardic poetry, such descriptions are potentially hyperbolic, and we may lose sight of the true nature of these Gaelic moated sites' (Finan 2014, 178). Anglo-Norman moated sites are

not considered militaristic in nature and were not built by high-status lords but are generally seen as agricultural centres within frontier settlements (Finan and O'Conor 2002, 72–87; Finan 2014, 177). In Gaelic controlled regions they appeared to house high status timber buildings not necessarily associated with agriculture. For example, in Co, Roscommon moated sites 'do not seem to respect the differences in soil type in the county, with an equal distribution of sites being located on soil with poor drainage towards bog, as well as on soil that is well drained and ideal for agriculture' (ibid, 177), and '30 of the 53 moated sites are located within 100 metres of the medieval road network into and out of Roscommon or are beside navigable rivers' (ibid).

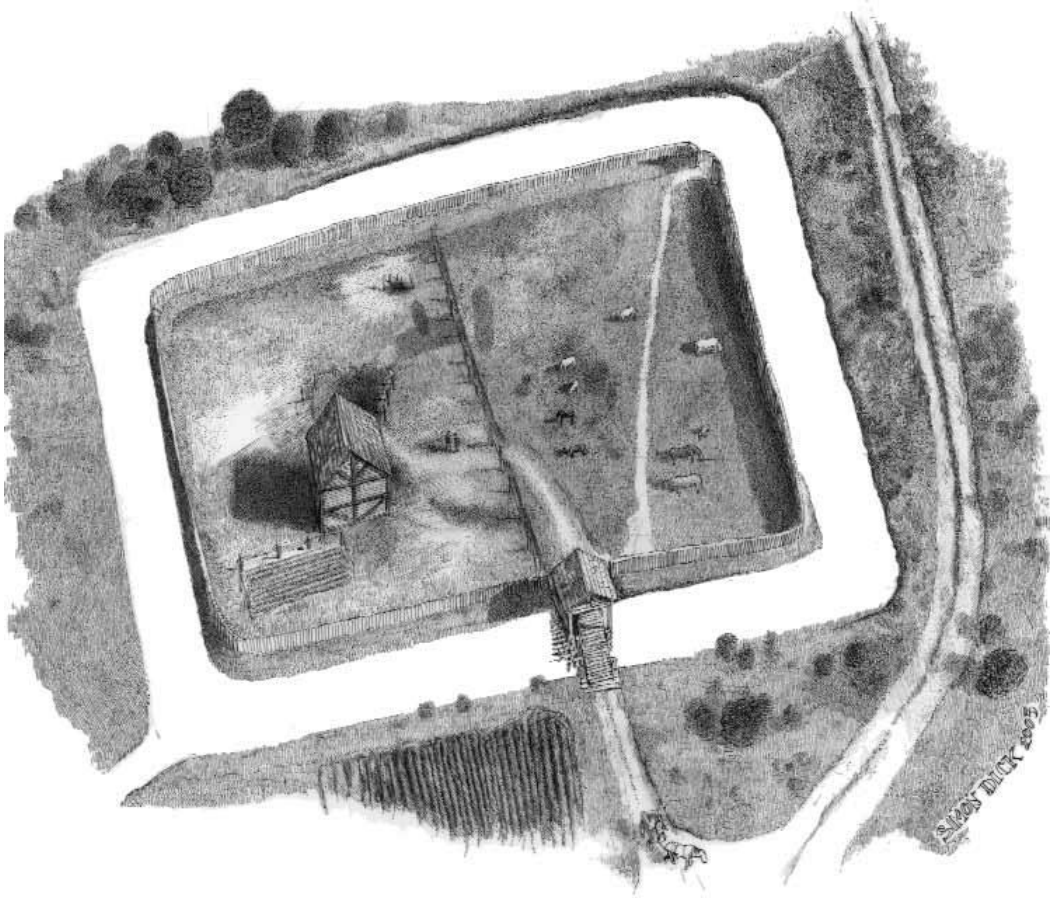

Figure 3 Artist Simon Dick's reconstruction of a moated site (Valerie J. Keeley Ltd.) (Fegan 2004, 133)

1.7 The Gaelic *Pailís* and Moated Enclosures

The *pailís* appears to have been a high status elaborate timber hall built and occupied by Gaelic elites in the 14th century which was 'An extraordinary period in which Gaelic elite identity was thoroughly refashioned' (FitzPatrick 2016, 198). They were usually built

within an enclosure. FitzPatrick (2016, 207) has noted that of the thirty instances of *pailís* place-names identified throughout Ireland, 13 are associated with moated sites, 12 are associated with *ráth* enclosures and the remaining five are not securely identified with an enclosure type. The moated site at Cloonfree, Co. Roscommon (5.9), which is celebrated in two separate bardic praise poems of the 14th century, is identified as the location of the *pailís* built by Aodh O'Conchobairr, lord of Machaire Chonnacht, who died in 1309AD (Quiggin 1913; Finan and O'Conor 2002, 72). FitzPatrick has argued that feasting and power display may have been the primary role of the *pailís* and that they were used 'as an expression of the survival of Gaelic culture through and alongside Anglo-Norman colonisation' (FitzPatrick 2016, 198). They appear to be associated with the old royal Gaelic demesne lands and mensal lands, and in some cases appear to have a continued occupation by service families after they had been vacated by lords who were shifting residence to tower-houses at the beginning of the 15th century. The O'Doran brehons of Ballyorley, Co. Wexford chose to re-use a moated site as the place in which to build the most important Gaelic Law school in Leinster in the 16th century (FitzPatrick and O' Drisceoil 2016, 392).

1.8 Conclusion

While the appearance of the *ráth* in the early medieval period is accompanied by other site-types which include the *caisel* (stone built settlement enclosure), *crannóg*s (artificial island enclosures on lakes), settlement-cemeteries and some palisaded enclosures (O'Sullivan et al. 2014, 322) there is no doubt that the use of the earthen banked enclosure was of unprecedented importance in the early medieval period and continued as a valued component of Gaelic identity to the 17th century. This is attested to by a continual active preservation or curation of these sites by Ireland's rural inhabitants which has ensured the extraordinary level of survival of so many sites to the present day. The adaptation of moated sites (which were essentially an Anglo-Norman form), by Gaelic elites in the high medieval period must to some extent reflect the Gaelic cultural value and preference placed in earthen-banked settlement enclosure.

As places built of earth, they are immediately conducive to harbouring plant life and are considered to be the canvas on which the relationships between trees and settlement in Gaelic Ireland are investigated in this thesis. As places of long-lived cultural importance

and successive occupation phases, the relationships with plant life embodied in these places must feature in the cultural paradigm.

2 Theorising Living Trees as Material Culture

> 'we need to recognize that because they have the ability to grow, survive and reproduce independent of human management, and because of their potential longevity, trees will often migrate through different cultural spaces during their lifetime' (O. Jones and Cloke 2002, 45)

2.1 Introduction

Over time, actions of trees have, to some extent, influenced how settlement enclosures have evolved and how they are perceived. Chief among the perceived relationships between trees and enclosures that are problematised and investigated in this thesis are the idea that living trees were intentionally planted on settlement enclosures in the medieval period and that their ongoing management has been practiced at such sites for centuries.

Several questions arise out of such hypotheses, some pertinent to the life-history cycles and survival strategies of trees. Others pertinent to the practical, economic and aesthetic roles of trees that are implied by their intentional inclusion in the processes of enclosure. The nature and purpose of earthen-banked enclosures must also be considered. In folklore and superstition such trees are very often inseparable from the archaeological sites they are found upon, which announces their significant role as guardians of place (3.8; 5.3.3; 5.4.3; 5.5.3; 5.6.3). How have the roles of such trees evolved within these places? What is the nature of the relationship between medieval enclosed settlements and trees?

Landscapes are consistently discussed under varying qualifiers that divide them into different realms such as natural and cultural landscapes or physical and mental landscapes for example (Keller 2003). Thus, things in the landscape, like trees, are often relegated to one realm, which perhaps diminishes their ability to remain visible or to perform in the other. Actor-Network Theory (ANT) is used in this thesis as a means of exploring the relationships between trees, earthworks, people and time in the context of medieval settlement enclosures. As will be shown, ANT integrates what is human and what is non-human in the same conceptual framework and assigns them equal amounts of agency. ANT was developed by Bruno Latour, Michel Callon and John Law, not as a theoretical framework in and of itself, but as a tool that extends our ability to observe and interpret anything in the landscape. By affording agency to non-humans and humans alike it can 'provide a means of navigating those dualisms, such as nature/society, action/structure

and local/global' (Johnathan Murdoch 1998, 357), thus making it a valuable tool for interrogating the relationships between diverse 'actors' in a network. Medieval monuments, particularly earthen-banked settlement enclosures, are viewed in this thesis as actor-networks where the earthen banks, trees, people and the passage of time are the main actors. This is akin to Willems-Braun's (1997) thinking where he notes that the intersection of humans and nature occurs in a place and that this 'place' is the landscape.

Thus, nature-society relations are a chief concern in this study, or perhaps more specifically, it is concerned with 'the interconnections between nature-society relations and place relations' (O. Jones and Cloke 2002, 1). How have trees been incorporated into the creation of settlement environments? How have they influenced the 'coming-into-being' of places? These ideas summon the view that trees are indeed active agents, rather than passive subjects of human activity (Callon 1986; O. Jones and Cloke 2002, 52). Therefore, the concept of non-human agency or 'material agency' (Knappett and Malafouris 2008) and how it applies to trees is completely at home with ANT. ANT is useful both for its ability to incorporate and document change, and for its ability to map relationships within a study that may not have been obvious at the outset. In order to justify why I have chosen an ANT approach I will first discuss nature-culture dualism and the benefits of avoiding it. This will be followed by a discussion of ANT, the agency of trees and how these approaches are used in this thesis. This approach aims to further elucidate how medieval Irish settlement enclosures are configured.

2.2 Nature – Culture Dualism

A great proportion of Ireland's earthen medieval monuments are covered in trees whose presence are too readily explained by natural colonisation and subsequent ecological succession alone. The trees in question are typically, but not exclusively, hawthorns and hazels. They are rarely trees that have been considered historically significant or pertinent to our understanding of medieval settlement despite the fact that they are consistently associated with such earthworks, both physically in the landscape and in literature and folklore. Trees are easily dismissed as transient and temporary features of a landscape although their lifespan may be many centuries or many generations of human life. As mutable living organisms, prone to senescence, a portion of this same fate perhaps befalls their perceived cultural significance. Trees are routinely overlooked as cultural objects which may be, in part, symptomatic of what Fitzsimmons and Goodman (1998, 194)

described as 'the disabling binary logics that have for so long organised modern thought'. What they are talking about specifically is Cartesian dualism or the nature – culture dichotomy, where nature and culture 'are distinguished from each other as if they were two separate realms of reality' (Haila 2000, 155). In this stalwart tenet of Western thought, agency is a power exclusive to humans, and nature is the passive subject of human activity.

However, the pervasive reach of that dichotomy has not always strictly confined agency to the realm of culture, or at least it has not always allowed for how we often feel about some things in nature, like trees. Oliver Rackham (1997, 116) for example, said that a tree is not just a mere artefact and, although it may be bound up with the processes of human landscape creation, it also has a life of its own. This sentiment, to some extent, paints trees as somewhat autonomous entities that are not exclusively native to either nature or culture, but rely on some hybrid belonging to both. For trees are equally in nature and in culture. The nature-culture dichotomy does not directly address the relationships, manner and means by which both facets are intertwined. Indeed, Aalen et al. (2011, 5–6) argue, in respect of landscape, for instance, that 'a rigid distinction between natural and cultural landscapes is (…) misleading, since natural processes operate in both: in a cultural landscape, humans simply channel natural processes toward a preferred outcome'. Choosing which natural processes to exploit will be based on the specific qualities, behaviours and timescales of things in nature, such as trees. Human behaviour is bound up with an intimate knowledge of natural processes (or of how nature behaves) and so human interactions with trees will be to some degree determined by the attributes and behaviours of trees.

A perspective that is sensitive to such intertwining relationships is required. Keller (2003, 84), in a similar approach, says that 'the making of a cultural landscape by definition implies a manipulation of a natural landscape'. Indeed, the very term 'natural landscape' or 'natural place' is rooted in a cultural perspective. In this view, landscape is not dichotomised as natural and cultural, which again advocates for a non-dualistic perspective of nature and culture. Indeed, the idea that true natural landscapes are non-existent (Aalen, Whelan, and Stout 2011, 5) also concedes that a dualist approach may be redundant. From this perspective, it is argued that the trees on a medieval enclosure cannot be viewed as artefacts of nature alone or of culture alone but must be some hybrid artefact of another paradigm. The idea that ANT effectively dispels the nature-culture dichotomy

is commonly expressed as one of its main advantages. One of the central principles of ANT has been coined as 'generalised symmetry' (Farias 2010) and it is characterised by the elimination of binary thinking so that human and non-human actors are treated equally.

The created environments that are the focus of this study are certainly abounding in nature-society relations. As places, they are varied in morphology, distribution and setting and have performed many roles throughout the *c*.1500 years of their existence. They have migrated through the becoming and ever-shifting landscapes of history, as homesteads, hostels, farmsteads, fortifications, features of designed landscapes, burial grounds, cattle enclosures, groves, orchards, playgrounds, landmarks, protected monuments and wildlife habitats. Living trees have been significant companions in many of those migrations. The term 'living trees' is self-evident but also connotes a sense of living *with* trees, thus emphasising human-plant relationships. There is also a further connotation that might be qualified by adding the word 'still'. Thus, 'still living trees' may be extant survivors or descendants of trees planted in the medieval period. This hypothesis focuses attention on timescales - the timescales of people, of plants, and of earthworks. The opening quotation by Richard Mabey above draws together several of these ideas, however intentional or not. He states that trees, over time, help shape the character of the places where they grow, the word 'help' implying a co-operation between trees and people in doing so. The agency of trees is acknowledged but what, specifically, do trees *do* to 'help' or how do they do it? Brook (1998, 67), in exploring methods of surveying and appraising landscape observed that 'The time scale of tree growth is beyond human lives and yet somehow not beyond our living imagination. The trees seem to act not just as a record to a broader than human time span, but also as indicators of that process of imagining time outside of ourselves, our lives, our futures. In this way they form a key to processes which can then be extended even beyond the timescale of individual trees'. The crucial ingredient is how each of these elements relate to one another, for it is through examining the relationships between all these elements - trees, earthworks, people and the timescales in which they operate - that meaning will emerge.

2.3 Actor-Network Theory

Although ANT has its critics among landscape theorists (e.g. Ingold 2008, 187) it has gained increased acknowledgement as a useful tool that extends our ability to observe phenomena (e.g. Knappett and Malafouris, 2008; Allen, 2011). In fact, some of its main

exponents, Latour (1999) and Law (1999), have said that ANT is not a theory, but rather 'it is a general attitude and an attempt to be sensitive to the multitudes of circulating forces that surround us, affecting both each other and ourselves' (Hitchings 2003, 100). Latour (1999b, 21) writes that ANT does not 'claim to explain the actors' behaviour and reasons, but only to find the procedures which render actors able to negotiate their ways through one another's world-building activity'. ANT does not seek to explain why reality exists, but it looks at how reality is performed through the relations that comprise the network. Human and non-human actors are of equal importance in the network of associations and the shape of the network emerges from the connections between actors. By tracing associations between actors, we can describe the network itself and come to understand how it came into being and what outcomes it produced. Therefore, it is a way of exploring the relational ties (both material and semiotic) that form a network. Actors are defined through action, and their action is how they are modified, transformed, perturbed, or created by other actors (Latour 1999b, 122). Essentially, anything can be described as an actor-network and the network does not have to be finalised or stabilised in order for meaning to emerge. ANT has been embraced by many human geographers (i.e. Jones 2009; Murdoch 2006) who think about space as relational rather than territorial. Murdoch (1997, 733) notes that ANT 'takes as its primary focus the relationship between natural entities and social actors and seeks to recast our understanding of this relationship within a new epistemology'. Simple actor-networks can be understood as 'assemblages' that are 'composed of heterogeneous elements that may be human and non-human, organic and inorganic, technical and natural' (B. Anderson and McFarlane 2011, 124). Actor-network theory champions inter-connectedness (Hillman, Brierley, and Fryirs 2008; Inkpen and Wilson 2013; Allen 2011, 277) and suggests that the actor is several things, 'perhaps human, perhaps non-human; maybe conscious, maybe unconscious – and always embodies action' (Allen 2011, 278).

The medieval settlement enclosures of Gaelic society are viewed in this study as 'heterogenous assemblages in which humans and non-humans are inextricably mixed up together' (Nimmo 2011, 109). Murdoch points out, "non-humans have the potential to act, a potential which arises from the network relations in which they are enmeshed" (Murdoch 1997, 331). The obvious actors that make up the network are people, plants, animals, earth, stones and water. However, the network is also made up of institutions, texts, timescales and concepts, each constituting relationships within the network that have equal importance when it comes to the best understanding of what constitutes a medieval

settlement enclosure. Networks can remain stable for a period of time but essentially, they are dynamic and fluid and do not guarantee stability. They are always in flux, allowing new actors to enter and exit the network so that there is always a possibility that it can be assembled and reassembled in different ways (Latour 2005). If this is applied to a settlement enclosure it may be observed that such a network does not so much change over time but instead it enrols new actors. Earthen-banked enclosures have been assembled and reassembled variously in their lifetimes. Trees and plants of the past and present, people who have been and gone, buildings that have been a part of such enclosures have all been enrolled in the complex network of relationships in various ways and at different times. Traces of those relationships also survive in language and literature. Because ANT 'attempts to document the co-construction of natural and social entities' (Murdoch 1997, 740) it is well suited to discerning the myriad relationships between plants and humans that are bound up in Ireland's medieval enclosures.

Many medieval settlement enclosures in Ireland harbour trees whose presence is testament to their ongoing guardianship and subsequently, the guardianship of the archaeological record. They are the product of centuries of preservation and management by our rural population and as such they are highly social constructions. On the other hand, they are also deeply natural places or entities comprised of earth and vegetation and abounding in natural processes. They are habitats and biodiverse ecosystems - the product of relations between trees/plants, mammals, invertebrates, lichens, mosses, fungi, liverworts, aphids and birds. Williamson (2013) has encouraged scholars studying early-medieval England to engage with the natural environment and refers to the need to reinstate 'nature's frame' as an important context for interpreting settlement. He argues that patterns and archaeological distributions are primarily 'the consequence of environmental factors: of physical geography, of geology and hydrology, of soils and climate' and challenges the post-processual tendency to regard such approaches as 'essentially dehumanising because they reduced people to cogs in social and environmental systems…' (ibid, 3). For Williamson, 'Landscapes are the consequence of human agency, but agency exercised knowledgeably in a real world' (2013, 4). The knowledge required is of nature and how it acts.

2.4 The Agency of Trees

> 'Over the centuries they (trees) help shape the character of the places where they grow, and it takes very determined action to wipe out their traces' (Mabey 1990, 6)

Trees are rarely the explicit subject of settlement studies in Ireland and very little has been written about them as features or components that contribute to our understanding of culture and its evolution. They are usually overlooked when considering the panoply of artefacts that may constitute the material culture of a people. Some trees, like the conspicuous churchyard yews, will have witnessed more of the human story than others, as indeed, some human stories bear witness to trees that are no longer with us. A tree may be intentionally incorporated into an environment as a monument or a boundary marker, but because a tree may die, it will rarely achieve the same status of artefact as a stone or statue erected for the same purpose. This is also in some part because the terms 'artefact' and 'material culture' suggest manufactured objects, which has the effect of relegating the tree to the status of raw material from which 'objects' are created. Trees that may potentially be perceived as 'artefactual' or 'historical' are often not there anymore, and those that remain tend to be treated as exceptions, anomalies or celebrities. These cases tend to be associated with species of well-documented longevity, such as yew trees. The yew in the cloisters of Muckross abbey, Killarney, Co. Kerry (Figure 5), with a girth of 3m, is said to have been taken as a sapling from Innisfallen island and planted at the time of the foundation of the abbey itself (1448AD) (Fennell 2013, 54). While this claim has not been scientifically verified it can be estimated with confidence that this tree is at the very least 350 years old, its girth having been measured at 1.8m 200 years ago (Watts 1984, 7) and 2.9m in 1932 (Forbes 1933, 170). The Silken Thomas yew in Maynooth, Co. Kildare, at over 6m in girth, is thought to be at least 800 years old[3] (ibid, 170; Fennell 2013).

[3] This tree is named after Lord Thomas FitzGerald who, in 1535AD, is reputed to have played his lute beneath its boughs on the night before his surrender to King Henry VIII (Tree Council of Ireland n.d.) (Forbes 1933, 170).

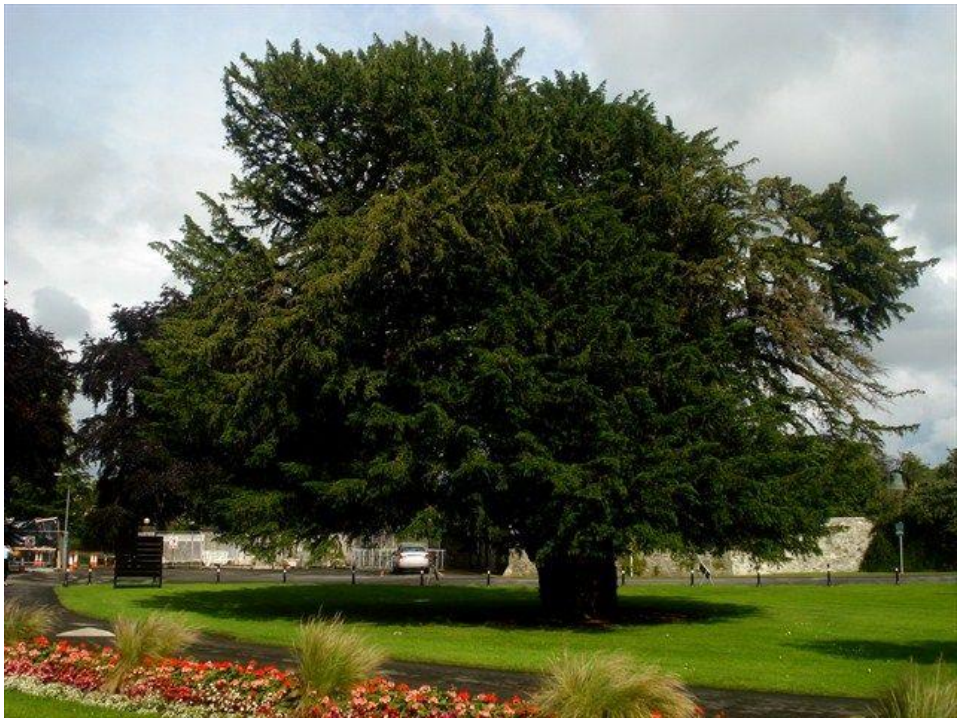

Figure 4 The yew tree known as the Silken Thomas Yew at St. Patrick's College, Maynooth, Co. Kildare. At over 6m in girth this tree is believed to be between 700-800 years old.

Figure 5 Yew in the Cloister of Muckross Abbey, Killarney. Photo: Ciaran McHugh

In such cases, their antique anthropogenesis is generally acknowledged; however, less conspicuous trees with such potential are often dismissed as incidental to the places in which they are found. Outside of woodland and forest that has been identified as ancient,[4] trees rarely feature as the subject of archaeological investigation.[5] When they are encountered at archaeological sites, they are often seen only as a hindrance to investigating the monument or as obstacles to an effective site survey and excavation. On medieval settlement enclosures, there is often a tendency to remove them, physically and mentally, in order to access or visualise the underlying archaeology without considering whether their presence may be the result of intentional planting, or of how long they have been present. Where trees or tree remains on enclosure banks are discussed in excavation reports it is often to note that it was necessary to remove certain trees before excavation could take place. For example, in the excavation report of a 'ringfort' at Clasheen, Co. Kerry the excavator Michael Connolly (1993) says

> 'The first task was to remove the vegetation and overgrowth on that portion of the site to be investigated. This involved the cutting down of a number of mature trees. Following this the modern wall bounding the fort was removed as were the stumps and roots of those trees which had been felled'.

There are numerous site descriptions of treed enclosures in the record of sites and monuments available at www.archaeology.ie that report restricted access due to vegetative overgrowth and that survey and description of the site was impossible. Survey of the vegetation is rarely undertaken and, where mention is made of the trees that are planted or otherwise present on them, very little reference is made either to individual species encountered or to potential noteworthy information regarding their appearance. An exception to this paucity of detail is found in some instances where intentional tree-planting has been encountered and described on monuments that lie within the landscaped environments of landed estates and historic houses of c. 1700-1914. The trees on these sites quite often retain the impressive visual impact intended by their planting in the first instance. These cases tend to be non-native ornamental species such as beech, sycamore and lime, intentionally planted on enclosures within the estate lands of the landed gentry

[4] Ancient woodland refers to those woods that have had a continuous history of cover since before the period when planting and afforestation became common practice (mid-1600s) (Perrin and Daly 2010, 6)

[5] There are some exceptions, such as Manning's, (1988) account of the excavation of a possible 'sacred' tree at Clonmacnoise (see 3.4).

as part of improvement era or modern landscaping projects. The distinctive presence of beech and sycamore at ‘the rath’ in Ballyallaban, Co. Clare (Figure 6) or the tall beech trees planted on the banks of ‘Rough Fort’ in Moneyrannel west of Limavady, Co. Derry (Figure 7) are good examples of this. The respective actions and cultural prerogatives of both the Irish and the English and Old English are thus made visible through the types of trees encountered on these monuments.

Figure 6 Sycamore and Beech planted on the inner bank of 'the Rath' Ballyallaban, Co. Clare

Figure 7 Beech trees as features of designed landscaping planted on 'Rough Fort', Moneyrannal, Co. Derry

Western anthropocentrism has produced, among other things, a certain hesitance to regard the movement of trees and other plants as action or behaviour. The following quotation is taken from the field of molecular biology where plant behaviour is increasingly being studied as active, purposeful and intentional (Trewavas 2009, 606), and represents a welcome shift for scientific enquiry.

> 'Terrestrial plants are sessile. However, their life is not still, but an exercise of continuous exploration. Plants explore their environment seeking favourable microsites for light capture and nutrient absorption, and avoiding places where resources are highly contested. Animals do this by movement; plants by growing and discarding organs, or by changing the shape of these organs. If good conditions are not found, plants often adjust their form and physiology to tolerate adversity' (Ballaré and Trewavas 2009, 605).

It must also serve as an appropriate and important introduction to discussing plants in any discipline. Acknowledging the agency of plants affects how we approach the social sciences in a similar way, but it is the tradition of anthropocentrism in western thought and culture that ultimately is being adjusted. When adjusted appropriately, due attention is paid to the actions of things like trees and how they can independently shape the shared world. Put another way,

> 'The ability of trees to grow, reproduce, spread, break up monuments, figure significantly in the emotions of nearby residents, demarcate heritage and so on, have (…) slipped the leash of human plans. The trees have acted as relatively autonomous material presences which have spanned across and between eras of place identity and place configuration. In doing so, their powerful material presence has relationally shaped the new place identities and configurations that have emerged' (Jones and Cloke 2008, 93).

Like us, trees live and die, they colonise, populate and de-populate and different species of trees will do all these things in different ways and at different rates. As noted above, human interactions with trees are based on such observations. People exploit the attributes and qualities of different tree species for different desired purposes such as harvesting of foodstuff, procuring medicines and manufacturing building materials to serve as shelters, landmarks and as aesthetic devices. These interactions between human and non-human entities are significant factors in the formation of places. Humans can cause trees to do certain things, indeed trees are planted *because* they do certain things which can be seen as the behaviour of trees, which in turn, influences human behaviour. Put succinctly, 'Non-human agencies not only co-constitute the contexts of life, but they also frequently

reconstitute the fabrics of day-to-day life and the places and spaces in which it is lived.' (Jones and Cloke 2008, 80–81). Trees may generally behave in a predictable manner but they also frequently end up doing something beyond the intended purpose of their initial inception by humans.

In their researching of the connection between trees and place, Jones and Cloke (2002, 80–81) proposed four ways in which trees might be regarded as having agency. These are agency as routine action, transformative action, purposive action and non-reflexive action. All four types of action may be discerned, to varying degrees, with regard to the trees typically encountered in the created environments of medieval Ireland. As routine action, trees 'are associated with a series of on-going processes of existence which enable them to grow, reproduce, bear fruit, spread, colonise and so on' (ibid). This is perhaps the level at which people engage most with trees (e.g., planting, pruning, cutting down) but trees have clearly transcended 'the passive role often allocated to nature's subjects' (Jones and Cloke 2002, 80–81). The active roles of trees in the preservation and conservation of many Gaelic *ráth* sites today can be seen as routine action.

Trees can obviously have transformative effects on places. Where and how they grow can change how a place is perceived and how other entities interact with that place. Their actions can be unexpected and 'when mixed with the social aspect, (…) can have creative transformative effects' (ibid). This kind of action is evident in modern perceptions of medieval settlement enclosures and their trees, and the folklore and superstitions associated with them. Hawthorn trees have engendered folkloric traditions in every society where they are a significant part of the landscape. 'Fairy-trees' in Irish lore are invariably hawthorns and there is an association between medieval enclosures and hawthorns in folkloric traditions (see 5.3.3; 5.4.3; 5.5.3 and 5.6.3). They are frequently referred to as 'fairy-forts' and 'fairy-trees' and are accompanied with warnings of severe repercussions for any damage or interference inflicted upon them. The presence of trees on a medieval enclosure can also determine how we cognitively interact with it. On an earthen bank devoid of trees, we might consider that we are 'on' an enclosure looking out at the landscape. An enclosure with trees is entered, like entering a wood. We are 'in' the enclosure, beneath the canopy.

Furthermore, the embedded purposive action (of hazel trees in particular) is expressed through their life-history strategy of persistent stem renewal and in how they respond to external forces (Tanentzap et al. 2012, 171; Coppins and Coppins 2010, 10). Their

behaviour will change and adjust according to other factors such as the presence or absence of browsing animals. In the localised environment of the earthen-banked enclosure, trees are fundamental to a diverse ecosystem. The cycle of regeneration is co-maintained by the lichen, liverwort and fungi communities supported by the trees, which can also be viewed as purposive action that accelerates the decomposition of deadwood, creating new biomass to perpetuate the action of persistent stem renewal.

Agency as non-reflexive action must be carefully considered in the context of Gaelic society and the way in which trees may have featured. Scholarship shows that trees were held in high regard in Gaelic Ireland (Kelly 1999; Lucas 1963). They were valued economically according to species and were imbued with symbolic significance in day-to-day actions and cultural practices. In some cases the damaging of a tree was as reprehensible as damaging a human (see Kelly 1997, 385–89), (3.3; 3.4). Trees were also used metaphorically in the literature of Gaelic Ireland to express ideas related to kingship and king-making sites and to describe the attributes of people and dynasties (3.5). These observations suggest that Gaelic society acknowledged a certain agency of trees and that their actions (the trees) were naturally and closely bound up with the creation of places. If trees were enrolled in the processes of place creation, their transformative action over generations of human habitation will have aided in the production of vernacular forms within which the trees themselves are active components. This type of action may also be responsible for the current and common trends of hawthorn and hazel growing on the banks of medieval earthen enclosures.

Through the lens of ANT, agency is viewed as ‘a relational achievement, involving the creative presence of organic beings, technological devices and discursive codes’ (Whatmore 1999, 26). For example, the fruit-trees of a Somerset orchard, in a case study by Jones and Cloke (2001), are creative actors or actants that have ’shaped’ the art of pruning (and forms of pruning equipment), just as contemporary pruning now shapes the trees’ (Cloke and Jones 2001, 655). If the hazel and hawthorn trees of the medieval enclosures are looked at in a similar way, the question may be asked as to whether the trees have helped to shape the forms of enclosure. What portion of the earthwork morphology is shaped by the trees? If indeed the intention was to include trees in their original purpose, then the creative input of trees is not only undeniable but it is essential to our understanding of such places.

2.5 The Case of Hazel, Hawthorn and Enclosed Settlement

The word 'tree' in itself does not convey or describe the variety of relevant species and their diversity of appearance, behaviour and use. Different trees do different things and as components of a settlement environment they have, accordingly, varied and dynamic roles to play in its creation. The ubiquity of hazel and hawthorn trees on and within medieval enclosed settlement forms today is in itself enough to warrant an investigation of the relationship between such trees and their host sites, but can such trees be viewed as relicts of intentional medieval tree planting? To answer this, it is necessary to consider how such trees behave and to ask why they might have been incorporated into these environments in the first instance. Are there practical benefits to incorporating these trees into earthen bank and fosse systems of enclosure? There is detailed evidence in early Irish law for carefully rationalised systems of fencing and boundary creation. The 8th century Irish law tract *Bretha Comaithchesa* includes 'precise descriptions of what constitutes a proper field-boundary (*imbe n-inric*)' (Kelly 2011, 372), one of which was the trench-and-bank (*clas*) which may have had trees planted on the bank to strengthen it (ibid). The value of trees growing in boundaries is also mentioned in an Old Irish gloss on *Bechbretha* (Bee Judgements), where they are said to have more value than trees growing in woods (CIH iii 925.36-7). The image of a managed landscape with carefully managed and hedged boundaries is evoked by the 17th century scholar Dubhaltach Mac Fhirbhisigh. He described 'the land of Fidh Cruaichi of banquets', which O'Donovan (1844, 194–95) identified as the area around Ballyrourke townland in Balla, Co. Mayo, as land 'on which are shower-shaken hazles of white bark, *And* where each round hill is protected by wattle hedges' (ibid).

Bank and fosse systems have a long history of use throughout Europe. Drains and ditches in Roman centuriated landscapes were 'almost always flanked by trees and hedges' (Caravello and Michieletto 1999, 47) and in his *Naturalis Historia* Pliny the Elder (AD23-AD79) refers to topiary and box-hedges as typical features of Roman gardens and villas.

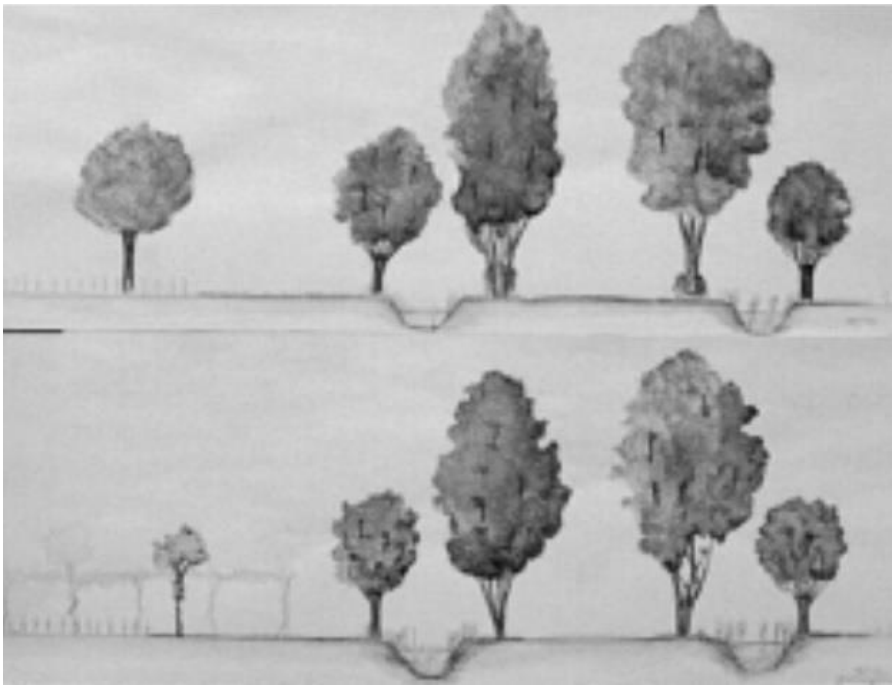

Figure 8 Typical elements of the Roman centuriated landscape: drains or ditches, almost always flanked by trees and hedges. (after Caravello and Michieletto1999,47)

Species such as hawthorn and hazel have long been used as fencing and hedging species. Rackham (1986, 184) has suggested that bundles of hawthorn in the fill of a ditch that was discovered beneath Bar Hill Roman fort in Dumbarton, Scotland and hawthorn, blackthorn and rose found in waterlogged deposits at Farmoor in Oxfordshire may be interpreted as evidence of hedges. Anglo-Saxon charter boundary clauses from *c*.AD800 frequently document the existence of hedges (Hooke 1989, 123). The Oxford English Dictionary (OED) records the earliest appearance in print of the term 'quickset'[6] in a state trial 'complaint of John Brome of Baddesley Clinton' dated to AD1450 in which a description of 'voide ground' is given as 'closyd ynne with a wall made of Tymber, Stone, and plaistre, and with palys, hegges, and quyksettes' (Ferrers 1859, 180).

A defensive fosse and bank was built in the 15th century around the greater Dublin area creating a Pale between the loyal subjects of the Crown and the disloyal Gaelic Irish and Old English of the midlands and Ulster. Ball and Hamilton's (1895, 8) description of the pale in their account of the parish of Thaney, Co. Dublin illustrates how historical interpretations of bank and fosse systems invariably assume the incorporation of a hedge as a matter of course.

[6] A 'quick' is usually understood to be a thorn cutting or sapling, however it may refer to any suitable living cutting used to plant a live hedge. 'Quick' in this sense means 'alive' as opposed to 'dead', hence the contrast between a quickset hedge and a dead hedge (usually made from cut branchs).

> 'In the period immediately after the Norman Settlement was constructed the barrier known as the 'Pale', separating the lands occupied by the settlers from those remaining in the hands of the Irish. This barrier consisted of a ditch, raised some ten or twelve feet from the ground, with a hedge of thorn on the outer side. It was constructed, not so much to keep out the Irish as to form an obstacle in their way in their raids on the cattle of the settlers, and thus give time for a rescue' (Ball and Hamilton 1895, 8)

2.5.1 Benefits to a Site

One of the most obvious benefits of using trees in settlement environments is their ability to provide shelter and reduce wind speeds which helps substantially in preventing wind erosion, and the damage it causes (FAO United Nations 1989, 15). In the case of earthen-banked settlement, this would include both potential damage to the buildings within an enclosure, and damage to the earthen banks themselves on which trees may be growing[7]. In some cases, tree-root architecture may provide stability to the form of an earthen bank. Tree roots spread laterally through the earth and hold it together so that the rain and wind cannot wash or blow it away. Planting trees is thus an effective counter-measure against soil erosion. Studies of the role that tree roots play in slope stabilisation and erosion control have shown that their tensile strength and their frictional or adhesional properties will reinforce the soil (Ekanayake et al. 1997; Greenway 1987; Reubens et al. 2007). 'Roots extending perpendicular to the soil surface reinforce the soil by increasing shear-strength of the rooted soil mass on the sheared surface. Roots growing parallel to the soil surface reinforce the soil by increasing the in-plane tensile-strength of the rooted soil zone' (Zhou et al. 1998 in Reubens et al. 2007). The 1989 U.N. report on forestry and food security says that tree roots can provide up to 80 percent of soil shear strength on a slope under saturated soil conditions (O'Loughlin and Watson, 1981) and are much more effective at doing so than either crops or grasses. Removing trees from a slope can increase the frequency of soil slides by as much as seven times (Swanson, Swanson, and Woods 1981, 70). It is particularly noted that coppicing species are most appropriate for continuous and long-term soil strengthening as their root systems remain alive and maintain shear strength even under harvesting conditions (FAO United Nations 1989, 23).

[7] Reducing wind velocities with windbreaks can also help improve insect pollination of crops. This is particularly important in fruit orchards (Caborn 1965). Beekeepers also find wind protection for their hives to be desirable in areas with strong, cold or hot winds. (FAO United Nations 1989, 15)

A tree's capacity for intercepting rainfall[8] will also have a positive effect on the preservation of the form of an enclosing bank. Tree foliage will influence the amount of moisture that reaches the soil. Densely crowned tree-cover can prevent precipitation from reaching the ground and some water is also lost through evaporation from the tree canopy (FAO United Nations 1989, 14). Ground cover by leaf litter also gives substantial protection to the soil in the prevention of water erosion[9] (ibid 20). Uptake of water by tree roots can also have a significant effect on local moisture availability. This supports the suggestion that, in many cases, the excellent preservation of the earthen banks of medieval Gaelic enclosures is in no small way due to the fact that trees have been present upon them. The trees are certainly enmeshed with the fabric of these sites and contribute to site morphology in several ways. It is likely that those particular qualities of trees were attractive to and exploited by people who built, occupied and worked in earthen-banked enclosures.

However, in the course of this study, it has been observed that, depending on the particular conditions at a given site, trees can also be active agents in the destruction of archaeology. Trees can frequently be the causes of the extensive deterioration of certain parts of a bank by directing browsing animals through particular paths or by attracting burrowing animals such as badgers in search of the ideal habitat locations (Muir and Muir 1987) that such places can provide. Thus, the presence or absence of trees alone does not provide enough information to assess whether they are ultimately of benefit to the preservation of a site's morphology. Many diverse factors need to be accounted for before any such generalisations can be made with confidence. The actions of trees are dependent on their relationships with other actors in the network. Diverse factors include differences in site type, species of tree present along with regional differences in soil, farming and forestry practices, to name but a few.

An enclosed site with well-tended and established trees could also provide a potential harvest of fruit and nuts, firewood and stock wood when needed. Hazel and hawthorn are species that have been long associated with hedging and enclosure and they can offer all the practical benefits mentioned above. Hawthorn is a common and effective hedging

[8] (see Nisbet, 2005)

[9] If the ground below is bare, large water droplets falling from a tall tree canopy may actually cause splash erosion and initiate more sheetwash than rain falling on bare soil in the open (Lembaga Ekologi, 1980). Often, therefore, it is not the cutting of trees that leads to surface erosion, but the disturbance to the understorey and leaf litter, and baring of the soil, associated with tree cutting (FAO United Nations 1989, 20)

choice, capable of providing a barrier to both livestock and humans (Pollard, Hooper, and Moore 1974; Dowdeswell 1986, 1). It may also be a more economical means of securing enclosure when compared to the amount of timber that would be necessary to enclose a site with fencing to achieve the same purpose. Maintenance of a living hedge does not demand repeated re-supply of materials. The immediate and accessible presence of hazel would be beneficial to a community that chose earth and timber building methods. The evidence from excavations of a raised *ráth* at Deer Park Farms, Co. Antrim (Lynn and McDowell 2011, 594-602), illustrates the use and demand for adequate supply of hazel rods in order to build and maintain the structures that lay within the enclosure. It is shown that there was clearly an area within the vicinity of the site from which the rods for building houses were harvested (Baillie and Brown 2011, 463). They estimated that an area of half an acre of well-managed hazel coppice would be necessary to build the structures within the *ráth* once every 10 years (ibid.). On reading this, it may immediately conjure an image of a managed hazel coppice woods, fenced from browsing animals and perhaps situated in close proximity to settlements. Yet we ought not to dismiss the possibility that much of the demand could be met by the prudent management of hazel coppice on the banks of an enclosure. Hazel trees may have been intentionally incorporated into the layout of the enclosure as a ready supply of rods for repairs and renewals, with the immediate secondary benefits offered by the fruiting season. Hazel is listed in the Old Irish Tree-list as the second most valued tree, valued for its rods and nuts (Kelly 1999; 1997, 382). The story of *Deirdre* recorded in the 12th-century Book of Leinster tells that 'A beautiful orchard full of fruit lay at the back of the fort, in which Déirdre might be walking for a while under the eye of her tutor' (Hyde 1899, 145). With this in mind, we may also consider the possible inclusion of other species such as apple for the immediate value they can offer.

The view that trees were intentionally incorporated into the very architecture of medieval settlement earthworks is expounded in this study. The hypothesis is also put forward that tree propagation may have been an important consideration in enclosing a site with earthen banks, particularly in the case of multivallation. Some multivallate enclosures, such as that in Turin townland outside Kilmaine, Co. Mayo (5.7) (Figure 91), include intentional walkways or berms among their banks. In line with arguments put forward by Mallory and McNeill (1991, 198) (6.2) regarding the length of the perimeter and the lack of a fighting platform, the banks and fosses of this particular site do not suggest a concern for defence. The outermost enclosing bank lacks evidence of ever having a substantial outer

fosse, is adorned with ornamental boulders on its outer edge, and functions as a low berm for the entire perimeter (Figure 9). The next bank encountered approaching the interior is also a wide platformed walkway. Berms of this nature imply certain actions. The invitation to circumambulate the monument is implicit and, in a monument that shows little concern for defence, it certainly evokes the idea of either a recreational or a ceremonial purpose to the monument. The presence of trees on the banks in such a scenario could only serve to enhance the experience. The presence of a souterrain in the interior of this site implies that the site was to some degree used for activities relating to food production or food storage. One possibility is that sites like this may have been used as venues to facilitate the practice of outdoor feasting which was a feature of Gaelic culture. The presence of trees on the banks would certainly aid in framing and augmenting such experiences. Whether this is the case or not, the idea that the banks of medieval settlement enclosures were purposefully planted with trees for uses other than the provision of protective barriers remains worthy of consideration. The possibility that they were places where particular trees were propagated and harvested for rods and food-items, or tended and managed as groves that provided private or public recreational or ceremonial spaces, remains.

Figure 9 Outermost bank of the multivallate enclosure in Turin, Co. Mayo.

If this is indeed the case then it adds a new dimension to the material culture of Gaelic settlements and, by implication, a renewed importance to the cultural traditions that associate trees with medieval earthworks. This view provides avenues for interpreting vallation outside the orthodoxy that confers the roles of status and defence only for enclosures with multiple banks and fosses. In that respect, Stout (1997, 20), in *The Irish*

Ringfort, associates multiple banks with status and defence, and O'Sullivan and Nicholl in 'Early medieval settlement enclosures in Ireland' (2011) are more focussed on the social organisation implied by enclosed space than on the enclosing elements. These associations are investigated and discussed in detail in chapter 4 (6.3).

The creation of hedges on the banks of enclosures could offer a practical degree of privacy, and security to the sites and provide secondary benefits such as firewood and shelter. The banks and fosses afforded protection perhaps from wolves etc. but they were not defensive structures. Thus, an enclosure could serve as a secure dwelling place without being considered a defensive site. The fact that hazel and hawthorn trees are perfect candidates for the purposes of intentional enclosure inspires and informs questions around the origins of those trees found upon settlement sites today. If there are any old enough to be those that were planted during some identifiable phase of the occupation of the site, then what may remain of that initial human activity is perhaps their positions, intentionality in the species chosen and the means by which they have been incorporated into the morphology of the settlement enclosures. Can any be considered as legacies of medieval practices - historical trees whose life-history strategies have seen them change from carefully managed coppiced trees to self-managed survivors?

2.6 The Age of Trees on Enclosed Settlements

> "In many woods the oldest trees are the coppice stools.(…) Stools are not men or machines; they do not die of old age or wear out; the process can go on indefinitely" (Rackham 1997, 102)

The hazel and hawthorn trees present on medieval settlement sites have evaded scrutiny largely because they do not behave like bigger single-stemmed trees such as oak or beech. Their ubiquity on these monuments, coupled with increasing knowledge of their life-history strategies (Coppins and Coppins 2010; Hæggeström 2000; Tanentzap et al. 2012), suggest the possibility that the lifespan of some of the trees that occupy the banks of some enclosures may reach back to a time of past human occupation of the site. Thus, the longevity or life-history of individual trees, seen as the relationship between trees and time, is an important relationship in the network. As will be demonstrated in Chapter 5, many enclosures from different parts of the country exhibit notable similarity in the way in which they harbour trees, especially hawthorn and hazel. The question of how old these trees are or when such trees were incorporated into the site is a difficult one to answer

directly.[10] They are certainly difficult trees to date by conventional dendrochronological methods due to their behaviours or life-history strategies of persistent stem renewal (4.3.1). There are a number of possible answers and some are more likely than others. It may be that such trees are the result of natural windblown colonisation that occurred sometime after a site was abandoned. It may be a case of intentional planting that could have taken place at any time in the site's history. Of course, not all the trees on these sites will conform to the same standards, but it may be possible to discern a relevant demographic.

In *The history of the countryside*, Rackham (1997, 20) observes of hazel that 'many trees, such as the pollards of deserted villages and the giant coppice stools of ancient woods are historical monuments themselves'. The striking similarity in the recurrent presence and apparent layout of both hazel and hawthorn[11] across many sites has the effect of ruling out natural colonisation as a likely explanation. Nordén and Paltto (2001, 2) reported personal communications with Oliver Rackham and Håkan Slotte who agreed that hazel stool genets can reach several hundred years in age. They also agreed that stools with a diameter of 1m could be estimated to be about 100 years old, and stools with a diameter of 2m to be more than 200 years old'. Indeed Rackham (2003) says,

> "Unlike most ash and maple stools, a hazel stool is usually underground. Neglected stools often have a 'self-coppicing' mechanism; stems die after 30-50 years and are replaced by new shoots. It is thus very difficult to tell the age of a hazel. The stools often reach 6 ft (1.8 m) in diameter but rarely much more. By analogy with other species this would represent an age of at least 300 years. It is possible that they cease to grow beyond a certain size, and they may even get smaller by underground decay" (Rackham 2003).

Hazel stools, being multi-stemmed trees, are not reliant on the life-span of a single trunk (Coppins and Coppins 2010, 28). Multiple stems act to increase the persistence of individual trees (Bond and Midgley 2001, 2003). A continuous production of adventitious shoots from the stem bases means they can be constantly replenished so that the stand can be a structural continuum. When the oldest stems die, they make room for new ones, a growth pattern that precludes accurate age determinations. However, some individuals are expected to become several hundred years old. Hazel trees lack runners and underground

[10] See Chapter 4 Methodology (4.3)

[11] While hawthorn is known to have been a requirement for making boundaries from the late century onwards (Breen 2018 pers. comm.) it may also be reflective of much older practices.

stems, but have a great capacity for vegetative propagation by layering, i.e. the development of adventitious shoots from partly broken branches touching the ground. As long as the conditions are correct for them to do so, these robust survival strategies might place such a tree as a single living entity in the same place for a very long time. Indeed, it is this very quality that Tanentzap et al (2012) explore in *The more stems the merrier* when they suggest no upper limit as to how long the processes of persistent stem renewal could continue in a stand of abandoned hazel coppice.

While it cannot be said for all early medieval settlement enclosures, there are several cases where excavation has shown that the use of medieval enclosures endured as a settlement tradition throughout the medieval period and into the early-modern period (1.4; 1.5). Such longevity of cultural preference must create standard practices over time in relation to the use of materials and the development of vernacular forms. Thus, the relationship with particular species of trees, as the living agents of cultural practices, will serve functional, aesthetic and symbolic roles. When human occupation is withdrawn from a site, or a site is abandoned, well-established trees would continue and develop new ways to act. They may inevitably lose some of their originally intended functions but would retain some functions that were exploited by humans, such as keeping the water balance in check and maintaining the integrity of the earthen banks. In time, they will also adapt some new roles that in turn go on to shape the mental landscape of future generations of people. Such mental landscapes become manifest in folklore and superstition where untended hazel and hawthorn trees on a Gaelic *ráth* can become symbols and artefacts of the place in new ways. Indeed, these imagined landscapes that are experienced through oral tradition, legend, folklore and place-names in Ireland are alive with trees. Numerous accounts in the stories collected by the Irish Folklore Commission[12] record that 'no-one ever cuts the trees' on a fort as doing so would incur the wrath of the 'fairies' and result in some dramatic calamity. The sites and trees become landscapes populated with an otherworldly life. Ideas of fairy trees, fairy rings and sacred trees are synonymous in many places with trees that exist on medieval enclosures and, as such, are integral to the way we experience such places (3.8). In this sense, they are enrolled anew into the network and embody new relationships by becoming inadvertent preservers and custodians of the sites. They do not cease to be functional, but their functions change. Some functions for which they may have been originally chosen may continue, such as the roles of providing structural

[12] www.dúchas.ie

integrity to the earthen banks or regulating the water content of the sites. Their visual aspect that, perhaps, has been long integral to how the sites are identified endures to inform the mythic and folkloric associations that survive in modern tradition.

The continuity of use of these sites and an apparent preference by Gaelic society for timber construction suggests that certain landscaping and building practices survived for centuries. Trees are set against such cultural activity and, as such, are testimony to the human story. They are living things that continue their processes throughout several human lifetimes.

2.7 Trees as Phronesis in Gaelic Traditional Knowledge

Any developed society will have repositories of knowledge of the natural world on which they depend**.** Careful observations become distilled into systems of knowledge that pass from generation to generation (usually by oral transmission) and become characteristic of the culture and its identity. While major changes, political and otherwise, can break these traditional cycles, the world-views of indigenous cultures may remain encoded in their traditional mythologies, stories, social institutions and place-names. These repositories of information, pertinent to the culture that uses them, may be understood as traditional or indigenous knowledge systems. They are increasingly being recognised and acknowledged within the western world as invaluable to ecological sustainability, conservation and future development.[13] Traditional knowledge is generally defined as the body of knowledge built up by a group of people through generations of living in close contact with their natural environment and 'It includes a system of classification, empirical observations about the local environment, and certain rules and views that affect resource use.' (Beverly-Qamaniruaq Caribou Management Board 1996: s1, 7).

Traditional knowledge embedded in Gaelic society is discernible to some degree in its laws, literature and place-names. Place-names that use trees may also communicate this kind of knowledge, which facilitates the creation of a shared mental landscape, a map in essence, that serves a society; and particularly a society with a rich oral tradition. But it is not only as maps in the geographical sense, for trees and their observed attributes are also woven into daily life in other important ways. Derry or *Doire* placenames, for example,

[13] (see (Berkes 2012) index of Web Links and Tips)

are indicative of woodland dominated by oak. They are commonly qualified with secondary associations, such as Derrynamuck 'the Oakwood of the pigs' or personal names such as Derrygorman (*Doire Mhic Gormáin*) 'Mac Gorman's oak-wood'. With a nationwide distribution in excess of 1200 townlands, derry/*doire* placenames must carry the connotation of woodland management and its associated commerce. The second part of the place-name must invariably pertain to specific local knowledge that orients people and communicates personal land divisions. Alder (*fern / fearnóg*) placenames, such as Ferns (*Fearna*), Co. Wexford or Farney (*Fearnaigh*), Co. Monaghan are invariably interpreted as 'place abounding in alder trees' and unsurprisingly occur mostly in areas of waterlogged terrain such as river valleys and lake-shores. Alder thrives in these waterlogged conditions where it usually forms the typical terrain known as an alder-carr. In this case, the place is certainly named from the trees that naturally occur there, but the knowledge that accompanies such a placename provides a vivid picture of associated resources, topography and soil conditions. The following excerpt from the Life of St. Maedoc of Ferns in *Bethada Náem nÉrenn* alludes to the relationship between alder trees and water and may be a vivid example of how the behaviour of trees and knowledge of the qualities specific to certain species are intricately bound up with the idea of naming and creating places, in this case Ferns, Co. Wexford:

> 'Now when Maedoc was building the monastery of Ferns, his disciples complained to him that there was no water near them in the place. There was then a great tree in the place. Maedoc said to his disciples: {folio 184a} 'Cut down yon tree (which is by the place) to the root, said he, and there will spring forth a gleaming fount, and a thin bright stream of green blue-edged water from it.' The tree was cut down then, and on its being cut down there thereupon sprang forth after it a lovely fount and pool called the spring of Maedoc. The women and lesser folk used to go and wash their clothes and cleanse their garments in the stream that flowed from the fount' (Plummer 1922, 211).

An alder carr is typically a succession stage in forest formation where the alder play a major role in transforming waterlogged terrain into the typical carr landscape (Whittow 1984, 17). The removal of a tree, or trees, in a carr could certainly expose or cause a degree of reversion to the underlying waterlogged soil conditions. In this way, tree placenames may be considered, among other things, as manifestations of traditional knowledge, products of a Gaelic phronesis or practical wisdom. As components of the landscape, they can be perceived as windows on past communities and important archaeological evidence. Whelan (Whelan 2004, 315) fervently expresses it thus:

> 'cultural landscape operates as an archive of material practices, symbolic forms, embedded and attached narratives…. It functions as a mnemonic, a matrix of memory, as storage system, an accumulated repertoire of historic narrative, *lieux de mémoire*. Place-names act as the narrative tags, anchors of memory. The living steam of history constantly deposits narrative sediment. That sediment always speaks with the eloquence of particularity'.

The behaviour of trees had long been observed and contemplated in the culture of pre-Norman Gaelic Ireland. The world-view of those who compiled Old Irish literature and laws would seem to be a view that was naturally (or culturally) inclined to afford agency to the plant kingdom, as is evident in several ways. It may be observed in the Irish chronicles and later medieval bardic poetry where the adaptation and personification of trees and tree behaviour become metaphors for human behaviour (3.5; 3.6). Inextricably linked with kingship, important historical figures are described as great branching trees and their ancestry described as scions, branches and fruit cut from them (3.5). It is also present in the old-Irish tree-list (*Bretha C.*) (3.3) and the anthropomorphic categorisation of the most important trees as *Airig fedo* 'nobles of the wood' and *Aithig fedo* 'Commoners of the wood' (Kelly 1997, 380). As such, trees have certainly been considered actors to the point that they have been afforded rights, in a social context, similar to their human counterparts. They are presented as actors that interact and communicate with people. Personification of the non-human enables communication in several ways. It essentially gives voice to the objects or entities personified. Meaning and knowledge become embedded in them, allowing them to speak in the human world. Such mechanisms can be repositories of traditional knowledge where, for example, knowing the trees, their preferences and their behaviours may carry additional knowledge of topography, soil conditions and the underlying geology of the places where they are encountered.

The idea that trees are touchstones for memory is occasionally expressed in Gaelic literature in potent poetical form. Hazel is associated with wisdom and kingship (3.4; 3.5). It is the poet's tree and probably the *bile* (sacred tree), which was especially associated with assembly sites and from which 'the rod of kingship'[14], *slat na righe*, was cut (FitzPatrick 2004, 58) (3.4). The capacity for trees to enable access to special knowledge is readily identifiable in many cultures. In Homer, just and true speech is ensured by

[14] In Celtica X, p3, Dillon discusses the "straight white rod" and "the rod of kingship" which he describes as the sceptre of the ancient kings of Ireland and makes comparisons to the king's rod in Indian tradition and to Agememnon's sceptre as described in Iliad ii xoi-o8.

holding the staff or sceptre (Goodison 2009, 52) and in the *Theogony* (30), when Hesiod is given a sceptre of laurel by the muses, they breathe into him the power to tell the past and the future (ibid). The popular story of Labraid Loingsech, a high king of medieval Irish legend and historical tradition, provides an interesting case. In synopsis, the legend goes that Labraid, the king, had horses' ears, which he kept secretly hidden from everyone except for a series of unfortunate barbers chosen each time the king needed to have his hair cut, and afterwards put to death. On hearing that her only son was chosen to cut the king's hair, a desperate widow pleads with the king to spare her son's life. The king agrees on condition that the unwitting barber keep secret his knowledge of the king's ears. The weight of keeping the secret eventually causes ill-health to the barber who is advised by a druid to share his burden with a tree, which he does and is thus cured of his ill-health. The king's harpist, Craiftine, subsequently mends his broken harp with wood cut from the willow tree that was told the secret. In turn, the harp reveals the secret when played in front of everyone at the next feast (Keating 1902, 173–75). Although this story has parallels in the Welsh story *March ap Meirchion* (J. J. Jones 1932) and the story of King Midas of ancient Greek tradition (Graves 2011, 281–84), it is unique in that the confidant is, in the Irish story, a tree. In both the Welsh and the older Greek renditions, the secret is whispered to a hole dug in the ground and then covered up. A bed of reeds grows over the place where the hole was made and the secret is whispered as the wind blows through them. In these versions, agency is given to nature in general, represented by the wind through the reeds. In the Irish story it is specifically a tree that is afforded agency. The tree acts in the social world, interacts with people and partakes in the cultural activity of music. That it is a willow tree in the Labraid Loingsech story is significant in a number of ways. Firstly, because it acknowledges the agency of trees and their facility to accommodate human interaction. Secondly, the tree becomes a container of information pertinent to the human social world. Knowledge becomes embedded in the tree. Thirdly, by listening in the appropriate way, or by knowing how to listen, we can perhaps benefit from a tree's knowledge. Finally, willow is a tree with key medicinal value. As the source of aspirin (Kuzovkina and Quigley 2005, 183), it has long been used for the treatment of aches and fever and thus its medicinal value is poetically alluded to in relieving the barber of his affliction. The motif is not only that the tree can hold and transmit knowledge, but also that the type of knowledge is species dependent.

The importance of trees within day-to-day living is a feature of many indigenous cultures. It is no coincidence that such keenly observed behaviours of individual species should

find expression in their language, oral traditions and literature. The story also suggests that trees are not subject to the same inhibitions and conceits to which their human counterparts are prone.

2.8 Summary Conclusion

If the proper place of trees within archaeological research is to be realised then, where relevant, they need to be accommodated into research strategies. Such strategies must pay attention to individual species and individual trees, observe how they behave, examine their life-history strategies, discern their underlying geographical and environmental conditions and interpret their interactions with humans. A created environment is a landscaped environment, crafted with sensibility. In the archaeological approach to recording created environments such as enclosed settlements, too often the first undertaking of the archaeologist is to remove the trees and other vegetation from a site to access 'the archaeology' without considering whether in fact they may be removing archaeology itself. Many of the created environments of Gaelic society that survive today, in various states of dilapidation, are the combined result of human agency and the continued agency of trees. To regard them reductively as repositories of frozen actions from the past ignores the roles that might have been played by those 'other' living components of the sites. Through examining the relationship between the morphology of settlement sites and the ever-changing nature of vegetative growth we may gain a deeper understanding of how, as places, they evolve over time. As material culture, they will tell much about human actions, particularly where it can be shown that they have been managed as resources for specific purposes. The possibility that trees were planted and tended on the earthen-banked settlement enclosures of medieval Ireland for economic, utilitarian and aesthetic purposes, is therefore posited as a potentially long-standing practice - a practice which may consequently have played a major role in the remarkable level of archaeological site preservation over centuries. Illuminating these roles impacts upon how the monuments are perceived and understood.

The idea that trees may be independent agents in the creation of place changes both how places should be studied and how trees must be treated. We can ask new questions and expect to gain new knowledge about them, the places where they reside and the people who have interacted with them. A thorough understanding of earthen-banked settlement enclosures ought to include the integration and behaviour of associated vegetation. By

acknowledging the agency of trees, we can better study how they have acted and influenced the settlement environments over time.

Ultimtely, when examining how these medieval settlement enclosures are configured, it is not enough to confine the discussion to the prime motivations for their creation or attempt to be definitive about their original purpose and use. Their very nature is evolutionary and their long-life is integral to understanding their configuration. ANT enables us to examine how they are configured by drawing the relationships between all the disparate components, be they humans, non-humans, ideas, strands of information or passages of time.

To date, there has been almost no scholarly discussion on the possible association between earthen banks of enclosures and trees other than those occasions where folkloric traditions provoke a scholarly interest. Investigating the possible associations between trees and enclosures brings archaeology, history, dendrology and folklore together into a complex network of relationships. As integral elements of these sites, trees must be considered as important material culture. Tracing the historical presence of trees and tree use in the settlement environment, from the medieval period to the modern, provides relatable contexts for both the trees that are encountered there today and for the traditions, folklore and superstitions that surround them. Indigenous cultures tend to display an innate propensity to protect and revere trees which may be seen as an informal method of conservation within a culture that values their utility (Pungetti, Oviedo, and Hooke 2012, 28-35). This thesis aims to broaden the definitions of what may constitute a heritage tree which, in turn, effects what these monuments may mean to the landowners and wider communities (who are the primary custodians of these monuments and their associated vegetation), and to the historian and archaeologist.

3 Living Trees and Settlement in Gaelic Literary and Historical Sources

3.1 Introduction

> '…correspondences between written and material sources, be they objects or landscapes, are indicative of a 'deeper level of cultural structure and practice'[15]…' (Bintley and Shapland 2013, 2)

The aim of this chapter is to examine the presentation and representation of trees in the corpus of Irish medieval written sources as one means of discerning their roles within the settlement landscape and society of the time. The corpus of source material concerned includes the Gaelic chronicles, legal and administrative sources (commonly referred to as Brehon Law), ecclesiastical law, gnomic and narrative literature (secular and religious), bardic poetry, political memoirs and folklore.

Trees were integral to the daily life practices of all European peoples throughout the medieval period. People relied on sustainable forestry practices and were very close to the means and methods of production that supplied resources for light and heat, building construction, tool and weapon making and the manufacturing of many other objects of material culture. As Bintley and Shapland (2013, 2) have said for the Anglo-Saxon world, the woodlands are also deeply rooted 'in their spiritual life, symbolic vocabulary, and sense of connection to the beliefs of those who had gone before them', so it was too for the Gaelic world. Trees are present in Irish medieval literary sources in various manifestations that range from the mundane to the profoundly symbolic. They are recorded, variously, as practical entities with economic and utilitarian value and as symbolic entities with sacred and poetic value. Bintley and Shapland (2013) adopted an interdisciplinary approach to the study of trees in early medieval England in an attempt to reveal how the Anglo-Saxons may have thought about trees and utilised them. A similar approach to trees is adopted in this thesis in order to discern the 'complex interrelationships between practical application and religious belief, architectural utility and literary conceit, or functionality and symbolism' (ibid. p.2). Framed by the use of

[15] Hines 2011, 974.

ANT, the varied ways that trees are represented in the historic and literary sources, and how they relate to the archaeology of settlement enclosures, boundaries and assembly places will be discussed in this chapter

3.2 The World Tree

Trees have been used as sacred symbols and objects of veneration in most cultures and religions throughout human history. A tree is connected to the earth and the underworld through its roots, to the sky and heaven through its branches and leaves, and to the everyday needs of people through what it can give in terms of sustenance, materials, shelter and inspiration. The idea of the world tree or the tree of life is a recurrent archetype that 'linked the underworld to the heavens and the gods to mankind, the dead to the living – it was, indeed, the backbone of all worlds, an idea met with in a number of ancient religions from across the world.' (Hooke 2010, 3). It is found in Egyptian mythology as *ficus sycamorus*, a sycamore fig whose fruits fed the blessed (Crews 2003). The Judeo-Christian Tree of Knowledge was in the Garden of Eden, the fruit of which granted knowledge which was forbidden to man by Yahweh, and in ancient Greece, Zeus was associated with oak trees that spoke to his petitioners through the rustling of leaves in the sanctuary of Dodona (Cusack 2013). In the *Atharva Veda* the cosmic tree grew from the navel of the Vedic sky god Varuna, thus creating the world (ibid).

Traditions of sacred or revered trees in North and Western Europe are most certainly rooted in broader and older Indo-European traditions of the world tree and the tree of life (Tolley, 2013). The world tree of Norse mythology was an ash, a*skr Yggdrasill,* (often translated as Odin's Steed) where Odin is said to have hung 'in voluntary sacrifice in order to acquire hidden knowledge and wisdom' (Hooke 2010, 3). Such a tree represented life, death and rebirth. It was the *axis-mundi* (world centre) that bound heaven and earth and a connection between the gods and humans. 'Human life was believed to be descended from it; its fruit was believed to confer everlasting life; and if it were cut down, it was thought that all fecundity would cease' (Crews 2003, 37). It may be noted that in Eddaic tradition the Mimiabrunnr (a well associated with Mímir who was renowned for his knowledge and wisdom), is placed under one of the roots of Askrinn, the great tree of the world, a motif that is echoed in the Irish well of Segais which was surrounded by hazel-trees whose nuts dropped into the well and caused bubbles of mystic inspiration (Wagner 1975) (3.5, p26).

Newman et al. (2007, 363) suggest that 'trees, and the wood derived from them, were socially and culturally charged materials in later pre-historic and early medieval Ireland: they had totemic significance and the properties of different types of trees and wood, including their aesthetic attributes informed how they were characterised and employed by society'. However, the cultural and symbolic meanings attached to trees are almost certainly rooted in older traditions where they, and their derivatives (posts), were venerated as religious objects or icons. The remains of an oak post found at the centre of a ceremonial structure at *Eamhain Mhacha* (Navan Fort) Co. Armagh has been dated to 95BC. It has been interpreted as a possible world-tree representation, perhaps related to sacral kingship ceremonial where the profound symbolic associations of the tree as axis-mundi connected man to earth and the king to his territory (Lynn 1992).

Sacred trees and groves were fundamental symbols that featured strongly in pre-Christian beliefs and they were often successfully integrated into Christian landscapes and folk religion in the early medieval period (Cusack 2013). Bintley (2015, 3) has argued that beliefs associated with the pre-Christian religions of England were consciously assimilated into English Christianity in such a way that they shaped how trees were perceived as part of this new belief system. He proposes that Anglo-Saxons were encouraged to think of their ancestors' worship of trees and wooden posts as a precursor to the worship of the cross. Tree symbolism and materials derived from trees were thus used in the processes of enculturation. In Sulpicius Severus' *Life of Saint Martin* we are told that in AD390 Martin, Bishop of Tours, cut down a sacred pine tree after demolishing a nearby temple in a village in the Touraine region of France (Cusack 2011, 69). It is also described in the 8th-century life of St. Boniface that, in the German territory of Hesse, the saint cut down the 'Oak of Jupiter' to effectively put an end to resurgent pagan practices and he built a chapel to St. Peter with its timber (Robinson 1916, 63). In this sense, sacredness is a quality of trees amenable to diverse credos. They also readily accommodate ideas related to kingship, sovereignty, lineage, governance and the Christian God.

3.3 The Old Irish Tree-List

A great deal of the discussion concerning trees in the context of Gaelic society has been generated around the topic of 'the old-Irish tree list' which is preserved in the 8th-century legal tract *Bretha Comaithchesa*, with the result that we have a considerable awareness of

the economic importance and significance of trees to Gaelic society. Along with their economic importance, trees also had a symbolic significance that permeated social life. The list of 28 native trees is divided into four ranks according to their value (See Table 1 below).[16] This ranking of the most important trees into seven nobles and seven commoners is an imitation of the laws relating to people as found in texts such as *Crith Gablach* (CG) 316-9, and *Uraicecht Becc* (AL v 24.10) (Kelly 1976, 107). The tree-list re-occurs in various forms in later literature. A 12th-century poem titled 'Suibhne in the Woods', and translated by Murphy (1961, no. 47, vv3–12), draws upon the tree-list by speaking to the trees and praising their characteristics, 'the oak for its height over every other tree, the hazel for its nuts, the alder for its shine, the blackthorn for its sloes, the apple and rowan for blossom and berries, the yew and the ivy for growing in churchyards and dark woods, the holly for affording shelter, the ash for its use in weapons, the birch for being proud and musical and the poplar for its leaves that rush noisily as if engaged in a foray' (Bateman, 2013. 37). It demonstrates that sacred and anthropomorphic connotations were ever present in how trees were thought of in Gaelic society.

This highly ordered manner of thinking about trees demonstrates that trees were not solely viewed as economic commodities but also had roles to play in the social life of people. The penalties for damage to a tree belonging to another are also clearly set out in *Bretha Comaithchesa* (see Kelly 1997, 385–89), with the compensation varying in accordance to the status of the tree that was damaged. This again reflects how the law treats offences against people.

Class 1: ***Airig fedo*** 'nobles of the wood'
daur 'oak' (*Quercus robur, Quercus petraea*)
coll 'hazel' (*Corylus avellana*)
cuilenn 'holly' (*Ilex aquifolium*)
ibar 'yew' (*Taxus Bacata*)
uinnius 'ash' (*Fraxinus excelsior*)
ochtach 'Scots pine' (*Pinus sylvestris*)
aball 'wild apple-tree' (*Malus sylvestris*)

[16] For a thorough treatise of The Old Irish Tree-List see Kelly (1976) in *Celtica* Vol.XI. pp107-124.

Class 2: ***Aithig fedo*** 'commoners of the wood'
fern 'alder' (*Alnus glutinosa*)
sail 'willow, sally' (*Salix caprea, salix cinerea, etc.*)
scé 'whitehorn, hawthorn' (*Crataegus monogyna*)
cáerthann 'rowan' (*Sorbus aucuparia*)
beithe 'birch' (*Betula pubescens, Betula pendula*)
lem 'elm' (*Ulmus glabra*)
idath 'wild cherry (?)' (*Prunus avium*)
Class 3: ***Fodla fedo*** 'lower divisions of the wood'
draigen 'blackthorn' (*Prunus spinosa*)
trom 'elder, bore-tree' (*Sambucus nigra*)
féorus 'spindle-tree' (*Euonymus Europaeus*)
findcholl 'whitebeam' (*Sorbus aria*)
caithne 'arbutus, strawberry tree' (*Arbutus unedo*)
crithach 'aspen' (*Populus tremula*)
crann fir 'juniper (?)' (*Juniperus communis*)
Class 4: ***Losa fedo*** 'bushes of the wood'
raith 'bracken' (*Pteridium aquilinum*)
rait 'bog-myrtle' (*Myrica gale*)
aiten 'furze, gorse, whin' (*Ulex europaeus, Ulex Gallii*)
dris 'bramble, blackberry' (*Rubus fruticosus aggregate*)
fróech 'heather' (*Calluna vulgaris, Erica cinerea, etc.*)
gilcach 'broom' (*Sarothamnus scoparius*)
spín 'wild rose (?)'. (*Rosa canina etc.*)

Table 1 The Old Irish tree-list (after Kelly 1997, 380-381)

3.4 *Bile* and *Biledha*

Sacred trees (*bile*) and sacred groves (*biledha*)[17] were distinguished in Gaelic law and feature to varying degrees across the corpus of literature (1.3.1). There is a somewhat

[17] The word *biledha* is essentially the plural of *bile* but likely carries the distinction of referring to a grove.

anthropomorphic manner by which the *bile* is treated in the legal tracts (1.6) where, for example, we find the penalty for damage to an apple tree that is classed as *nemed* 'sacred, privileged' to be four times the penalty for the damaging of an ordinary apple tree (Kelly 1997, 387). Trees, however, are not neatly divided into those that are sacred and those that are not. Every tree may echo the sacred and idealised tree and an actual sacred tree may be as plain and inconspicuous as any other may. A tree that is considered sacred does not exist only in the physical place where its roots grip into the earth and its leaves breathe in the atmosphere. It is also firmly rooted in the human perception of self and it branches into how we perceive the world. But a living tree is a substantial physical object; tangible while it lives and, otherwise, changeable and ephemeral. Individual trees often attain fame and become embedded in the fabric of history. Once it disappears, a historical tree can very easily migrate to those subjective realms where many sacred trees and other such trees of the mind reside. Lucas (1963, 34) did not see both manifestations as mutually exclusive. Indeed, he noted the need to consider interpretations of the persistent association between church sites, dwelling sites and trees 'in terms of the realities of everyday life'.

The record of sacred trees in pre-12th-century Ireland is well attested in native chronicles and in saints' lives. *Bile* and its plural *biledha* are the Irish words used particularly for notable, venerated or sacred trees and sacred groves in the early texts. Lucas (1963, 16) noted that despite a number of passing references in various studies to the sacred trees of Ireland there existed 'no systematic attempt to correlate the evidence from the different sources, ancient and modern, to provide a view of the subject as a whole or of the tradition as a continuum'. Since Lucas, the subject of the sacred trees of Ireland has gained more attention, particularly where it has contributed to a growing interest and knowledge of Gaelic assembly places (FitzPatrick 2004; Hooke 2010; Simms 2000; Zucchelli 2009). For convenience, Lucas (1963, 17) grouped individual sacred trees into a number of categories. These are trees associated with inauguration places, with ecclesiastical sites, with individual saints, with funerals, with holy wells and those sacred in their own right such as the five great legendary trees of ancient Ireland named as *Bile Tortan, Eó Mugna, Eó Rossa, Craeb Daithí* and *Bile Usinig*.

Trees marked important meeting-places. The *bile* had a role in Irish kingship ceremonies and a presence at Gaelic assembly places where they were sometimes targeted and destroyed by rival dynasties. The uprooting of a *bile* at an inauguration site was 'manifestly the greatest symbolic insult' (FitzPatrick 2004, 58) that one king could inflict

upon another. FitzPatrick notes three recorded inauguration sites in Ulster, Connaught and Munster that had sacred trees targeted in this way. The annals record that in 981 AD Máel Sechnaill mac Domnaill, king of Mide, went in force to Magh Adhair, the inauguration site of the Dál Cais in Co. Clare, and cut and uprooted the sacred *bile*. In 1051 the *bile* at Magh Adhair was once again laid prostrate by Aodh Ó Conchobair, king of Connacht. Another account tells of the cutting down of the *Ruadbeithech* (red birch tree), which was the *bile* of the Ui Fiachra Aidhne kings of south Galway in 1129 AD. This tree has given its name to the townland of Roevehagh, Co. Galway. It is particularly noteworthy too because the sources tell us that this tree benefitted from a wall or *caiseal* being built about it, perhaps to protect it from such attacks (FitzPatrick 2001; Lucas 1963, 25). Similarly, in 1099 AD an army led by Domhnall Ua Lochlainn of the northern Uí Néill defeated the men of Ulster before cutting down the *bile* known as Craebh-Tulcha in 1099 (AFM 1099:7). In 1111 AD the men of Ulster sought revenge for that act with an attack on the inauguration site of the Uí Néill kings of Tír Eoghain at Tulach Óg, where they cut down the sites sacred grove of trees (AU 1111:6) (AFM 1111:4). While the exact location of this grove remains unknown, there are some strands of evidence that provide room for constructive speculation in this regard. Geophysical surveys carried out on the hill by QUB (see Sloan 2014; McDermott 2014) detected evidence of a circular enclosure 33m in diameter, which appears to be comprised of a series of pits, immediately south of the main extant enclosure, which could possibly define the location of the grove. This enclosure constitutes roughly the same area as an average *ráth* enclosure. It is also possible however that the *biledha* existed as a grove that was incorporated into the main enclosure. FitzPatrick (2004, 148) has speculated that perhaps the *biledha* of Tulach Óg may have been enclosed within this site, drawing attention to the area in the northeast quadrant of the enclosure, as depicted in the map picture of Tulach Óg by the Tudor cartographer Richard Bartlett in 1602, that appears to have a small mound topped with a number of trees (Figure 10). It is plausible that such a mound may represent a space set aside to accommodate a sacred grove of trees within the enclosed space, which was also host to residential buildings. It is also plausible that any trees growing in the vicinity were constituent of the *biledha* simply by virtue of their presence at this important place. In this sense, the grove of trees may have been made up of specimens growing on the enclosure banks. While still in the realm of speculation it is nonetheless interesting when considering Bartlett's map picture as it depicts trees on the bank, within the enclosure and dominating the immediate landscape (Figure 10).

This site was used as a residential *ráth* as early as the 11th century, and evidently, up to the early 17th century, and the discovery of two cereal drying kilns on the hill attest to activities related to arable farming (Sloan 2014a, 2). One of the kilns provided dating evidence from the early to middle-seventh century. The other, which was located within the 33m enclosure, was a stone-lined keyhole shaped kiln, charcoal from which provided dates from the late 8th century to the end of the 10th century (McDermott 2014a, 5). Notwithstanding the residential and agricultural uses of Tulach Óg in the medieval period, FitzPatrick has argued that it may have been originally a late pre-historic, internally ditched, single-banked hilltop enclosure (FitzPatrick 2004, 147). With an 80m diameter, this hilltop enclosure is comparable to enclosures at Teamhar, Eamhain Macha, Dún Ailinne and Raffin that appear to have been constructed solely for ritual or ceremonial purposes (FitzPatrick 2004, 146). Indeed, this interpretation is supported by lidar imagery and geophysics carried out by QUB that revealed several other features including a large enclosure of possibly pre-historic origin (McDermott 2014b; Sloan 2014 a&b).

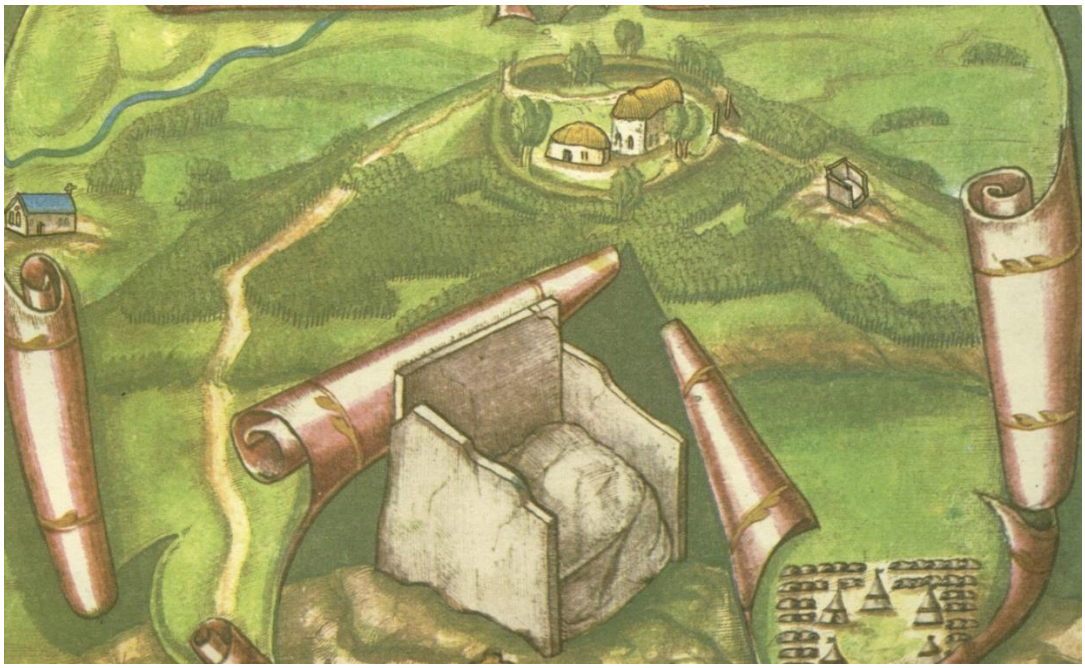

Figure 10 - Richard Bartlett's (c.1602) depiction of Tulach Óg, Co. Tyrone showing the Uí hÁgáin ráth and the stone chair on which the Uí Néill was inaugurated.

Thomas Herron (2007, 299) suggested that the unusual shape of the woodland on the hill conforms to the figure of a satyr which has 'both cartographic and ethnocentric significance associated with the symbolic discourse of colonial empire' (ibid, 303). This plays on the fact that trees held special symbolic meaning in Gaelic culture, which is used by Bartlett 'to demonize the native Irish' (ibid) as primitive woodland creatures. It

parodies the symbolic significance of Tulach Óg and the tradition of the *biledha* or 'sacred grove' associated with it. Bartlett's work has been attested as an accurate eye-witness record of the then lord deputy of Ireland Baron Mountjoy's military engagements in southeast Ulster (Andrews 2000, 205). As an accurate representation of the site of Tulach Óg at the turn of the 17th century it clearly demonstrates the deliberate use of trees in the presentation of place, both upon and within the enclosure by an Irish elite. In this sense, the depiction of the trees on the bank clearly reflects their value to the occupant as an aesthetic expression, making it a fitting cultural target of the colonial agenda. The deliberate allusion to trees and woodland imagery when portraying Irish or Gaelic culture was a popular trope used by colonial artists and commentators and is discussed in more detail below (3.7).

It seems certain that both sacred trees and sacred groves were a feature of some consistency among the functions, paraphernalia and furniture of assembly places and that they were powerful signifiers in the symbolic language of kingship and sovereignty. In the reality of day-to-day living, acts of instatement, destruction and re-instatement of such trees would have had the ability to transmit important information across populations. Newman et al. (Newman et al. 2007, 361) surmise that 'in such contexts, the growing tree symbolised the fecundity and life-line of the tribe; the felling of such a tree, such as the Ash of Uisneach, signalled decline or loss of power'. Other such trees mentioned in various sources include *Bile mac Crúaich* from the book of Armagh, which is associated with Narraghmore in County Kildare, *Bile Bridam* and *Bile Cairne* in County Offaly, *Bile Methais* in County Laois and *Bile Tened* in County Meath. (Ó hÓgáin 1999, 115). Lucas (1963, 16) lists a sample of 22 *bile* placenames from throughout Ireland, as a demonstration of their wide distribution, and argues that it 'serves to show that the "cult" of the sacred tree was a countrywide phenomenon'. There are three different references to sacred trees at Clonmacnoise noted by Lucas (1963, 32), an oak an elm and a yew. Excavations carried out in 1985 by Con Manning in the Steeple Garden at Clonmacnoise unearthed the carbonised remains of a tree root system which was not treated with due importance as it was not regarded as an archaeological feature at the time of excavation. Manning (1988, 35) retrospectively pointed out that this may have been the remains of the yew tree of St. Ciaran which was struck by lightning in 1149AD (CS 1149: 295). Unfortunately, no charcoal samples were kept that could potentially have identified the species and age of the root system.

Biledha may be simply the plural form of *bile*, or it may refer specifically to a grove of sacred or revered trees. The word *fidnemedh*, derived from the words for 'wood' (*fid*) and 'a consecrated place' (*neimed*) (DIL), also denotes a sacred grove and is most often associated with ecclesiastical sites, although in some cases, the *fidnemedh* may predate the church site which was subsequently built. Lucas (1963, 27–34) has suggested that one of the main reasons for selecting Derry as the site of a monastery in the 6th century was the pre-existence there of a pagan sacred wood. Similarly, at Armagh, the Annals of Ulster (AU 996: 1) tell us that the buildings and the sacred wood were set on fire by lightning in AD 996. Lucas suggests that Derry, Armagh, Kildare and Clonmacnoise were all originally pagan seats of sacred groves. These accounts of venerated trees, and those relating to the venerated trees of Tulach Óg, Roevehagh and Magh Adhar in the 10th, 11th and 12th centuries show that the tradition of the *bile* or *biledha* at important places of assembly and inauguration survived the Christian enculturation processes in Ireland and endured well into the second millennium.

Objects are often considered sacred or holy if they are worshipped, revered or otherwise used for spiritual purposes. Outside of being the source of *slat na righe* (the wand of kingship) (3.4), there is nothing to suggest that the *bile* or *biledha* were overtly worshipped or revered in any religious or ritualistic way in medieval Ireland. The *bile* is certainly a potent force; power may flow from it but it does not illicit adulation, which perhaps allows the intentional damaging of a *bile* to be less an act of sacrilege and more an act of defiance or challenge. Katherine Simms sees the destruction of sacred trees at traditional inauguration sites during the 10th, 11th and 12th centuries, among other things, as consequential to the movement towards a continental model of kingship (Simms 2000, 11). It seems also that there is very little evidence of any established universal criteria for what may constitute the *bile* or *biledha* at such places. The only prescription we can confidently suggest is perhaps that their presence is a necessary criterion at an assembly site, and that they gave legitimacy to the functions of the site. In this sense, any tree present at the assembly place might be a *bile*, or several trees in the appropriate vicinity might be a *biledha*, just by virtue of their presence at that particular place. They signal that the sacred place of assembly is 'alive' thus proclaiming that both the territory and its leadership are potent and functioning. This is not to dismiss the probability that such sites may have overtly included a very particular location for the tree, which is illustrated to some degree in the aforementioned account of an enclosure built to protect the tree at the assembly place Roevehagh. It may be that the *bile* was perceived as presiding over a site,

perhaps as nature presiding over, and bearing witness to, the activities and decisions of the people. The following piece of hagiography in *Bethada Náem nÉrenn* tells of an assembly attended by Saint Berach and the druid Diarmait at *Lis Ard Abla* (the High Fort of the Apple-Tree) in *Magh Tethba*. The deeds that take place at this assembly are the final episode of a standing contention between the two parties that ends in the successful conversion of land and faith by St Berach:

> '…And Berach and Diarmait each went to his own territory the night before the assembly. And they held a preliminary assembly on the morrow at the thorn-tree that is in *Tir Tromra* (Tromra's land) at Rathonn. And Berach did not go to the preliminary assembly, but went direct to the assembly at *Lis Ard Abla*. (…) Berach then did many mighty deeds and miracles in the assembly; and then Diarmait came to the assembly, and began reviling Berach, and said: 'Thou impostor, there is not (here) the thorn-tree under which we held the assembly in *Rathonn*.' Then said Berach: 'God is able to bring it hither.' And the divine power raised the thorn-tree aloft in the air with a cloud about it, and brought it so that it overhung the assembly. And Berach said to Diarmait: 'Look aloft'; and Diarmait looked and saw the thorn-tree, and ceased reviling. Afterwards the thorn-tree was let down slowly to the earth, till it lighted on the mound on which Aedh son of Brenann was sitting, and stood on the mound as if it had grown out of the earth there.'(Folio 71a, p35).

This is indeed hagiography designed to extol St. Berach and must not, obviously, be relied upon to supply direct evidence of past events or practices, however, in describing a process of enculturation as a method of religious conversion in early medieval Ireland[18] it may reveal insights into the functions of the *bile*. Diarmait is effectively telling the Saint that he has no authority to perform his deeds at this assembly due to the absence of the appropriate tree, and indeed, it might be understood that the deeds he performed were being done to influence conversion to the Christian faith. Berach acknowledges the role of the *bile* in his summoning of the appropriate tree in order that legitimate assembly can take place, while simultaneously demonstrating the over-riding power of the Christian god called upon to summon it. This episode does seems to suggest that the power of the tree had much to do with its role as witness to the proceedings at an assembly place. It also echoes the ideas associated with the world-tree anchored to the earth and reaching to the heavens like a conduit between God and man or nature and culture (3.2); the Christian God now presiding over nature and having the power to uproot it and replant it at will.

[18] Bintley (2015) discusses the processes of enculturation a method of religious conversion in the context of Anglo-Saxon religion.

The tree's status as *bile* may be attained by its presence at the appropriate place rather than any power it may be inherently imbued with but it must be living, rooted in and contingent with the earth and sky.

Yet despite the consistent association of the *bile* and *biledha* with places of assembly and inauguration we have no clear picture of how they were incorporated into the created environment of an assembly place or indeed of what their exact role might have been in kingship ceremonies. FitzPatrick (2004, 58), citing an episode in the 12th-century Life of Saint Máedóc, says 'there is some evidence to suggest that *slat na righe3*[19] (rod of kingship) (see above 2.4) , the principal ritual prop and archetypal symbol of legitimate royal authority, may have been cut as a matter of course from a *bile* growing at an inauguration site'. The Life records *slat na righe* as being procured from a sacred hazel tree for the inauguration of the king of Bréifne (ibid). Although hazel is considered to be the poet's tree (Graves 1966) and is also associated with wisdom and kingship, there is generally no one particular species that is identified as the sacred tree, or *bile,* of assembly places or inauguration sites. The possibility remains that a hawthorn was associated with the Mág Uidhir assembly landscape of Sgiath Gabhra, which centres on a number of monuments in the adjoining townlands of Lisoneill, Cornashee and Sheebeg in Co. Fermanagh (FitzPatrick et al. 2011, 170).. There is a summit point with a univallate *ráth* on its southern downslope in Lisoneill townland immediately SW of Cornashee, which bears the name 'Lisnaskea' in the Ordnance survey (ibid). Joyce (1875, 519) opined that Lisnaskea was '*lios na sceach*' (the fort of the bush), and that it 'took its name from the celebrated tree called Sceath-ghabhra, under which the Maguire used to be inaugurated'. The more accepted view today is *lios na scíath*, 'fort or enclosed space of the shield or defence' and that it refers to the mound of Sgiath Gabhra in Cornashee where the Mág Uidhir were inaugurated (FitzPatrick et al. 2011, 170). However, the possibility that it refers to a tree or trees must not be entirely dismissed. Such a reference would not be unexpected within the assembly landscape if indeed it did preserve the memory of a venerated thorn tree or grove.

Some other species that feature as sacred in Irish sources are ash, yew, and oak (Lucas 1963; Manning 1988; Watson 1981). Three of the five great legendary trees of ancient Ireland were ash trees; *Bile Tortan, Craeb Daithí* and *Bile Uisnig* and although *eó*

[19] For a more detailed treatment of *slat na righe* see FitzPatrick (2003, 77-80; 2004, 58)

generally refers to yew it is often interpreted as meaning simply tree. The *Eó Rossa* was a yew tree but the Eó Mugna is reputed to have been an oak (Lucas 1963, 17–18). However, it is perhaps less important that we can name the species than being able to recognise these as idealised trees and exemplars. Their legacy is such that they set a standard for people and places to identify with and emulate. Bateman (2013, 32), writing about the image of the tree in Gaelic culture, says that they 'represent a connection to the source of all knowledge and the powers of life and regeneration.' Other trees that are incorporated into settlement or civic environments may aspire or adhere to the qualities and standards embodied in the knowledge of these exemplary trees.

Adequate provision for such trees must have been an aspect of the upkeep of assembly places. When we consider that outdoor ceremonial was the preferred practice of Gaelic inauguration it becomes more likely that the siting, presentation and care of trees was very important to those who chose these locations to conduct their most important cultural events. Because trees can survive many generations of human life, the survival of such venerated trees could chart the successions of dynasties and enhance the pedigree of those who conducted their affairs beneath their boughs. FitzPatrick makes the argument that assembly places 'were very much 'living' landscapes mindfully carried through time and incorporated into secular and ecclesiastical life in different periods' (FitzPatrick 2004, 48). The care of any trees that may have been present at an assembly place would surely have been included in the duties of those charged with its upkeep. We might assume that Ó hÁgáin, who was the steward of the Uí Néill and resided in the enclosure on the summit of Tullach Óg was charged with the upkeep of that site. It is not unlikely therefore, that any tree or trees that bordered, enclosed or otherwise furnished the place of assembly and inauguration may have constituted a *bile* or *biledha*, damage to which would be considered damage to the fabric of the place itself. This may have made the presence of 'sacred trees' somewhat inconspicuous within the entire paraphernalia of its fully furnished contemporary setting, in the sense that they would blend harmoniously into an ordered landscape. Words like *bile* and *biledha* convey a sense of respect and connection with nature, which informs us that trees were not thought of in the past solely as resources objectified for consumption.

There are other practical benefits of planting trees at a settlement or habitation site (2.5). Trees may be used as a buffer against inclement weather conditions, a practice that is still common today. Indeed, trees are frequently mentioned in the chronicles to describe the force of the wind which certainly illustrates a role for trees in expressing and maintaining

meteorological cognisance. Both trees and buildings feature in the chronicles to document storms and their ferocity. The AU mention great storms causing destruction of trees in 857, 892, 1121, 1178 and 1487 while AFM mention great winds causing destruction of trees and buildings in 888, 1107, 1121, 1137, 1146, 1178, 1477, 1478 and 1528. The recurrent mention of trees in this context, at least, shows how they have been used as a standard for the purposes of communicating abstract ideas. It might also suggest a link between settlements and trees that shelter them from the full force of the wind. If the preservation of a house in gale-force conditions relies in some way on the shelter supplied by trees, then the destruction of trees is perhaps viewed as equally devastating as the destruction of people's homes, both socially and economically. Lucas (1963, 34) also discusses the possibility that some trees functioned as lightning conductors. This makes good sense when it is considered that many fortified habitation sites are built on high ground and the deliberate planting of tall trees or a single tall tree could act as a protection to close buildings under threat of a lightning strike (Lucas 1963, 34). It is interesting to note how walls, fosses and ramparts of enclosures are often referred to in law tracts and glosses without mention of fencing. According to a glossator in the law text *Di Astud Chirt 7 Dligid*, an intruder must pay compensation for crossing the wall or ditch of a monastery or the rampart of a lord's fort (Kelly 1997, 431) (See also 6.3).

3.5 Trees as Narrative Devices

Cusack (2011, 1) says that the power of trees is principally derived from the fact that they can function as homologues of both human beings and of the physical universe. Bintley (2015), in his study of trees in the religions of early medieval England, has shown that the idea of associating humans and trees 'was common cultural property in early medieval England and Scandinavia' (2015, 151–52) and that the origins of this tradition lay in the pre-Christian era. He argues and demonstrates that the frequent identification of humans with trees is 'a trope which is found throughout skaldic poetry, and also found extensively throughout the Eddic corpus' (ibid) and that similar associations, though far less prominent, are to be found in Old English poetry. He provides examples from Eddic poetry (ibid. 131-8) that make specific use of the physical forms of trees in describing people and their condition - 'my kindred cut away like the branches of a fir, deprived of happiness, like a tree of its leaves' (Dronke 1969, 161–67), or poems that describe the increasing stature of heroes through 'the imagery of burgeoning plants and trees', such as the

Volsung hero Helgi who is described in one poem as 'that shining-born elm-tree, that radiant bliss' (Neckel 1983, 130–39) and 'like the bright-growing ash by the thorns' (ibid. 150-61) in another. Ireland undoubtedly shares in this 'common cultural property', although Irish sources are absent from Bintley's analysis. Lucas (1963, 22) described the instant emotional appeal of the sacred tree/*bile* as 'one of the choicest honorific epithets for a redoubtable king or warrior' and indeed, medieval Irish sources contain hundreds of examples of trees representing both men and women where trees and their qualities are used metaphorically to describe or pronounce the personal qualities, stature, status and influence on society of individuals such as chieftains, warriors and kings. Words such as *creabh*, *bile*, *géag*, *crann* and *slat* are used interchangeably of both people and trees. The symbolism of the tree connects the land and ancestry through the roots and provides nourishment and a progeny through its fruit and seed. As a great tree, a king or leader shelters his territory and its people. An entry in the chronicles for the year AD 489 recounts that 'the branch of a great bushy tree died, praiseworthy Aongus, son of Nadfraech' (AT 489: 2) at the battle of Cellosnad in Mag Fea. Another chronicle entry for the year AD 876 describes Aedh Finnliath, the son of Niall Caille thus- 'a yew without any charge of blemish upon him was he of the long flowing hair' (AFM 876: 15). An entry for AD 1155 says of Maelseachlainn, son of Murchadh Ua Maeleachlainn, 'The death of this man was like swine-fattening by hot fruit, like a branch cut down before its blossoming' (AFM 1155: 6) and in the 14th-century battle-roll Caithréim Thoirdhealbhaigh we read that one of the O'Molonys, Donall's son of merry visage, is described as 'yet another that from among the forest of maddened combatants was a branch of the white hazel (i.e. a choice specimen)' (O'Grady 1929, 108). Another example is observed in a 16th-century poem to Calbhach Ó Conchobhair where the poet, Tadhg Dall Ó hUiginn (1550–1591), alludes to the wisdom of his patron by addressing him as 'thou appletree from Paradise' (Knott 1922b, 182) and a eulogy in the Annals of Connaught for the year AD1562, lamenting the death of Brian Ó Ruairc, Lord of West Breifne, describes him as 'that tree of victory, that thicket of shelter, that fruitful branch' (AConn 1562:1). Examples such as these show how the language of social life was bound up with the language of trees. With this kind of a worldview, observations of qualities in nature are providing allegories for human qualities. The characteristics of different trees, such as strength, flexibility and longevity, figure totemically in Irish tribal and personal names. IVA-, meaning 'yew tree', appears in compound names like IVACATTOS ('yew' and 'battle') and is the root of the tribal name 'Eoganachta' (McManus 1991, 105. 102, 177). The Uí Fidgeinti were an early dynasty of north Munster whose name means the

'People of the Wood' (Newman et al. 2007, p. 361). Perhaps the most interesting association of this kind comes from John T. Koch's (2006) etymology of the word *Gael*. In his *Celtic Culture: A Historical Encyclopedia*, he suggests an origin in the word *Guoidel* which was borrowed from Primitive Welsh and became an Old Welsh term, meaning "forest people", "wild men" or later "warriors" (Koch 2006, 775).

Trees are also central in the telling of certain tales or events as in the hazel trees that surrounded the magical well of Segais which was indirectly associated with the Uı Fidgeinti and traditionally identified as the source of the river Boyne[20] (Newman et al. 2007, 361). The legend tells that the salmon of knowledge gained its supernatural powers by consuming a nut that fell from the trees into the water and that knowledge was again transferred to Fionn mac Cumhaill when he tasted the flesh of the fish. The name Fionn mac Cumhaill, 'the legendary warrior-hunter and border hero of Gaelic literary and oral tradition, has several suggested translations. Nagy in *Wisdom of the Outlaw* explores the many interpretations of the name which are commonly the 'fair one' or 'the bright one' but sometimes 'The name 'Finn', (…), is an emblem of the hero's druidic, knowledgeable identity' (Nagy 1985, 126).

3.6 Poetic Allusions to Trees in Settlement Contexts

Relationships between trees and habitation sites are suggested in several ways in Gaelic literary and bardic tradition. Some are simple descriptions such as in the story of *Deirdre* recorded in the 12th-century Book of Leinster which describes an orchard full of fruit at the back of the fort (Hyde 1899, 145) (2.5.1). Other evocations of trees at settlement sites are imbued with potent poetical reference. One example can be read in The Life of Bairre of Cork from *Bethada Náem nÉrenn*, where a conversation between Bairre and the king takes place at the king's house. The story tells that 'there fell ripe nuts from the hazel tree under which they were, so that their bosoms were full of the nuts' (Best 1922, 11). Given the associations that hazel has with wisdom and sovereignty it would be prudent to consider such a reference as poetic allusion to the same. As a literary device, the nuts, like wisdom and realisation, fall into the laps of the king and the saint and thus give weight to their conversation. However, it is also quite likely that precisely because of this ability to lend weight to an idea; the actual presence of hazel trees at one's house was not unusual.

[20] Bhreathnach (1999, pp 85–86) argues that it could equally refer to the source of the Shannon

O' Riordan (1990, 2–3) suggests that certain motifs, such as the espousal of the king to his territory and the attribution of the fertility of the territory as being among the portents of a rightful monarch', were used in bardic poetry to indicate a chief's power, influence, authority and wealth (ibid 1990, 2-3). It is certain that hazel was specifically used as a powerful poetic metaphor within this motif. A bardic praise poem to the 13th century MacShamhradháin, and which begins 'Let us make a lasting peace, O Brian…', reads 'for thee every fair tree is fruitful, and every river rises to its brink; thy land with its blue mantle of bursting (?) hazels sends forth its grass quickly neath the bright rain' (McKenna 1940, 445). In a later stanza he says 'thou makest every green field fertile, O Guaire, on the ploughing of its sod; all white with nuts is thy portion of (this) Greece, O young generous Mág Shamhradháin' (ibid). This use of hazel symbolism as a stock poetic motif in Gaelic poetry is seen again in the work of the 16th century poet Tadhg Dall Ó hUiginn. Lines from the poem *The Battle of Drumleene* read,

> 'In days of conflict the three gallant sons of *Cearmaid* are slain by them, three valiant ones for whom hazels bore fruit-laden branches, pillars of fair *Cathair Chröoinn*' (The bardic poems of Tadhg Dall Ó hUiginn - Knott 1922, 20) (see also 2.5 above).

Considering the extent of timber construction on earthen settlement enclosures among the Gaelic peoples, we should expect to find a ready supply of certain trees, particularly hazel, associated with habitation. The resource management of hazel and the activities associated with its harvesting, preparing, building and crafting must have been a common feature at, or near, settlements. Working with hazel was a long-lived tradition as evidenced by Chris Lynn in his description of the methods of construction used at Deer Park Farm, Co Antrim in the 7th century and synopsised here by Kelly (1999, p. 42) 'A double layer of wattling was used to build up a nearly circular structure. The rough side of each layer was turned inwards so that both the outside and inside walls had a smooth surface. Insulating material such as moss and feathers was packed in the cavity between the two layers. It would seem that the use of hazel as a prime building material continued throughout the entire medieval period. This would undoubtedly ensure the development of styles and techniques pertaining to its use, which in turn would be reflected in the cultural literature. Katharine Simms (2001, 256) demonstrates how some house poems, composed by hereditary praise-poets between about 1200AD and 1650AD, can be 'valuable sources of information (…) providing (…) a glimpse into the activities and concerns of the houses' occupants. Although she warns against being too confident about extracting definite information from

encomiastic poems that tend to exaggerate for effect, (ibid.) a reading of certain poems can nonetheless help to frame our conceptualisations of the places and activities that are eulogised within them.

A poem of the 16th century titled *Lios Gréine (sunny enclosed space)*, by Tadhg Dall Ó hUiginn describes the enclosure as 'fair stead amidst green-topped hazel-trees' and a 'white-lathed, straightly built castle, a habitation beguiling to companies' (Knott 1922a, 1:26). Another 13th-century poem by Muireadhach Albanach Ó Dálaigh, beginning *Mo leaba féin dhabh, a Dhonnchaidh*, describes the making of house walls in verse 4 as 'rod into rod, pole into pole along the fair side of your house yonder, one man scraping them clean and another twisting them together' (McKenna 1941).[21] This description offers some insight into the activities and processes involved in building and maintaining dwelling places. It is interesting that this account describes the laborious task of scraping the rods clean. While de-barking the rods would indeed aid in maintaining the integrity of a daubed wall in damp conditions, we should not dismiss the possibility that it may be done from a desire to provide a pleasing aspect in cases where the wattle work is exposed. Hazel, when stripped of its bark is strikingly white in colour which, while loaded with poetic associations of purity and wisdom, could also possibly account for the many references to white forts and bright forts. In *The Genealogies, Tribes, and Customs of Hy-Fiachrach* a celebrated poem beginning 'Many a branch of the race of Conn', composed by Giolla Íosa Mór Mac Firbis, the fort of Durlas is described as 'The white-sheeted fort of soft trees - habitation of poets and bishops' (O' Donovan 1844. 291), and a praise poem to the house of the Ó Conchobair lord of Machaire Chonnacht of Cloonfree (5.9), dated to the 14th century, describes the fine intricate 'wattling white' wall and 'white hurdle-work' (McKenna 1923, 643) associated with the habitation. Making wattle walls or hurdles with hazel rods and scraping them clean are tasks that are best performed when the rods are freshly cut. The present author has had the practical experience of harvesting, splitting and de-barking hazel for the purposes of building wattle fences. The bark of greenwood (freshly cut and not yet dried) peels with ease; peeling becomes significantly more difficult when rods have dried out. Freshly cut rods are also pliable enough to bend and weave into neat wattle-work. Once dried, hazel becomes very hard, substantially less pliable and consequently more difficult to work. The bright de-barked rods would also have the very practical application, in an interior wall, of reflecting any available light in

[21] see also (Ní Úrdail and Ó Dálaigh 2003, 20)

what might otherwise be quite a darkened interior. An anonymous poem of the 13th century addressed to Brian Mág Shamhradháin describes feasting and drinking in his house where "the back of (each of) the warriors like a curving ship-prow leans against the white hazel-wood wall as he drinks…" (McKenna 1947, 2), suggesting perhaps that a neatly made wall of exposed hazel wattle was an admirable interior finish in the Gaelic aesthetic sensibility.

Indeed, it may be argued that hazel was intrinsic to the expression of such an aesthetic and symbolised artistry and beauty itself. The following lines from a late 16th-century poem titled 'An Calbhach Ó Conchobhair', by Tadhg Dall Ó hUiginn (1550–1591), uses these qualities associated with hazel to frame a vivid and picturesque image of the landscape:

> *'Taisdeal learg Locha Gile, torchar srotha Sligighe;*
> *cnuas i ngar bhfionncholl bhfíthe, tiomcholl a gcladh gcoigcríche.*
> *Teaghdhais chúplach chupadh n-óir séad mbuadha bheirteadh ndonnsróill*
> *tháibhleadh ngeal gceathramhnach gcorr, dar bean neamhchumhgach'*
>
> 'Journeying over the slopes of Loch Gill; the produce of the stream of Sligo; nuts coming upon the white, thickly-growing hazel-trees about their border ditches. The coupled mansion, with its golden goblets, precious treasures, red satin garments, bright, square, smooth battlements…' (Knott 1922b, 181).

The phrase '*cnuas i ngar bhfionncholl bhfíthe'* is translated as 'white, thickly-growing hazel-trees'. However, the word *fíthe* specifically means 'woven, plaited, fenced' (eDIL s. v. *fíthe*) and not just thickly growing. The closely related word *figthe* means 'woven, intertwined, pleached, plaited' and with an interlaced or intricate design (eDIL s. v. *figthe*). This suggests a very deliberate use of hazel as a type of living boundary fence, and one with noted aesthetic application and value. *Coigcríche* is the word for border or border dyke and may, in this instance, refer to the borders about houses. Line 19 of the same poem also mentions 'the white houses of Sligo's host' (Knott 1922b, 182). While 'white' here may refer to lime rendering on the exterior wattle walls, there is also the possibility that it is referencing the association with hazel as both a standard building material and an aesthetic medium. The manner in which hazel foregrounds the description of the 'coupled mansion' is loaded with aesthetic sentiment. It is a fitting backdrop within which to frame the items of beauty and value- golden goblets, precious treasures and red satin garments.

Although hazel features most frequently in the relationships between living trees and settlement environments observed in medieval Irish literature, other species such as hawthorn and apple are mentioned too. A line from the 13th-century poem, *Déanam ríod mbunaid a Briain,* addressed to the Mag Shamhradháin reads 'Youths train their hounds

around the castle with its palisade bright with berries' (McKenna 1940, 446), which evokes the image of a living palisade in summer fruit as a component of the castle's enclosure. If this were indeed the case, then it most likely refers to a hedge of hawthorn (and perhaps also bramble) whose bright red summer fruit can create a striking contrast against its dark dense foliage. Another reference to trees and bushes as features of habitation sites occurs where the 15th-century historian Ó hUidhrín describes the 11th-century Ó Conaill lord of Magunihy in Kerry as:

> "O'Connell of the slender swords,
> Over the bushy-forted Magounihy
> A hazel tree of branching ringlets
> In the Munster plain of horse hosts…" (O'Donovan 1862, 109)

Everett (2014, 22), in his treatise on the woods of Ireland, interpreted the above as Ó hUidhrín having identified a style of 'fort' essentially consisting of 'bushes'. It is likely however, that this refers to a style that was much more the norm than the exception.

Early Irish law, as recorded in *Críth Gablach*, suggests a set of building regulations that restricted the size of dwellings according to the social rank of the occupant. This suggests the evolution of a highly prescriptive set of standards and methods of building of which hazel was the chief component. Round houses were generally built within the *ráth* but plans of figure-of-eight shaped structures are often found and have been interpreted as a second round house attached to the first in order to provide additional space (O'Sullivan et al. 2014, 91). Examples of figure-of-eight structures were found at Deer Park Farms, Co. Antrim (Baillie and Brown 2011), at Dressogagh, Co. Armagh (A. E. P. Collins 1966, 119–22), at the *ráth* of Corrstown, Co. Londonderry (Conway 2002:0386, 2002:0387), and at Lisleagh II, Co. Cork (Monk 1995, 111). Interpretive reconstructions of such buildings rarely make the effort to consider the degree of aesthetic concern that may have been applied in their construction for indeed it may be argued that such detail does not survive in the archaeological record. However, a high degree of concern for aesthetics is certainly evident in other ways that complement the poetic allusions in literature. Donnchadh Ó Corráin's (2001, 315) argument for the correct translation of the woodworkers tools in 'Some Cruxes in Críth Gablach' points to 'a high-level inherited indigenous skill in woodworking'. The *mrugfer* who was an ordinary strong farmer, was expected to own an adze (*tál*), an auger (*tarathar*), a saw (*tuiresc*), a chisel (*eipit*), dividers (*dias fídchrann*), an axe (*biáil*) and a billhook (*fidbae*) (ibid). Mark Gardiner (2013, 45) in discussing the degree of sophistication of late Anglo-Saxon timber buildings discusses

how preconceptions about medieval buildings have played an important part in our interpretation of them. He points out that some scholars interpret the evidence from excavation of timber buildings as 'crudely made structures with unsophisticated woodwork' and points out the tendency to associate the idea of short-lived housing with badly built housing. This is most certainly also the case in the interpretation of Irish early medieval timber buildings, which must be imagined in the context of how their contemporaries thought about them. The astoundingly rich archaeological record of medieval earthen-banked settlement enclosures in Ireland, on its own, is aesthetically mute. It is rarely considered under the subject heading of architecture, a term that in early Irish studies is invariably confined to masonry structures and rarely leaves the ecclesiastic world. Trees, as component features of these settlement environments, hold some of the power to reconstruct that architecture and give voice back to that aesthetic.

3.6.1 The Bile Ráth – The Great Tree of Forts

Lucas (1963, 20–22) has made a case for believing 'that a *bile* was regarded as an appropriate adjunct to a chiefly or kingly residence'. He cites several examples including the description of a warrior in *Táin Bó Cúalnge* as 'as large as one of the noble trees on a main fort's green', and the following fanciful depiction of the house of Failbe Find in *Serglige Con Culainn*:

> 'Before the entrance to the east, three trees of purple glass (*trí bile do chorcor glain*), in which birds sing softly, unceasing, to the children of the royal fort. There is a tree at the entrance to the enclosure (*ata crand I ndorus liss*)- it were well to match its music – a silver tree on which the sun shines, like gold is its brilliance' (Serglige pp.16-40).

Lucas (1963, 20) mentions Rathvilly (*Ráith bilech* – enclosure of the venerated tree) in Co. Carlow, a *Dun Bile* (fort of the venerated tree) mentioned in AD 759 (AFM 759:9) and Balrath (*Bile rátha* – venerated tree of the enclosure) in Co. Westmeath, whose names have almost certainly derived from such trees. He points out that the same kind of conjunction is made with the word *liss* or *les* (which also refers to an enclosure) and *bile* in the form *less mbilech* which appears in the Irish folktale *Mongan's Frenzy* (Meyer 1895, 56) and the Middle Irish story *Aislinge Meic Con Glinne* (Meyer 1892, 68–69). There is a small townland named Lisnabilla in the parish of Magheramesk in Co. Antrim (Figure 11). The 1st ed. OS map from *c*. 1840 depicts a sizeable *ráth* enclosure (*c*.50m diam.) in the NE of the townland, the western half of which remains extant.

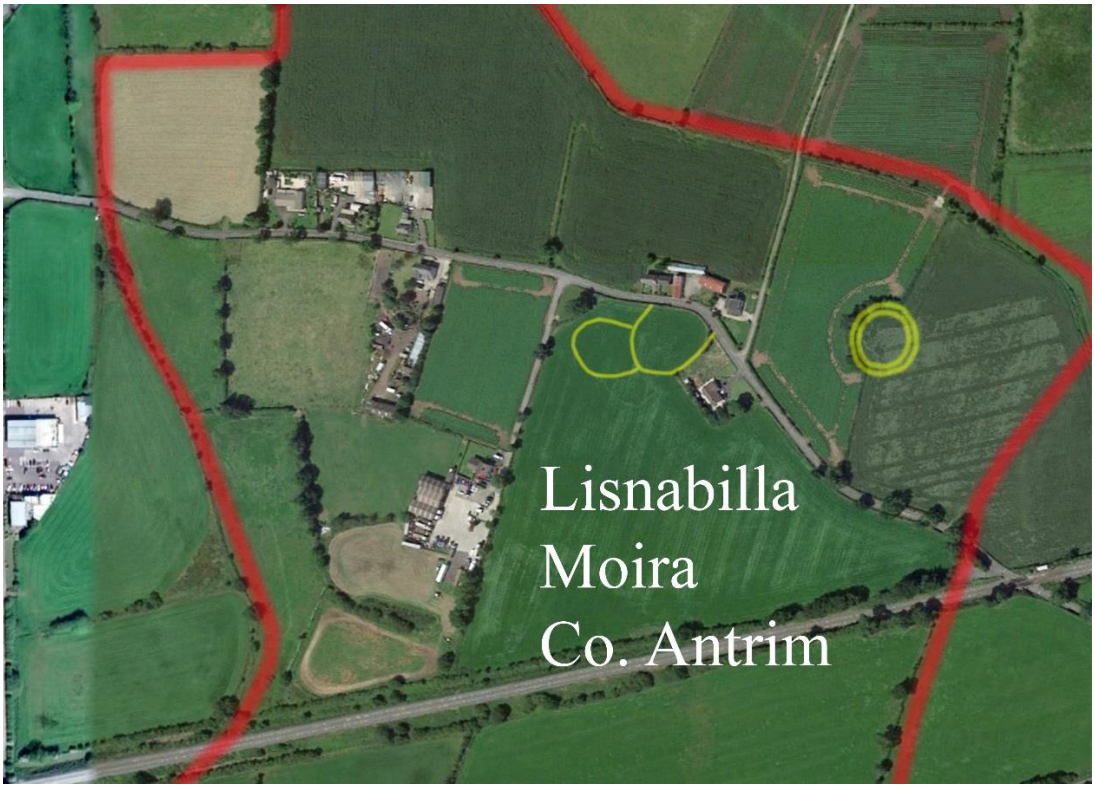

Figure 11 Enclosures as depicted on the 1st ed. OS map c. 1840 at Lisnabilla townland in the parish of Magheramesk, Co. Antrim

However, about 100m to the west of this enclosure the map also depicts, with the label 'forts', the outline of two conjoined enclosures which offers a very intriguing possibility as to the origin of the placename. The easternmost of the conjoined enclosures, defined in its NE sector by a turn in the road, may be a kind of forecourt to the main enclosure or the 'main fort's green 'wherein 'noble trees' reside echoing the abovementioned exemplary description from *Táin Bó Cúalnge*. Lucas (1963) opines that the presence of revered trees at the homesteads of important personages was a common occurrence in ancient Ireland. There are also eight other places named Balrath throughout the counties of Westmeath and Meath. However, the term *Bile rátha*, meaning 'the (great) tree of the *ráth* or fort', is not just a recurring place-name. It appears to have been a fixture of some enclosed settlements and is frequently used in poetry and verse. In an anonymous poem of the 9th century, the hermit Marbán describes his hut to king Gúaire thus. '*Atá úarboth dam I caill; nís-fitir acht mo Fhíada: uinnius di-siú, coll an-all, bile rátha, nasn-íada.*' (I have a hut in a wood; only my lord knows it: an ash-tree closes it on one side, and a hazel, like a great tree by a rath, on the other) (Murphy 1998, 10–11). This idea of hazel as the *bile rátha* appears to maintain a cultural significance for several subsequent centuries. An early Middle Irish poem beginning *'Ráithe fó foiss fogamar'* (reproduced below) from the Book

of Leinster compiled in the 12th century (Greene and O'Connor 1967a, 141–42) offers an intriguing description of a settlement site and some trees associated with it that include 'the great tree of forts (*róbili ráth*).

Ráithe fó foiss fogamar,
Feidm and for ech oenduini
Frí oíb na llá lángairit.
Loíg brecca i ndiaid deisseilte,
dínit rúadgaigg raithnige.
Rethait daim a duamachaib
Fri dordán na damgaire.
Dercain, subai i síthchailltib,
slatta etha imm ithgurtu
ós íath domuin duinn.
Draigin, drissi delgnacha
Fri duaí in láir lethshlissi,
lán do mess tromm teinnithir,
do-tuittet cnoí cainmessa
cuill, robili ráth

The opening line describes autumn as a good stay-at-home season (ibid.) and continues to describe various things typically witnessed at this time of year. It describes thorn trees (*draigin*) and thorny brambles (*drissi delgnacha*) by the rampart of a house-site and the hazel tree as 'the great tree of forts', (*cuill, robili ráth*) (ibid.) Kuno Meyer's (1914, 3) translation reads 'Spiked thorn-bushes (grow) by the site of a half-ruined fort: the weight of a heavy harvest bows them down. Hazelnuts of the fairest crop drop from the great tree of forts.' Greene and O'Connor's (1967, 142) translation reads: 'There are thorns and spiky brambles by the rampart of the house site with the broken wall. The hard earth is full of heavy fruit. Nuts fall, the good fruits of the hazel, the great tree of forts'. Both translations suggest that the term *lethshlissi* refers to a dilapidated or abandoned site. Indeed, the presence of brambles (particularly in a modern context) certainly conjures an image of un-tended overgrowth, however, could the description in fact be referring to a contemporary 12th-century and lived in habitation site? Thorns (hawthorn) and brambles, as alluded to earlier, may well have been intentionally grown upon the earthen ramparts of such habitation sites. They may have functioned as protective barriers while also providing a local supply of haws and blackberries. The word *leth* or *leath*, which generally means 'half', may also mean 'side' in which case the *lethshlissi* may denote the sidewall of the enclosure, or the scarp of an earthen rampart.

The term '*robili rath'*, the great tree of forts, is written as if the poet expects it to be familiar to the reader. There is no explanation offered as to why hazel is the great tree of forts, it is simply stated. The poet is recounting the observable, which suggests the presence of hazel at or on a *rath* as a commonly encountered phenomenon in 12th-century

Ireland. There is, perhaps, a sense that hazel is commonly or familiarly known as the 'great tree of forts'. Hazel, too, is pregnant with other connotations that add to its import as 'the great tree of forts'. As mentioned before, hazel has sacred or esteemed associations with wisdom and kingship. The tree bountiful in nuts is a supply to the household and a resource for the provision of hospitality and finally, as a building material, it would have gone into the creation of so much of the habitation site. As the *robili rath*, however, it must certainly be the living tree that is being directly referred to and not any combination of its by-products. A wattle fence or wall is unlikely to have been considered a tree and certainly not a *bile,* therefore 'the tree of forts' may refer to living trees as integral to enclosed dwellings. Whether or not the scene described is of a lived-in site or an abandoned site, this poem none the less provides a clear reference to both hazel and hawthorn trees associated with Gaelic enclosed settlement sites in the 12th century.

It is not unreasonable to suggest that the presence of these species on some such sites in the modern period may be due to some level of continuity in traditional farming and folk practices. Lucas (1963) felt compelled to mention the fact that trees and bushes growing on *ráth* sites were treated with the utmost respect up to the very recent past and to the present in some cases. The following lines in this regard are worth quoting;

> 'It was, of course, considered very unlucky to interfere with any of these old earthworks and it was, no doubt, partly this which made it imprudent to damage the trees or bushes growing on them. On the other hand, it seems possible that something of the sacredness which hedged the *bile* trees formerly growing at such places has descended by tradition to modern times to protect their successors on the sites' (Lucas 1963, 22).

Only trees exceptional in girth or height have tended to be scrutinised for identification as long-lived and significant cultural artefacts and only high profile sites that can claim some lofty association with an ancient tree tend to be considered for the investigation of the phenomenon. New relationships between people, places and trees can be discerned when we begin to look at those trees that have quietly occupied these settlement environments of the past. By observing the patterns they adhere to, and considering their less lofty, profane and mundane aspects that rarely gain due scholarly attention, we may discern their place in the network of relationships. New connections become apparent and new discoveries may be made. The persistent association between trees, such as hazel and hawthorn, and enclosed settlements, gives particular cause for redress in this regard. The fact that hazel has a long-standing relationship in literature with habitation sites testifies

to embedded cultural and traditional practices, the vestiges of which may still possibly be discernible in the landscape today.

3.7 Conflict, Identity and Trees in the Later Medieval

Using trees in the characterisation of the Irish and Irish culture is a recurring motif in English written descriptions and illustrations.[22] An illustration in Jean Creton's (*c.* 1401-1405AD) *Histoire du roy d'Angleterre Richard II* (Figure 12) depicts Art Mór Mac Murchadha Caomhánach emerging from woodland to meet the Earl of Gloucester. John Derricke's (1581) *The image of Irelande* (see Figure 14, Figure 15 and Figure 16 below) repeatedly shows the Irish in the woodland or emerging from woodland. The recurring theme of associating the 'Wild Irish' in this way with trees and woodland is a subtle device. Its strength lies in the fact that the Irish *did* identify culturally with trees and woodland and thus that identity becomes the focus of discrimination. Indeed, as discussed earlier (3.5) the ethnonym Goídel (Gael) originates in Old Welsh and translates as 'wild men' or 'forest people' (Koch 2006, 775).

Figure 12 Art Mór Mac Murchadha Caomhánach riding to meet the earl of Gloucester, as depicted in an illustration to Jean Creton's Histoire du roy d'Angleterre Richard II (c.1401-1405AD)

[22] See Bartletts image of Tulach óg (Figure 10) above

Trees are also present on the internal bank of what appears to be one sector of a bivallate enclosure in another of Bartlett's map-drawings, which depicts the newly fortified town of Monaghan in the year 1602AD, represented by the sharp geometry of a star trace as its central image (Figure 13). A portion of a treed enclosure is shown in the top right-hand corner of the image. It consists of two concentric earthen banks with and intervening fosse. There is a causewayed entrance cutting through both banks and there is an orderly rank of trees on top of the inner bank only. Bartlett has drawn this enclosure so that it is obscured by the rolled corner of the drawn overlaid map. There is no indication of buildings associated with it and it is very much on the margins of the overall composition thereby giving the impression of an abandoned settlement site or one that has ceased to be functional. The overall image seeks to communicate the success of the military campaign in advance of the plantation of Monaghan and thus it is clearly setting up a contrast between cultures in its depiction of these enclosures. The contrast and composition are completed in the final act of Gaelic style houses being enclosed within the new star trace. Like his image of Tulach Óg, the trees on this enclosure are specifically referencing Gaelic identity, which has been supplanted, and its vestiges pushed to the margins.

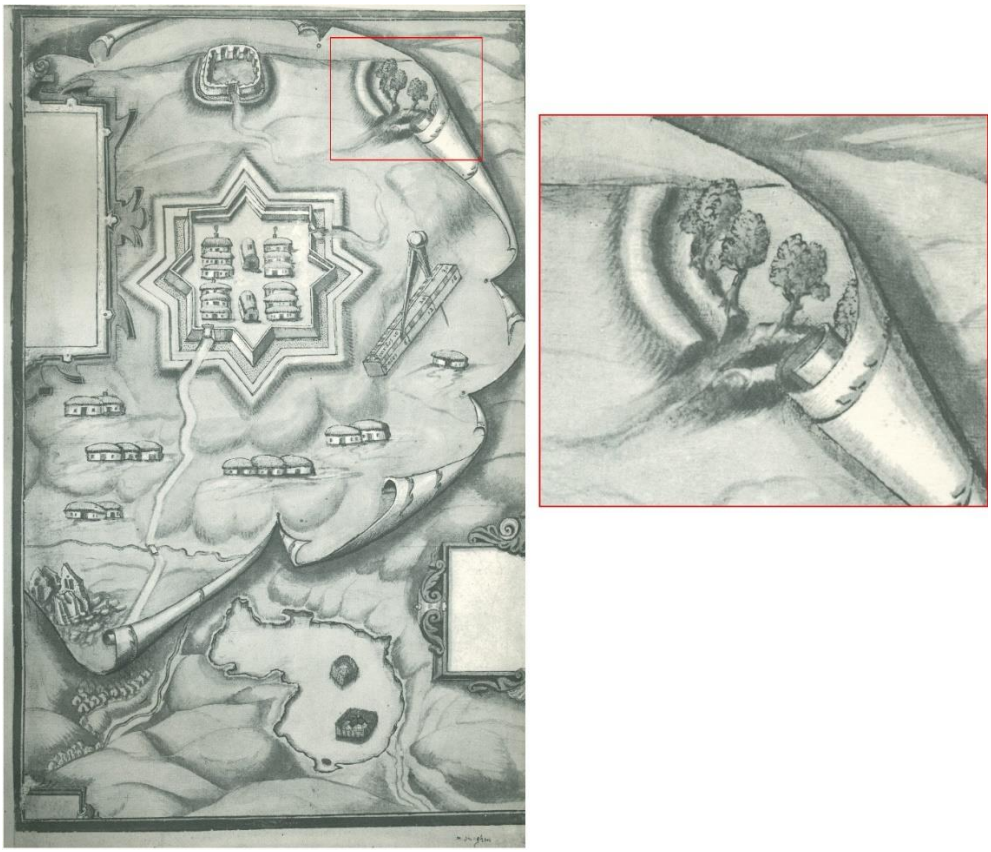

Figure 13 Richard Bartlett's depiction of Monaghan town in 1602 AD and detail from the top right of the image showing a bivallate enclosure with trees on the inner bank

John Derrick's *The Image of Irelande, with a Discoverie of Woodkarne* (London, 1581) contains a series of woodcut plates that relate the story of the subjugation of Irish rebels Sir Henry Sidney, Lord-Deputy of Ireland under Elizabeth I (Figure 14, Figure 15, Figure 16). Setting the Irish against a woodland background or depicting the Irish as emerging from woodland is a consistent motif of many of the plates.

Figure 14 Woodcut image by John Derrick depicting a soldier holding a battle-axe and handing a spear to an Irish chieftain in full dress. The action is deliberately placed as if the chieftain has just emerged from the woodland.

Figure 15 Woodcut image by John Derrick depicting an Irish chieftain receiving a blessing before departing for battle. This image places the Irish against a wooded background or emerging from woodland to meet the enemy.

Figure 16 Woodcut image by John Derrick depicting Rorie or Roderick Oge O'More, as a defeated rebel in the forest with only wolves for company. He is depicted as uttering the words 'Ve mihi misero' *("Woe to miserable me")* to which the wolves replya 'Ve atque dolor' *("Woe and sorrow")*

These motifs may also be identified in some accounts in English administrative records of the 16th and 17th century such as the Calendar of State Papers Ireland (CSPI), which describe instances of the Irish retreating or escaping into their 'fastnesses' that are invariably characterised as wooded, boggy, mountainous, barbarous, wild, remote and inaccessible. While these descriptions may be plainly and simply interpreted, it must be borne in mind that they are also facets of a colonial discourse recorded by the colonising forces about the landscapes occupied by the resistant Irish. They are often accompanied by reports of how the Irish are unwilling to engage warfare in the open as is the English fashion. The rhetoric is that of the coloniser and excludes any native addendum to the subject matter. We must consider that there are two entirely different cultural attitudes to the landscape at play. Some facets of the native counter-discourse are discernible in the details recorded. Seán Mac Cuinn Ó Néill (*c*. 1530 – 1567) (Shane O'Neill) would sign and date his letters to the English government in Ireland with *Ex silvis meis* 'From my wood'. This ought not be interpreted simply as a provocation or a jibe at those who would criticise the 'celtic mode of warfare', of hastening to the woods to avoid engagement with the English soldiers. We must assume that Ó Néills signature is exacted with a sense of cultural pride. It proclaims astutely and in the royal style 'I am here, in *my* wood'. It fixes the so-called 'fastness' as a culturally distinct landscape that maintains an Irish or Gaelic identity.

Indeed, there are several instances in Gaelic and English historical documents and map pictures of the later medieval and early modern period that suggest a continued use or re-use of settlement enclosures. In Hill's (1877, 83) *An Historical Account of the Plantation in Ulster at the Commencement of the Seventeenth Century 1606-1620* there are several accounts of the building of bawn enclosures. Most are described as houses or castles with a bawn about it made of earth or sod, stone or a combination of these. Some are described as having a palisade fence on top, and some are described as having hedges. Hill's explanation of the word *bawn* is that it is 'the anglicised form of the Irish *bo-dhaingan*, or *bádhún*, a 'cattle – fortress.' He goes on to describe that:

> 'it was customary among the ancient Irish to construct their bawns or cattle-enclosures near their residences in times of peace, and adjoining their encampments in times of war. These enclosures were always formed on a certain well-recognised plan, of trenches and banks strengthened by stakes, or most frequently by growing hedges, to guard against the attacks of wolves and other ravenous animals, as well as the assaults of hostile tribes. The remains of these ancient Irish bawns or enclosures still exist numerously throughout ulster, although vast numbers of them have been levelled by the farmers from year to year' (ibid. p.83).

He is no doubt attempting to explain the phenomenon of the ubiquitous 'ringfort' in its varied forms and its arboreal heritage. This discourse certainly continues to the 19th century and beyond as is evidenced in the following excerpt of an Ordnance Survey letter from Co. Down that accompanied the 1st edition OS:

> 'Mc Rory (Parish Priest) says that many forts were thrown up to defend cattle against wolves and other ravenous animals, and that the name Lisnagree is a great proof of it. Lios na g-Croighe signifies Fort of the Cattle. He often heard from O'Kelly his relative (the shanachy of Ballynascreen) that many of the forts or raths were erected by farmers to protect their cattle, and that they planted them with white thorn and other shrubs for that purpose. Lisnacree in the Barony of Mourne Co. Down was one of this description…' (O'Donovan 1834, 146).

An entry from the lists of grants and grantees in Nicholas Pynnar's survey of 1619 describes the home of a Mrs Lindsey at Tullaghogue as having 'a good strong Bawne of Earth, with a Quick-set Hedge Upon it, and a Ditch about it. There is a Timber House within it, in which she and her Family dwell' (Rev. G. Hill 1877, 549). This most obvious and practical use of trees is well-attested in 17th-century Ulster and is likely to have been a feature of their previous occupancy on Gaelic family estates. It must certainly have also been a feature of enclosures and field-boundaries on Gaelic landholdings.

There is some evidence for the historical planting of trees on such monuments. The statistical surveys of the late 18th and early 19th century carried out on behalf of The Dublin Society record some instances of trees being planted on 'Danish forts'[23]. In the years 1789 and 1790, The Dublin Society offered 'A premium of two shillings per perch, running measure, (…) for enclosing old Danish forts, mounts, raths, or moats; and likewise a premium, at the rate of forty shillings an acre, for every acre containing two thousand forest trees, except ash and poplar, planted therein' (TDS 1806, V:82–83). There does not appear to be an extensive record of uptake of this encouragement. In Mc Parlan's survey of Co. Donegal there is one record of planting Danish forts (13 perches planted, 17 perches enclosed) attributed to one Mr. Fawcett in 1791. In the statistical survey of Co. Mayo there is one instance of premiums granted to a Mr. Peter Bourke in 1790 for planting Danish forts. The record lists 2 roods and 25 perches planted and 60 perches enclosed. The record goes on to say that Mr. Bourke's venture was ultimately unsuccessful, his family reporting before the publication of the survey in 1802 that he had died and that the planted forts had been destroyed 'by an exposed situation, and by cattle' (McParlan 1802, 116-117). The statistical survey of Co. Leitrim recounts premiums given to two gentlemen, Mr. Nesbitt of Aughamore and Mr. Lowther of Bonnybegg, for planting Danish forts. Mr. Nesbit died before his fort-planting enterprise could pay off and the survey reports that his place had 'totally fallen into ruin and decay, and the plantations also' (McParlan 1802 p.74). The latter was, however, a more successful venture - 'Mr. Lowther's plantations, on the Danish forts, are in the highest vigour, bloom, and preservation. I have visited them every one – enough cannot be said of Mr. Lowther's care and preservation of them' (ibid p.74). There are four *ráth* enclosures in the townland of Bunny Beg, Co. Leitrim depicted on the 1st edition OS map (*c*. 1840). Two of them have been levelled and are only visible today as crop-marks in aerial imagery. The remaining two, like many others in the surrounding townlands, are covered in trees. This appears to be the only mention of any sort of systematic or intentional planting of trees on such sites either during or after their occupation. It is also likely that this campaign affected only those improvement landscapes of the gentry. Furthermore, the trees for which premiums were granted were forest trees listed as sycamore, beech, oak, larix, Scotch fir, Norway maple, walnut and Spanish chesnut, the use of which corresponds to those enclosures considered category 1 (CY1) in this study (4.2.3). The *Transactions of the Dublin Society* (1806) note the results

[23] 'Danish fort' is the erroneous name ascribed to ringforts in the writings of those involved in improvement in 18th and 19th century Ireland.

of its efforts by stating that 'Every gentleman's seat, and almost every wealthy farmer's house, are now furnished with plantations and shrubberies' (TDS 1806, V:43).

The dearth of evidence for uptake of the Dublin Society's 'Danish fort planting' encouragements may also be explained to some extent by the reluctance of the native population to interfere with the old monuments. In Townsend's (1815, 110) *Statistical Survey of the County of Cork* he notes, 'One cause of raths remaining so entire to the present day is the unwillingness of the country people to level them, not out of religious veneration, as some suppose, but from one of those unaccountable fancies, which places good or bad luck in unmeaning occurencies'. This might also be a factor in why 'Danish forts' were deemed suitable for the planting of trees by the improvers. They must certainly have noted such sites were very effective in terms of growing trees and putting in non-native forest trees as mentioned above, Sycamore, Beech, etc. makes a distinct contrast to the native trees. Thus, there may have been an intentional political aspect to the re-appropriation of such sites and to how trees were used both economically and symbolically. Enclosures and trees embody the conflict at the interface between the new English practices and the traditional practices of the Gaelic and Old English. Indeed, the lofty ornamental trees planted on enclosures in the estate lands of the landed gentry in the era of improvement are a sharp contrast to the typical type of tree growth on the enclosures that remain among the general population and are valued in a different cultural paradigm. The appropriation of monuments by English landowners as features of designed landscapes might be seen as a symbolic conflict, because at the time when these projects were undertaken, Irish identity continued to be expressed in the active protection of sites and their trees. The reluctance to damage or alter them could perhaps have been read as the symbolic contesting of rightful land ownership. Indeed, Whelan (1995) argued that 'underground' Gaelic political practices survived through the late 17th and 18th century and into the early decades of the 19th century. The ongoing protection of enclosures is undoubtedly an aspect of such practices. That trees were also used as cultural differentiators in the creation of the grand colonial project that was the 1st Edition Ordnance Survey of Ireland in the early 19th century, is no great surprise. The manner in which trees are depicted on the maps visually distinguishes the estates and demesnes occupied by the landed gentry.

3.8 Modern Legacy, Folklore and Superstition.

Most farmsteads of rural Ireland exist in close proximity to the remains of medieval enclosures and will often have the *ráth* incorporated into the spatial layout of their farms. Ní Cheallaigh (2012, 369) generalises the ubiquity of the Irish ringfort thus,

> 'Whilst they are listed, mapped and recorded as part of the legally-defined archaeological "heritage" of Ireland, the majority of sites are understood in primarily local terms. They form part of grazed landscapes, or act as overgrown counterpoints to the furrows and crop-cover of individual fields. They also form part of the defining topographies of individual families and farmers and act as landmarks in micro-landscapes that are often unknown or invisible to the eyes of the casual passer-by.'

In some cases, the relationship between the farm and *ráth* suggest a continuous pattern of occupation at the site that has seen an evolution in the role of the *ráth* within the farmstead. This might often complement the historic use of and the need for hazel in the timescale of rural settlement.

These settlement sites were central to the farming communities of early medieval Ireland and today, they still occupy a very particular place in modern farming practices. The majority of them exist in landscapes where they have been integrated in numerous ways with settlement patterns and farming practices for centuries. In some cases, such as at Dunmadigan (D2 and D3) and Derrylevick (D9) in Co. Monaghan (Cluster D in this study) the enclosures remained central to the settlement environment. The univallate enclosure (D3) in Dunmadigan is a central part of a working farm. It is immediately adjacent to the modern farmhouse and is used as a yard where farm vehicles and machinery are stored. Two hundred metres to the north, a similar relationship exists between a smaller house and farm, and the enclosure (D2). The enclosure (D7) in Derrylevick townland, 6km north of Emyvale, Co. Monaghan again is adjacent to an old farmhouse. This enclosure is depicted on the 1st ed. OS map (c. 1838) in the middle of a small nucleated settlement. The site is used today as a recreational garden and the trees on its bank (blackthorn, hawthorn and ash) are managed as hedgerow shrubbery.

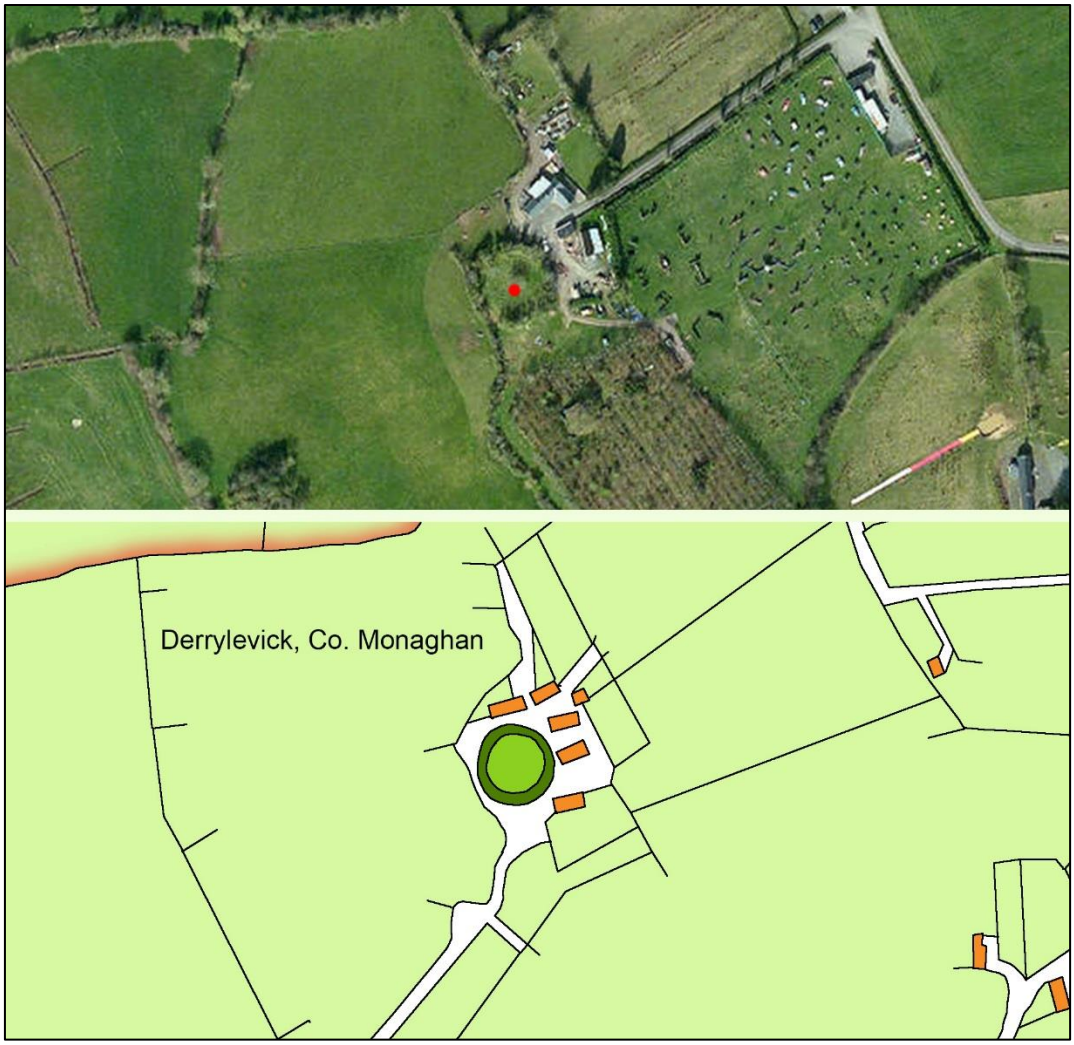

Figure 17 Enclosure D9 aerial view 2012 above. The image below shows the layout of a cluster of 19th-century houses around the enclosure as they were depicted on the 1st ed. OS map c.1838

Such continuity is expressed in attitudes and actions, and is also embedded in folklore and superstitions. Ní Cheallaigh (2006, 105) says that 'in the nineteenth century, ringforts were among the most frequently 'narrativised' archaeological monuments of the Irish landscape and lay at the centre of an overlapping system of traditional and popular understandings'. These narratives continue to ensure their preservation by maintaining attitudes that protect the trees on these sites as much as they do the earthen structures. In folkloric traditions, the trees and sites are intricately mingled. Danaher (1964, 91–93) observed that 'The ordinary country people were restrained by the old tradition that these places were inhabited by the beings of the other world. In fact, we may claim the fairies as the best protectors of ancient monuments the country has ever seen…'. The term 'fairy' here is a late and unfortunate translation of *sídhe* or *síd*, which is mentioned in the earliest medieval Irish texts (Koch and Carey 2009, 198–200) and originally referred to the older megalithic mounds. Koch (1991, 24) said that 'throughout Irish tradition the síd-mounds

are the old Neolithic tombs, such as those in the Boyne valley'. Hills or mounds, particularly if they were associated with prehistoric monuments were *sídhe* places, and the beings that inhabit this 'otherworld' were the *áes sídhe*. It is this term, or idea, that has been translated as 'the fairies' in modern times. The passage of time has also seen the realm of the *áes sídhe* expand, whereby the cultural inclination to preserve old monuments by not interfering with them is extended to include early medieval monuments. This demonstrates the importance of old monuments in Irish traditions and to the Irish sense of identity which may sometimes be read in modern folklore and superstitions relating to 'fairy forts' and 'fairy trees'.

3.9 Summary Conclusion.

This chapter has demonstrated that trees have occupied a special place within medieval Irish culture, which was firmly set within the context of wider and older European traditions. The formulation of the Old-Irish tree-list in early Irish written law attests to a well-developed set of cultural practices relating to the economic and symbolic value of trees. These values endured to varying degrees throughout the medieval period and their influence can be identified in some later literature. In this sense, it is prudent to consider the symbolic weight that may accompany any mention of trees in the corpus of medieval Irish literature, especially where certain species such as hazel, oak or yew can be identified with specific symbolic meanings. In some of the sources discussed, the trees referred to are (or have been) real trees, or they are (or have been) specific trees in real contexts. Of course, this may only serve to tell us that a certain tree, or trees, once existed in a certain place, but we must at least read that its existence had certainly borne enough influence to be recorded or otherwise remembered.

The recurrent and consistent presence of hazel and hawthorn trees on and within the earthen banks of many settlements can be traced through historical documents. In many cases, particularly where they feature in bardic poetry, hazel trees in particular are invoked as agents of high status, hospitality (6.6) and architectural beauty (6.1). I argue that such symbolism was also projected by the purposeful incorporation of the trees themselves into the settlement environment. In a world where trees were valued and used as the main material that constitutes the spaces and places where people live and dwell, we should

expect their presence to feature as overtly in reality as they do in the written records[24]. The physical presence of hazel at such settlement sites is certainly conveyed by use of the intriguing pre-12th-century term '*bile ráth'*.

[24]This argument is followed up in more detail in Chapter 6 – Living Trees and Vallation

4 Field Methodology for Recording Living Trees on Earthen Settlement Enclosures

4.1 Introduction

This chapter will outline the methodology used for the campaign of fieldwork undertaken in this research. The possibility is considered that some trees are present because of long-lived practices where certain species are repeatedly planted on the banks of enclosures as a form of traditional maintenance. In this sense, the traditional practice may be much older than the present trees.

The campaign of fieldwork involved the recording of living trees on a selected sample of study sites in the four provinces of Ireland with the main objectives of providing evidence of intentional tree planting and a small sample of scientifically determined dates and age estimations pertaining to the trees in question. The fieldwork (Chapter 5) was foregrounded by a desk-based study, which commenced with the process of site selection as outlined below and was augmented by recourse to relevant excavation reports, maps and aerial imagery, placename research and local folklore pertinent to each fieldwork location.

4.2 Fieldwork Overview

The campaign of fieldwork was designed to try to establish the relationships between the selected sample of enclosed settlement forms (Chapter 5) and the life-histories of the trees currently on their banks and interiors. The methods utilised were undertaken in order to, firstly, determine whether patterns and consistencies exist in the distribution, frequency and presentation of various species recorded across the set of study clusters and sites. Secondly, the fieldwork methods sought to determine whether such trees have their genesis in intentional planting in the medieval period. This involved attempting to scientifically determine the age of certain trees, and attempting to establish a species specific history of tree-cover at certain sites. Wherever possible, landowners and other people that were encountered in the course of fieldwork were asked about their knowledge of and relationships with the sites and the trees associated with them.

Note was taken of any trees with veteran or potential veteran status. This assessment was based on visual inspection and measurements where appropriate, and candidate specimens were selected for further dendrological investigations that may determine their age. An attempt was also made to identify candidate trees for sectioning into transects in order to analyse growth patterns and potentially obtain material suitable for radiocarbon analysis. In the course of the field work no trees presented as suitable for sectioning. This was because all of the potential candidates encountered presented with hollowed boles, thus rendering that particular method unproductive.

4.2.1 Rationale Behind the Selection of Sites

As the number of early medieval settlement enclosures on the island of Ireland is in the tens of thousands (O'Sullivan et al. 2014, 48–49), a strategy for selecting a representative sample was devised. It was important that the representative sample had a national distribution and included a variety of site types. Therefore, four main medieval settlement landscape clusters were targeted, one from each of the four provinces of Ireland. The range of site types included univallate, bivallate, trivallate and quadrivallate *ráth* enclosures, concentric enclosures and moated sites (Table 1). The selection also included 3 individual sites, a bivallate *ráth* in Burren, Co. Clare, a quadrivallate *ráth* near Kilmaine in Co. Mayo and the moated site in Cloonfree, Co. Roscommon which has previously been the subject of archaeological research and scholarship. Finally, in order to consider a site eligible for fieldwork, the prerequisite was that it contain a current presence of trees, with a particular emphasis on native trees of veteran or potential veteran status.

The following series of rationalisations was performed as a means of narrowing down the selection pool of eligible sites. By starting with placenames associated with trees and settlement it could be assured that such relationships were represented to some degree in the study. Tree-related placenames, however, did not dominate the set of study sites as they only represented a portion of the cluster of sites that spanned several townlands in each given region. The political and familial landscapes associated with the chosen sites were also important in the selection process. Clusters that existed in areas known to be Gaelic strongholds in the post-Norman period were favoured for selection (5.3.2; 5.4.2; 5.5.2; 5.6.2).

The importance of trees and timber as a resource in Gaelic Ireland is reflected in place-names. Many Irish place-names are descriptive of their topography and geography. There

are hundreds of place-names that contain words like *coill* (wood), *ros* (wooded height) and *doire* (oak-wood or thicket) thus associating places with woodland or particular stands of trees. The words for individual species of trees, such as *dair* (oak), *coll* (hazel) *sceach* (hawthorn), *cuilenn* (holly) and *iúr* (yew) are often incorporated into place-names and the word *bile* or *biledha* which denotes a sacred tree or grove of sacred trees is also frequently encountered. Thus, place-name research offered an opportunity to strategically select from a reduced number of sites. The Place-names Database of Ireland at www.logainm.ie has (to date) created about 150 glossary pages with distribution maps of common elements in Irish placenames. These include several names of trees and provide full lists of the place-names in which the element in question occurs. These lists were used as a starting point and were searched for tree-related placenames that also included component words related to settlement and habitation such as *ráth*, *lios*, *dún*, *teach* etc. The sites on this final list were then cross-referenced against the digital-globe layer of aerial imagery on the Historic Environment Viewer WebGIS, which is available at www.archaeology.ie Aerial imagery from Google maps and Microsoft's Bing Maps were also consulted. At each site, note was taken of the apparent tree-cover (or lack of it) and the proximity to other treed enclosures in the surrounding landscape that qualified the group as a suitable cluster. Through this process many sites were dropped from the list, either because they revealed no evidence of relevant extant monuments or they revealed monuments devoid of trees. Clusters were deemed suitable if they appeared to contain at least 10 treed enclosures within a *c*. 2km radius of a central enclosure. Through this process a short-list of 10 clusters were identified.

County	Parish	Townlands
Monaghan	Donagh/ Errigal Trough	Emy,Tully, Dunmadigan, Dungillick, Lisavargy, Lisgrew, Killakeady, Monmurry, Knockakirwan, Lenagh [25]
Monaghan	Errigal Trough	Raflacony, Skinnahergy, Ivyhill, Moy Aghaderry, Dromore, Cloncullan, Derrylevick, Rakelly, Tireran, Dernagola, Luppan, Derryleabeg and Mullagh Otra[26]
Monaghan	Donaghmoyne	Laragh, Donaghmoyne, Lisgall, Creevy (Oliver), Creevy (Swinburn), Aghavilla, Longfield Etra, Killabrick

[25] This cluster lay within the personal desmesne lands of the McKenna lords of Trough (5.6.2).
[26] This cluster was situated in the territory of the McKenna lords of Trough. Some enclosures such as at Raflacony have been modified as designed landscape features in modern times (5.6.1; 5.6.4)

Longford/ Westmeath	Street	Clonmore, Lismacaffry, Coolamber, Lisduff, Athenboy, Correaly, Coolnagun, Boherquill, Kilmore
Mayo	Kilcolman	Eskerlevally, Lisbaun, Lugatemple, Streamstown, Ardroe, Mayfield, Lisduff, Clare
Clare	Drumcreehy / Rathborney	Ballyconry, Ballyvaughan, Acres, Newtown, Knocknagroagh, Ballyallaban, Croagh North
Clare	Clooney	Rathclooney, Ballyvroghaun Eighter, Rylane, Knockanoura, Maghera[27]
Clare	Moyarta	Bellia, Carrownaweelaun, Killinny, Moyarta West, Moyarta East
Tipperary	Cooleagh	Mortlestown, Lismortagh, Grangebarry, Cooleagh, Coolbaun, Milltown St. John, Moglass, Coolmore
Waterford	Santy /	Garramillion Upper, Garramillion Lower, Faha, Fahafeelagh, Curabaha, Garrahylish, Ballynabanoge, Garranturton, Drumlohan

Table 2 Short-list of study clusters before final selection.

It was then necessary to visit each short-listed cluster (Table 2) in order to ground-truth and confirm their suitability for the study. Sites that currently support native species of trees, in particular alder, ash, hazel, hawthorn, holly, oak, yew, were an important selection criterion. Other criteria for determining the suitability of sites and trees to this study are that they are not on improved landscapes of the later historic period and that they present a reasonable assumption of a great age. The intention was that at least four regionally distinct clusters would be selected for fieldwork.

A number of other individual sites from outside of the four main clusters, but that supported veteran or potential veteran trees, were also included in the fieldwork sample. Some were chosen because they were well-known sites in the medieval archaeology of Ireland and already the subject of past or on-going investigation. Such sites include the *páilis* of Cloonfree, Co. Roscommon (5.9), the multivallate enclosure in Turin, Co. Mayo (5.7) and the *ráth* known as Doontorpa in Croagh North townland, Co. Clare (5.8). Other sites that are mentioned in this study, such as Beagh, Co. Galway (*ráth*), Swellan, Co. Cavan, Rathmurragh, Co. Offaly and Aghabrack, Co. Longford, and the *ráth* sites at

[27] The sites in this cluster would have been in the lordship of the Maconmara (c.1200-1600 AD) and specifically part of their lucht tighe lands which earlier constituted a royal estate of the Dál gCais kings centred on Magh Adhair (5.5.2).

Streamstown and Ardroe near Claremorris, Co. Mayo were visited in the course of fieldwork and included for descriptive comparisons.

4.2.2 Initial Site Visits

In order to verify the results of the aerial photointerpretation all sites were visited. It was not possible to access some sites. Gaining permissions to enter sites and overcoming physical barriers such as severe overgrowth were the main factors affecting access to sites. The final selection criteria was based on accessibility to the maximum number of suitable sites per cluster. Four clusters in the four provinces of Ireland were finally selected for inclusion in the campaign of fieldwork and named as follows.#:

Cluster A: Lismacaffry/Boherquill – Street, Co. Westmeath

Cluster B: Cooleagh Parish, Co. Tipperary

Cluster C: Clooney, Co. Clare

Cluster D: Trough, Co. Monaghan[28]

A total of 52 sites are represented in this research. Of those, 41 sites were distributed across the four regional clusters and the remaining 11 sites were distributed randomly outside the regional clusters (Fig. 5.1). The following table gives a breakdown of the number and type of sites targeted for investigation in this study:

	Univallate *ráth*	Bi-vallate *ráth*	Tri/Quadri-vallate *ráth*	Moated Site	Total sites per Cluster
Cluster A Co.Westmeath	7	5	1	1	14
Cluster B Co.Tipperary	3	2	3	1	9
Cluster C Co.Clare	8	1	0	0	9
Cluster D Co.Monaghan	7	2	0	0	9
Other sites	0	1 (Doontorpa)	1 (Turin)	1 (Cloonfree)	3
Totals	25	11	5	3	44

Table 3 Breakdown type and number of sites targeted for investigation in this study

[28] This cluster is comprised of sites that were initially investigated as two separate clusters spread between Donagh parish and the parish of Errigal Trough.

4.2.3 Generating Tree-cover Categories

An essential criterion for the inclusion of an enclosure in this study was that it had trees growing on it. In the initial selection process, only those enclosures that could be identified in the Ordnance Survey Ireland and Digital Globe Inc. datasets of aerial imagery as having substantial tree-cover were considered. The first site visits involved descriptive survey to assess the general condition and the types of tree-cover encountered upon each. General trends were observed in respect of frequently encountered species and the manner in which some groups of trees were spatially arranged upon the site banks. For example, hawthorn appeared to be the dominant species on the banks of univallate enclosures, and a consistent orderliness in the appearance and layout of hazel trees encountered on many multivallate enclosures was a somewhat consistent feature (See Chapter 5). Four distinct categories of tree-cover were identified and are synopsised as follows.

Category 1 (CY1)	Trees intentionally planted as modern landscaping
Category 2 (CY2)	Veteran/ancient trees (particularly hazel) on the banks in apparent order
Category 3 (CY3)	Hawthorn as dominant species on the outer bank
Category 4 (CY4)	Mixed and random species present due to natural colonisation and with no discernible indication of any other category present

Table 4 Categories of tree-cover encountered on medieval settlement enclosures

Hereafter these categories are abbreviated CY1, CY2, CY3 and CY4.

While other species, such as ash, oak and elder were frequently encountered within enclosures and on their banks, they did not appear to be incorporated into any planned spatial layout in a similar manner to the hazels and hawthorns. The absence of these species of trees from the category definitions by no means indicates that they are not considered in this study or indeed that they are not important. Such trees are regularly encountered within each of the categories listed above and recorded and discussed where they are found. Some enclosures encountered possess more than one category of tree-cover. For example, the multivallate enclosure in Turin, Co. Mayo hosts veteran hazel trees in apparent order (CY2) and has an outer bank dominated by hawthorn (CY3).

4.2.4 Recording Tree-cover Categories

The category of tree-cover was assessed and recorded for each site. Tables detailing the site type, species of trees present and categories of tree-cover encountered in each study cluster were produced and analysed. Recurring trends, consistencies and patterns within these data-sets were identified (see Table 7, Table 8, Table 9, Table 10, Table 11)

4.2.5 Mapping Spatial Relationships

A campaign to map spatial relationships between trees and site morphology was undertaken on sites that contained CY2 and CY3 tree-cover. This was undertaken in order to discover any evidence for preferred or intentional layouts and discern the roles of trees therein. Observation and analysis of such spatial relations may reveal evidence of historical tree planting and management, species preference and information regarding trees as utility items. The individual tree positions were mapped by a combination of two methods. A GPS (Trimble V8) device was initially used to capture the co-ordinates of tree centres. However, the tree canopy cover proved a great challenge to the usability of this device and its ability, in this context, to capture accurate and reliable data. Most of the tree position data was therefore acquired by traditional methods of direct measurement and triangulation with the use of a 30M nylon coated steel measuring tape. The tree positions were then plotted on to topographical plans of the banks of the enclosures (see 5.3.4, 5.4.4, 5.5.4, 5.6.4, 5.7.3, 5.8.3, 5.9.3.) Many of the sites encountered were heavily overgrown with trees and shrubs, which was an impediment to conducting topographical survey and, in some cases, to determining the relative positions of trees. However, every effort was made to record as much additional detail as possible through photography and thorough descriptive survey at these sites.

Site plans were produced that showed the breakdown of woody species and the spatial layout of trees. Trends and patterns were identified by comparison and cross-referencing the data-sets within each cluster and across the whole set of sites surveyed. This data is presented and analysed in Chapter 5 Fieldwork: Results and Analysis.

4.3 Methods for Determining the Age of Trees

Dendrological methods of analysis were applied with the main aim of determining or estimating the age of trees encountered at case study sites. Dendrology, as the scientific

study of trees, is concerned with species identification, understanding their life-history strategies and behaviours and tree measurements. Age estimations of hazels can be made to some degree by measuring the diameter of the stool at ground level. Oliver Rackham and Håkan Slotte [29] maintained that a stool of one meter diameter could be estimated at 100 years and a two meter diameter may be thought of as at least 200 years old but that it could well be several centuries older without increasing in diameter (Nordén and Paltto 2001, 2). Stool diameters and stem girth measurements of notable trees were recorded when encountered. Growth stages and growth patterns of trees were identified and recorded photographically (see 5.3.4, 5.4.4, 5.5.4, 5.6.4, 5.7.3, 5.8.3, 5.9.3). Understanding tree behaviour is essential to the study of relationships between the trees and the earthen banks of the sites on which they are found.

4.3.1 Tree Coring with an Increment Bore

An increment bore is an instrument used to extract core samples from trees, usually at chest height (*c.*120 cm), in order to analyse their annual growth rings. It is commonly used in dendrochronology, which involves matching the pattern of tree rings to the exact year that they were formed, and can also be used to analyse atmospheric conditions over time and reconstruct past climate (Briffa et al. 2002, 2001; E. Watson and Luckman 2001). The simplest application of an increment bore is in determining the age of a single stem or trunk of a living tree by counting the annual growth ring from the pith to the outer bark. As the long-term survival strategies of both hazel and hawthorn depend on a persistent cycle of renewal and shedding of multiple stems it was not expected, in the case of hazel at least, that the coring of any individual stem would provide an age for the tree itself. The initial intended strategy in using an increment bore in this research was to retrieve old-growth material from the heart of specimen hazel stools for the purpose of radiocarbon analysis. This strategy was based on the possibility that old-growth material might be preserved at the heart of a stool, protected by subsequent successive outer growth. This kind of technique has been used to successfully date olive trees in the Eastern Mediterranean (Ehrlich et al. 2017). However, on attempting to apply this method, no such specimens were identified in the course of fieldwork, chiefly because Ireland's damp climate generally ensures that timber rarely survives to 200 years. Close examination of the hazel stools and their growth patterns confirmed that the stools themselves were in a

[29] Nordén and Paltto (2001,2) cite this as personal communication with both Rackham and Slotte.

constant state of fluctuating between renewal and decay and that there was no ideal portion of the tree, above or below ground, that could be expected to preserve old-growth material. Indeed, Rackham (Rackham 2003, 203) speculated that hazel behaves in much the same way underground as it does above, its roots also decaying and renewing as a survival strategy. Consequently, no hazel specimens were encountered that justified the strategy of cutting or cross-sectioning trees for the purposes of obtaining material for radiocarbon analysis, as no trees were encountered that offered the possibility of successfully preserving such material.

Test cores were, however, obtained from seven (three hazel and four hawthorn) particular trees or stems whose circumference exceeded 0.1m, or that otherwise presented as exceptional or notable in girth by comparison to the mean diameter of stems encountered in this study. The borer was aimed at the estimated centre of the stem in an attempt to encounter the pith and thus provide a complete age profile of the stem. Cores were prepared for age determination following Stokes & Smiley (1968). Rings were counted using a boom-arm microscope.

The hazel cores provided ages of between 50 and 84 years (see Table 5) which is within the typical life expectancy range of individual hazel stems (Coppins and Coppins 2010; Tanentzap et al. 2012). Attempts were made to extract cores from hazel stems that exceeded 1m in circumference at four other sites but on penetration of these stems with the increment borer it was discovered that they were at an advanced stage of decay, their interior wood already rotten away at the centre and thus making it impossible to determine their age.

Hawthorn has a much slower growth rate than hazel and will typically mature into a single stemmed tree. However, specimens of exceptional girth may often be the result of two or more fused or inosculated stems making some core growth-ring patterns difficult to interpret. Test coring of four of the thickest hawthorn stems encountered ranged between 74 and 112 years in age (see Table 5).

Site	Location	Tree species	No. of growth rings counted
Turin Multivallate *ráth*	Turin, Co. Mayo	Hawthorn (Crataegus monogyna)	73
Turin Multivallate *ráth*	Turin, Co. Mayo	Hawthorn (Crataegus monogyna)	106
Turin Multivallate *ráth*	Turin, Co. Mayo	Hawthorn (Crataegus monogyna)	80
Turin Multivallate *ráth*	Turin, Co. Mayo	Hazel (Corylus Avellana)	60
Coolamber Multivallate *ráth*	Coolamber, Co. Westmeath	Hazel (Corylus Avellana)	54
Doontorpa Multivallate *ráth*	Croagh North, Co. Clare	Hawthorn (Crataegus monogyna)	112
Doontorpa Multivallate *ráth*	Croagh North, Co. Clare	Hazel (Corylus Avellana)	84

Table 5 Growth-ring counts for selected trees

Based on dendrochronology carried out on the hazel and hawthorn trees outlined above, the discovery of hazel or hawthorn stems in excess of *c.*100-110 years was deemed unlikely. A significant outcome of the campaign of tree coring however, was that it facilitated a close encounter with the behaviour of the trees in question. Trees were observed at various stages in their life-history cycles. In general, hazel stems that exceeded 0.1m in girth proved to be at the stage where they were becoming too weak to support their still significant canopies and would soon fall away to be replaced by new stems. Fallen branches in various stages of decay were evident at all sites and, as these cycles became more obvious, they provided a means by which the action of the trees could be observed (see Figure 18). The rate at which old stems fall away and new stems are recruited varies depending on factors such as the presence or absence of browsing animals and the level of overstorey at a site. In any stand of mature hazel, the trees will be comprised of stems of all ages and sizes. Thus, as discussed above (4.3) it is the size and shape of a stool that may be the only way to estimate of the age of the tree.

Figure 18 Thick hazel stem leaning under the weight of its own canopy. There is evidence of recent fall away stems throughout the fosse. The rate of decay accelerates significantly after stems have fallen

4.3.2 Palynology

Palynological investigation was undertaken in an attempt to establish chronological controls for the inception of tree species at 5 selected sites. This portion of research was carried out through a specialised module (SPA441 Archaeological Specialisms) under the supervision and advice of Dr. Karen Molloy of the Paleoenvironmental Research Unit (PRU) at NUI Galway. Archaeological palynology generally examines the human use of plants in the past by studying fossil pollen and other palynomorphs preserved in soil sediments. The primary focus of the pollen analysis carried out in this study was to provide an outline of the vegetational history of the individual sites where the samples were obtained. There was a particular focus on the history of hazel and hawthorn as dominant species at each chosen site. This strategy was based on the expectation that accumulated fill in the fosse at some sites would preserve a chronological stratigraphy with a corresponding pollen profile. It was expected that the pollen profile would reflect the immediate vegetational environment over time and may possibly reveal a depth at which certain tree species (such as Hazel or hawthorn) were introduced to a site by carbon dating material obtained from that point in the core. Thus, sample cores of sediment were extracted from the fosse-fill of five sites and eight samples of material taken from different depths along each core were processed for pollen analysis. More samples across a greater number of sites would certainly prove more efficacious; however, the cost of this strategy prohibited its wide-range application across a greater number of sites, which emphasises

the experimental nature of this approach. The first core was obtained at Turin, Co. Mayo (excavation licence no. 16E0012) under the direct supervision of Dr. Karen Molloy and the supervisor of this research Prof. Elizabeth FitzPatrick who held the five excavation licences that were granted to carry out this work. The licenced work of obtaining the four remaining cores was carried out by Peter Casby (see Table 6 for licence numbers). In order to date the expansion of specific tree species at those sites, carbon-datable material was extracted at depths in the cores that were identified by notable changes or events in the pollen profile, such as the depth in the stratigraphy where hazel becomes a significant presence at a site. These samples were sent to the 14Chrono Centre at Queens University Belfast for carbon 14 analysis in an attempt to provide historical context for the introduction of certain species (such as hazel) as a component of the site and a snapshot of the biological environment at that time and to provide an approximate conjectural age for the hazel stools present on the site.

4.3.3 Obtaining Core Samples from Enclosure Fosse-fill

Five sites were selected for coring and subsequent pollen-analysis (1.3.4; 1.3.5) Samples of material were obtained from water-logged fosses, and examined in an attempt to provide chronologies for the type of tree-cover found at each site. The number of sites was limited due to the costs involved in this methodology, especially in the preparation of pollen slides and c14 dating. At each site a 30mm diameter single gauge auger with an operational length of 100 cm. was used to retrieve a vertical core sample from the water-logged fill material in the fosse. Upon the retrieval of the material, stratigraphical notes were taken, detailing the condition and appearance of each core sample and the context from which it was obtained. (see 5.4.4.1; 5.5.4.3; 5.7.5; 5.8.3 and 5.9.4).

Site name and location	RMP	Excavation Licence number	Site type	Location of core	Depth of material retrieved
Turin, Kilmaine, Co. Mayo	MA121-033	16E0012	Quadrivallate *Ráth*	ITM 525994, 758350 NE sector.	0.52m
	There were plant remains throughout the core which consisted of modern leaf litter from 0cm to 10cm and quite a bit of plant remains visible from 11cm to 30 cm. The material below 30cm was more compact. This core sample was labelled MYW-1				
Rylane, Bunratty, Co. Clare	CL026-112	16E0014	Bivallate *ráth*	ITM 543545, 682011 NW sector	0.53m
	The soil was quite wet and light brown to sand brown at the bottom and more of a chocolate brown at the centre. The top 0.10m appeared quite churned up by browsing cattle.				
Cooleagh, Cooleagh parish, Co. Tipperary.	TS062-052	16E0015	Trivallate *ráth* (possibly originally quadrivallate)	ITM 621614, 641752 2nd fosse, NW sector	*c*. 0.56m
	The top of the core was very wet and some material washed away upon retrieval. The soily material was a darkish brown at the top and noticeably lighter in colour and less wet further down. There were some greyish sections with some gravelly material at 15-20cm and 30-40cm.				
Cloonfree, Co. Roscommon	SMR: TS062-052	16E0013	Moated site	ITM 591295, 780569	0.85m
	The bottom 30cm of material was a relatively soft grey clay. The upper core material was of brown soily consistency with a lot of leaf litter and woody material throughout. The upper most 10 to 15cm drained away on extraction due to its water content.				
Coolamber, Co. Westmeath	WM002-013	16E0016	Bivallate *ráth*	ITM 634780, 772993 SW sector	0.56m
	In general, this sample was drier than had been anticipated. It had organic material evident throughout most of its length. It was soily all the way down with gravelly inclusions throughout and clayey at the bottom.				

Table 6 Core samples obtained from five selected sites

All core samples were transferred to a sample tube, which was then secured and sealed for transport to the Palaeoenvironmental Research Unit (PRU) at NUI Galway where pollen analysis was undertaken.

4.3.4 Preparation of Pollen Slides

Samples of material were extracted at specific depths along each core and were prepared for pollen analysis using the following procedures based on Faegri, Kaland, and Krzywinski (1989) and modified (see Molloy and O'Connell 2004).

1/2cm^3 samples were taken from along the length of the core and added to small pointed-end centrifuge tubes. Lycopodium tablets were then added to the tubes. A dilute hydrochloric solution (10%) was added to dissolve the matrix, which was then centrifuged, and the supernatant decanted. These samples were then washed with distilled water, decanted and the remaining pellets added to individual conical flasks. The four samples of material were each placed in the conical flasks and boiled for 10 minutes in 10% potassium hydroxide (KOH). These were then strained, using 0.1mm sieves placed in a funnel, into large centrifuge tubes and washed through well with distilled H_2O. These solutions were then concentrated by centrifuging at *c*. 3000g for 3 minutes, washed with distilled H_2O, centrifuged and supernatant decanted once more. The pellets were transferred to small centrifuge tubes using distilled H_2O.

Sixty per cent hydrofluoric acid was added to each sample and left overnight in a fume cupboard. Samples were the centrifuged and decanted. After this, the pellets were washed with distilled H_2O, centrifuged and supernatant decanted off. Pellets were then transferred to small glass centrifuge tubes and centrifuged. The pellets were then washed with glacial acetic acid and centrifuged.

An acetic anhydride/sulphuric acid (9:1) mixture was added to each tube and stirred carefully with glass rods. These was placed in a boiling water bath for 4 minutes. Samples were once more centrifuged. Samples were washed with glacial acetic acid, centrifuged, washed with distilled H_2O and centrifuged again. Samples were then sieved through a mesh of 0.5mm using an ultra-sonicator, washed with distilled H_2O and centrifuged before being transferred to small labelled sample tubes. These samples were centrifuged and decanted one final time, before carefully adding 2 drops of glycerol to each tube. Slides were then made using the material from these samples and analysed under a microscope.

The procedures and methods described in this chapter were carried out over several seasons. The relative success and limitations of the collective methodologies presented here are reviewed in Chapter 5

5 Fieldwork Results and Analysis

5.1 Introduction

The aim of this chapter is to present the data that was generated from field surveys and observations recorded at the study sites. Each site and study cluster is presented in its landscape, geographical and historical setting in order to fully contextualise the network of relationships between the trees and enclosures investigated.

Field observations that were undertaken prior to this study had suggested that the presence of certain species on the banks of medieval earthen enclosures (in particular hawthorn and hazel) was a widespread phenomenon, and may possibly be the result of intentional planting in the past. Examination of aerial imagery attested to the presence of trees on medieval enclosures as a widespread phenomenon, but it does not permit reliable identification of tree species or reliable analysis of their number and position. The first task of fieldwork involved ground-truthing in order to identify what species were present and assess the potential for identifying trends or patterns in the layout of the trees on each site, and in their distribution across the entire sample. Thus, the first visit to each cluster of sites saw the collection of data which would establish the extent to which this was the case. Detailed notes were taken and sites and trees were recorded photographically. This resulted in establishing the four categories of tree-cover CY1, CY2, CY3 and CY4 as outlined in Table 4 (4.2.3).

5.1.1 Recording Clusters and Constituent Enclosures

Some of the clusters occur on former early medieval royal lands and later medieval mensal lands, which might predicate specific roles for some of the enclosures investigated. Therefore, the medieval familial and landholding context is also given where possible. The manner in which the monuments and their associated trees are presented in local folklore, as recorded by the Irish Folklore Commission in the 1930's (www.dúchas.ie), is also considered for each cluster. Each individual site is described according to its category of tree-cover. Where conditions allowed, the tree species present were recorded and their positions upon the banks were mapped. Patterns and trends in the composition and layout of trees are thus identified in order to discern whether such trees might have been intentionally incorporated upon the banks of the enclosures. Comparisons are made across

the distribution of clusters in order to establish the extent to which the presence of particular species and the manner of their inclusion may be considered predictable trends or the product of widespread cultural practices.

Prior to this research, the growth of hazel and hawthorn trees on many medieval settlement enclosures had been noted by the author. Their presence was notable for similarities in appearance, morphology and the apparent order upon the banks of sites where they were encountered. The sizeable diameters of hazel stools in particular suggested that they may be of significant age. As mentioned earlier (4.3), Rackham maintained that a stool of one meter diameter could be estimated at 100 years and a two meter diameter may be thought of as at least 200 years old but that it could well be several centuries older without increasing in diameter (Nordén and Paltto 2001, 2). A number of methods were employed in an effort to provide relative chronologies for the presence and persistence of hazel and hawthorn tree-cover upon the banks of a selection of study sites (4.3). The behaviour and survival strategies of both hazel and hawthorn were studied and applied to the trees encountered in the field in order to form an understanding of how these trees interact with their host monuments over time. Attempts were also made, using palynology, to establish chronologies for the persistence of tree-cover at a number of sites. There are other species such as ash, blackthorn and elder that also feature significantly across many of these discrete environments, however, they do not tend to reflect the same kind of apparent order and intentionality.

5.2 The Sites

A geographically widespread sample of enclosures were selected for field-study. The bulk of these sites are in four main medieval settlement landscape clusters and are named and numbered as follows: (see Figure 19) ,

Cluster A	Lismacaffry/Boherquill, Street parish**, Co.** Westmeath/Longford
Cluster B	Rylane, Clooney parish, Co. Clare
Cluster C	Cooleagh, Cooleagh parish, Co. Tipperary
Cluster D	Emyvale, Donagh/Errigal Trough parish, Co. Monaghan

Also selected were three additional enclosures, Cluain Fraoich, Cloonfree, Co. Roscommon (5.9); the bivallate *ráth* of 'Doontorpa' in Croagh North, Co. Clare (5.8) and Turin, Kilmaine, Co. Mayo (5.7).

There are a number of other sites that were visited in the course of this research, and although they were not subject to the same degree of survey and analysis, they are referred to for comparative purposes. These are the multivallate enclosure 'Rathnadrinna', Lalor's Lot, Co. Tipperary, a bivallate *ráth* in Streamstown, Co. Mayo, a univallate *ráth* in Beagh (Donnellan), Co. Galway, a trivallate enclosure in Swellan Upper, Co. Cavan, a bivallate enclosure in Aghabrack, Co. Longford (See Table 7 below). Others enter the discussion as valued sources of data incidentally encountered in the field over the course of this study.

Townland and County	SMR No.	Site type	Category of tree-cover	Site dimensions
Croagh North, Co. Clare 'Doontorpa'	CL005-030	Bivallate *ráth*	CY2 CY3	Internal diameter 28m External diameter 39-45m
Cloonfree, Co. Roscommon	RO029-009	Moated-site (Bivallate)	CY2 CY3	
Turin, Co. Mayo	MA121-033001	Quadrivallate *ráth*	CY2 CY3	Int.diam. 42m N-S; 44m E-W Overall diam. +100m.
Ardroe, Co. Mayo	MA101-014	Bivallate Raised *ráth*	CY2 CY3	Internal dimensions 35m N-S; 27m E-W External dimensions 69m N-S; 60m E-W
Streamstown, Co. Mayo	MA101-013	Bivallate *ráth*	CY2 CY3	Internal diameter 39m External diameter 60m
Lugatemple, Co. Mayo	MA101-015	Univallate *ráth*	CY2 CY3	Internal diameter 30m
Swellan Upper, Co. Cavan	CV020-072	Trivallate *Ráth*	CY1 CY2	Internal dimensions 49m N-S; 42.5m E-W External dimensions 92m N-S; 85m E-W
Aghabrack, Co. Longford	LF001-031	Bivallate *Ráth*	CY2 CY3	Internal diameter 37m External diameter 57m
Beagh (Donnellan), Co. Galway	GA030-010	Univallate *Ráth*	CY2 CY3	55m NW-SE, 50m NE-SW
Rathmurragh, Co. Offaly	OF024-042001	Bivallate *Ráth*		Internal diameter 55m External diameter 80m
Lowerton beg, Co. Offaly	OF024-039	Bivallate *Ráth*		Internal diameter 55m External diameter +85m

Table 7 Other sites surveyed or otherwise mentioned in the text.

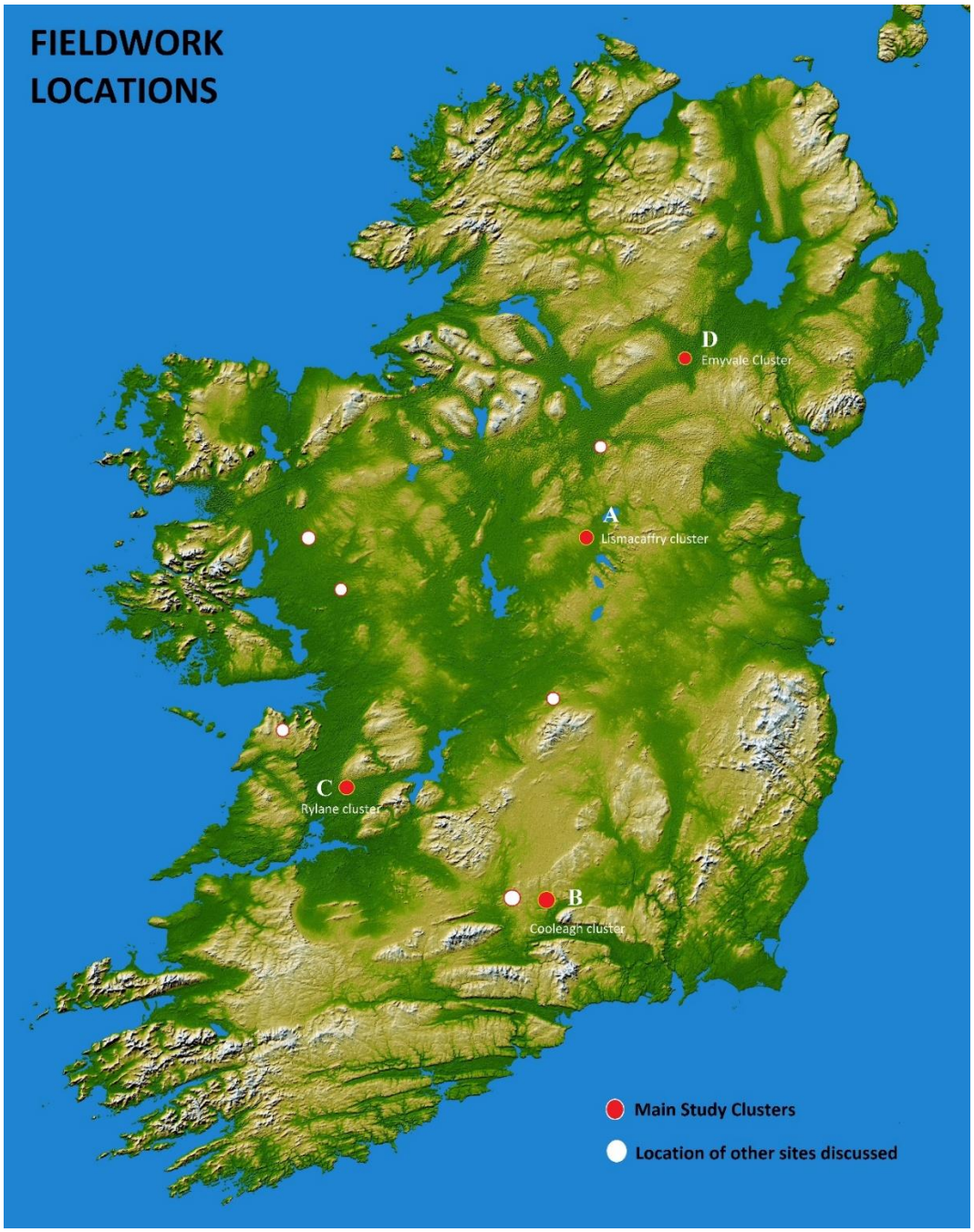

Figure 19 Locations of study clusters

5.3 Cluster A: Lismacaffry/Boherquill – Street, Co. Westmeath

5.3.1 Landscape and Geographical setting

This cluster of enclosures is in the parish of Street, which straddles the Longford – Westmeath county border in the Irish midlands. It is in the locality of Lismacaffry, Boherquill and Coolamber. Coolamber townland is divided into two portions, one lying in Co. Westmeath and the other in Co. Longford. The surrounding area is a gently undulating fertile plain west of the river floodplain bogs that developed around the Inny

River as it flows from Lough Kinale (8km to the north) to Lough Derravaragh (6km to the southeast). This expansive raised bog system formed an ideal natural border zone, with the Inny becoming the eastern border of Street parish and the northeastern border between the later Moygoish and Fore baronies. Most of the sites in this study area are situated on low rises of well-drained acidic till derived chiefly from cherts. The underlying bedrock is dark limestone and shale.

The re-appropriation of some older monuments in the Anglo-Norman period is a feature of the settlement landscape in this locality. The late 16th-century/early 17th-century fortified house which is marked as Coolamber Castle on the 1st ed. OS map of *c.*1837, is built upon a raised circular platform which is possibly the site of an earlier ringwork castle. It is marked as such in the record of sites and monuments. An old route-way that may depart from this site can be traced to the southeast through Boherquill townland and passes the northern side of the motte castle in the adjoining townland of Coolnagun (Figure 20). This road, notable in aerial imagery, is depicted on the 1st ed. OS map running for 1.3km from the Coolamber border through Boherquill and terminating in the western portion of Coolnagun. It is most likely that this road gave its name to the townland of Boherquill, which translates as 'Road of the Hazels' (P. Walsh 1957). This place-name is recorded as 'Boherguill' in 1638 (Inq. Lag. 1826, 139) and 'Boherquill' in the Down Survey in 1657. The old road depicted on the 1st ed. OS map is identifiable on the Digital Globe aerial image taken in 2011 running to the west from a point close to the larger *ráth* in Coolnagun townland, past the motte castle and continuing through to the western border of Boherquill townland. There is a faint suggestion in the aerial image that it may have continued into Coolamber, Co. Westmeath, with the probable next destination being the aforementioned site of Coolamber castle in the Longford portion of that townland (Figure 20).

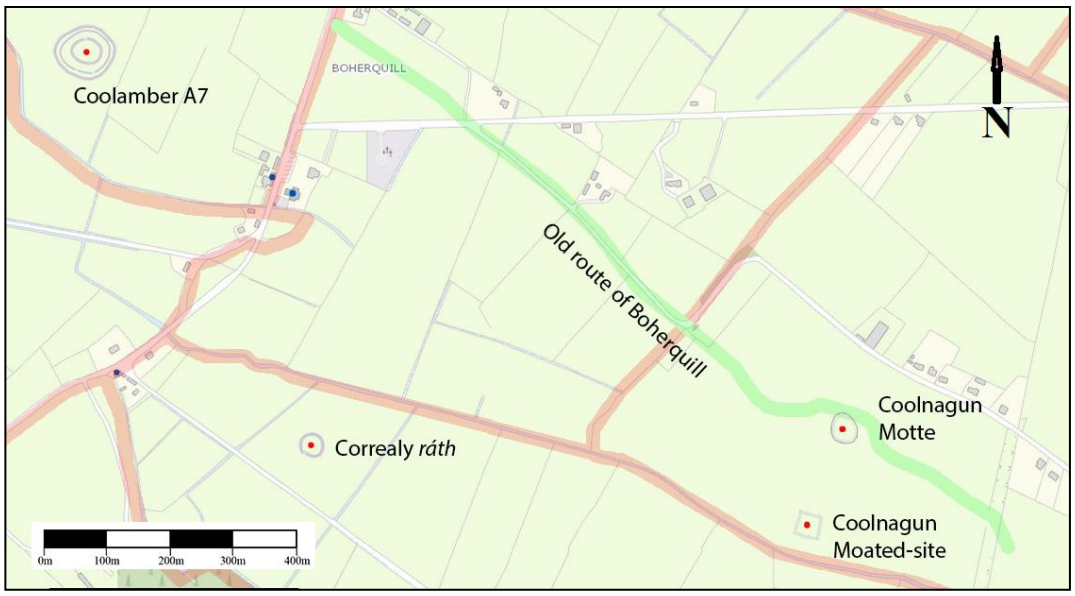

Figure 20 The old road shown in green, running from NE-SW past the motte (A8) in Coolnagun townland as depicted on the 1837 1st ed. OS map.

This route passes just north of a trivallate enclosure (A7 below) in Coolamber, which contains the most abundant source of Hazel in this locality today. There is only one section of this old route coincident with a modern road. This is a 300m section of minor road bisecting Boherquill townland and the only portion of the 1.3kms to have trees or hedging. The dominant species is ash and there is a complete absence of hazel along this route. There are three big beech trees on this section, one of which shows evidence of former pollarding. All the hedgerows around Boherquill and Coolnagun are dominated by ash. Hazel is not encountered in the hedgerows in this locality and appears to be confined to the banks of the few medieval enclosures discussed below.

5.3.2 Historical Background

The 11th/12th century local kingdom (*trícha;* MacCotter 2008, 13) of Tethba and Bregmaine occupied the area now comprised of the Longford parishes of Shrule, Abbeyshrule, Kilcommock, Taghgshinny, Agharra, Tagheenod, Kilglass, Rathreagh and Moydow and the Westmeath parishes of Rathaspick, Russagh and Street (Dobbs 1938, 241; MacCotter 2008, 201). The later medieval lordship of Anghaile (Annaly) was formed out of the territory of Tethba and would later become the County of Longford. It was divided into Lower Annaly, which comprised the part of Longford north of Granard, and Upper Annaly which comprised the part of Longford south of Granard (O'Hart 1876, 280) See also Nicholls (1972, 153), and FitzPatrick (2004, 209). Upper Annaly, which

contained the area of this study cluster, was possessed by Ó Ferghail Buidhe until they were dispossessed of the eastern part of Annaly by the English settlers, the Tuites and the Delameres, in the 12th century (ibid). This Norman incursion into Tethba took place in 1184 AD and by 1201 it had ceased as a minor principality and the official pedigrees of the ruling families came to an end and ceased to be regularly kept (Dobbs 1938, 147).

Magh Brecraighe (plain of the Breacraighe) was the old name for Street parish, 'Breacraighe' being the name of a people who occupied this part of the ancient territory of Tethba. Granard is about 10km to the north-west and was the chief location of the ancient kingdom of North Tethbae (Tethbae Thúaiscirt) *c*.700AD.

Lismacaffry townland is three kilometres west of the Inny River, which is at the eastern limit of that ancient territory. In 752AD the Brecraighe were decimated at Kilfintan (Telach Findin) by the Cenél Coirpri of North Tethba (AU 752.14; Dobbs 1938, 249). The townland of Kilfintan is immediately north-west of Lismacaffry and contains three *ráth* enclosures and one other in the adjoining townland of Kilfintan Lower. These four monuments are within the catchment of this study cluster but have been significantly disturbed or destroyed by farming practices and are for the most part devoid of trees. On the border between Kilfintan and Kilfintan Lower there is a holy well labelled 'Toberfintan' (Fintan's well) on the 1st ed. OS map. The townland of Clonmore to the north of Lismacaffry and east of Kilfintan contains a religious site marked as 'Kinnard Nunnery' on the 1st. ed. OS map *c*.1840. Local tradition maintains that St. Fintan is buried in the unusual mound that is incorporated into the remains of this ecclesiastical site. It lies 1.8km east of the well. There are references in the Irish chronicles to Kilfintan as 'Chailledh Fintainn' in the year 1396AD (MIA 1947, 154) and 'Caille-Finntain' in 1406AD (AU 1 1983). This suggests that the place-name may not represent *Cill-Fintain* (Fintan's Church), but rather *Caille* or *Coille-Finntain* (the Wood of Fintan) (JACAS 1951, 97). In a note in the Ordnance Survey Namebooks for Co. Longford, O'Donovan (1838) maintained that Kilfintan (Coill Fhiontain) should properly be the name of the parish of Street. Interestingly, by the early 19th century, the townland of Kilfintan Lower is also known as Crancam which translates as 'Crooked tree'.

Lismacaffry (Lios Mhic Gofraidh) translates as 'MacCaffry's fort' or 'MacCaffry's enclosure'. Mac Gofraidh (also written Mac Gafraidh, Mac Caffrey or Mac Gofradha), is the name of a branch of the Méig Uidhir ruling family of Fermanagh whose estate may be identified with the townland of Ballymacaffrey near Fivemiletown on the

Tyrone/Fermanagh border (www.logainm.ie). This historical identity of Lismacaffry is important to understanding the possible roles of the enclosures in the cluster. The townland of Lismacaffry contains four enclosures. The name 'Lismacaffry' is also given to a *ráth* in the townland of Ballymore about 3km to the west of Granard, which is 9km to the north-west of this study cluster and is labelled as such on the 1st ed. OS map of *c*.1840.

5.3.3 Folklore Relating to Cluster A

Several of the monuments in this locality feature in The National Folklore Commission's Schools' Collection. One such account describes two *ráth* enclosures in Kilfintan on the lands of a Mr. Gaynor and a Mr. Fagan respectively. The informant describes the former as having 'a hedge of whitethorn bushes growing around it' and that 'no-one ever dug it up or cut the hedge' (NFC, Vol. 0739, p.237). The other he describes as having 'a hedge of bushes around it' (ibid). Unfortunately, both of these sites have been levelled or heavily interfered with and there is no trace of their original trees. He describes another *ráth* in Lismacaffry with bushes growing in it and again remarks that 'No one ever dug it or cut any bushes out of it' (ibid. 238) and he mentions another *ráth* in Aughamore as having 'a fence of bushes all round it' (ibid). Another informant, Christy Newman, aged 57, describes a *ráth* in Correaly townland with 'a lot of bushes round it' (ibid. p239). This may be one of two enclosures in that townland that are now levelled and treeless. Informant James Carrigy from Chancery, Lismacaffry, describes the *ráth* in Clonmore, just north of Lismacaffry. He reports that all the bushes are cut down but that the big fort in Annie Connell's land 'is covered over with whitethorn bushes and blackthorn bushes'. His account also goes on to say,

> 'There is an old fort in Thomas O'Reilly's land of Lismacaffrey. It is fairly big and half of the trees are cut down. In Miss O'Hara's land of Lisduff there is a big fort. There are a lot of whitethorn bushes growing on it. No one plough(s) on it and there are not any of the bushes cut down because it is not lucky to cut them or to level any forts. Its shape is round and it is higher than the field it is in'. (ibid. pp.237-238).

I believe this account refers to the *ráth* (A3) in Athenboy which today harbours 65 substantial hawthorn trees on its enclosing bank (see 5.3.4.3 below).

The final enclosure mentioned by Carrigy is reported as follows, 'In Miss McGuire's land of Float there is an old fort. It is all covered over with nut trees and blackthorn bushes and

whitethorn bushes. In the summer it is all covered over with nettles and other weeds, and it is not like a fort at all' (ibid. p.241). I believe this refers to the *ráth* (A1) in Lisduff townland (which contains the land of Float). It has CY2 tree-cover today. Accounts such as these are recorded in all parts of the country and they invariably describe fences or hedges of trees (that 'no-one ever cuts') surrounding the earthworks.

5.3.4 The Sites

The high number of well-preserved treed enclosures within seven adjoining townlands, and the townland name of Boherquill, which translates as 'road of the hazel' were among the criteria that qualified inclusion of this cluster in the fieldwork campaign. There are 11 *ráth* enclosures, one moated site and an ecclesiastical enclosure within the seven townlands (see Table 8). However, two enclosures in Lismacaffry and one in Coolnagun have been destroyed, another enclosure (RMP:WM002-022) in Coolnagun was inaccessible at the time of survey and the enclosure in Correaly is devoid of trees. This left eight treed enclosures to investigate in this cluster, which were numbered A1 to A8 (as listed in Table 8) and are described and discussed below.

Figure 21 The distribution of treed enclosures in Cluster A.

Townland	Cluster No.	SMR No.	Site Type	Vallation	Trees Category*	Site Dimension	Trees
Lisduff	A1	WM002-010	Ringfort-*ráth*	Bivallate	CY2 CY3	diam. 32m	Hazel Hawthorn
Lismacaffry	A2	WM002-008	Ringfort-*ráth*	Univallate	CY3	diam. 43m N-S; 54m E-W	Hawthorn Ash
Athenboy	A3	WM002-017	Ringfort-*ráth*	Univallate	CY3	diam. 56.5m	Hawthorn
Clonmore	A4	WM002-005	Ecclesiastical site (Nunnery)	Univallate	CY4		Elder Hawthorn
Lismacaffry	A5	WM002-007	Ringfort–*ráth* (raised)	Bivallate	CY4	diam. 48m	Hawthorn
Coolamber	A6	LF016-017	Ringfort-*ráth*	Bivallate	CY2 CY3	diam. *c*. 40m	Hazel hawthorn
Coolamber	A7	WM002-013	Ringfort-*ráth*	Trivallate	CY2 CY3	diam. 36m	Hazel Hawthorn 1 oak Ash
Coolnagun	A8	WM002-020	Moated site		CY3?	35m NNE-SSW; 35m WNW-SSE	Hawthorn
Lismacaffry *	Destroyed	WM002-006	Ringfort-*ráth*	Univallate	0	diam. 35m	
Lismacaffry *	Destroyed	WM002-009	Ringfort-*ráth*	Univallate	0	diam. 41m NW-SE; 26m NE-SW	
Coolnagun*	Destroyed	WM002-018	Ringfort-unclassified	Bivallate?	0	No surface remains	
Coolnagun*	Inaccessible at time of visit	WM002-022	Ringfort-*ráth*	Univallate	?	diam. 41m	
Correaly*	No trees	WM002-016	Ringfort-*ráth*	Bivallate	0	diam. 30m	

Table 8 Study sites Cluster A: Lismacaffry / Boherquill, Co. Westmeath and Co. Longford. Enclosures marked with '' were not surveyed for reasons given.*

5.3.4.1 A1 Lisduff (Figure 22)

This circular bivallate enclosure (*c*.32m diameter) in Lisduff is situated on a gentle NE-facing slope of a low natural rise of poorly drained pasture with bog to the NE. It consists of two tree-lined earthen banks with an intervening fosse. The presence of ash as an over-storey canopy is notable on approach from the road north of the site. There are tall nettles and brambles to negotiate in the small portion of field between the enclosure and the road. The outer perimeter of the enclosure is a bank 1m to 1.5m high and dominated by

hawthorn, particularly in the SW sector. The land-owner has a fence following the line of the bank. Moving over the outer bank there is a fosse about 3.5 m wide and an inner bank with a slight counterscarp. Hawthorn is also prominent on the N section of the inner bank with ash trees that appear to be randomly dispersed throughout the site. There are ten hazel trees in this enclosure. Seven of them are on the inner bank and distributed around most of its circumference but absent from the NE sector. The original entrance may have been in this NE sector where there is a wide gap. In the SE sector the hazel stools are notably larger. The hawthorns in the southern half of this site are also substantially thicker than those in the north. This site has been much altered in the E and the SE quadrant where it is truncated by a modern field boundary which cuts between the two banks. This is also apparent from its depiction in the 1st ed. OS map of *c.*1840. The tree positions were mapped at this site (Figure 22).

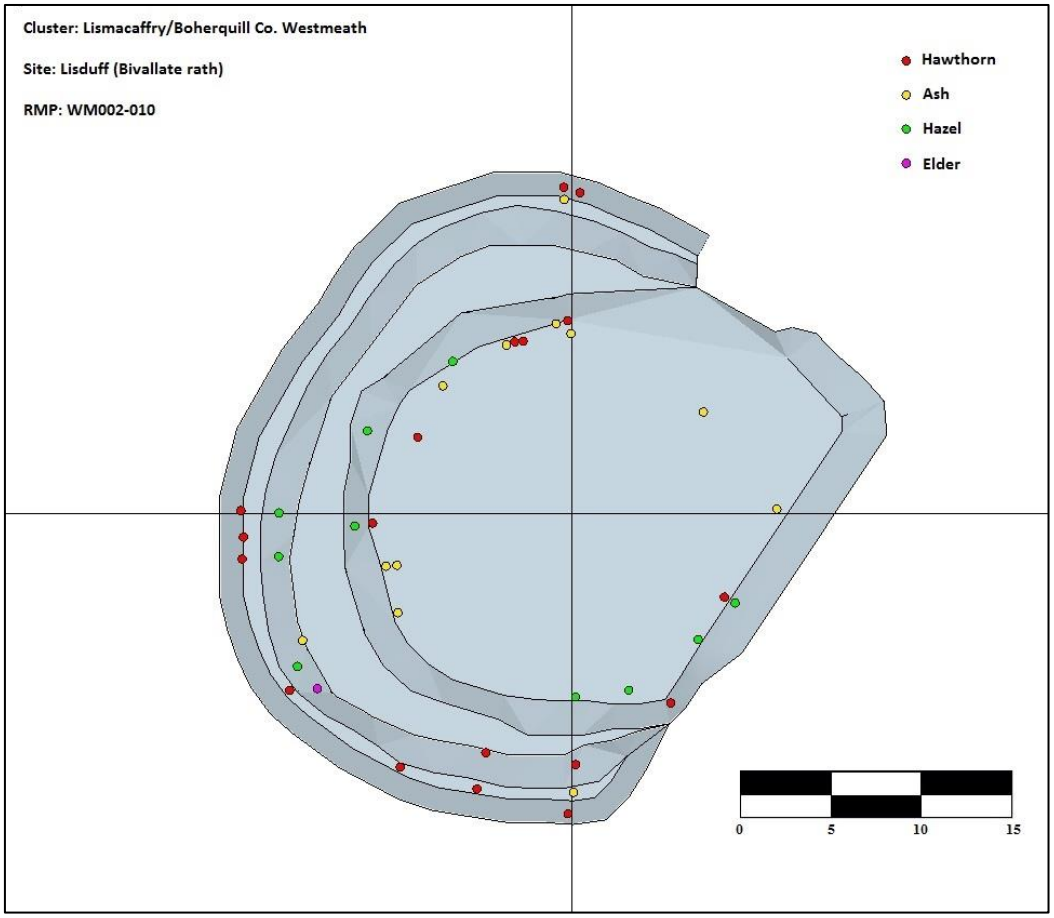

Figure 22 Trees mapped at the enclosure in Lisduff, Co. Westmeath. Site A1

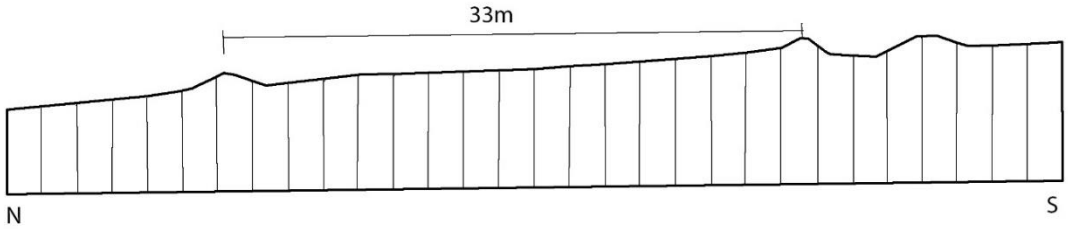

Figure 23 Profile of Site A1 Lisduff, Co. Westmeath after Coyne and O'Brien (2016)

5.3.4.2 A2 Lismacaffry (Figure 24)

This univallate *ráth* is on a low natural rise with good views in all directions but particularly to the E. It is an ovoid area, 43m N-S by 54m E-W. The earthen bank contains some stone and is surrounded by a fosse that is mostly infilled. A gap in the SSE section of the bank with a causeway across the fosse is most likely the location of the original entrance. The bank is mainly topped with hawthorns. There are three ash trees on the bank, two are on the western half and one on eastern half, but no other species is present. Figure 24 shows the trees mapped on this site. In the SW quadrant there is a peculiar bunching of hawthorn that looks like the remnants of an old plashed hedge. Four of the hawthorns in this curious clustering of stems display a dramatic change in growth direction close to the ground, and some layering has occurred which appears to account for the deviation of this short line of trees from the general line of the bank.[30] There is evidence of continued site and tree management on this enclosure. Some substantial tree felling in the southern section of this site has occurred at some point in the recent past and there is a wire fence attached to the trees on the northern bank, restricting the passage of livestock over the bank between the trees.

[30] There is a wire fence running from tree to tree on the northern bank perhaps explaining the demise of the laid hedge in favour of more expedient modern enclosure practices. It seems that the purpose of the wire fence is merely to prevent large livestock from crossing the bank of the monument and causing it damage as the southern treeless sections of the bank are unfenced and the bank there is traversable without the effort of a climb.

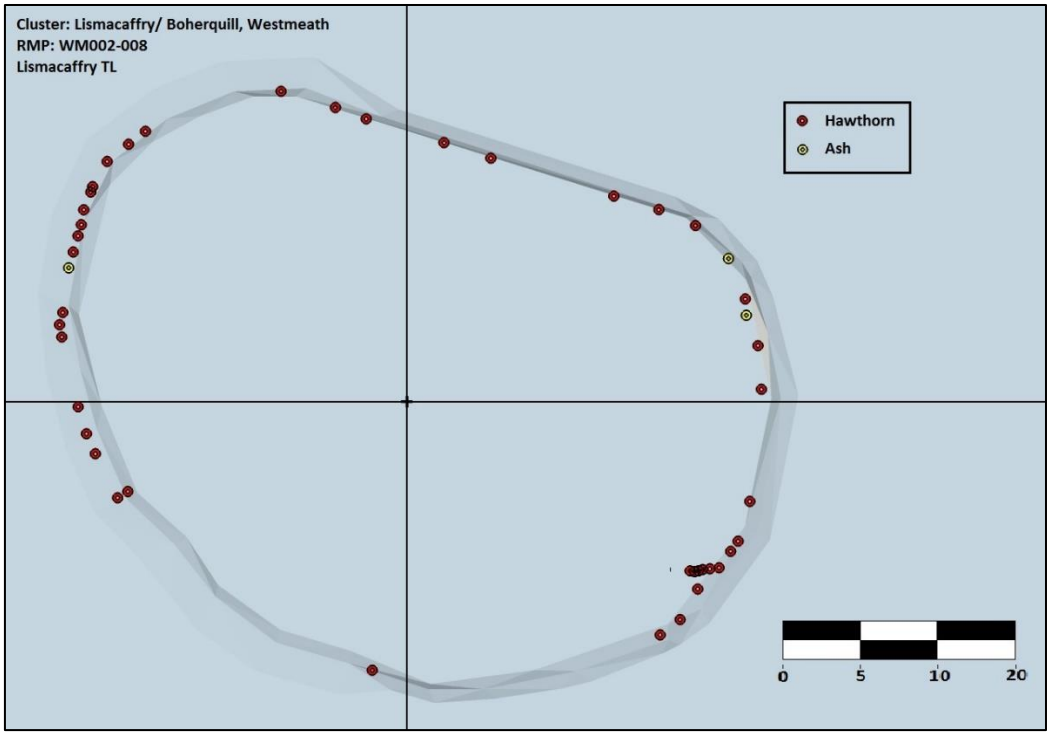

Figure 24 Lismacaffry A2 with tree positions

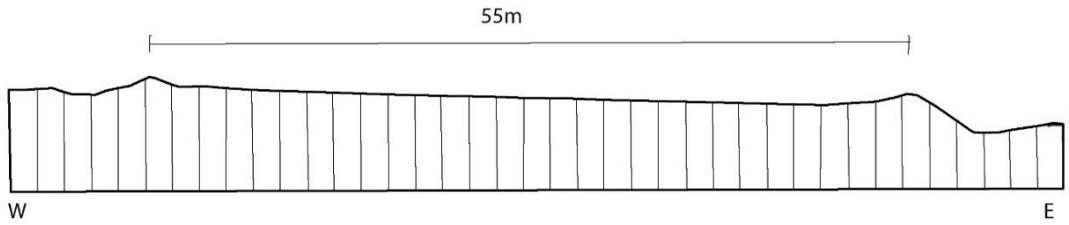

Figure 25 Profile of site A2 Lismacaffry after Coyne and O'Brien (2016)

5.3.4.3 A3 Athenboy (WM002-017)

On a low, natural rise in Athenboy townland, just south of Lismacaffry, a sizeable (56.5m diameter) sub-circular *ráth* is enclosed by a substantial tree-lined earth and stone bank with a wide shallow external fosse. There is a causewayed entrance (width 1.75m) in the NE sector and a large gap in the bank at SE that appears to be modern. While it was possible to count the trees, it proved impossible to map them due to the growth of low dense and interconnected hawthorn branches over most of the monument. There are 65 substantial and consistently distributed hawthorns on its enclosing bank. These trees form a tight interlocked canopy, and a substantial growth of low lateral branches makes navigation over the bank extremely difficult throughout the monument and impossible in

places. The notable and distinct formation of hawthorn growth on this monument has rendered the banks mostly inaccessible to livestock. The only other species of tree present on this monument are two ash trees on the eastern bank and six elder trees distributed throughout the south and southwestern portions of the bank.

Figure 26 Approaching A3, Athenboy from the north showing the dense layer of hawthorn overtopped by some ash

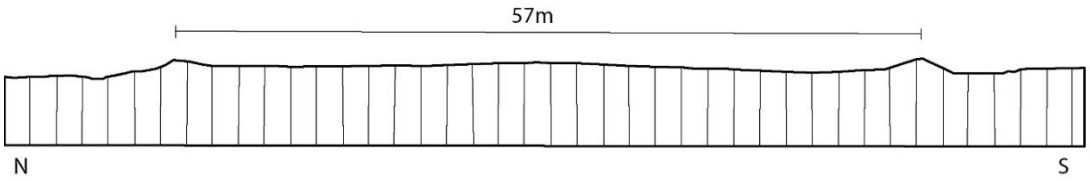

Figure 27 Profile of site A3 Athenboy after Coyne and O'Brien (2016)

The almost exclusive presence of hawthorn is similar to A2 Lismacaffry but the trees on A3 are decidedly different in morphology due to an increased difficulty for livestock in gaining access to the base of trees where young shoots are produced. The banks are more substantial and steep, making them difficult to traverse, thus they have not been subject to the same level of degradation caused by the trample of farm animals. The resulting unchecked growth consists of thick branches leaning over the fosse, which further reduces access to the banks. In some cases, the trees have migrated down the scarp through

incremental layering due to the leaning action of the branches (Figure 28). The entire bank is a matrix of tree-roots and it is extensively perforated with holes made by badgers.

Figure 28 A3 Athenboy showing the low lateral growth behaviour typical of many of the 65 hawthorn trees on this site.

Figure 29 A3 Athenboy showing hawthorn trees and roots on the edge of the bank at the NE causewayed entrance. Holes in the bank made by badgers are clearly visible among the exposed roots of trees in this image.

Figure 30 A3 Athenboy showing matrix of tree roots in the bank of the monument.

5.3.4.4 A4 Clonmore

Kinnard nunnery (WM002-005) is an ecclesiastical site in Clonmore townland to the north of Lismacaffry. It is a rectilinear stone-lined enclosure (*c*.40M SW-NE and *c*.30M NW-SE) with an earthen mound in its western corner. The perimeter includes some fairly big stones and two substantial hawthorn trees on the northeastern section. There is a mound in the western corner of the site, which is covered by several tall hawthorns with lots of bramble overgrowth around them. This mound was indicated on the 1st ed. OS map (*c*. 1840) and is clearly depicted as a raised area roughly 10m by 10m on the *c*.1900 edition OS map. There is a lot of stone present in the fabric of the mound which may perhaps indicate that it is a consequence of heaped masonry cleared from the enclosure in order to reclaim it for agricultural purposes. The land-owner had recently cut down a thick trunked and substantial 'boor tree' (elder), as he called it, whose remains were piled up where it was cut at the NW side of the mound. There is another similar elder still standing and growing from the side of the mound. A local legend tells that this mound is the burial place of St. Fintan. [31] A stream runs to the south of this site. The dominant tree-cover is Hawthorn.

[31] I met the landowner Frank Smith who talked about an association between this site and St. Fintan's well (Toberfintan) LF016-011 which lies 1.5km to the northwest.

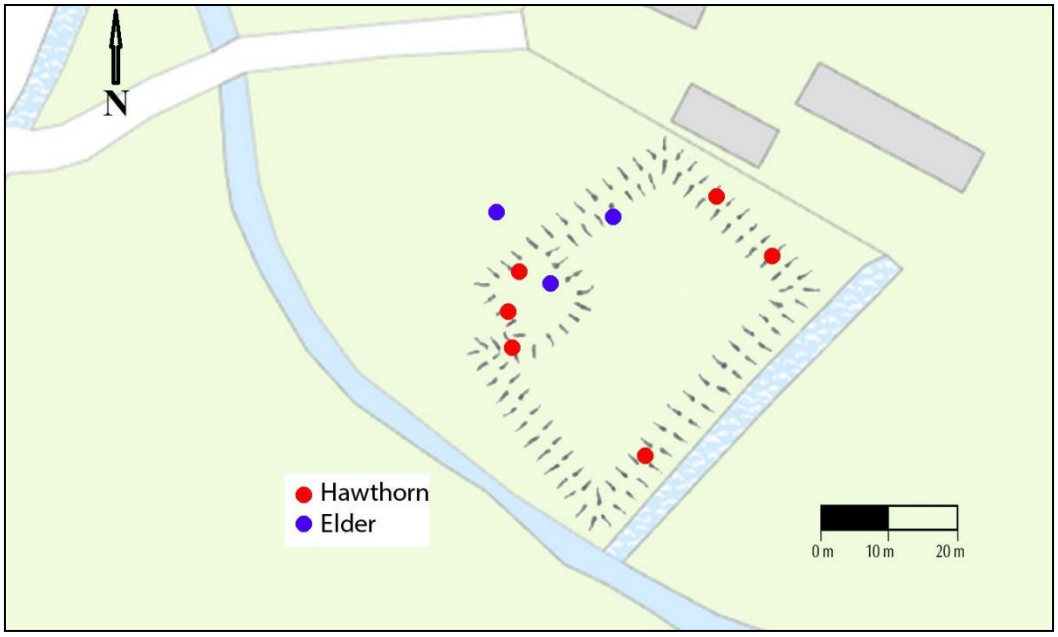

Figure 31 Site of Kinard Nunnery showing positions of hawthorn and elder trees on the enclosure bank and on the mound in the eastern corner of the site.

5.3.4.5 A5 Lismacaffry - WM002-007

This is a raised *ráth* of *c*. 48m in diameter, situated in reclaimed pastureland on a low rise with good views in all directions but particularly to the E and S. The field falls gently into the depression that would have been a more substantial fosse about this site before its current state of infill. From the fosse, the scarp presents a substantial 3m climb to the edge of the interior. There is a lot of stone thrown into the fosse and a lot of stone in the fabric of the earthen bank. The entrance appears to have been in the SE section of the bank. The interior space undulates and contains a raised area directly opposite the entrance. The raised area is off-centre in the NW quadrant and the ground falls down as you approach its edges before slightly rising again at its very edge. There is some evidence of an outer bank beyond the fosse on the northeastern and southeastern sides but it disappears everywhere else, most likely backfilled into the fosse which appears to be filled up most of the way around. The trees on this site are a mix of elder, hawthorn and blackthorn with one small ash on the bank in the NW quadrant and do not display any evidence of being substantial in age, nor do they present any discernible evidence of deliberate planting. There is much evidence of ongoing intentional cutting and windblown colonisation. For these reasons this site was considered as unsuitable for this study. 60m to the south are what remains of another *ráth* (WM002-009) which does not bear any trees.

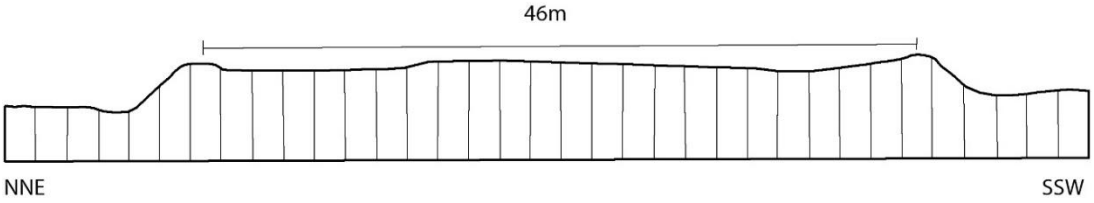

Figure 32 Profile of site A5 Lismacaffry after Coyne and O'Brien (2016)

5.3.4.6 A6 Coolamber, Co. Longford

There are two adjoining townlands called Coolamber, which are separated by the county border between Longford and Westmeath. This is also the border between Moygoish Barony and Ardagh Barony. However, both townlands are in the civil parish of Street. There is a treed enclosure in each Coolamber townland. The *ráth* in Coolamber townland, Co. Longford (LF016-017), which I was not granted permission to visit, is described by in the record of sites and monuments at www.archaeology.ie as 'Description: In level pasture. A raised circular area (diam. c. 40m) enclosed by a low bank of earth and stone (Wth c. 5m; H 0.3-0.65m) at W and from NNW-N, and defined elsewhere by a scarp (H 0.75-1.5m) with a wide shallow intervening fosse (Wth 6-7m; D 0.6-1.05m) and from WSW-W-NNW an outer bank (Wth 4.5m; H 0.4-0.8m).' The original entrance is not recognisable. Although detailed survey was not possible at this site it was possible to ascertain visually that this site harboured CY2 and CY3 tree-cover.

5.3.4.7 A7 Coolamber, Co. Westmeath.

The *ráth* in Coolamber, Co. Westmeath (WM002-013) is situated on good pasture-land on a gentle SSW-facing slope. It consists of a sub-circular area averaging 36M in diameter enclosed by two concentric banks and fosses, with evidence for a third bank and fosse in the western quadrant. The inner bank is mainly reduced to a scarp. The substantial middle bank is straddled by two wide and deep U-shaped fosses. The middle fosse and the outermost are quite wet. While there are several gaps in the banks (which appear to be modern and due to the passage of cattle), there is no gap that may be identifiable as the original entrance. The banks are extensively perforated by badger activity which is a common feature of many of these sites. The banks are dominated by CY2 hazel tree-cover. There are also some quite substantial CY3 hawthorn trees, particularly on the outer bank in the southern part, many of which are multi-stemmed. Elder and blackthorn trees also

feature on the outer perimeter and in the interior. There is a large mature oak growing on the outer bank in the NE quadrant. This oak has a girth of 3.5m at hip height and thus estimated to be 280-300 years old. One relatively young yew tree was noted on the western outer bank. About 300m to the north there is a late 19th-century private burial ground planted with a perimeter of yew trees which may be the seedling origin of this tree.

Many of the hazels on the banks of this site are quite substantial (Figure 33). Their stools are typically 4-5 m in girth and some of them bear the thickest hazel stems I have seen at any site, several of which measured in excess of 1m in girth. I attempted to extract a core sample from a stem measuring 1.12m in girth, but discovered that after about 0.10m, the corer was no longer effective, indicating an advanced stage of rotting in the inside. This illustrated a typical stage in the life-cycle of these trees. This stem would soon collapse due to the rot weakening it, and once on the ground its decomposition and disintegration will be accelerated (see 4.3.1).

Figure 33 Veteran hazel stool on the middle bank in the NE sector of Coolamber A7. (Image by Elizabeth FitzPatrick)

It has been noted that 'the interior is fairly even, sloping appreciably from N to S. Cultivation ridges, aligned NNW-SSE, run across the interior of the ringfort. Some straight earthen banks radiate from the site. It is difficult to say whether or not they are coeval with the ringfort. These linear features are visible on Digital Globe aerial photographs (taken November 2011) and appear to be the remains of drainage ditches feeding into the nearby stream.' (Coyne & O'Brien, 2016). It is also possible that the linear features may have served as leets to maintain a wet ditch such as is found at a moated site.

The moated site in Coolnagun is reached from this site by travelling the old road through Boherquill (that is mapped on the 1st ed. OS map) for 1km east (see Figure 20).

At Coolamber A7, I retrieved about 0.56m of material with the gouge corer from the SW section of the inner fosse (see Figure 34). Between 0.40m and 0.50m some material was lost as the corer was extracted. The core in general was drier than I had anticipated. There was organic material and gravelly inclusions evident throughout most of the sample and the very bottom appeared more clayey than the soil above it. I did not have the strength or weight to push the corer any deeper. I believe it would have gone deeper, but the relative dryness of the soil increased the resistance making it very difficult to penetrate deeper. The pollen analysis is discussed in section 5.10 below.

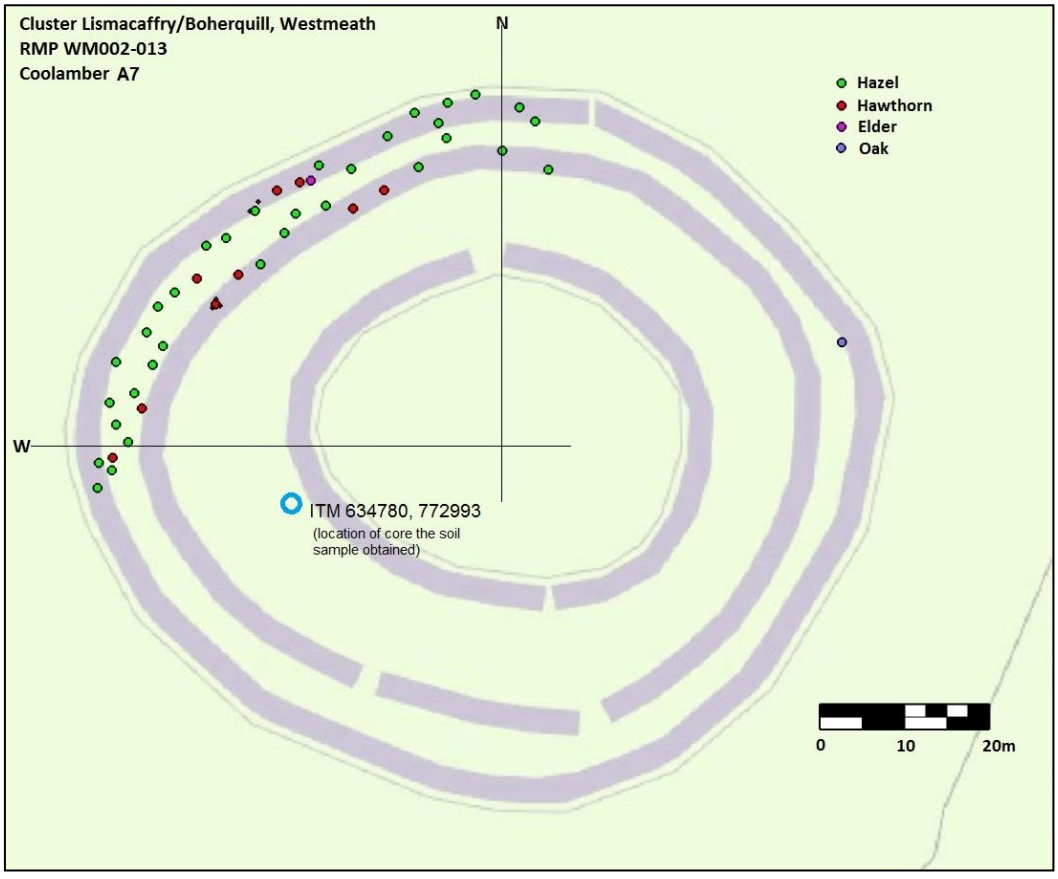

Figure 34 Site A7, Coolamber, Co. Westmeath with tree survey on the NW sector of the middle fosse. Also shown is position of veteran oak on the NE sector of the bank and the location of the core soli sample obtained for pollen analysis

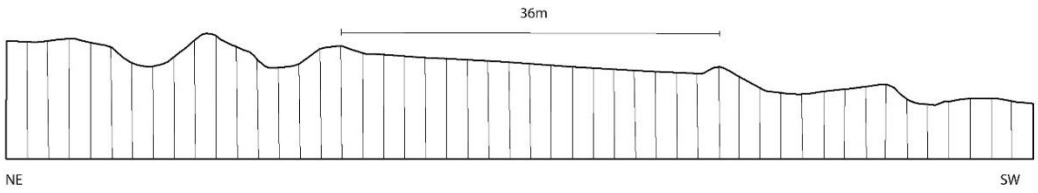

Figure 35 Profile of A7 Coolamber after Coyne and O'Brien, (2016)

5.3.4.8 A8 Coolnagun townland

The townland of Coolnagun stretches from the eastern border of Boherquill townland to the river Inny 3.6km to the SE. It contains seven listed monuments that include a motte castle (WM 002-019), a moated-site (WM002-020), a *ráth* (WM002-022), a hut-site (WM002-023001), a windmill (WM002-033) and an unclassified togher or track (WM002-032) in the boggy margin near the river basin. The motte castle (WM 002-019) is in a very prominent location on a low rise which offers impressive and extensive views in every direction. It has an outer bank that rises about 1.7m above field level. The fosse between this bank and the interior mound is about 0.6m higher than field level and the mound rises up to about 5m over field level. The plateau on the top, which falls away toward the southeast, is not very large by comparison to other mottes. It appears to have been a *ráth* on to which the motte mound was added. There are no hazel trees associated with this site. Three ash trees grow from the top northern edge of the mound and the rest of the trees are damson plum (*Prunus domestica-intsitia*). There are two hawthorns on the outer bank of this site but damson is dominant. The moated site (WM002-020) is *c*.100m to the south.

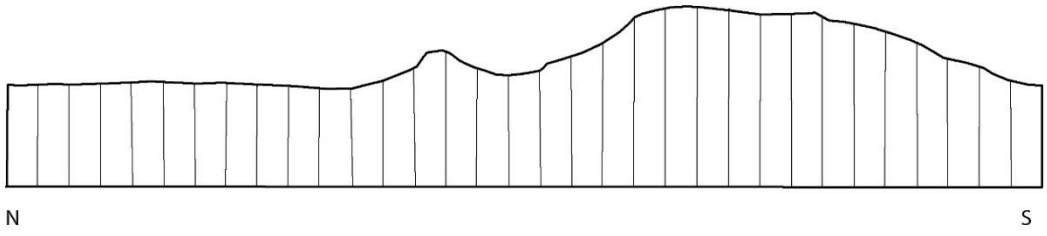

Figure 36 N to S profile of Motte site WM002-019 in Coolnagun

The path of the old road favours the higher ground and is easily discernible from this site, on a raised ridge that runs from the southeast to northwest towards Coolamber.

5.3.5 Summary of Key Findings

Three out of the nine treed enclosures in this study cluster have CY2 tree-cover, which is distinguished by the presence of substantial specimens of veteran hazel in ordered ranks on the edges of their enclosing banks. They are the bivallate enclosures of Lisduff and Coolamber (Longford), and the trivallate enclosure in Coolamber, (Westmeath). Enclosures with CY2 tree-cover tend to also have CY3 tree-cover, which is distinguished by a significant presence of hawthorn on their outer banks. This is the case with the above-mentioned enclosures and has also been recorded in each of the study clusters and at several other individual sites throughout the country (Table 8). The only other treed multivallate enclosures in this cluster is site A5 in Lismacaffry, which has CY4 tree-cover (see appendix A5). There are other bivallate enclosures in Correaly and in Coolnagun, but those monuments are devoid of trees.

Most trees on univallate enclosures, if they have trees, tend to be hawthorn (CY3 tree-cover), such as site 2 in Lismacaffry (Figure 24) and the univallate *ráth* in Athenboy. Three such enclosures exist in the Lismacaffry/Boherquill cluster. These are site A2 in Lismacaffry, site A3 in Athenboy and the moated-site A8 in Coolnagun. In Lismacaffry A2 the hawthorn trees are growing from the outer edge of the bank. It is most probable that these trees are remnants of what was once a hedge set around the perimeter. A properly laid hedge would have served the purpose of protecting the bank from damage. There are two treeless enclosures in the same townland that are very much reduced to a scarp and their fosses infilled. Several factors may have had influence on their current state, such as quarrying, cultivation and trampling by livestock, but all of these will certainly have been aided and amplified by the absence of trees.

By contrast, the univallate *ráth* in Athenboy is largely inaccessible to livestock due to the 65 closely growing and substantial hawthorn trees that dominate the bank. (See Figure 28, Figure 29, Figure 30) It is certainly a relict hedge. The bank itself is visibly enmeshed with a tight matrix of tree roots. Without the trees the character of these banks would certainly have diminished significantly. The aged appearance of the trees on this site indicate that their direct management as a hedge appears to have ceased much earlier than at Lismacaffry.

Hawthorn is present as CY3 tree-cover on six of the nine treed monuments in this cluster. Two of those sites, Lismacaffry (A2) and Athenboy (A3), clearly demonstrate that they are the remains of hedges planted on the bank in the past. This is corroborated to some degree by accounts from this area recorded in the 1937 Schools Collection (NFC), which suggest that hawthorn hedges were a more frequently encountered aspect of these sites a century ago (5.3.3). A strong tradition of maintenance of the sites and the trees that occupied them is also apparent from those accounts. CY3 tree-cover may also suggest some use of these sites as livestock enclosures or corrals, however there is no explicit evidence for this.

There are three sites in this cluster with CY2 tree-cover. Two of the sites are bivallate (Coolamber A6 and Lisduff A1) and the third is the trivallate *ráth* A7 in Coolamber. In each of these cases there is also CY3 tree-cover on their outer banks. Similar multivallate enclosures with similar patterns of tree-cover are frequently encountered throughout the country and are found in all the other study clusters. Hazel is absent from the hedgerows and confined in this locality to the enclosures concerned. The hedgerow surveys for Westmeath and Longford recorded the hazel in 10% of hedgerows and 13% respectively for those counties (Foulkes 2006, 28; Foulkes and Murray 2005, 32). This distinguishes enclosures, such as those where hazel is the dominant species, as havens where it has been consciously and deliberately maintained. There is evidence of ongoing maintenance of the hazel and hawthorn at A1 and A7 in the form of recent branch cutting to accommodate movement through the site and evidence for the stem cutting of ivy to prevent it from damaging other trees. Such maintenance practices are encountered in most places where treed medieval enclosures exist in working farmland.

While there is conscious preservation and management of many sites in this locality, there is also equal evidence for the purposeful neglect and destruction of some enclosures at various points in the past. Map evidence can help to estimate when some of this destruction took place. Lismacaffry contains a *ráth* that appears to have been levelled prior to the creation of the 1st ed. OS maps *c.*1840. A *ráth* in Kilfintan appears to have been destroyed at some point between *c.*1840 and *c.*1900. There is another, in the northern portion of Coolnagun townland, that was surveyed in 1967 and described as ‘a small circular raised area or platform (approx. diam. 27m) enclosed by a bank (ext. H 1m) and wet waterlogged outer fosse’ (Coyne and O’Brien 2016), which has no surface, remains visible today. The levelling of monuments, such as these, presumes the removal of trees as a part of the process and, in some way, speaks of the role of trees as guardians of

medieval enclosures. Trees essentially restrict access to the banks and control both the means of approach and how people and animals interact with the earthwork. Without tree-cover and the benefit of its root networks and canopy shelter, access for browsing animals and farm machinery is increased, which may aid in a more rapid depletion of bank size. Thus, the loss of trees may herald the demise of an enclosure. A counterpoint to this are the stories and descriptions of 'forts' and 'fairy forts' collected by school children in 1937 for the National Folklore Commission. The frequent mentions of the 'forts', their trees and the dangers associated with interfering with them are reflective of their ongoing importance as managed resources, as much as it is a reflection of their role in expressing cultural identity.

Figure 37 Stem cutting of ivy to prevent damage to hawthorn. Site A7, Coolamber, Co. Westmeath.

5.4 Cluster B: Cooleagh Parish, Co. Tipperary

The area from Cashel to Cooleagh parish is populated with an unusual number of closely built and morphologically varied monuments (typically large multivallate *ráths* and concentric enclosures) which seems to be part of a wider regional trend (Figure 39).

Francis John Byrne (1973, 165) remarked in the opening lines of his chapter on Cashel in *Irish Kings and High Kings* that 'On entering the province of Munster we find ourselves in a subtly different atmosphere. In many respects Munster is a world to itself' (Byrne 1973, 165) and indeed we should expect a density of *ráth* enclosures of different kinds in the hinterland of the caput of the kings of Munster. The quadrivallate enclosure 'Rathnadrinna' in the townland of Lalor's Lot to the southeast of Cashel is perhaps the best known, but also as impressive (in size at least, and in vallation to some extent) are examples such as 'Shancashlaun' in Rosegreen, Foulkstown and the quadrivallate enclosure at Coolbaun crossroads in the townland of Cooleagh. It was borne in mind while examining the enclosures of the Cooleagh cluster in their regional context, that these were perhaps household lands of service families attached to the royal centre of Cashel. There is also a particularly high concentration of closely grouped and/or conjoined enclosures, such as the conjoined pair in Mortlestown townland just to the north of Cooleagh townland, and another pair in Lismoynan/St. Johnstown to the east. Straddling the primary route R689 at Coolbaun crossroads are a substantial trivallate *ráth* (B2), (labelled 'Lismortagh' in the 1st ed. OS map of 1839), and the aforementioned quadrivallate *ráth* B1 in Cooleagh townland (see Table below). The former is *c.*60m in diameter and the latter is *c.*100m in maximum diameter and they are separated by less than 30 meters. A similar relationship appears to exist between a concentric enclosure and a multivallate *ráth* 600m to the west in Grangebarry townland. Both of these monuments have been levelled, but are visible as crop-marks on the digital globe aerial imagery. About 1km south of Coolbaun crossroads, in the southern part of Cooleagh townland, there is another concentric enclosure (B3) which is in very close proximity to another large enclosure (diam. 50-60m N-S; 56m E-W) and three other associated earthworks.

Figure 38 Showing the clustered character and proximity of enclosures in this area as recorded on the 1st ed. OS map c. 1840. Some of the enclosures mapped here are visible only as crop marks today. (Coolbaun crossroads is the road junction beside the multivallate ráth B1 at the top of the image).

5.4.1 Landscape and Geographical setting

This cluster of sites is mostly in the parish of Cooleagh with investigation extending beyond its borders to a number of enclosures in Rathcool, St. Johnstown and Peppardstown parishes. The area is in the plain to the south-west of the Slieveardagh hills

along the basin of an un-named stream that flows southward to Fethard from Killenaule. This stream forms the eastern border of Cooleagh and Rathcool parishes and it is a tributary of the Clashawly River, which it joins at Fethard. The underlying bedrock in Cooleagh parish is essentially the muddy siltstone and silty mudstone that surround the sandstone, shale and fireclay that make up the Slieveardagh hills (Geological survey of Ireland). The soil type is fine loamy drift with siliceous stones, making it an agriculturally important area, ideally suited to stock rearing and dairying.

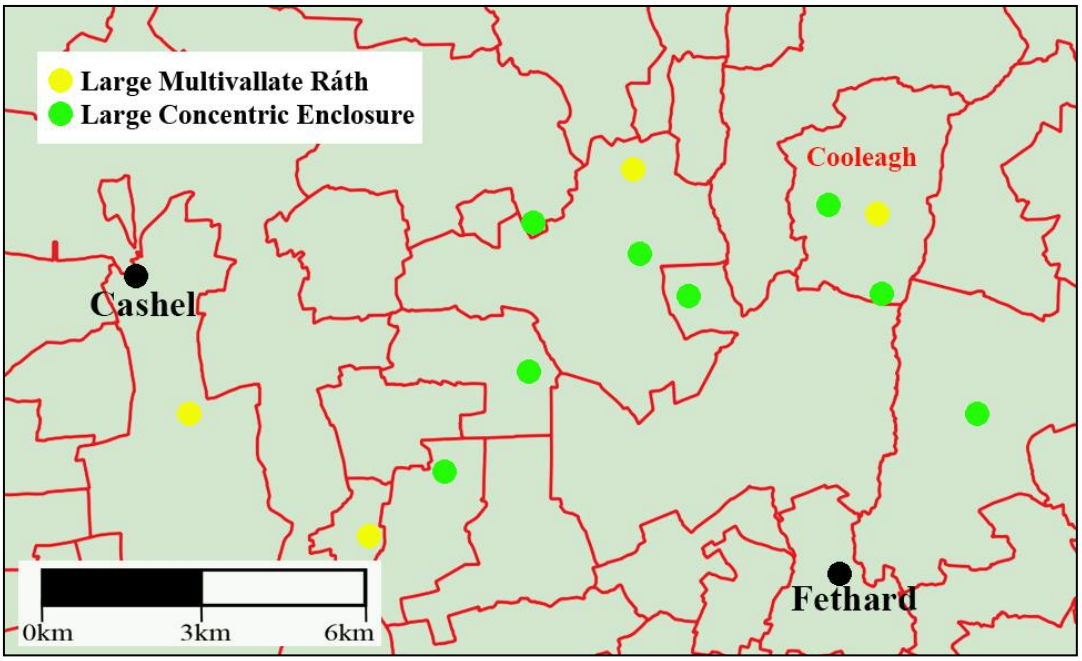

Figure 39 Large multivallate and concentric enclosures distributed across the parishes between Cashel and Cooleagh

5.4.2 Historical Background

Cashel was the early medieval royal centre of the Eóganachta dynasty who dominated southern Ireland from the late 6th to the 10th centuries (Ó Corráin 2001a, 30). Cluster B, centred on the parish Cooleagh 10km to the east of Cashel, is in the east of the Eóganachta territory at the border between Cashel and Ossory. This cluster is in the area at the end of the pass between the Slieveardagh hills and Slievenamon, as a traveller makes their way west from the Kilkenny area towards Cashel. Movement north - south between Killenaule and Fethard thus makes the Coolbaun crossroads, which is at the heart of this cluster, an important junction. According to Byrne (1973, 169) 'Access to Munster was restricted. The normal path for an army from the north was down through Leinster and across by Bealach Gabráin in southern Osraige, where the prehistoric hill-fort of Freestone Hill

guards the pass'. This point onward to Cashel would take any army on this route past Drangan and directly through the area of this study cluster in Cooleagh Parish. The plain east of Cashel and stretching south to Clonmel was known as Mag Femen (plain of Femen) and was occupied by a branch of the Múscraige people, the Muscraighe Airthir Feimin which means 'East of (mag) Femen' (Gleeson 2012), who were Eóganacht vassals. The Múscraige became the main source of income for the Eóganachta and their defence against other kingdoms (Byrne 1973; S. Duffy, MacShamhráin, and Moynes 2005). The Cooleagh cluster is in the northern portion of the kingdom of Airthir Femen and as such may represent household lands of the Múscraige around the precinct of Cashel.

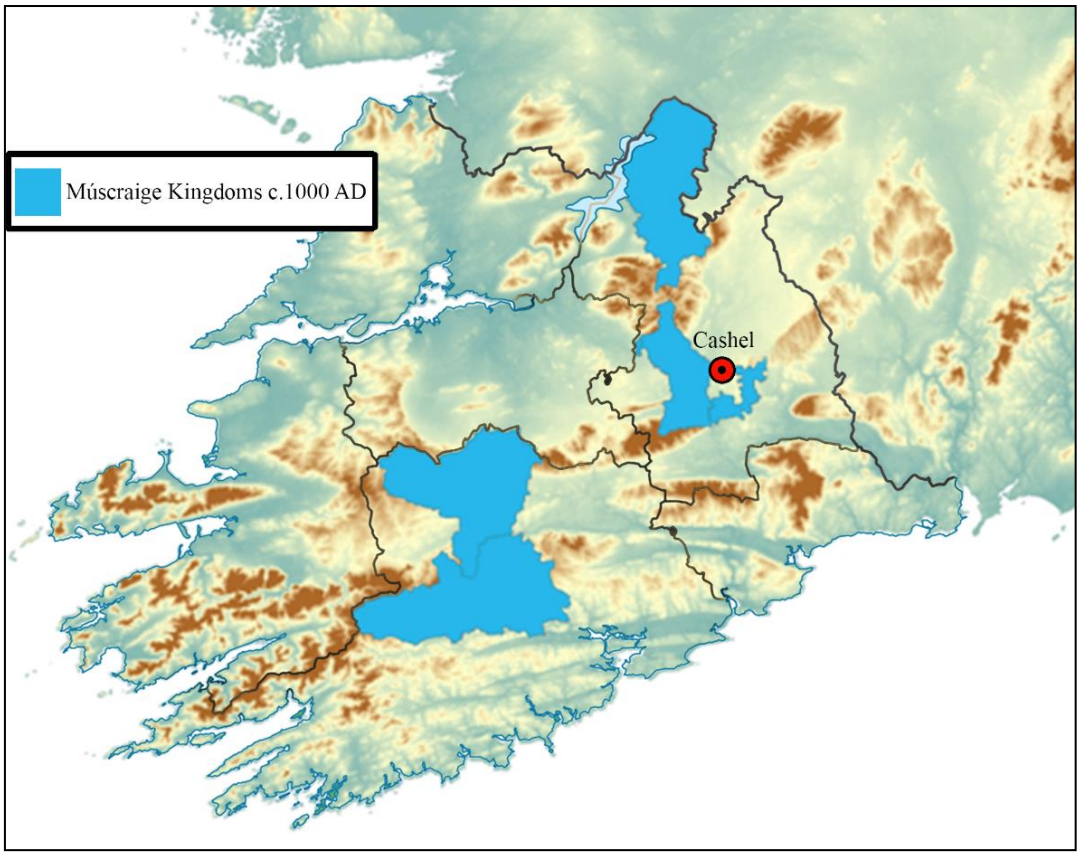

Figure 40 Constituent kingdom of the Múscraige polity in Munster c. 1000-1100AD

Cooleagh (An Cuailleach) is the name of the civil parish that contains this study cluster and it is also the name of one of its central townlands. This townland lies about 6km north of Fethard and contains two large enclosures with substantial tree-cover. The quadrivallate *ráth* B1 which supports a combination of CY2, CY3 and CY4 tree-cover and the concentric enclosure B4 which today only harbours CY4 tree-cover. O'Donovan's 1840 namebook entry notes 'Cuaileach' as meaning 'full of poles or tall straight trees'

(Ordnance Survey 1959). Records for this placename go back to 1200AD. William Petty's Down Survey[32] says of the barony of Middlethird in which this parish resides, 'This barony for the most part beinge arable and pastureable land to a very inconsiderable part. (…) In this Barony are noe timber woods, but a few ashes and groves and some oake serviceable for fire and plowboote.' 'Ploughboote' is an English legal term that describes the right of tenants to take from a lord's wood or forest the wood necessary for the repair of ploughs. The terms 'houseboote' and 'fireboote' describe similar rights pertaining to home repair and heating needs.

The townlands of this cluster contain a rich array of earthworks including many *ráth* enclosures and several moated sites. There are also the ruins of a medieval village in Mortlestown townland in Cooleagh parish. The townland of Coolanure which translates as 'the back or corner of the yew', with no extant enclosures, is separated from Cooleagh townland by Coolmore and Coolbaun to the south-west. Both of the latter contain enclosures with trees present.

5.4.3 Folklore Relating to Cluster B

The monuments in this cluster do not feature specifically in any of the recorded stories from the Schools' Collection (0.4.3), however, the collection contains several stories from the surrounding area that reiterate motifs pertaining to the dangers of interfering with the earthworks of 'fairy forts' or cutting the trees on a fort.

The motif of the 'forts' being protected by supernatural entities, (either fairies or animals), has various manifestations in this area. A popular trope is the seeking of gold or treasure in 'forts' only to be thwarted in the last moment by a wild or dangerous animal (a bull, bees, a wild cat, a black dog and a gander each occur in similar accounts). A wild cat is associated with a fort in Cathaganstown townland 3.6km NW of Cooleagh cross (NFC Vol. 0564, 282) and 1km further west the story is recorded of a big black dog that guards the fort in Knockforlagh townland (ibid, 281). Accounts of lights, music and dancing (attributed to the activities of 'fairies') being heard or seen coming from 'forts' at night are also a recurring motif in the folklore of this locality. These accounts further evoke the idea that the monuments are under the protection of supernatural forces and are best left undisturbed. The following story, related by a Martin Bourke of Ballaghboy, Ballinure

[32] See http://downsurvey.tcd.ie/down-survey-maps.php#bm=Middlethird&c=Tipperary

Co. Tipperary (which lies about 5km NW of the study area), illustrates how the trees on an enclosure may have been considered as supernatural entities that embody roles of guardianship on such sites;

> 'There is a story told by a man who lives in this neighbourhood about a fort which is in one of our fields. It is said that hundreds of years ago this fort was a round space enclosed by mounds of earth. The man who was the owner of the field at this time decided that he would throw the earth into the centre and make the fort on a level with the rest of the field. On the following morning when the work-men were ready to do this levelling they were surprised to find that any amount of fully grown white thorn bushes had sprang up during the night all over the fort. They went home without doing anything to the place, because they were afraid the fort was guarded by the good people' (NFC, Volume 0564, Page 343).

5.4.4 The Sites

Townland	Site No.	SMR No.	Site Type	Vallation	Tree-cover Category	Site Dimension	Trees
Cooleagh	B1	TS062-052	*ráth*	Quadrivallate	CY2	*c.*100m diam.	Hawthorn Hazel Ash Blackthorn Damson
Cooleagh/ Lismortagh	B 2	TS062-051	*ráth*	Tri-vallate	CY2		Hazel Elder Ash Hawthorn
Cooleagh	B 3	TS062-059001	Concentric enclosure	bivallate	CY4	*c.*100m diam.	
Milltown St. John	B 4	TS062-053	*ráth*	bivallate	CY2	*c.*60m diam.	
Milltown St. John	B 5	TS062-021	*ráth*	Univallate (possibly originally Multivallate)	CY2		Hawthorn Hazel Oak
Coolmore	B 6	TS062-084001	Moated site				
Coolmore	B 6	TS062-085	*ráth*	bivallate	CY1		Hazel Hawthorn
Coolbaun		TS062-046	*ráth*	univallate	?		?
Grangebarry Lismortagh		TS062-043	*ráth*	univallate	CY3		Hawthorn

Table 9 Study sites in the Cooleagh cluster

5.4.4.1 B1 Cooleagh (TS062-052)

This multivallate *ráth* is in the townland of Cooleagh at the junction known as Coolbaun crossroads (Figure 38 and Figure 41). The centre of the enclosure is a circular (20m diameter) area enclosed by four banks with intervening fosses. The innermost bank is about 8m wide at the base and 2.4m wide at the top followed by a wide, flat-bottomed fosse. The second bank is also 8m at the base and 1.5m wide at the top followed by a flat-bottomed fosse. The third bank is low and much narrower and steeper, 4.5m at base and 2.2m at top, followed by the narrowest fosse. The outermost bank has a basal width of 7.5m and 1.5 at the top. An outer fosse is evident in the north-west but toward the west it is truncated by the regional road R689. The tree-cover on this monument is typically an CY1 overstorey of ash and sycamore with an understorey of CY2 and CY3 hazels and hawthorns. Entering from the SW, the first bank presents very much as a berm where the wide flat walkway is like a corridor with hazel and ash on either side. Proceeding around this first bank / berm reveals that hazel is the dominant species. It presents as typical veteran stools very consistently spaced all around on both sides apart from a section on the east side where the banks are diminished and somewhat flattened into the field. (see Figure 42, Figure 43, Figure 44, Figure 45, Figure 46 and Figure 47 below)

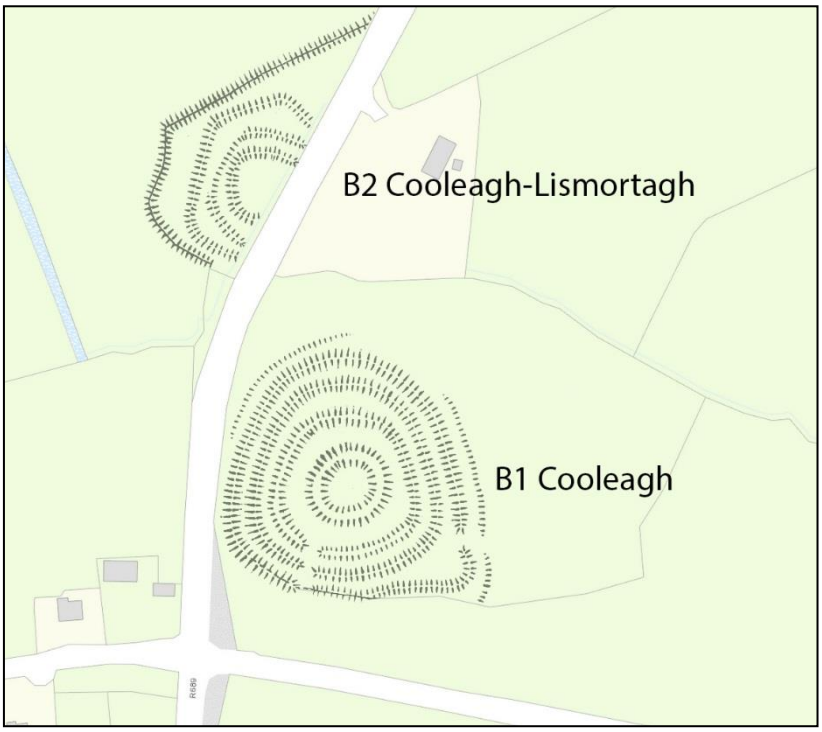

Figure 41 B1Cooleagh at Coolbaun crossroads and B2 Lismortagh, Co. Tipperary.

The eastern half of the interior of this fort is clear but marshy. The outer fosse on the north has a flow of water that originates in the southwestern section. This must be associated with a well that is marked on the OS map of *c*.1900 (Figure 41). The well is marked as a small circle in the middle of the first fosse at a point where the banks are cut, providing access to the widest interior fosse. It was not discernible as a distinct feature in the overgrowth and it is unknown whether it is an original feature. It appears, however, that the flow from this 'well' is ensuring that fosses are waterlogged. This enclosure is best preserved in its western half and northwestern sector. The four banks are still discernible throughout the whole structure. The bramble and bush in the western half of the interior is impenetrable, and the banks and fosses of the eastern half are very difficult to penetrate for the same reason. The field immediately to the east is marshy while to the south there is good pasture.

The stand is mostly hazel and ash with some holly present, and several hawthorn on the outer perimeter. On the western outer perimeter in particular there are several mature hawthorns growing from the counterscarp of the outer fosse and the outer scarp. In this sense it contains features of CY3 tree-cover, but the extent to which these hawthorns may have once formed a deliberately planted hedge is impossible to discern. There is a fairly consistent perimeter of tall ash trees interspersed with hazel all about the outer bank, and some on the second bank. Based on girth measurements that did not exceed 2.4m, none of the ash trees on this site could be considered of veteran status. Hazel is the dominant species on the three interior banks (Figure 44, Figure 45, Figure 46). It grows on the edges overlooking the fosses so that the flat-topped banks present as tree-lined berms (Figure 44, Figure 45). Many of the hazel stools are not as sizeable as other encountered stands of CY2 tree-cover in this study. This may be explained by the substantial overstorey of ash, which does not permit the hazel here to form its own broad canopy. Instead, it is forced into cycles of producing more stems and a more rapid stem turnover as a survival strategy (2.6) (see Tanentzap et al. 2012).

Figure 42 Showing hazel stools on the north-western section of the outer bank of B1 Cooleagh, Co. Tipperary

Figure 43 A view north along the innermost and widest fosse of B1 Cooleagh, Co. Tipperary.

Figure 44 A section of the bermed third bank (from the outside) in the western quadrant of B1 Cooleagh, Co. Tipperary.

Figure 45 Tree-lined top of outermost bermed bank in the south western quadrant of B1 Cooleagh, Co. Tipperary.

Figure 46 Tree-lined top of 2nd bank in the western section of B1 Cooleagh, Co. Tipperary

Hazel is present across the entire site and is very evidently situated on the top edges, both outer and inner, of the banks. This allows that their older branches reach out over the fosses while the tops of the banks are technically tree-lined berms. This phenomenon is encountered at several of the multivallate enclosures that are noted as having CY2 tree-cover in this study such as at Turin, Co. Mayo and Croagh North, Co. Clare (see 5.11 for further discussion).

Figure 47 Hazel stools and some sycamore on the inner scarp of the second bank of site B1 Cooleagh, Co. Tipperary.

5.4.4.2 B2 Cooleagh/ Lismortagh (TS 062-051)

Lismortagh (*Lios Muircheartaigh*) is recorded as Lysmoryerthy as early as 1305 in *CJR II*. 55. It contains several enclosures including a moated-site and three *ráth*s, one of which (B2), it shares with Mortlestown townland. This trivallate site (3 banks and fosses) is immediately north of site B1 (see Figure 41) and is truncated in its southeastern section by the road that separates both sites. It contains a mix of categories CY2, CY3 and CY4. There are substantial hazels in various states of collapse and regeneration. There is an overstorey of ash and a number of tall hawthorns. This site is well fenced and prohibits access to livestock. As a result, it is extremely overgrown with bramble, and extensively littered with fallen trees and branches, making most of the site inaccessible for detailed survey.

5.4.4.3 B3 Cooleagh (TS062-059001)

This concentric enclosure in Cooleagh townland lies 1km to the south of B1 (see Figure 38). Farrelly's (2002) description of this site for the archaeological survey of South Co. Tipperary noted that it was very overgrown with vegetation which remains an appropriate description of the site today. It is overgrown thick brambles, blackthorn, hawthorn understorey and overtopped by a tall and broad ash canopy. There was no apparent order in the positions of trees and a complete absence of hazel, thus creating an interesting contrast with B1. This site is fenced off to exclude livestock, which accounts for the level of inaccessibility due to overgrowth. Gaining access and traversing the outer bank is somewhat difficult due to the extent of overgrowth. There is a very wet intervening fosse with ash trees on its inner scarp and the interior is dominated by tall ash trees. There are some hawthorn and blackthorn but hazel is entirely absent throughout. In the middle of this enclosure there is a linear bank or wall about 40-50 cm high. The tree-cover here is CY4 making this site an unsuitable candidate for survey.

This site may have been subject to late landscaping, alterations and uses that site B1 did not. A drain has been cut into the southeastern section and there are some remains of low walls dividing sections of the interior. There is a medieval church and graveyard about 300m to the north of the concentric enclosure. Two other enclosures also flank this site, an enclosure which has been levelled lies 150m to the southwest, and a *ráth* about 150m to the east of which the only remains are the south-western portion is now incorporated into a field boundary. Being the closest to the church, these two enclosures are most likely

those referred to in the Civil Survey (1654-6), which mentions that there were 'on the lands of Cooleagh two little gardens of Gleabland, ditched about neare the Church' (Simington 1931, 1:175; Farrelly 2011) (see Figure 48). This is a rare example of late documentary evidence pertaining to the appropriation of earlier monuments for cultivation purposes. It raises intriguing questions about the dialogue and discourse between the Irish traditions of monument preservation and the improvement aspirations of the landowning elite.

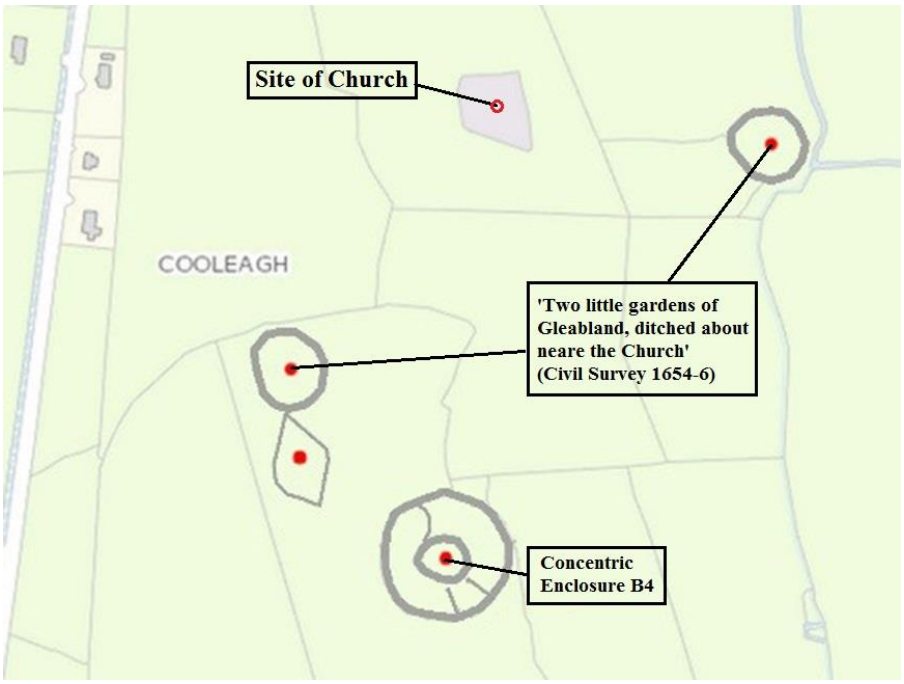

Figure 48 The arrangement of monuments in the Southern portion of Cooleagh townland.

5.4.4.4 B4 Milltown St. John (TS062-053)

One kilometre east of Coolbaun crossroads, in the townland of Milltown St. John, the road bisects *ráth* B4 (Figure 49). This monument has CY2 and CY3 tree-cover. The northern portion of this monument is defined by a raised semi-circular area enclosed by a bank with a steep scarp of over 1.6m in height. This is surrounded by a fosse and evidence for a much reduced outer bank that has most likely been backfilled into the fosse. This makes it easily browsed by livestock. This backfilling is further evidenced by comparison to the southern portion of the monument where the outer bank is better preserved and the fosse is much deeper. There are only three hazel stools surviving on the northern portion of this monument. Two of them are next to one another, 3m apart, on the eastern end of the inner bank and one less substantial specimen is on the diminished outer bank. close to the road

(see Figure 49). Cattle are excluded from the portion of this monument that is south of the road.

The edges of the scarp and counter-scarp of the fosse on the southern portion are dominated by hazel. A wire fence and a dense barrier of tight hazel and blackthorn on the outer bank, and the steepness of the inner scarp make reaching the interior very difficult. Both the inner bank and the interior are also densely overgrown.

Figure 49 B4 Milltown St. John. showing trees mapped on the banks of the northern half of the enclosure. This site is bisected by the road with contrasting tree-cover on either side

Figure 50 Hazels on eastern side of inner bank of site B4 Milltown St. John

5.4.4.5 B5 Milltown St. John (TS062-021)

In open pasture, half a kilometre to the north of B4, is *ráth* B5 with CY2 and CY3 tree-cover. This site consists of an oval area 36m N-S by 33m E-W enclosed by a low 6m wide bank and 10m wide outer fosse. The fosse is notably backfilled in the S sector. The dimensions of this site, the degraded bank and the backfilling of the fosse indicate that this site was most likely a bivallate enclosure and that the outer bank has been filled into the fosse. Some of the hawthorns on the outer perimeter of this enclosure are unusually tall reaching to between 10 and 12 meters (Figure 51). The site is browsed by cattle and regularly cleared of deadwood by the landowners who reported that they otherwise never interfere with the trees. There is quite a lot of bramble and blackthorn in the interior, and the banks on the eastern portion are heavily overgrown making a mapping survey impossible. There is a magnificent veteran oak growing from the eastern bank and several very tall stemmed hawthorns. The oak is in its full maturity and estimated to be between 200 and 300 years old. An oak of similar stature and age grows on the outer bank of A7 Coolamber. While it is likely that these oak trees became established upon these enclosures through natural processes, their presence today may be a good indication of ongoing protection and status being afforded to the trees on these monuments in the modern era.

Figure 51 Unusually tall hawthorns growing on the northern outer edge of B5 Milltown St. John, Co. Tipperary

Figure 52 Mature oak growing from the bank on the eastern side of B5 Milltown St. John, Co. Tipperary

5.4.4.6 B6 and B7 Coolmore (TS 062-084 and TS062-085)

There are two more enclosures 650m S of the Cooleagh concentric enclosure (TS062-059001). B6 is a circular moated site (TS062-084) which appears to have a tree-lined berm (similar to many category 2 enclosures) and B7 is a *ráth* (TS062-085), which has an unusual hollow feature at its centre that was described by Farrelly in 2014 as 'quite a steep-sided, flat-bottomed depression (dims. 13.5m x 15.4m; D 0.84-1.35m)'. There are hawthorns on the outer banks and hazel trees are dispersed throughout both of these sites. The hazels do not have sizeable stools, nor are they particular to the banks of the enclosure and they lack the appearance of intentional planting. There is no discernible order or pattern to the positions of the trees on these sites and there is a high probability that both monuments were modified as components of late landscaping activities associated with Coolmore house.

5.4.5 Summary of Key Findings

CY2 and CY3 tree-cover are again significantly encountered in this cluster. Notable too, is the fact that hazel is virtually confined to the medieval settlement enclosures where its presence is substantial. While the degree of monument preservation in this area is high, there is also plenty of evidence for episodes of monument destruction. Past attitudes to the enclosures and indeed the trees upon them also appear to be played out in this landscape in other subtle ways. The manner in which some of the enclosures in this locality have been bisected or truncated by roads speaks, to a certain degree, of contention in the past between the tradition of curating monuments and a desire to appropriate them for new purposes. The *ráth* B4, and another enclosure (TS062-054) 100m further east in the townland of Milltown St. John, appear to have been quite deliberately targeted during the construction of the road that bisects them, which most likely occurred in association with landscape management and design undertaken at St. Johnstown during the era of improvement. The trivallate enclosure B2 at Coolbaun crossroads is truncated by the R689 as it passes between it and the quadrivallate *ráth* B1. The numerous stories from the area that are recorded in the archives of the National Folklore Commission relating the dangers of interfering with 'forts' and their trees highlights the contentious nature of such interference with monuments.

The five enclosures with varied manifestations of CY2 tree-cover in this cluster illustrate the effects of different treatments by landowners of such sites. The greatest contrast is,

once again, between enclosures that permit browsing livestock and those that do not. Where livestock is excluded, the sites become heavily overgrown with vegetation. The hazel on these sites tend to appear as a flourish of younger stems with an occasional few growing tall and thick in an attempt to reach the canopy. Hazel trees on sites where livestock browse tend to have several large thick and spreading stems that form an impressive canopy. Livestock eat whatever young shoots they can reach, which aids in the process of some stems forming into thick canopy supporters. This contrast is best observed at site B4 in Milltown St. John where the monument is cut in two by a tertiary road. Hazel is the dominant species on both banks overlooking the fosse in the southern half of this monument where livestock have been excluded. Only three hazels exist on the northern half. Livestock browse the northern half and its three veteran hazels have thick arching stems producing a broad canopy. The effect has been that while the morphology of the bank and fosse is better preserved in the southern portion, its interior is virtually inaccessible due to overgrowth. The northern half has undergone infilling of its outer bank into the fosse.

Ash is the dominant hedgerow species in this locality. There are a number of hazels in the hedgerow along the road that passes between sites B1 and B2 but otherwise hazel is notably absent from the hedgerows in this locality. Its presence on this stretch of road may be a result of migration from these two substantial enclosures.

5.5 Cluster C: Clooney, Co. Clare

This cluster is in southeast Co. Clare in the parish of Clooney. Thirteen enclosures with trees that are designated as *ráth* in the record of sites and monuments and are spread across the six adjoining townlands of Rathclooney(5), Rylane(4), Knockanoura(2), Ballyvroghaun Eighter(1) and Cloonawillin(1) (Figure 53).

The townland of Rylane contains four enclosures with trees in a variety of states. In the southern part of Rylane there are two monuments labelled as Knocksallaghmore fort (C1) and Knocksallaghbeg fort (C2) on the 1st ed. OS map of *c*.1838. 'Knocksallagh' is a compound word formed from the Irish words for hill '*cnoc*' and willow '*saileach*' and thus translates as 'willow hill'. The qualifiers 'more' (*mór*) and 'beg' (*beag*) mean large and small respectively, hence we have 'small willow hill fort' and the 'big willow hill fort'. Willow thrives on wet land and may have been used at these sites to help control the water content in the soil.

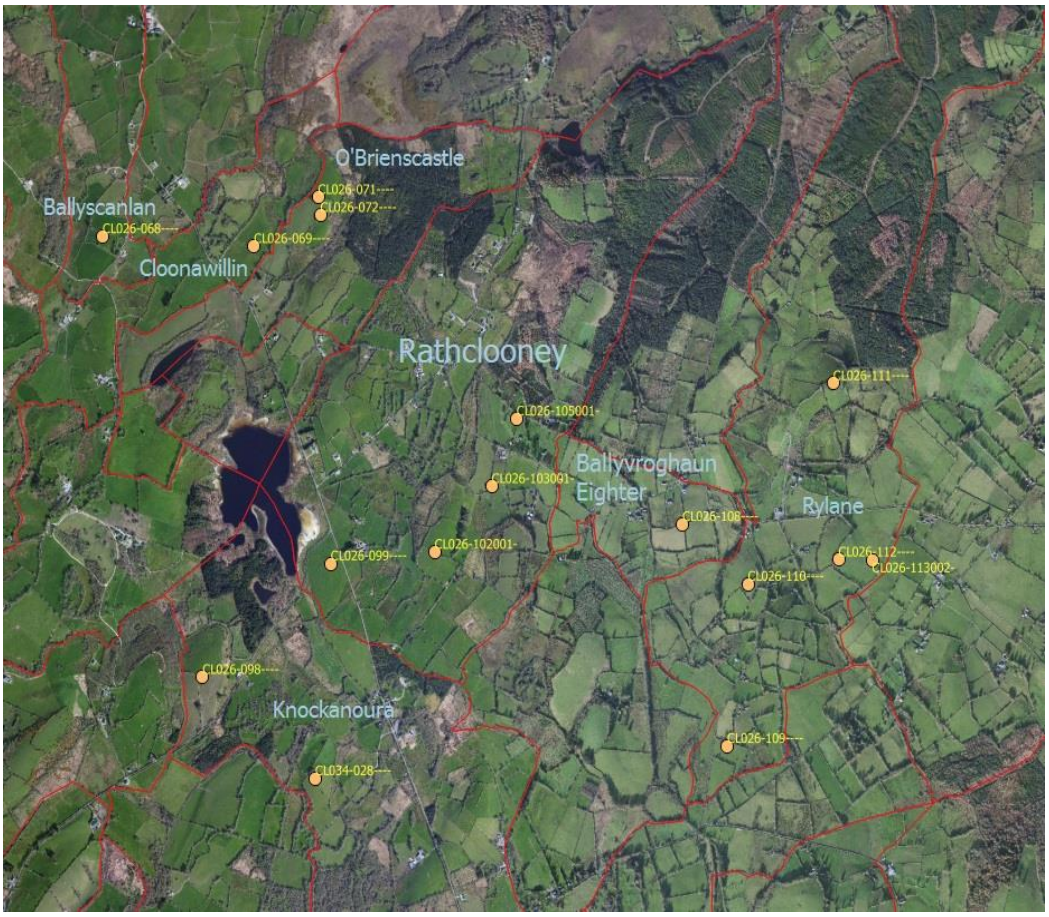

Figure 53 Cluster C townland boundaries and locations of treed monuments of interest. (Image source: https://www.bing.com/maps)

Other enclosures and places in Rathclooney and Rylane with tree-associated names are depicted on the 1st ed. Ordnance Survey maps. There is a small settlement labelled Attycuil, *Áit Tí Coill* (The house of the place of the hazel) in the townland of Rathclooney. There is a *ráth* adjacent to the settlement which may be the original site of *Áit Tí Coill*. Unfortunately, there is no living indication as to why this place was given this name. The closest hazel trees exist in a hedgerow about 400m from this site. In the northern part of Rylane townland, there is a small settlement labelled 'Derrynagullion' on the 1st ed. OS map of *c*. 1938 and although there is no officially confirmed record of the Irish name of this place, it is almost certainly derived from a compound of the Irish words for an oakwood '*Doire*' and the word for the holly tree '*Cuillenn*'. The name Derrynagullion would then translate as 'The oakwood of the Holly'.

5.5.1 Landscape and Geographical setting

Situated among the drumlins at the southwestern extreme of the Slieve Aughty Mountains, Co. Galway, the medieval enclosures in this locality tend to occupy the high ground. This gives them highly visible profiles and affords a high degree of intervisibility between sites. This area has deep well-drained mineral soils derived from mainly non-calcareous parent materials, chiefly Devonian sandstone till on the drumlins, and carboniferous limestone till in the lower ground between them. The area is also interspersed with pockets of cutaway/cut-over peat.

5.5.2 Historical Background

The Rylane cluster is in the parish of Clooney, and along with the parishes of Quin, Doora, Inchicronan, Kilmurrynagall, Kilraghtis, Templemaley and Tulla, make up the early medieval territory of the Uí Chaissíne, a line of the Dál gCais who became dominant in Munster in the 10th century. Clooney and Quin arguably make up the 10th -12th century royal demesne of the Dál gCais whose place of assembly and site of royal inauguration was Magh Adhair in the townland of Toonagh which lies about 5km south of Rylane in the southern portion of Clooney parish. 'At least five kings of Uí Chaissine are recorded between 1014 and 1151' (MacCotter 2012, 193) starting with Brian Bóruma and thus producing the Ó Briain lineage. Despite remaining outside of Anglo-Norman control, this territory is recorded as the Anglo-Norman cantred of Ocassin in the 13th century and is today co-extensive with the modern barony of Bunratty Upper and the parish of Tulla in the neighbouring barony of Tulla Upper. The partition of Munster in 1118 created the Uí Bhriain kingdom of Tuadh Mhumhain (Thomond) and the Mac Cartaigh kingdom of Deas Mhumhain (Desmond). Thomond was made up of the modern counties of Clare, Limerick and parts of Tipperary, and existed largely outside Anglo-Norman control until the 16th century.

5.5.3 Folklore Relating to Cluster C

A story about Naughton's fort in Rylane, told by then 67-year-old Martin Vaughan, tells of a cat in a hole in the fort guarding a pot of gold (NFC, Vol. 0593, 199- 200). Stories such as this are common and interesting in the sense that they simultaneously set up old enclosures as places with the potential to provide a reward, and to bring harm to those who would interfere with them, perhaps indicating that the treasure lies in treating them

prudently. In other words, the wilful destruction of monuments for selfish reasons will lead to loss while their prudent care, (even if it involves some interference), preserves the rewards for posterity. In this view the treasure being guarded alludes to knowledge and identity. The following story by informant Tomás O hÓgáin of Tome, Co. Clare pertains to the dangers of interfering with old enclosures,

> ‘There is a fort situated about a mile from Scariff in the Co. Clare. This fort covered a fairly good rich piece of land. The owner of the place thought to dig this land but then he thought of the danger of digging a fort. He stuck the spade in the middle of the fort in the evening and he said aloud "if I can not dig this place have the spade knocked in the morning. The man got up very early the next morning and he went out to the fort. To his surprise he found the spade knocked and he went back home again and he never dared to go near the fort or dig it afterwards’ (NFC, Vol. 0590, 088).

Thomas Whelan from Drumbonniv, Co. Clare relates a different version of this trope. This time a man named John Nash stuck his spade in the middle of the fort and left it overnight with the intention of ploughing the enclosure if the spade remained standing in the morning. In this version the spade remained standing and Nash carried out the ploughing which resulted in the death of every beast he put in the field after that. Thomas Whelan related another story about a large fort in Milltown, Tulla, in which the owner, John Conheady started digging which resulted in his two daughters falling ill and one of them dying (NFC, Vol. 0593, 201).

Thomas Whelan is also reported as the informant of the following report:

> ‘In a neighbour's farm there is a large fort, surrounded by a high mound of earth on which grow ancient whitethorns. It is supposed to be haunted by fairies, as music was often heard under the bushes at the dead hour of night.
>
> In my grandfather's farm in Rathclooney, which is about six miles north-east of Ennis there is a hill called "Cnocnaratha". In it there are four forts supposed to have been built by Danes, who intended to settle there, but now the smallest is supposed to be haunted by fairies. At night queer churning sounds like a stick hitting the walls of an underground room are heard in this fort.
>
> None of the inhabitants of these districts ever interfere with these forts, as it is considered unlucky to do so. The only names that forts are called are, "lios, fort, rath and cathair"’ (NFC, Vol. 0593, 059-060).

A story from a Mr. Martin Kelly of Durra, Ennis tells the following of a fort on McFalvey’s farm in Spancilhill.

> 'One day when McFalvey cut a bush in it to fence a gap, he was struck blind, but when he left back the bush his sight was restored again' (NFC, Vol. 0593, 053).

The following account is attributed to Mr. James Walsh of Kilduff, Tulla, Co. Clare,

> 'A Fort is supposed to be the home of the fairies. In every Fort there are four white thorns and outside those bushes there is the remains of a trench all round it. It is supposed to be unlucky for any person to clear those bushes. There is a Fort about a half a mile from the school. People are very afraid of the fairies to pass by a fort at night. A fort is usually to be seen on the top of a high hill' (NFC, Vol. 0590C, 027-028).

5.5.4 The Sites

Townland	No. in appendix	SMR No.	Site Type	Vallation	Trees Category*	Site Dimension	Trees
Rylane	C3	CL026-112	*ráth*	bivallate	CY2	*c*.55m	Hazel Hawthorn
Rylane	C2	CL026-110	*ráth*	univallate	CY3	*c*.36	Hawthorn Ash
Rylane	C1	CL026-109	*ráth*	univallate	CY4	43m x 44m	Hawthorn
Rylane	C4	CL026-111	*ráth*	univallate	CY4		Hazel Ash Gorse Hawthorn Elder
Ballyvrogha un Eighter	C	CL026-108	*ráth*	univallate	CY3	30m diam.	Hawthorn
Rathclooney	C5	CL026-105001	*ráth*	univallate	CY4	38m. diam.	Holly Ash Whitethorn 1 Hazel
Rathclooney	C8	CL026-103001	*ráth*	univallate	CY3	35m diam.	Hawthorn
Rathclooney	C7	CL026-102001	*ráth*	univallate	CY3 CY4	37m. diam.	Blackthorn Hawthorn
Rathclooney	C6	CL026-099	*ráth*	univallate	CY3	36m. diam.	Hawthorn

Table 10 Study sites in the Rylane/Rathclooney cluster

5.5.4.1 C1 Rylane (Knocksallaghmore CL 026-109)

Although named as a *ráth* in the sites and monuments database, Knocksallaghmore fort has a rectilinear plan and a decidedly wet fosse, suggesting that it may in fact be a moated-

site. The type of tree-cover appears to be CY4 throughout, with no apparent order discernible on visual inspection. Hazel was not identified at this site. There is no substantial presence of willow in this townland today. However, the landowner informed me that the downslope southeast from Knocksallaghmore was once abounding in willow trees that were rooted out and removed *c*. 20 years ago in an act of land reclamation. This area is quite marshy and contains a lot of rushes (*juncus congloeratus*) which favour cold and wet conditions. It was noted that the fosse of C1 was quite soft and wet despite the fact that this monument is situated on the brow of the hill at the end of the ridge that defines the southern part of Rylane townland.

The monument today is quite overgrown with vegetation and impenetrable, with specimens of whitethorn, holly and hawthorn visible from the outside. It was very difficult to discern the species that occupied the greater portion of the site, but the landowner reported that he could remember a time when the interior was clear and that in his father's time, they used to cut hay in there.

Despite the fact that both C1 and C2 (below) are on the crest of their respective hills, the fields that they are in are marshy and are abounding in reeds.

5.5.4.2 C2 Rylane (Knocksallaghbeg)

The enclosure C2 Rylane, labelled 'Knocksallaghbeg fort' on the 1st ed. OS map, lies 700m north of C1 (Knocksallaghmore fort) near the summit and on the north-facing slope of a steep hill, with commanding views in all directions. The single bank of C2 has a ring of mature hawthorn trees on its bank, similar to A2 Lismacaffry in Co. Westmeath. Despite its location on the top of the hill, the interior is quite waterlogged, has an abundant growth of rushes dispersed throughout, and is entirely clear of woody growth. There are stony/rock inclusions apparent in the fabric of the insubstantial bank, and only the very faint suggestion of an outer fosse. It is possible that this site once had a more substantial bank and fosse and that the bulk of material from the bank has either slipped to fill the fosse or was deliberately backfilled into it, or that an outer bank has been backfilled into the fosse. Among the 31 hawthorns, there are three ash trees on the east bank of the enclosure and one small hazel on the north bank.

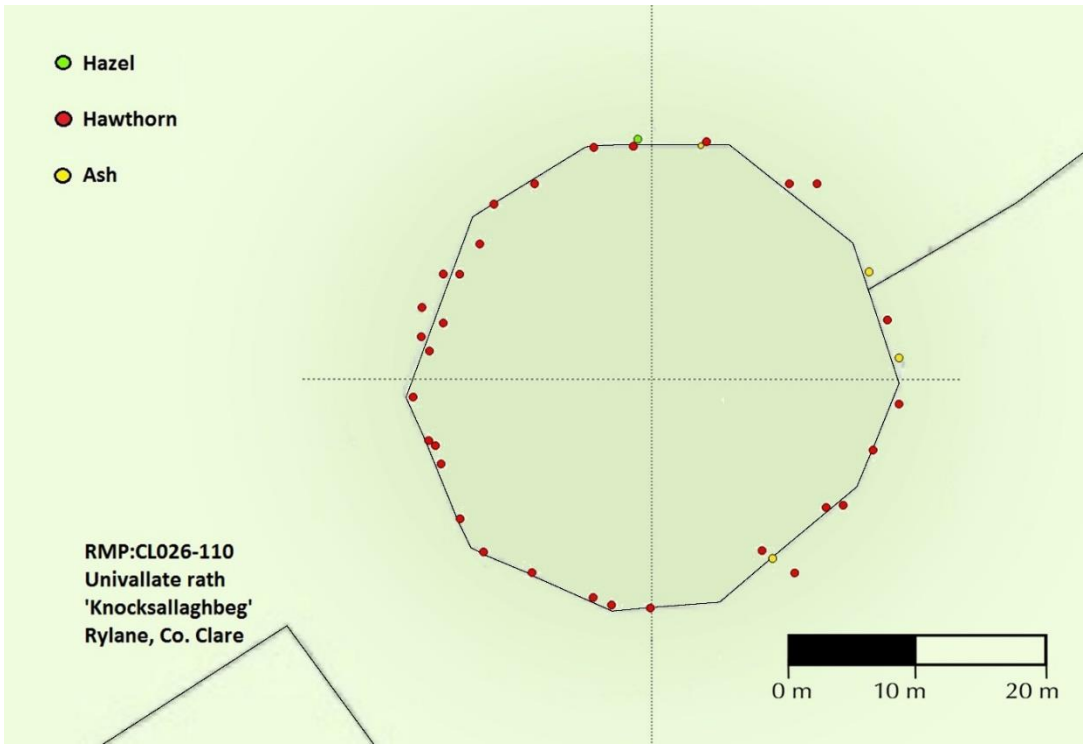

Figure 54 C2 Rylane 'Knocksallaghbeg fort' showing layout of trees on the bank

5.5.4.3 C3 Rylane, Co. Clare (CL026-112)

A little further east is site C3 Rylane, a bivallate *ráth* that supports a variety of tree species. The landowner offered the local opinion that this site, although not the largest in the locality, is the most important as it is at the centre of a cluster of five enclosures and has intervisibility with them all, thus offering a higher status to its occupier by virtue of being able to see all the others. Height data analysis using Google Earths' viewshed analysis tool verifies that there is indeed a remarkable degree of intervisibility between the enclosures in this area. However, it appears that the univallate enclosure of Knocksallaghbeg, C2 Rylane, is the site that offers a view of the most of its neighbours.

The dominant species on site C3 is hazel which is reasonably consistent in its distribution upon the edges of both banks. This site also supports quite a lot of holly, six hawthorn, three willow (with one that wandered curiously around the fosse in the south end), a close group of medium sycamore stems, and several blackthorn bushes.

Figure 55 Large hazel stool on the E inner bank of C3 Rylane, Co. Clare showing an array of stem ages

A gouge corer was used to obtain a soil sample from the middle of the waterlogged fosse in the western quadrant of the site (ITM 543545, 682011) for the purposes of pollen analysis. The sample obtained at Rylane, Co. Clare was 0.53m in depth, quite wet and light brown to sand brown at the bottom, and more chocolate brown at the centre. The top 0.10m appeared quite churned up due to the use of the site by browsing animals. After processing samples for analysis of its pollen content, it was discovered that this core contained very little pollen and it was concluded that the waterlogged condition of the fosse was not a permanent feature of the site. Results of all pollen analysis are discussed in section 5.10 below.

5.5.4.4 C4 Rylane (CL026-111)

This site is heavily vegetated and well fenced to exclude browsing livestock. It is best categorised as having CY4 tree-cover. The outer perimeter has some hazel, ash, gorse, hawthorn, elder and holly visible. The fosse is extensively overgrown with brambles, and difficult to traverse. The interior is likewise overgrown with a mixture of the above and some large willow. Some of the holly trees in the interior are also quite large. There is no discernible order or layout to these trees and navigation within this enclosure is severely hampered by extensive branchfall throughout.

5.5.4.5 C5 Attycuil (CL026-105001)

C5 is a *ráth* adjacent to a settlement cluster named Attycuil (*Áit tí Cuill*) on the 1st ed. OS maps. This *ráth* was primarily full of holly, ash and whitethorn. There was one young hazel present and a notable scarcity of hawthorn. The tree-cover on this site was categorised as CY4 and did not contain any particularly old growth specimens. It was concluded that this site was not suitable for this study. However, some of the hedgerows just a little to the east of C5 did support quite a lot of hazel and may indicate an on-going association with the Attycuil settlement.

5.5.4.6 C6 Rathclooney

Rathclooney contains three other *ráth*s that support trees. In the 1st and 2nd edition OS maps site C6 is labelled as Cloonalough fort, site C7 is labelled as Kilbay fort and site C8 is un-named. Hawthorn trees are identifiable on the OSI 2005 aerial image of this area due to the photographs being taken at the time of year when their white flowers are in full bloom. The high concentration of hawthorn on these monuments is notable by comparison to the presence of hawthorn in the hedgerows.

Figure 56 1. C6, 2. C7, 3 C8 and the location of Attycuil. The white flowers of the hawthorn are clearly visible on the trees on the numbered monuments and in the hedgerows.

5.5.5 Summary of Key Findings for Cluster C

In a similar fashion to the cluster in Co. Monaghan (below), the enclosures in the Rylane/Rathclooney cluster tend to occupy the high points of the hills and ridges, with perhaps an apparent concern for intervisibility between sites. The presence of CY2 tree-cover was sparse, being found only upon 2 of the 9 enclosures examined in the locality. However, the two examples where it did occur were typical of CY2 tree-cover found at most other sites in all the study clusters. Consistent use of hawthorn was certainly a more common feature. A sample core of fosse fill material was extracted from site C3 in Rylane for the purposes of pollen analysis. It was found that the conditions here were not suited to the preservation of pollen and very little could be ascertained about the vegetation history at this site using this method.

5.6 Cluster D: Trough, Co. Monaghan

5.6.1 Landscape and Geographical Setting

This study cluster is dispersed among the lowland glacial drumlins around the town of Emyvale in the barony of Truagh in the northernmost portion of Co. Monaghan. 'The underlying geography of the barony of Truagh is Carboniferous limestone. Slieve Beagh to the north-west is an upland plateau of blanket bog, the underlying solid geology is Dinantian sandstone and Upper Carboniferous sandstones and shales' (McDermott 2010, 375–76). The medieval settlement enclosures tend to occupy the agriculturally rich high ground of the drumlin tops in this area. Intervisibilty between these sites is a somewhat characteristic feature of this settlement landscape, which makes it similar to the Rylane cluster in Co. Clare. Wooded valleys between the drumlins that accommodate a system of streams and small lakes are also characteristic of this area, and McDermott has shown that the majority of townland boundaries in north Co. Monaghan followed topographic features such as the streamlet network (McDermott 2010, 390, 2010b, 82–85).

5.6.2 Historical Background

A particular portion of this study area has already been the subject of a medieval landscape investigation by McDermott (2010) in which she examined the '12 tates of McKenna' as they are defined in the Cromwellian Books of Survey and Distribution, (MFS 2/1-9; Shirley 1879, 559–84). The McKennas were the lords of Truagh who occupied this area

from the 13th century to the early 17th century. The '12 tates' were the lands granted to Patrick McKenna in the 1591 land settlement. They were the personal demesne lands of the McKenna chief (McDermott 2010, 392) and included the modern townlands of Tully, Derrygassan Lower, Derrygassan Upper, Pullis, Desert, Portinaghy, Killycooly, Emy and Bracklagh. There are six recorded monuments within the '12 tates', which include two *ráth*s in Tully townland (one of which is now destroyed), a *ráth* in Pullis, a *ráth* in Emy and a *crannóg* on Emy Lough. The placename Pullis indicates a *pailís,* (see 1.7) however, unlike the *pailís* at Cloonfree, Co. Roscommon (5.9) which was situated on a moated site, the only identifiable enclosure at Pullis was a *ráth* which has in now destroyed but is still identifiable as a low treeless, grass covered mound (McDermott 2010, 399-400).

McDermott argues that the late medieval occupation of settlement enclosure forms in this area is an important fact, prefacing her argument with the observation that towerhouses or other more easily datable settlement forms are absent in this landscape (McDermott 2010, 373). She suggests that 'The known archaeological landscape, place-name and cartographic evidence all suggest that Gaelic Irish settlement in this area of south Ulster continued to focus on native enclosed settlement forms during the early modern period' (ibid).

5.6.3 Folklore Relating to Cluster D

As with Cluster A and Cluster B, the folklore recorded in the NFC Schools' Collection relating to the medieval settlement enclosures in this area is populated with some standard recurring motifs. Stories relating to 'fairy-forts', warnings against interference with them and severe consequences for damaging the trees upon them are well represented here. A Mr. E. McKenna from Killybrone tells a story of a man who 'thought well of stubbing or levelling this fort to make it fit for tillage and put some crop in it. In doing so he came at the image or figure of a child composed of ordinary clay' and took it home. His livestock start to cause ructions and the figure of the child begins to laugh and warns of further consequences unless it is returned to the fort and the fort is left alone (NFC, Vol. 0959, 201).

The motifs of hidden gold or treasure buried in a 'fort' and a wild animal coming out of a fort, which were also encountered in the folklore of Clusters B and C, recur here in a similar way. For example, a story collected by Bernadette McKenna of Mullanana llog reads,

> 'There is supposed to be a crock of gold to be found in Mullanna log. There is a fort on top of this hill and, it's in this fort that the treasure is supposed to be hidden. Some man dug for it and was chased by some animal. The hole is visible to this day.' (NFC, Vol. 0959, 089).

In a similar vein, a Bernard McKenna relates that a black cat comes out of a fort in Curkin townland (3km NW of Emyvale) once every seven years and 'if anyone managed to see it and keep watching it coming back, that person would find out the whereabouts of a crock of gold' (ibid, 088).

The trees feature as important elements of the enclosures in many descriptions. For example, John McElmeel of Corry, Co. Monaghan describes whitethorn trees on the fort in Killyslavin, Mulnafinnock as a fort of shrubbery and whitethorn bushes, and Raflaconny as a large fort of shrubbery covering an Irish acre of ground. A story from an un-named informant reports that the smaller fort in Liskenna townland is surrounded by 'a fairly high embankment and all closely grown over along the edge of the mound with strong whitethorn trees and bushes'. The trees are often described in a manner that indicates their function as enclosing elements that create the space within which the supernatural elements are contained. One such account reads,

> 'There is a fort in Mullabrian and it is surrounded with bushes. There is an entrance through which the people go out and, in. The fairies sing (sang) very nice sweet music here and (everybody) people (were listening) listen to them whenever they are going by' (NFC, Vol. 0959, 089).

Removing or cutting trees on medieval enclosures is variously cited as causing the sickness or death of horses and cattle, or bringing sickness, bad luck and even death to the perpetrators or members of their family. However, the stories also variously relate that the ill-luck can be undone by returning the trees or cut branches to the place from where they were removed. A Mr. W. Wright of Elvey, Co. Monaghan related the story that when he was young, he was ploughing around the fort on his land when a small man with a red hat put the bushes he had cut back and cursed the field whereon they stood to never again yield crops (NFC, Vol. 0958, 320). This folk motif is recurrent in relation to trees and medieval enclosures. If trees are removed, they must be replaced is the message.

The following story collected by Eileen McKenna of Derryhallagh, Emyvale and titled *The Story of Tully Fort* illustrates a number of these motifs in detail.

> ‘About eighty years ago there were Fairies in a fort called Tully Fort. The family that owned this fort was named Mc Kenna. The fort was at the gable of their dwelling house.
>
> The old woman that lived there eighty years ago could hear the fairies singing and dancing at night when she would be sitting at the fireside.
>
> They used to come in the form of “begging women" in the daytime, One day the old man of the house was removing a hedge in the fort and one of these poor women called for some tea. Tea was not common at that time but the woman of the house gave her a little tea. After she had taken the tea she told the woman of the house to tell her husband to replace the hedge which he had removed, the same, as it belonged to the fairies or "good people". If they did not that, they would come to a terrible loss of cattle, or something else. When she was leaving the old woman of the house went out to the street with her, and the poor woman disappeared and the old woman of the house could not see where she went.
>
> After the ditch was replaced the same poor woman came back again and told the woman of the house that they would never want for anything when they had replaced the ditch again. The old woman of the house believed this poor woman was a fairy and did all she told her and they never interfered with the fort since or never cut a bush on it. Tully Fort is situated in the townland of Tully in the parish of Donagh Co Monaghan and is about 1 and a half miles south east of the village of Emyvale. This story relating to the fort was told to me by Mrs Margaret Mc Murrough who is aged about 86 years and resides in Tully’ (NFC, Vol. 0960, 036).

5.6.4 The Sites

Emy and Tully townlands contain the only extant *ráth* enclosures within the ‘12 tates’. They are both heavily treed. However, many neighbouring townlands contain suitable candidate enclosures. Due to problems encountered gaining access and permissions at several of the sites in the initial chosen cluster, the study area was expanded to include some well treed enclosures that lie about four miles to the north of Emyvale, near the Co. Tyrone border.

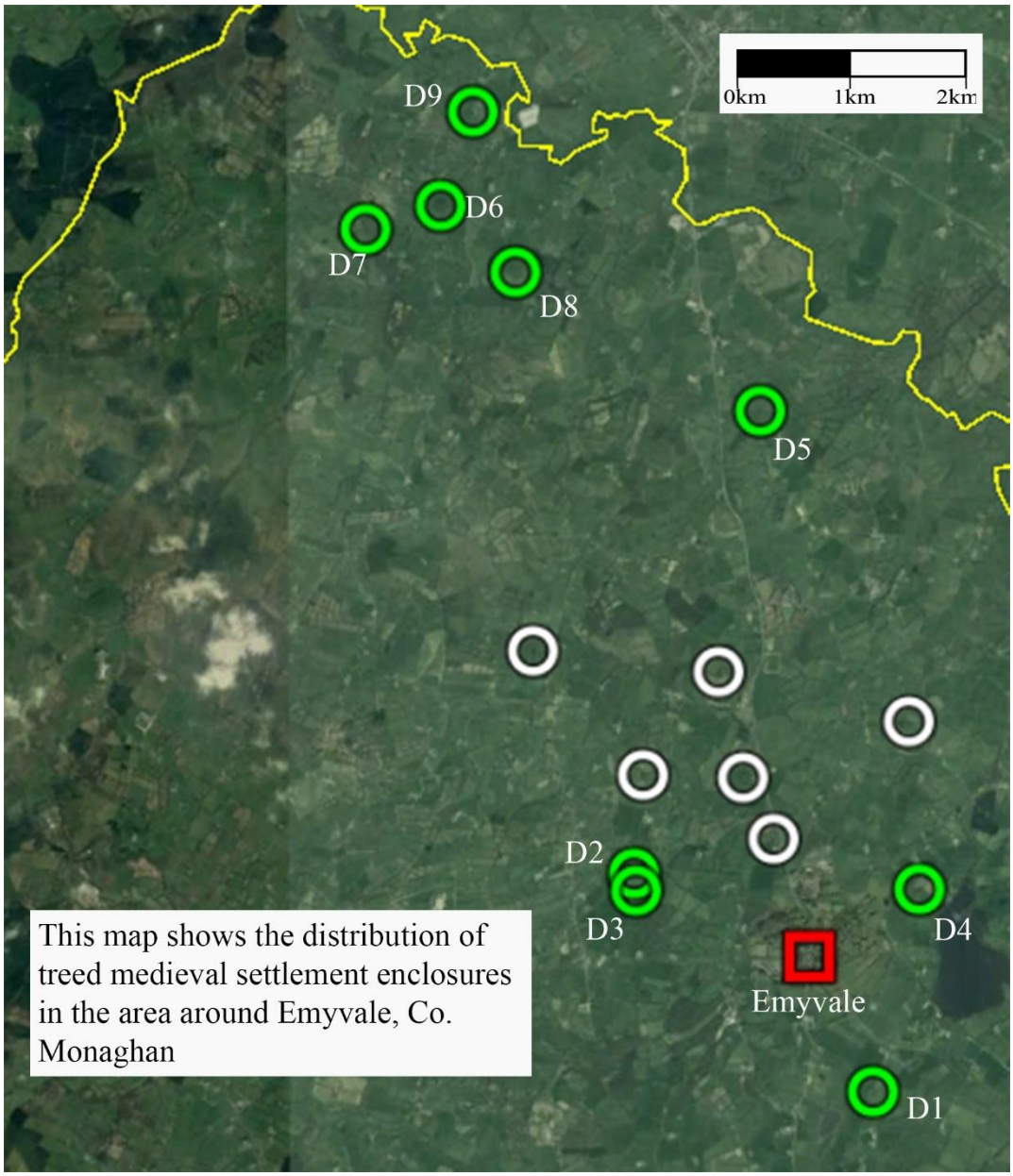

Figure 57 Distribution of sites in Cluster D, Co. Monaghan[33]

This expands the cluster over the townlands of Raflacony, Skinnahergy, Ivyhill, Moy Aghaderry, Dromore, Cloncullan, Derrylevick, Rakelly, Tireran, Dernagola, Luppan, Derryleabeg and Mullagh Otra. Several of these sites were also visited and their CY of tree-cover was noted.

[33] Only sites marked in green were surveyed.

Townland	Site No.	SMR No.	Site type	Vallation	Tree-cover category	Site dimension	Trees
Tully	D1	MO006-005	*ráth*	Univallate (Originally Bivallate or Trivallate)	CY2	Int. diam. 40m E-W, 36m N-S	Hazel Hawthorn Ash
Dunmadigan	D2	MO003-041	*ráth*	Univallate (Possibly originally bivallate)	CY2	Diam. 38m	Hazel (26) Hawthorn Ash
Dunmadigan	D3	MO003-042	*ráth*	Univallate	CY3	Diam. 36m E-W; 34m N-S	Hawthorn Blackthorn
Emy	D4	MO0034-045	*ráth*	Bivallate	CY2 CY3 CY4	int. diam. *c.* 34m NE-SW; 34.5m NW-SE	Hazel Hawthorn Blackthorn Elder Ash Holly Sycamore
Killydonagh	D5	MO003-020	*ráth*	Univallate	CY2 CY3 CY4	Diam. 35m	Hazel Hawthorn Blackthorn Ash Willow Elder
Raflacony	D6	MO001-006	*ráth*	Univallate	CY2	Int. diam. 38m NNE-SSW: 36.6m WNW-ESE	Hazel Ash Hawthorn Holly Oak
Mullanafinnog	D7	MO003-007	*ráth*	Univallate	CY3 CY4	dims 36m WNW-ESE; 31.5m NNE-SSW	Hawthorn Ash Pine
Skinnahergna	D8	MO003-050	Designed landscape feature	Univallate	CY1 CY4	Diam. *c.*100m	Hawthorn Ash Gorse Blackthorn Oak Hazel
Derrylevick	D9	MO001-003	*ráth*	Univallate	CY3 CY4	int. diam. 30m NW-SE; 29m NE-SW	Hawthorn Ash Alder

Table 11 Study sites in the Trough cluster.

5.6.4.1 D1 Tully

This univallate enclosure is known locally as Tully fort and is situated on a prominent hill south of Emyvale with extensive views in all directions. The trees on the bank represent a fine grove of thick trunked and broad canopied hazels a smaller number of less substantial hawthorns and one ash interspersed (CY3 tree-cover). The interior of the enclosure is raised above the surrounding field with the top of the bank reaching 3m in height. There is evidence for a wide outer fosse and traces of an outer bank in the southwest indicating that this site was originally bivallate. The most likely scenario is that an outer bank has been backfilled into the fosse. The road that approaches this enclosure from the north takes a sharp turn to the west to circumscribe the site by a wide margin and further indicating the former existence of a wide concentric fosse and substantial outer bank.

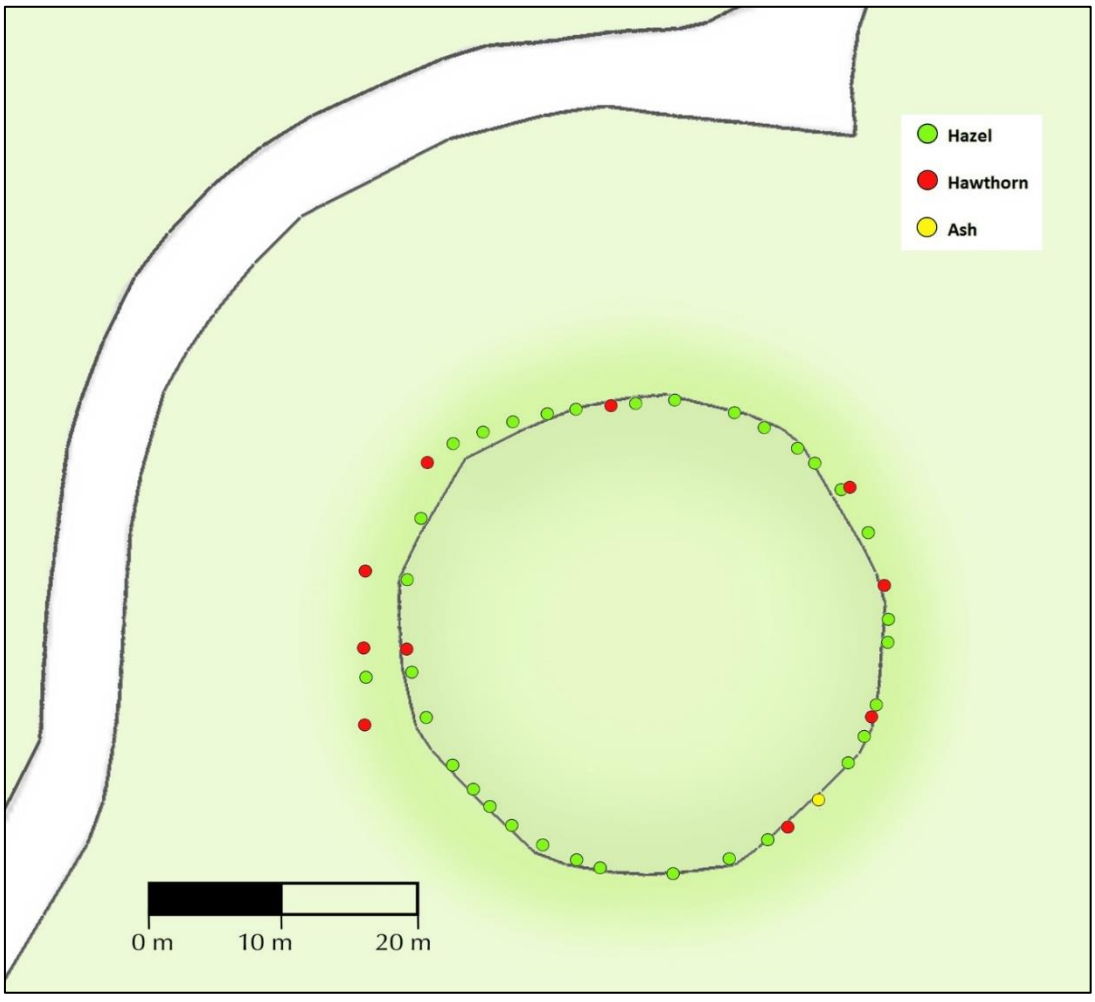

Figure 58 Tree layout at D1 Tully, Co. Monaghan

Figure 59 Hazel stool and roots on the scarp of D1 Tully, Co. Monaghan. This tree shows a vigorous growth of young stems on an old stool.

Figure 60 Looking north along the perimeter of hazel trees in the interior of D1 Tully, Co. Monaghan.

5.6.4.2 D2 Dunmadigan (MO003-041)

The Holland fort is univallate with big hazel stools. There is ash and hawthorn present too. There is an even distribution of hazel all about the top of the enclosing fosse. The hazels are browsed by cattle and thus big-stemmed. In the SW quadrant, the bank rises to present a more substantial bank. It is somewhat covered here in brambles, with one hazel protruding. There is no evidence of any substantial external fosse or outer bank. The bank is best preserved where there are trees growing directly on it, and the passage of cattle between trees has greatly reduced the bank in places. On the west side, the bank is more eroded and damaged between trees, where livestock can traverse into the interior. It constitutes a nice little nut-grove. There are several tall ash trees, a pine, and a fir as overstorey immediately to the west of this enclosure.

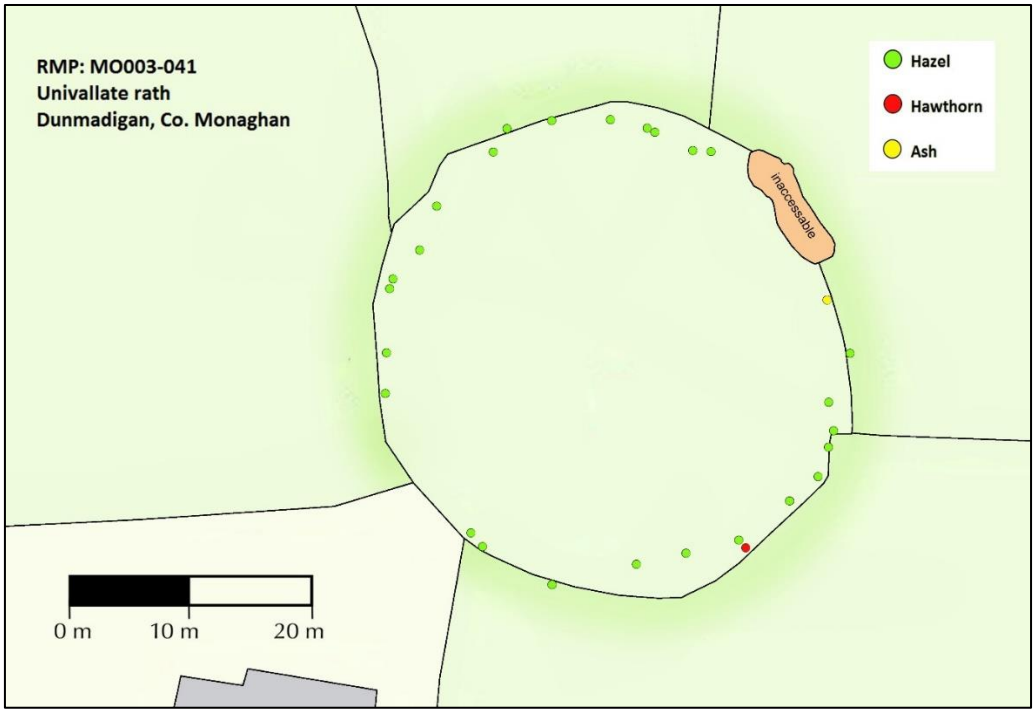

Figure 61 D2 Dunmadigan, Co. Monaghan

Figure 62 Hazel stools of the north sector of D2, Dunmadigan, Co. Monaghan showing erosion between the stools.

Figure 63 Hazel stool on the western bank of D2, Dunmadigan, Co. Monaghan

5.6.4.3 D4 Emy (MO0034-045)

Emy *ráth* overlooks Emy lough with substantial and impressive views in all directions. Tall ash trees are immediately obvious on approaching this site. The outer bank is a dense barrier of hawthorn, holly, blackthorn, hazel and some sycamore. This site has CY2, CY3 and CY4 tree-cover. The outer bank falls into a deep fosse that is well below field level and the inner scarp rises up to 3m in places. The fosse is also thick with trees and lots of large fallen branches and large ferns. The inner bank has a hazel understorey of vigorous stools with a good mixture of various sized stems. Although hazel is consistent around the inner bank (and opportunistic in the interior) it is difficult to discern a plan among the vigorous growth. The survival strategy of the hazel here is to produce long thick straight trunks with intermittent offshoots that attempt to reach the canopy as quick as possible. Elder has colonised the interior and is also employing a survival strategy that exploits gaps in the canopy by sending up rows of long straight shoots from lateral branches. It was noted that the main difference between this site and D1 Tully is perhaps due to the absence of browsing animals. Cattle cannot access this site, which allows it to form CY4 tree-cover, which in turn alters the behaviour of the hazel which must now compete for light.

Figure 64 View of dense tree-cover on Emy Ráth which consists of a barrier of holly, hawthorn and blackthorn with a sycamore and ash overstorey

Figure 65 View of Emy Lake from D4, Emy

5.6.4.4 D5 Killydonagh

This enclosure is situated on the summit of a prominent steep drumlin that offers extensive and impressive views in all directions. It is a raised area of c.35m diameter enclosed by a low bank and fosse. It is truncated in the south by a deep modern drainage ditch contingent with the south curve of the enclosure, and most likely cut into the original fosse. In its current condition, this site bears much resemblance to the enclosure in Tully (D1) c. 6km to the south, both in the manner by which it has been extensively altered and in the dominance of hazel on its bank. Although it is currently a univallate enclosure, it presents

a distinct probability of having formerly been a bivallate enclosure. This site harbours CY2, CY3 and CY4 tree-cover. The trees on the outer side of the recut drain in the S quadrant are predominantly blackthorn and dogwood. Crossing the drainage ditch reveals the presence of hazel at the top edge of the inner bank and a number of unusually tall hawthorns (*c*. 12m). Hawthorn dominates the edge of this bank in the SW quadrant and is otherwise sparsely dispersed on the perimeter. The wet mucky interior contains some blackthorn, an ash, a quite substantial willow tree and a number of elder trees, some of which have been extensively stripped of their bark by browsing livestock (

Figure 66). Hazel has also colonised the interior, which is well trodden by cattle that have unimpeded access across the infilled fosse and degraded bank on the north of the enclosure. Because of this, very little evidence of the fosse remains in the N half. However, the curve of the bank here is defined by a slight rise, topped with a perimeter of fairly substantial hazel stools separated by the heavy trample of cattle (

Figure 67). The browsed remains of hazel shoots are also visible on the stools throughout the site. Despite its location on the summit of a steep hill, this site is in a very wet and marshy field abundant with rushes. Similar conditions have been encountered in Cluster C, at sites C1 and C2 in Rylane, Co. Clare, which were labelled as 'Knocksallaghmore' (hill of willow – big), and 'Knocksallaghbeg' (hill of willow – small) on the 1st ed. OS map of c. 1840.

Figure 66 Evidence of elder bark eaten by either cattle or horses.

Figure 67 D5 Killydonagh, Co. Monaghan showing the ground trampled by cattle on the perimeter of hazel on the north inner bank.

Figure 68 D5 Killydonagh, Co. Monaghan. Young shoots springing from a hazel stool where cattle browse freely

5.6.4.5 D6 Raflacony (MO001-006)

This site occupies the summit of a steep drumlin and consists of an early medieval *ráth* (*c*.37m in diameter) enclosed by an earthen bank and outer fosse, which is further enclosed by a small bank and outer fosse which is an 18th century designed landscape feature (*c*. 100m in diameter). This designed landscape feature is one of several in this region that may be associated with a large landscape design known as 'the Thistle' (TY060-042), just W of Aughancloy village[34]. The Thistle was designed after 1722 by Acheson Moore, a Jacobite, as a symbol of his political sympathies. Three other hilltop enclosures in Co.

[34] More information on 'the thistle' can be found in the Northern Ireland SMR database at http://appsc.doeni.gov.uk/ambit/Details.aspx?MonID=14768

Monaghan are between 1 and 2 km from the SW tip of the Thistle, and together with four other large enclosures in Co. Tyrone could have been designed to enhance the Thistle as outlying rosettes.

None-the-less, the central *ráth* of Raflacony D6 is fairly well preserved which may reflect the sympathies of 18th century landscape designers. The inner bank of the central *ráth* enclosure has CY2 hazel tree-cover on its bank with stools that are comparable to those found at Tully D1 and Dunmadigan D2. The central enclosed space has some very tall ash trees. The space between the outer designed landscape bank and the inner *ráth* is densely populated with large ash and oak as overstorey and an understorey dominated by tall hazels with some hawthorn and holly throughout. This is most likely resulting from a combination of planned CY1 tree-cover (ash and oak) and the natural encroachment of CY4 tree-cover.

Figure 69 Looking W up the hill toward the large site of Raflacony, Co. Monaghan

Figure 70 Hazell in the ráth interior at Raflacony, Co. Monaghan

Figure 71 The extensive view to the NE from Raflacony

5.6.4.6 D7 Mullanafinnog (MO003-006)

MO003-006 in Mullanafinnog has a 2m deep and narrow v-shaped fosse and is very overgrown with brambles making it inaccessible. Some hawthorn is visible around its outer edges and the interior tree-cover is comprised mostly of ash with two tall pine trees. There is heavy bramble throughout the site. This site could not be surveyed in any more detail.

5.6.4.7 D8 Skinnahergna (designed landscape feature)

This large enclosure is a designed landscape feature of about 100m diameter. It was included for investigation prior to its RMP record being updated by Michael Moore in 2017 which includes the following, 'The enclosure is large enough to be considered a hilltop enclosure, but it is 1.6 km S of the SW tip of a large landscape design known as 'the Thistle' (TY060-042), just W of Aughancloy village' (See D6 Raflacony above).

It has a small outer fosse and a low inner bank topped with a substantial hedge dominated by hawthorn but which also contains gorse, bramble and blackthorn. Outer fosse is *c*. 1 m deep and 1m wide at bottom and 2.5 m wide at top. There are a number of oak and ash trees dispersed along the hedge and an occasional young hazel, however the overall tree-cover on this monument is best described as a modern hedge. This site is not a suitable candidate for this study.

5.6.4.8 D9 Derrylevick

There are two enclosures in Derrylevick; D9 and another very dilapidated D-shaped enclosure which lies about 150m to the southeast of D9. This second site is planted with conifers and deemed unsuitable for inclusion in this study. D9 is a circular univallate grass-covered enclosure of about 30m internal diameter and is used today as a recreational garden. There are hawthorn and ash present all along the bank but no semblance of order or intentionality in their appearance. The landowner keeps the trees on this site trimmed down to a tight hedge to the point that examination of the bank is extremely difficult. This enclosure is adjacent to an old farmhouse and is depicted on the 1st ed. OS map (c. 1838) in the midst of a small nucleated settlement.

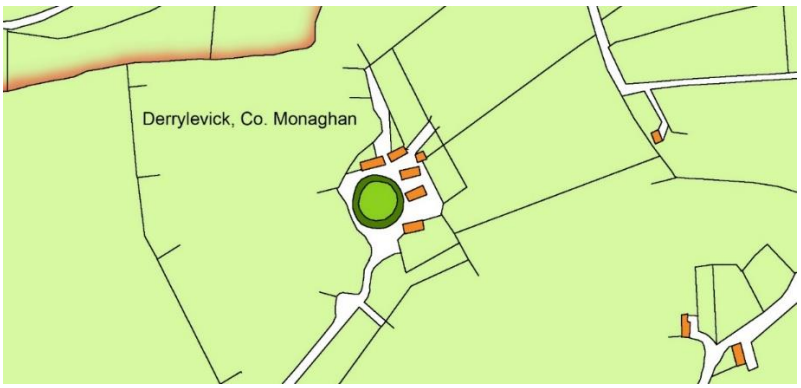

Figure 72 Derrylevick ráth as the focal point of a settlement cluster as depicted on the 1st ed. OS map c. 1838

5.6.5 Summary and key findings

The tendency for the earthen banked medieval enclosures in this area to occupy the high points of drumlins and ridges is notable. CY2 tree-cover was encountered at five of the nine enclosures surveyed in this study area. CY3 tree-cover was evident at four of them. Although Tully D1 and Dunmadigan D2 have very little remaining evidence of their outer banks, both sites would appear to have originally been bivallate. In the case of Tully there are visible traces of an outer bank at the southwest, but on the whole this bank has been infilled to the fosse. Similarly, in Dunmadigan D2, the lack of a substantial fosse suggests infill from a former outer bank.

Once again, a clear contrast between sites where livestock were allowed to browse and those that excluded livestock with modern fencing was noted. This contrast reflects two different approaches to the management of the sites and their trees. Fenced enclosures were very much overgrown and included a wider variety of woody species. Those that allowed browsing livestock also showed evidence of branch clearing and remedial stem cutting and a visible deterioration of banks in places where gaps in the tree-cover allow the passage of animals. Thus, the state of many of these enclosures is directly reflective of on-going traditional farming practices.

5.7 The Multivallate Enclosure in Turin, Co. Mayo

5.7.1 Landscape and Geographical setting

This area consists of good agricultural pasture derived from fine loamy soil over a bedrock of carboniferous limestone. The site is on a slight rise, which offers extensive views of the landscape in all directions.

5.7.2 Historical context

The impressive multivallate *ráth* in Turin, Co. Mayo is located *c*.1km S of Kilmaine village and 5km north of the Black river, which is the southern boundary of the territory occupied by the Conmaicne Cúile Tolad in the 9th century (MacCotter 2008). The Black river separated these lands from the territory occupied by the Uí Fhlaithbheartaigh of Mag Seóla (Naessens 2009, 30), and still represents a portion of the modern border between

Co. Mayo and Co. Galway. This area was heavily settled by the Anglo-Norman de Burgo's in the 13th century who drove the Ui Fhlaithbheartaigh into Iarchonnacht, west of lough Corrib (Naessens 2009, 39). The de Burgo's would later become the Clann Uilliam Íochtar. The Clann Uilliam Íochtar used a *ráth* (*Ráth Easa Caoide,)* which lies in the townland of Rausakeera North at Kilmaine village, as an assembly and inauguration place (after the Gaelic fashion) to the late 16th century (FitzPatrick 2004, 23;221). This may indicate that these monuments were set within and integral to the *lucht tighe* or household lands of the Conmaicne Cúile Tolad and continued to serve a similar function for the Clann Uilliam Íochtar. The late use of *Ráth Easa Caoide* for assembly and inauguration purposes increases the probability that the multivallate site in Turin saw some late use as part of that assembly landscape, and was also set within and integral to the *lucht tighe* or household lands of both the Conmaicne Cúile Tolad and the later Clann Uilliam Íochtar. Naessens (2009; 2018) has shown that the area in Mag Seóla, immediately to the south of the Black River were the mensal lands of Uí Fhlaithbheartaigh. This may indicate a certain degree of shared resources, such as hunting grounds for example, among the mensal lands of these neighbouring polities.

5.7.3 The Site

This large and impressive enclosure consists of a sub-circular area (42m N-S; 44m E-W), enclosed by three concentric earthen banks with two wide intervening fosses. The low inner earthen bank has the remains of a stone wall in the SE sector and its interior edge has a dense mixture of blackthorn, hazel and briars growing on it. The inner U-shaped fosse is *c*.2.9m wide at the base, *c*.7m wide at the top and *c*.2m deep. It is overhung by hazel growing from the edges of its inner and outer banks. The middle bank is c.11m wide at the base and topped by a tree-lined berm c.5.3m wide which is fairly consistent for the entire perimeter. Hazel is the dominant species on both edges of the bank. The second fosse is also U-shaped, wider than the first (c. 12m at the top) and deeper. In the NW sector, where a profile of the monument was recorded (Figure 74), the base of the fosse measured 2.75m below the height of the middle and outer banks. The outermost bank is c.7.5m in overall width but drops 1.4m on exterior face to a second berm (3m wide) that survives to a height of 1.2m above field level. The outer edge of this platform is set with over one hundred low standing stones (H 1m) and interspersed with veteran hawthorn trees (Figure 75). The overall diameter of the enclosure exceeds 100m. There is a 4.4m wide entrance in the NNE of the site with a causeway cutting through the banks and

terminating the fosses. There is a stone-lined depression in the interior, which may be a collapsed souterrain. While the date of this site is unknown and its function is unclear, the possible presence of a souterrain suggests the likelihood that it was in use in the early medieval period, as the construction of souterrains usually date to between the 9th and 12th centuries AD (O'Sullivan et al. 2014, 66; Clinton 2001, 89–95; Warner 1986, 111–12). Souterrains are most frequently explained as places for the storage of food due to their ability to maintain a constant cool temperature. The possibility that this site may have been used as a venue for feasting or functioned to some degree in the dispensation of hospitality is put forward in this thesis and is discussed in chapter 6 (6.6.1). The presence of berms may also indicate a social function in that they presume the presence of people and the act of circumambulation. In this sense, the possibility increases that access to trees and the resources they provide was a function of the wide walkways on such elaborate sites.

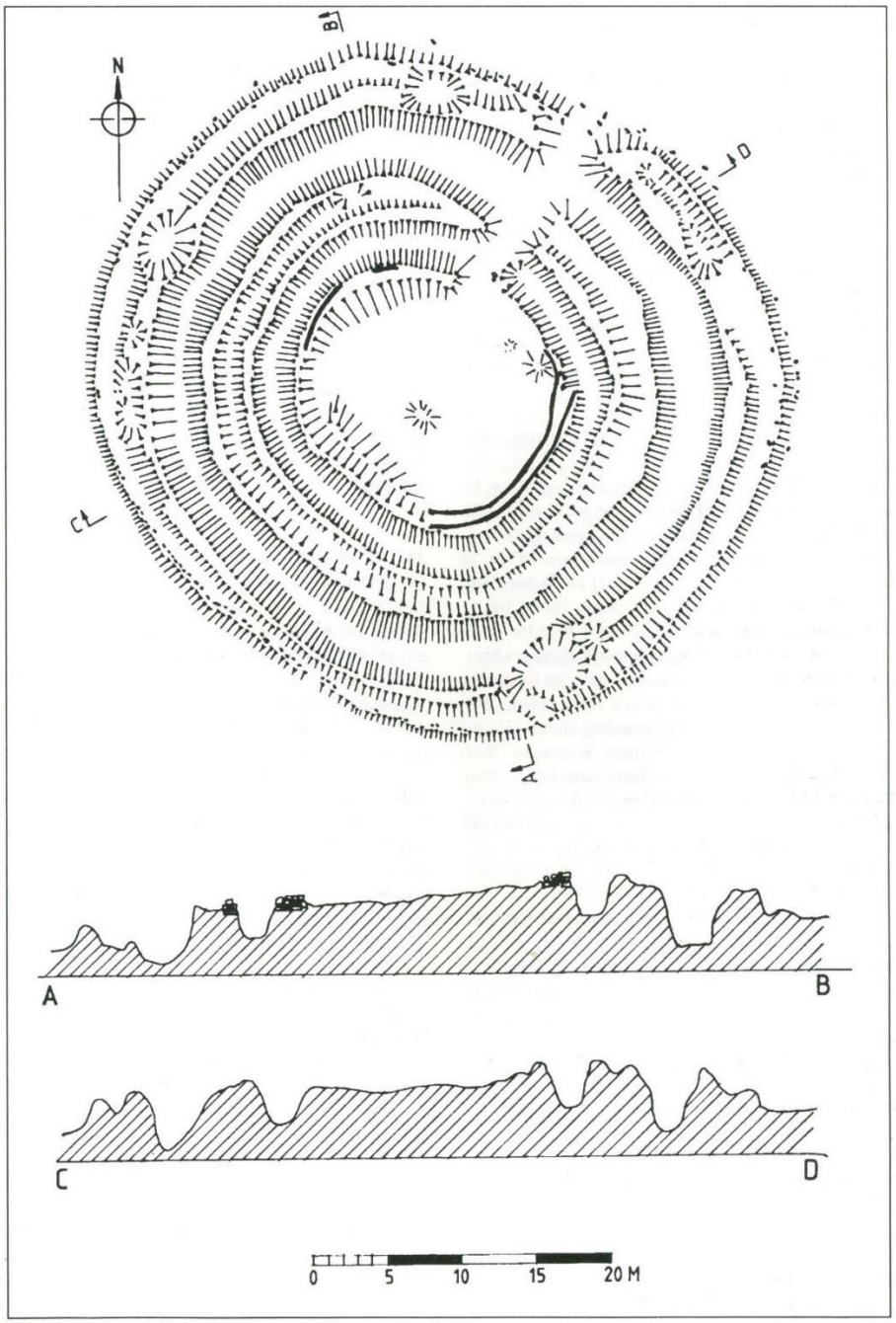

Figure 73 Turin, plan and exaggerated cross-section (after Lavelle 1994, 37)

Figure 74 Profile xy of the multivallate enclosure at Turin, Co. Mayo. This profile was taken through the causewayed entrance in the NNE of the site and across the banks at SSW.

Figure 75 The berm on the outer bank of Turin multivallate enclosure. Note the outer edge interspersed with boulders and hawthorn trees

5.7.4 Surveying the Site

The CY2 and CY3 tree-cover are a dominant feature of this site. The outer bank has a consistent presence of 70 veteran hawthorn trees all around the perimeter, which were possible to survey with a handheld Trimble V8 GPS device (see Figure 76). This survey technique was not successful in the interior where the tree-cover is more extensive with a near complete closed canopy of hazel trees planted on the tops of the inner and outer edges of the interior banks. A section of the hazel cover in the NE sector was surveyed and mapped by triangulated measurements. These are represented in Figure 76 by two roughly

parallel rows of trees on the edges of the outermost of the large interior fosses at this site. This surveyed section is also a good representation of the consistency of hazel distribution throughout the rest of the site. The mean average distance between the centres of neighbouring hazel stools in the area surveyed was calculated at 2.4m.

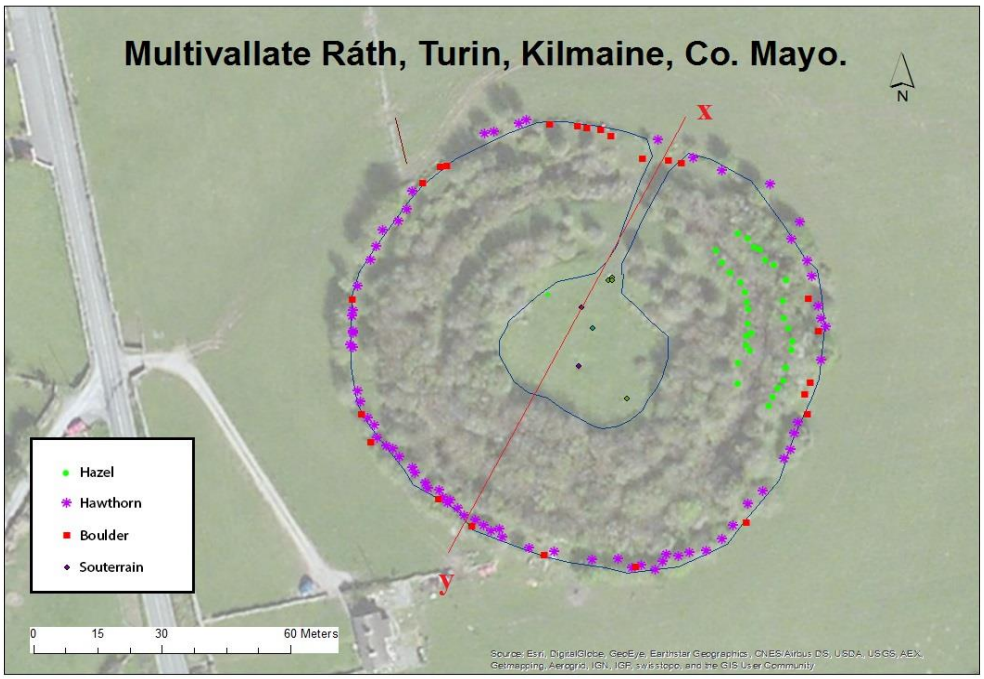

Figure 76 Survey of hawthorn and a section of hazel trees on the multivallate enclosure in Turin, Co. Mayo. The boulders on the outer bank and height profile (xy) across the site were also recorded

Figure 77 Hazel trees on the edges of the banks either side of the inner fosse in the NE sector of Turin multivallate enclosure, Co. Mayo

5.7.5 Turin Pollen Core and Carbon dating

Under excavation licence no. 16E0012, a gouge corer was used to retrieve 0.53m of material from the outermost of the two big fosses in the NE sector of this site (4.3.3; Table 6). The area of the fosse where the core was taken was about 6m to the east of the causewayed entrance and was waterlogged at the time of this visit. Subsequent visits have shown that the degree of waterlogging in this fosse varies seasonally. It was noted that there appeared to be plant remains throughout the sample, with 0m – 0.10m consisting of modern leaf litter. From 0.11m to 0.30m there was quite a bit of plant remains and a complete hazelnut at 27cm. The material below 0.30m appeared much more compact. This core was obtained in order to analyse the pollen content in an attempt to determine longterm vegetation cover on the site. Eight samples in total were taken from the core material (MYW -1) obtained at the multivallate enclosure in Turin, Co. Mayo (Figure 78). The first four were extracted at depths of 49cm, 45cm, 34cm and 28cm respectively. These samples were processed according to the procedures outlined in section 1.4.5 above and their pollen was analysed. From this initial count, it was noted that hazel becomes decidedly significant at some point between 34cm and 45cm. In an effort to achieve a higher dating resolution three more samples were extracted at 42cm, 39cm, 36cm and were prepared for pollen analysis. A final sample was extracted near the top of the core at 6cm, as a sample of recent representation, completing the eight samples. Although the deepest samples (49cm, 45cm and 42cm) revealed a distinct paucity of hazel pollen, their overall similar pollen assemblages indicated a landscape of open pasture with lots of meadow plants and grass and very little arboreal pollen in general. Significant numbers of pine pollen and pine stomata were counted throughout the samples, indicating the presence of pine in the immediate vicinity. While the presence of pine pollen is generally taken to indicate a modern date, it was noted here that pine is completely absent at the site and is not evident in the immediate vicinity of this site.

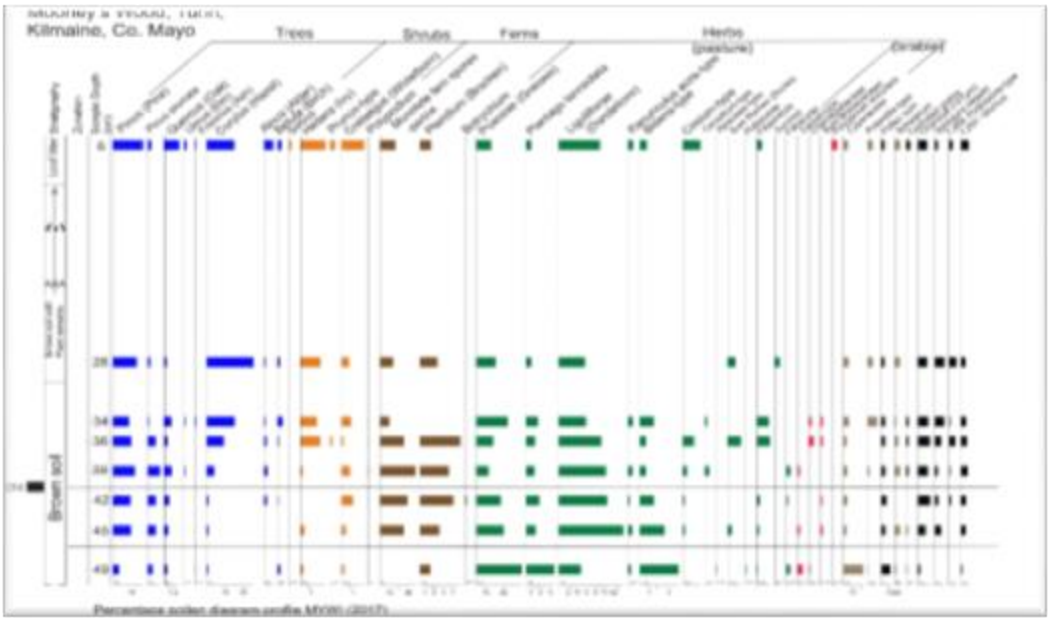

Figure 78 Percentage pollen profile diagram from fosse core sample obtained at Turin, Co. Mayo. Compiled by Dr. Karen Molloy.

Hawthorn was consistently represented in low numbers across all samples. Dr. Karen Molloy (pers. comm.) noted that hawthorn does not produce much pollen; its consistent representation here is therefore not unusual or unexpected.

The three deepest samples, 49, 45 and 42cm, have similar pollen assemblages dominated by non-arboreal pollen, in particular pollen of grasses. The lowermost sample is somewhat different, in that arboreal pollen is at its lowest representation, and the non-arboreal pollen are suggestive of grassland dominated by grasses, plantain, dandelions and daisies. There is a higher representation of arboreal pollen, mainly pine and pine stomata, in the 45cm and 42cm samples and in hawthorn at 42cm. Fern spores and Liguliflorae, which often have a high representation in soils, are also more strongly represented at 45cm and 42cm.

Samples at 39cm and 34cm both revealed the presence of hazel at 15% of the pollen count. As hazel becomes a significant presence somewhere between 39cm and 42cm, sample material consisting of wood fragments was extracted from this depth and sent for carbon 14 analysis (see Figure 79). Results from the carbon 14 analysis suggested that a modern date was most likely. There was a 66.7% probability that the wood fragments were dated to between 1801 and 1940AD and a 28.7% probability that they dated between 1679 and 1764AD (Figure 79).

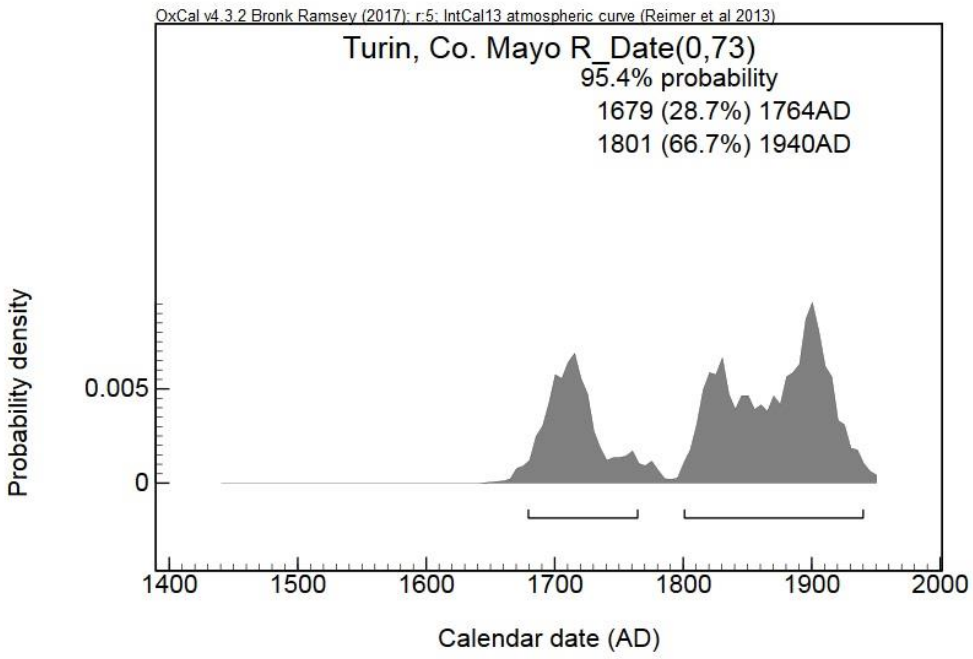

Figure 79 Turin carbon dated sample results

5.8 Doontorpa, Croagh North, Co. Clare.

Doontorpa is a fairly well-preserved bivallate *ráth* in Croagh North townland, in the civil parish of Rathborney and the barony of Burren, Co. Clare and one of only three *ráth* enclosures in the immediate landscape which is dominated by *caisels* as the prominent medieval settlement type. The rarity of earthen enclosures in the Burren adds significance to this site and is one of the reasons why it was chosen for inclusion in this study. Other important factors were its proximity to the medieval church of Rathborney, which itself stands within an earthen enclosure, and that Doontorpa has striking CY2 and CY3 tree-cover. The inner bank hosts an almost complete ring of veteran hazel trees while what remains of the outer bank hosts a significant presence of hawthorn.

Figure 80 Showing 'Doontorpa' on 1st ed. O.S. Map c.1838 beside Digital Globe aerial image 2015

5.8.1 Landscape and Geographical Setting

This enclosure is situated on a low and level ridge in the lower east end of the Rathborney valley, which runs from Ballyvaughan village to the Corkscrew hill at the southern end of Gragan East townland. This fertile valley consists of fine loamy drift soil over the typical limestone karst bedrock of the Burren. The site looks up at the hill of Lismacteige to the north-west and Ballyallaban to the southeast.

5.8.2 Historical Context.

This site is labelled 'Doontorpa' on the 1st ed. OS map of *c*. 1840. A note in the Book of Ballymote tells us that Torpa, the son of Cermad and grandson of Dima, claimed the kingship of Munster from Failbe Flan in AD636. Rathborney medieval church lies 600m WSW of Doontorpa and stands within the remains of another earthen enclosure. Westropp, writing in 1899, remarked

> 'The earthen forts of Duntorpa and Rathborney and the caher of Cloomartin lie across the mouth of the valley. The first is planted with bushes, and the second forms part of the burial ground of Rathborney Church to which it gives its name, 'the *Ráth* of Burren'; it is much defaced by interments, but is very well marked. Doontorpa possibly derives its name from a certain Torptha or Torpa, chief of the

> Corcomroes in about A.D. 750, or of his contemporary, a prince of Thomond' (Westropp 1899, 81).

The neighbouring townland of Ballyallaban contains the other two *ráth* enclosures in the valley. One is a well-preserved circular enclosure of *c*. 37.5 meters diameter with CY1 tree-cover and the other is a much denuded univallate enclosure. The rarity of earthen enclosures in this area cannot be overstated. There are almost 500 *caisel*-type enclosures identified in the entire Burren area of Co. Clare, thus outnumbering *ráth*s by 3 to 1. This may indicate that the choice of material for the building of enclosures is not necessarily solely related to the availability of soil for *ráth* construction and stone for *caisel* construction but is possibly used to differentiate the role of the monument.[35]

A church was built immediately adjacent to Doontorpa in 1795 by The Marquis of Buckingham and enlarged again sometime before 1837 when the 1st ed. OS maps were drawn (Figure 80). The proximity of the church to the *ráth* puts the community in very close contact with it and perhaps highlights the role of the community as cultural curators over time, which is reflected in the state of preservation of the site.

5.8.3 The Site

Doontorpa is a bivallate *ráth* with extensive CY2 and much diminished CY3 tree-cover. The outer bank is best preserved in the south-west where the majority of the hawthorns reside but is less distinguishable in the NE sector of the monument (Figure 81). The inner bank is an inverted U-shape in profile, about 2m wide and has a reasonably consistent pattern of hazel (32 individual stools) at the top edges of both its scarp and the counterscarp facing the interior. Many of the hazel stools here have basal diameters of between 1.5 and 2m. Cattle browse freely all through this site, which has had a visible effect on both the banks and the trees (Figure 83). Where cattle pass between trees, the banks are significantly more denuded and the tree roots trampled, which has prevented expansion of the stools in some cases. While the hazel uniformly adheres to the edges of the inner bank there is not a uniform distribution in distance between stools around the perimeter. On the N edge of the inner bank, there are six stools that are separated by

[35] This is discussed in introduction (1.5) with reference to the an extract from the 14th-century battle-roll *Caithréim Thoirdhealbhaigh*, that reads, 'Every king in his *ríglongport* and every chief in their strong places, and hospitallers in their dwellings, ollaves (learned men) in their *raith*, coarbs in their respective churches, every 'son of a good man' in his own *dúnad*, every layman in his *lios*, and every bishop in his noble *cathair'* (O'Grady 1929, 134)

closely matched distances that average 3m between stool centres. In the NE sector there appears to be a higher concentration of individual stool (see Figure 81 below), however it is likely that these closely space clusters are clonal stools that originated in one or two older trees and that the combination of grazing pressure, periodic root trampling and layering has led to this current formation. Evidence of layering at an earlier stage in this life-history cycle was also encountered on the inner edge of the inner bank in the NE sector (Figure 84).

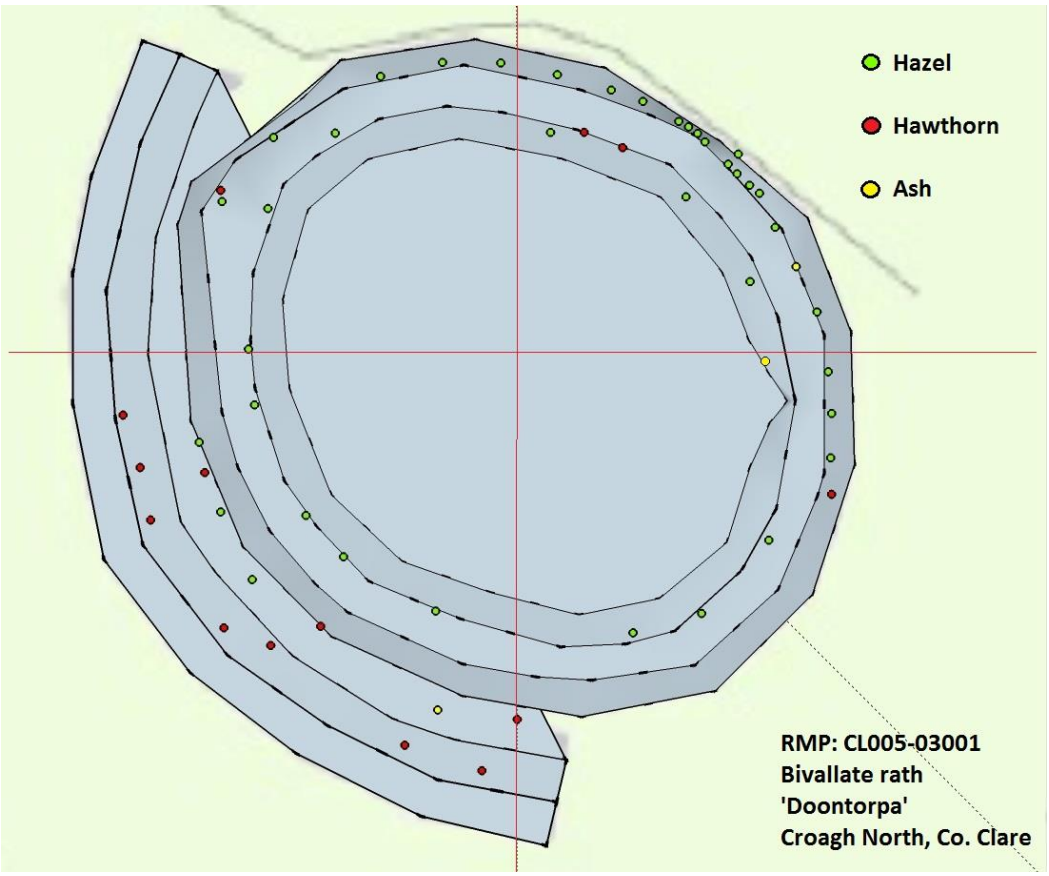

Figure 81 Tree survey and topography of Doontorpa, Croagh North, Burren, Co. Clare

Figure 82 Hazel stools flanking the flat-topped inner bank at 'Doontorpa' Croagh North, Co. Clare

Figure 83 Veteran hazel stool on the inner bank in the NE sector of 'Doontorpa', Croagh North, Co. Clare. This example shows the effects of extensive long-term grazing pressure where the young shoots are browsed off allowing some stems to grow quite large.

Figure 84 Layering in the NE sector inner bank where leaning branches have touched the ground and put down roots creating clones of the parent tree.

Hazel is also a dominant species on the outer bank, but shares it with several hawthorn and some blackthorn bushes. A number of younger hawthorn trees share their location with the hazel on the scarp edge of the inner bank indicating that they are perhaps seedlings from parent plants on the outer bank. The inner bank is extensively perforated with rather large badger holes and there is stone facing visible in places on both the inside and the outside of the bank. This seems to suggest that the bank consists of a double stone wall core, mounded over with earth to create a flat-topped bank. There is a causewayed entrance cutting the banks to the southeast, with an ash tree on its east side. There is a second ash at the southern point of the outer counterscarp. The inner bank presents as a walkway or berm flanked by a consistent pattern of hazel (see Figure 82). Although on a much smaller scale, the particular pattern of trees flanking a berm is comparable to the layout of hazel on the earthen banks of the multivallate enclosures at Turin, Co. Mayo (5.7.3) and at Cooleagh (B1), Co. Tipperary (5.4.4.1) (See Figure 97 in chapter 6 below).

5.9 Pailís Cloonfree, Co. Roscommon.

Figure 85 Looking N at the treeline of Cloonfree moated site. The interior is predominately hazel overtopped by ash on the east and west banks and one sizeable beech in the SW corner (on the right in this image)

5.9.1 Landscape and Geographical Setting

Pailís, Cloonfree is a moated site near the crest of a gentle SE-facing slope 1.9km west of Strokestown in the parish of Cloonfinlough, Co. Roscommon. It is situated in the centre of a raised but low ridge, with a soil type comprised of fine loamy drift with limestones. This ridge stretches for 5km between Ardakillin townland in the west and Strokestown in the east. The N5 national route that connects Longford town in Co. Longford to Castlebar in Co. Mayo runs along this ridge for this 5km stretch as the most convenient route through this landscape. The ridge is flanked to the north and the south by tracts of peatland interspersed with several small lakes. The moated site is clearly visible from the road, which lies 80m to its south (Figure 85).

5.9.2 Historical Context

The moated site in Cloonfree, Co. Roscommon was first identified by O'Donovan during the ordnance survey of Ireland and later reiterated by Quiggin (1913) as the location of the *pailís* (see 1.7) built by Aodh O'Conor, king of Connacht, who died in 1309AD (Finan and O'Conor 2002, 72). The word *pailís* generally refers to a high-status hall or residence of timber construction which emerged in the 14th century 'as an expression of the survival

of Gaelic culture through and alongside Anglo-Norman colonisation' (FitzPatrick 2016, 198), and appear to be associated with the old royal Gaelic demesne lands and mensal lands (1.7). The site at Cloonfree was referred to in the Annals in 1306 and is also the subject of two separate bardic praise poems contemporary with its use (Quiggin 1913) which provide detailed descriptions of the site and its related buildings (Finan and O'Conor 2002, 72). In one poem it is called a 'four-ridged rath' and the other describes it as 'a stately four-squared fort (Quiggin 1913, 337; McKenna 1923, 641; Tom Finan and O'Conor 2002, 77). FitzPatrick (2016, 207) notes that almost one third of *pailís* residences are identified as being built on moated sites (1.7) and that some appear to have been occupied by service families of Gaelic lords after they had been vacated by the lords who had shifted residence to tower-houses at the beginning of the 15th century (FitzPatrick 2012, 102). Such was the case at Cloonfree where service families of the Ó Conchobair lord of Machaire Chonnacht, as late as 1594, 'remained on that landholding long after the *pailís* had been vacated by the Ó Conchobhair in favour of a stone castle' (FitzPatrick 2016, 203–4, 2018, 182-184). The word *Pailís* appears to imply an elaborate timber hall on a lordly site which FitzPatrick (2016, 198) has argued probably combined the roles of hunting lodge and feasting hall. This interpretation is supported by the landscape setting described above. If this is the case, we would expect to see a long period of high status occupation from the early 14th century to the 17th century in the record of site usage at Cloonfree. This is an important site that requires excavation.

5.9.3 The Site

The site is essentially a bivallate enclosure with a wedge-shaped plan *c*. 36.1m E-W by 29.4m N-S and an entrance gap in the southern end. This area is defined by wide flat-topped earthen banks 0.7-1m in height above the interior, 1.4-2.1m at the top and 4.1-5.1m at the base. Outside this, and 1.8-2.3m below the top of the bank is a flat-bottomed moat (6.2-8m wide at the top and 4-5m wide at the base). There is an outer flat-topped earthen bank 0.6-1.4m high, 3.6-5.9m wide at the base and 1-3m wide at the top. The maximum external dimensions are *c*.61m E-W by 54.8m N-S.

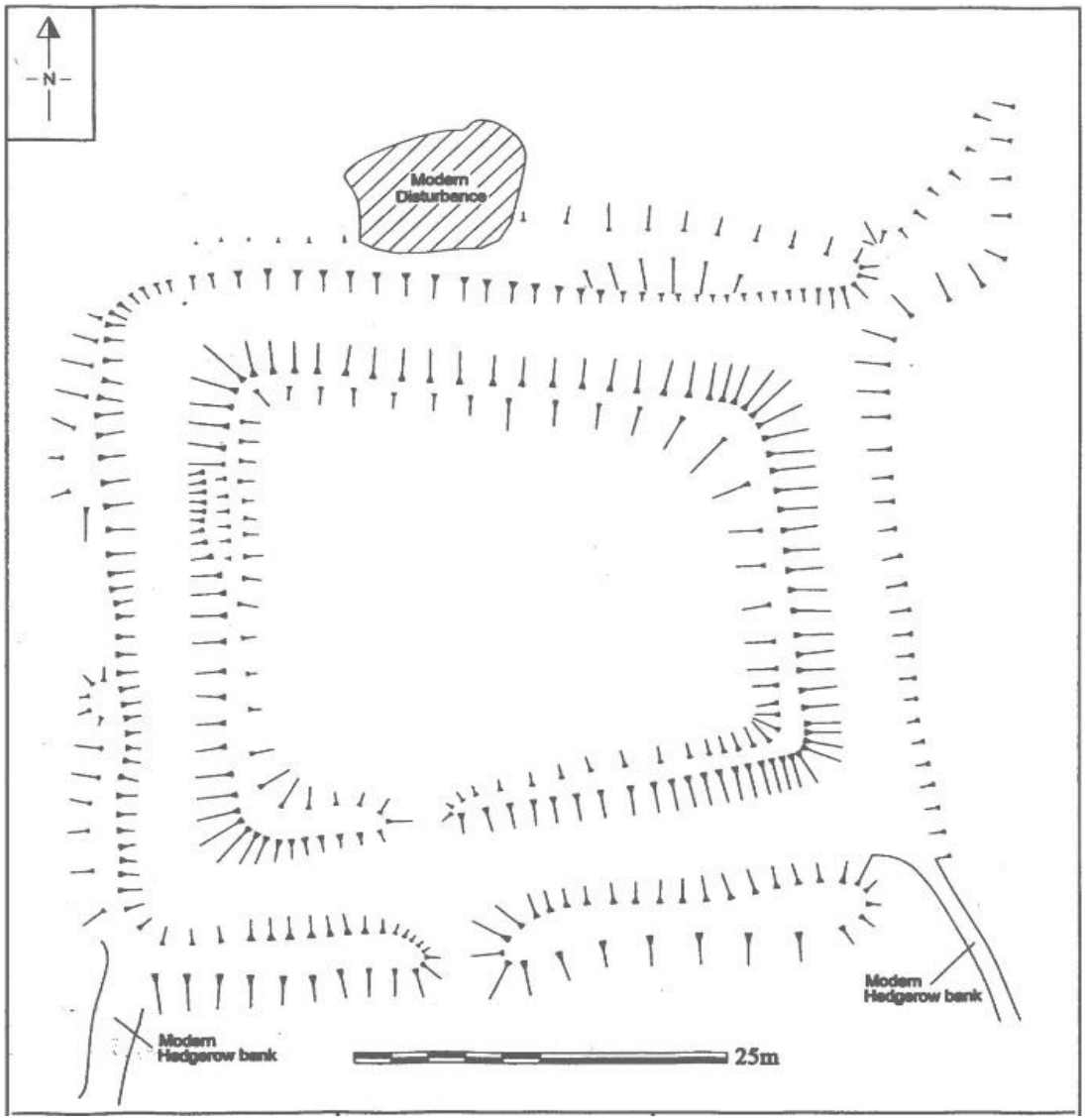

Figure 86 Morphology of the moated site at Cloonfree, Co. Roscommon (The Discovery Programme).

The west, north and east inner and outer banks are lined with hazel as the dominant species. There are tall ash trees interspersed among them on the banks and in the interior. Much of this site was inaccessible and impossible to survey consistently. Attempts to map tree positions with a handheld Trimble V8 GPS device were unsuccessful due to the dense canopy of trees. A combination of the deep, wet moat and extensive bramble overgrowth made access to many of the trees on the S, E and W banks to gain accurate measurements impossible. Tree positions on the north inner and outer banks (either side of the fosse) were surveyed by triangulated measurements. The pattern that emerged is comparable to CY2 tree-cover encountered at some of the multivallate enclosures investigated in this study. The wide outer bank on the north of this site has the trees growing on its top edges and flanking the central flat-topped area in a similar fashion to the berms of Cooleagh B1, Co. Tipperary (5.4.4.1), Turin, Co. Mayo (5.7.3) and Doontorpa, Co. Clare (5.8.3). While

there is no absolute regularity to the spacing between hazel specimens on the banks of this site, those on the NE section of the inner bank are the most regularly spaced and averaged 2.4 meters between stools.

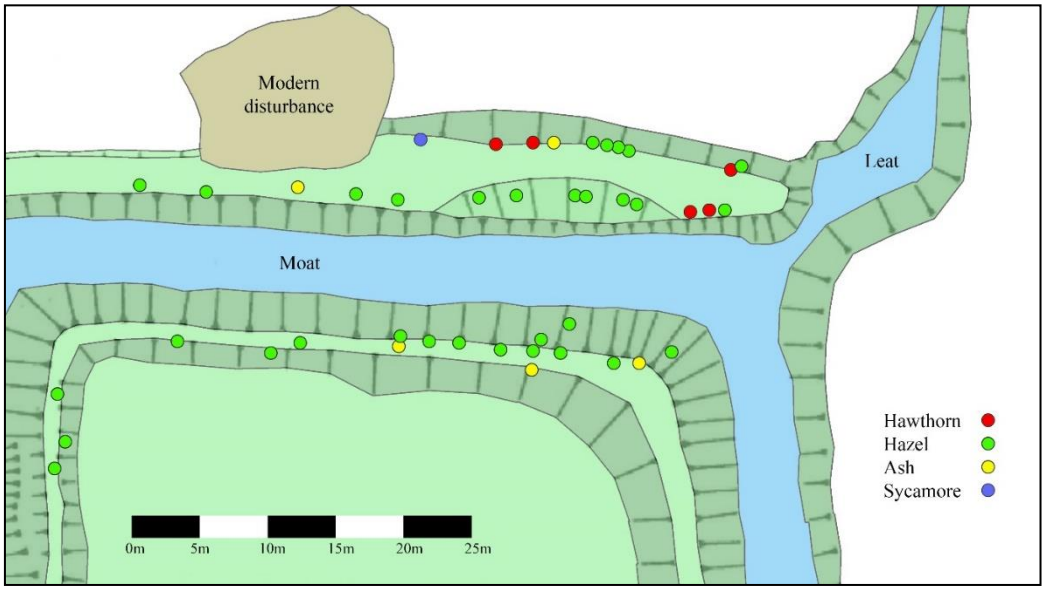

Figure 87 Layout of trees on the north section of the moated site at Cloonfree, Co. Roscommon.

5.9.4 Cloonfree Pollen Profile

Eight samples were taken from the core material (CLF-1, Figure 88) obtained at the moated site in Cloonfree Co. Roscommon. These samples were processed according to the procedures outlined in section 4.3.4 above. The pollen slides were analysed and the following percentage pollen diagram was produced.

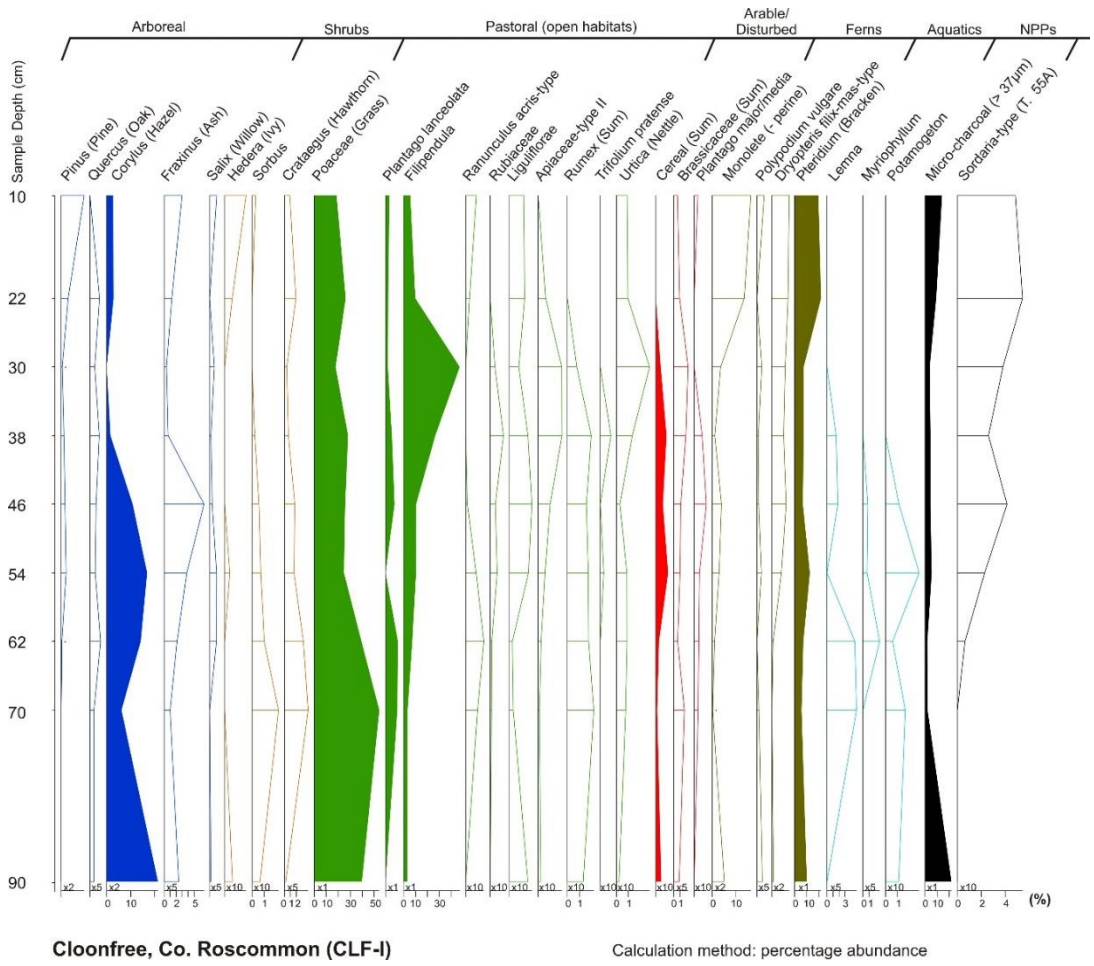

Figure 88 Percentage pollen profile diagram from the fosse core sample obtained at the moated-site in Cloonfree, Co. Roscommon. Compiled by Dr. Carlos Chique.

The waterlogged fosse fill material at CLF-1 was 100cm in depth. The lower portion of the core was more compact and clayey and hazel pollen was well represented there. A substantial wood fragment was found in the core sample at the same depth as the earliest pollen slide, 90cm. This was near the very bottom of the core. This piece was extracted and labelled CLF-1_90 and sent to the 14Chrono Centre at Queens University Belfast for carbon 14 analysis. The result obtained was a modern date (post 1950). This result was surprising given the depth of the sample and so a re-check of the results was requested. A subsequent sample was submitted from 88-89cm consisting of wood fragments. They were supplied with wood fragments extracted from 88-89cm and a new carbon 14 analysis was performed. The results returned were significantly older that the first sample provided giving date ranges between 1616 and 1695AD at 33.2% probability and between 1726 and 1814AD at 34% probability.

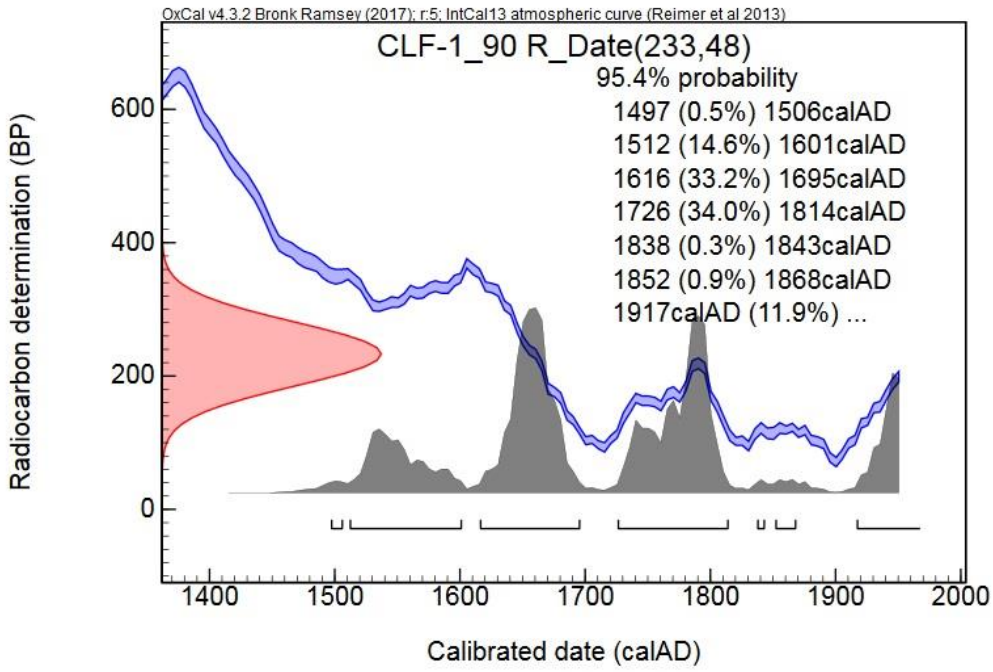

Figure 89 Radiocarbon determination of (CLF-1) wood fragment extracted from the fosse core material obtained at Cloonfree, Co. Roscommon. Sample was extracted from a depth of 0.9m.

5.10 Results from Pollen Analysis

This experimental approach proved to be challenging, not least because the sample base was so small. Site conditions at three out of the five samples obtained proved to be unfavourable to the preservation of pollen. The sediments in samples 2 (Rylane) and 3 (Cooleagh) proved to be too inorganic and silty and produced very little pollen data. The most probable reason for these poor results is perhaps that these sites do not maintain the condition of being waterlogged as a constant. This would result in pollen both periodically washing away and perishing without the conditions for preservation offered by a constantly waterlogged site.

Sample 5 from Coolamber was also very poor in pollen content (Figure 90) It may also be the case that this site does not retain a wet fosse all year round. The upper levels of the core contained the most pollen with very little surviving at the lower depths. However, the presence of fir (Abies) at 28 cm would appear to make it relatively recent in time. Fir is usually considered to be modern, having been introduced to Ireland anytime after the Medieval period. The presence of Liguliflorae pollen throughout the core is common enough to indicate that the area was quite open, which corresponds to the modern character of the landscape. Hazel is only recorded towards the top and there is very little of it, which again reflects the unsuitability to pollen preservation at this site given that the

majority of trees on this enclosure are hazel. It was concluded therefore, that the sample cores 2 (Rylane), 3 (Cooleagh) and 5 (Coolamber) did not provide the data necessary for proceeding to the stage of extracting of carbon-datable material.

Depth (cm)	10	20	28	34	40	46	50	54
Abies (Fir)	-	-	1	-	-	-	-	-
Alnus (Alder)	-	1	-	-	-	-	-	-
Pinus (Pine)	5	12	7	12	3	1	-	1
Quercus (Oak)	-	1	-	-	-	-	-	-
Corylus (Hazel)	1	1	1	-	-	-	-	-
Sorbus (Rowan)	-	-	1	-	-	-	-	-
Prunus-type (Blackthorn)	-	1	-	-	-	-	-	-
Hedera (Ivy)	-	-	-	1	1	-	-	1
Pteridium (Bracken)	1	6	1	1	3	1	3	4
Polypodium (Polypody)	-	-	1	-	1	1	-	-
Driopteris filix-mas (Male fern)	-	1	-	-	-	-	-	-
Monolete (Fern spore - no coat)	1	6	1	1	-	-	-	-
Poaceae (Grasses)	1	6	-	-	-	-	1	-
Liguliflorae (Dandelion)	17	4	9	9	1	4	1	1
Asteraceae (Daisy)	1	1	-	-	-	-	-	-
Ranunculus acris (Buttercup)	-	-	-	-	-	-	-	-
Rumex acetosella (Sorrel)	-	3	-	-	-	-	-	-
Calluna (Heather)	1	1	-	-	-	-	1	-
Spagnum (Mosses)	-	2	-	-	-	-	-	-
Pollen/Spore Sum	28	46	22	24	9	7	6	7
Glomus-type	x	x	x	x	x	x	x	x

Taxa Category
Arboreal
Shrubs
Ferns
Grassland
Bog
Non-pollen (x = presence)

Figure 90 Coolamber Pollen data. Compiled by Dr. Carlos Chique.

The remaining samples 1 (Turin) and 4 (Cloonfree) were much more favourable to the preservation of pollen.

5.11 Discussion on CY2 and CY3 Tree-cover

The catalyst for this thesis was the general observation that a substantial number of treed enclosures throughout the Irish landscape were home to a particular manifestation of two tree species in particular, hazel and hawthorn. A chief objective of the survey was to identify trends and consistencies in tree-cover across the set of sites and to establish the nature of the relationship between the medieval settlement enclosures and such trees.

Trends and patterns were identified in the distribution and spatial organisation of hazel and hawthorn trees as CY2 and CY3 tree-cover on a significant number of the sites across the selected fieldwork sample. The campaign of fieldwork targeted 44 enclosures (Figure 4) that were distributed across 4 regional clusters and 3 additional sites. Seven of these

sites were excluded from the study after the first initial site visits, as they were inaccessible due to either dense overgrowth or an inability to obtain permissions to visit them. This reduced the selection to 37 sites. Descriptive survey identified CY2 tree-cover on 16 (43%) of the selected sites and CY3 tree-cover on 19 (51%) of them. Six of these sites contained both CY2 and CY3 tree-cover, thus there were a total of 29 sites that contained either CY2 or CY3 tree-cover. This essentially means that (not counting CY1 tree-cover) 78% of the sites examined in this research showed some evidence that trees had been intentionally planted on their banks at some point in the past.

CY2 hazel tree-cover was almost exclusively associated with multivallate enclosures. There was one univallate *ráth* enclosure in Milltown St. John, Co. Tipperary (B5) and four in the Co. Monaghan cluster (D1, D2, D3 and D5) that contained CY2 hazel trees. However, in each of these cases it was noted that they may have originally been multivallate enclosures whose outer banks have been levelled and backfilled into their fosses. This is most notable at Tully, Co. Monaghan (D1) where the adjacent road still respects the line of the original outer bank at a distance of over 20m from the remaining extant bank and fosse (see fig). Thus, at least 11 of the 16 enclosures (68%), but potentially all of them, where CY2 hazel tree-cover was identified, were multivallate. Similarly, 12 of the 19 sites (63%) where CY3 hawthorn tree-cover was identified were univallate enclosures. This pattern is well illustrated in Cluster C, Co. Clare, which had the weakest representation of CY2 hazel tree-cover, identified on only one enclosure out of the nine investigated. This enclosure was also the only multivallate enclosure in the cluster. Six of the remaining eight univallate enclosures revealed evidence of CY2 hawthorn trees.

Enclosures with veteran hazel as CY2 tree-cover were found in all the investigated areas. Coolamber and Lisduff in Co. Westmeath, Tully, Dunmadigan, Emy, Killydonagh and Raflacony in Co. Monaghan, Rylane and Rathclooney in Co. Clare, several enclosures in Cooleagh and Milltown St. John, Co. Tipperary all harbour veteran hazels in a similar condition. The same category of tree-cover is also found on the bivallate *ráth* 'Doontorpa' in Croagh North, Co. Clare, on the moated site in Cloonfree, Co. Roscommon and the multivallate enclosure in Turin Co. Mayo. Enclosures with similar veteran hazels were also encountered incidentally in other parts of the country (Table 7). The presence of hazel on medieval enclosures is far from an isolated, regional or unremarkable phenomenon to the point that they are integral to understanding the biographies of these monuments.

Observable patterns of tree planting are also evident where CY3 tree-cover is encountered. While hawthorn is unsurprisingly present on nearly all sites, it is invariably found as veteran specimens specifically upon the outer banks of enclosures. As Ireland's most common hedgerow species, we should expect to find it present due to some degree of natural colonisation, but when we encounter hawthorn trees in orderly ranks upon the banks of enclosures, it leaves little doubt that its origin is due to intentional planting. CY3 tree-cover is most likely relict hedging set about the perimeter bank at some point in the past. It is mostly observed on univallate *ráth* enclosures (A2, A3, C2, C6, C8, and D3) and the outer perimeter of multivallate enclosures (A1, A6, A7, D4, D5, D7, D9, Turin and Doontorpa) in this study. Indeed, such hedging may well be a late addition to the overall composition of a site, but the argument is made that the survival of such sites down through the centuries may be as a result of constant curation and management through traditional practices by landowners.

This view is supported by numerous descriptions of 'forts', contained in The Schools' Collection, as being planted with hawthorn trees or bushes (5.3.3; 5.4.3; 5.5.3; 5.6.3). That they were intentionally planted may have been far more obvious a century ago when natural hedging and fencing was still the widespread practice, a practice which would gradually be replaced in many places, by the use of post and wire fencing. For example, where the 'hedge' has deteriorated on Lismacaffry A2 the landowner has erected a wire fence between the trees that remain on the northern bank. It appears that the purpose of this fence was not necessarily intended to enclose the site or to corral livestock within the *ráth* or exclude them, but may only have served to prevent livestock from traversing the bank. Hedges restrict the movement of farm animals on the banks of an enclosure thus protecting them from the erosive effects of trampling. The wire fence does not continue around the full perimeter of the enclosure and access to the interior can be easily gained in the SSE where there is a causewayed entrance gap and fewer trees. Thus, the wire fence is used simply as a means of protecting the earthwork from deterioration under foot of livestock. Similar wire fences have been encountered in other sites, such as at Tully in Monaghan, where cattle have freedom to enter the interior but are restricted in passing between the hazel trees on the bank. This may illustrate the maintenance of barriers on medieval enclosures as a traditional practice, perhaps indicative of the desire to protect the monument from deterioration, a practice that was perhaps once exclusively managed through the maintenance of trees. This provides a context for the widespread recurrence of superstitious and folkloric references to the dangers and consequences associated with

removing trees from enclosures. The idea that the only remedy to the ill-luck that befalls a person who removes trees or branches from an enclosure is to return them, might well be central to explaining the widespread consistent patterns of intentional planting that otherwise have no historical signature.

There are distinct differences between the hawthorn and hazel trees encountered in hedgerows and trees of the same species encountered on medieval enclosures. When the manner in which CY2 and CY3 tree-cover on a *ráth* is compared with the manifestation of similar species in hedgerows, some contrasts come to light that support the argument that their ordered layouts cannot be explained by natural processes. Hazel is not an overly common hedgerow species. If its presence on medieval enclosures were due to natural colonisation, then we should expect to find it as a more significant component of hedgerows, particularly in hedgerows close to the enclosures where it is abundant. Fieldwalking as a part of this study has found that hazel is significantly absent from the hedgerows in the environs of the surveyed enclosures that have CY2 tree-cover. Data from various hedgerow surveys (see Table 12 below) throughout the country show a relatively low frequency of hazel as a hedgerow component, which serves to highlight the frequency with which it is found on enclosures.

	East Galway	Offaly	Sligo	Westmeath	Monaghan	Longford	Laois	Roscommon
Hawthorn	90.3	99	88.3	99	95.4	99	98	99
Blackthorn	55.3	76	19.1	41	57.4	73	72	53
Elder	26.5	49	27.7	58	13.9	37	40	26
Gorse	22.8	15	33	9	25.9	32	28	27
Ash	15.2	10	48.9		51.9	35	14	
Holly	12.0	35	11.7	33	40.7	28	52	20
Hazel	11.1	33	2.1	10	13.9	13	25	7
Privet	10.8	41	5.3	33	12	36	34	24
Spindle	7.1	27		16		6	11	12
Willow	7.1	28	24.5	12	20.4	13	30	19

Table 12 Frequency percentages of woody shrub species occurrence from 8 county hedgerow surveys.

The relationship between CY2 and CY3 tree-cover and medieval earthen enclosures appears to be specifically pronounced in multivallate enclosures. A general pattern of CY2 tree-cover on the internal banks and CY3 tree-cover on the outermost bank is identifiable at many sites throughout the country including A1, A6, C3, D4, D5, Turin, Doontorpa and the moated site in Cloonfree. Also comparable are the enclosures in Streamstown, Co. Mayo and Beagh, Co. Galway. The possibility exists that tree planting in this manner on these enclosures is related to the resource management of hazel as a source of coppice wood, which would have been a valued resource for fencing and thatching right up to the end of the 19th century. The purpose of a hawthorn hedge enclosing such a site may have served as protection from browsing animals of the hazel stock within. This leads to the postulation that some of these earthen enclosures may have developed new roles over time where they served as groves where certain trees were cultivated and protected. In this view, the enclosures are valued for what they provide as much as for the cultural identity that they represent, and the trees become an essential component of a rich culturally inherited paradigm.

5.12 Fieldwork Conclusions

The presence of veteran hazel stools as CY2 tree-cover and hawthorn as CY3 tree-cover was identified across the four main study clusters (5.11). No other species demonstrated the same type of spatial organisation as hazel and hawthorn. The idealised form of CY2 tree-cover is typified by the location of veteran stools on the banks and in particular upon the inner and middle banks of multivallate sites with some discernible order, and has been interpreted as relict of past coppicing practices. Coppicing hazel leads to the establishment of healthy hazel stools with an increased capacity for long-term survival. The other trend that seemed apparent from the outset was the presence of hawthorn on the banks of univallate sites and on the outermost banks of multivallate sites. This was also upheld significantly in all regions of this study. Hawthorn, long associated with protection, appears to have been employed as guardian to the earthworks themselves. This is perhaps a continuation of an earlier role when it may have been employed to protect those who dwelt within them. In the particular case of multivallate sites, this continued role of protection extends to the inner earthworks and the trees that are growing on them. The only other veteran trees that were encountered within the set of study sites were an oak in Milltown St. John, Co. Tipperary and an oak in Cooleagh, Co. Westmeath, both of which

were estimated to be in the region of 300 to 350 years old. Whether these oaks were intentionally planted is of course impossible to tell.

Finding sites with comparable purposeful tree-cover such as at (D1) in Tully, Co. Monaghan, Turin, Co. Mayo, Doontorpa, Co. Clare and (B1) in Cooleagh, Co. Tipperary indicates the existence of widespread practices and attitudes relating to the treatment of such monuments. These attitudes and practices are, to some extent, represented in, and tangible through the record of folklore collected by the National Folklore Commission, which reveals a common set of folkloric tropes and motifs relating to medieval settlement enclosures, the trees growing upon them and how both ought to be treated. The widespread distribution of these folkloric motifs, coupled with the widespread similar treatment of enclosures, may indicate an origin of deeply embedded cultural provenance. The record of extant monuments clearly shows that protection, preservation and management of these sites was a high priority concern throughout their entire existence. The widespread and consistent distribution of this relationship between site typology and the trees present, indicates that this phenomenon may be seen as the result of long-lived cultural practices. The nationwide distribution and consistent nature of such tree-cover certainly announces their anthropogenic origin but challenges remain in establishing chronologies for those human/plant interactions. There is little doubt that such tree-cover has been established on the sites for several centuries, but the culturally inherited paradigm that has dictated the ongoing curation and management of both the enclosures and the trees is doubtless much older.

While tree toponyms certainly indicate the presence or importance of trees at certain locations in the past, they cannot be relied upon to reflect the continued significance or presence of such trees. They may however, indicate a certain record of past land-use and resource management. In as much as the character of these sites is defined by the presence of hawthorn and hazel trees, there is a portion of their character that is also defined by the absence of ornamental species such as beech and sycamore and other species that were introduced mainly for landscaping projects conducted by the landed gentry in the modern era. Such trees are often found upon post-medieval designed landscape features and on medieval enclosures that have been adapted as features of such designed landscapes and may present as CY1 tree-cover on some sites today, the enclosure in Ballyallaban townland in Co. Clare or the ‘rough fort’ in Moneyrannel, Co. Derry being good examples (Figure 6, Figure 7). Very few monuments with CY1 tree-cover were encountered in this research and where it was encountered, it was noted but not surveyed.

The presence of CY4 tree-cover indicates that neglected sites will succumb to being colonised by a variety of opportunistic species. When this occurs, it appears to lead to a a random selection of species present and a distinct lack of order in their spatial arrangement. Thus, where CY4 tree-cover is encountered, it may indicate an enclosure where traditional practices have ceased. This interpretation may explain tree-cover at D5 Killydonagh (5.6.4.4) which consists of alder, willow, blackthorn, birch and ash CY4 tree-cover and remnant hazel CY2 tree-cover.

6 Problematising Living Trees and Vallation

6.1 Introduction

Determining relationships between trees, people and the earthen-banked settlement enclosures of medieval Ireland is challenging. In this chapter, earthen-banked settlement enclosures are presented as the settings within which networks of relationships between people, earthworks and plants have been assembled and disassembled from the early medieval period to the present. Different motivations behind the creation of enclosures are predicated by the diversity in their type and size. Several methods of achieving enclosure were employed. They included the making of earthen and rock-cut fosses, the building of earthen banks, stone walls and revetments, the construction of palisade fences and the probable setting and laying of stock-proof hedges. Despite this diversity, there is also an undeniable uniformity which is succinctly expressed by O'Sullivan et al. (2014, 48) in the statement that 'Early medieval settlement in Ireland, (…), is overwhelmingly about the inhabitation of enclosures'. A pertinent question is 'what motivated their creation?' The more their purpose is understood, the more that can be discerned about the activities involved in their creation, use and maintenance. Traditional responses to this question have tended to centre on concerns for defence and the expression of status as the primary motivations.

More recently, scholarship increasingly suggests other social and ideological roles and motivations for enclosure creation (O'Sullivan and Nicholl 2011, 67; O'Sullivan et al. 2014, 82–87). O'Sullivan and Nicholl (2011, 79) discuss how the enclosing features usefully separate private space from public, domestic space of the household from the kin-land of the wider group and how the enclosure as a boundary aids in organising access and restrictions in terms of movement and rights attached to property. This perspective provides a fundamental and primary motivation for enclosure that is not, in the first instance, overtly concerned with defence. Essentially, it suggests that the enclosing elements must carry meanings or a kind of tacit knowledge that transcends any physical functions suggested by their morphology. The banks and fosses of many bivallate and most other multivallate enclosures constitute the greater portion of their area, which raises questions about the use of such spaces. For example, the space enclosed by the earthworks at the multivallate enclosure in Turin, Kilmaine, Co. Mayo (5.7) amounts to 0.15 hectares, while the space occupied by the enclosing banks and fosses is five times that at 0.75

hectares (Figure 91). Similarly, the multivallate enclosure in Cooleagh, Co. Tipperary (B1), (5.4.4.1) occupies a total area of *c*. 0.8 hectares with approximately 0.1 hectares representing the central enclosed space. The banks of these monuments also incorporate berms, which further illustrates their purpose as places people frequented and used. It also requires that we consider how such places, as architectural expressions, were considered aesthetically and indeed, how aesthetics may have been expressed within and through them. Despite this, as spaces in their own right, they are the lesser-considered features created by the processes of enclosure and are rarely considered beyond the focus of size, type and morphology. The spaces that they enclose and their contents have tended to attract the most investigative attention as places of human activity.

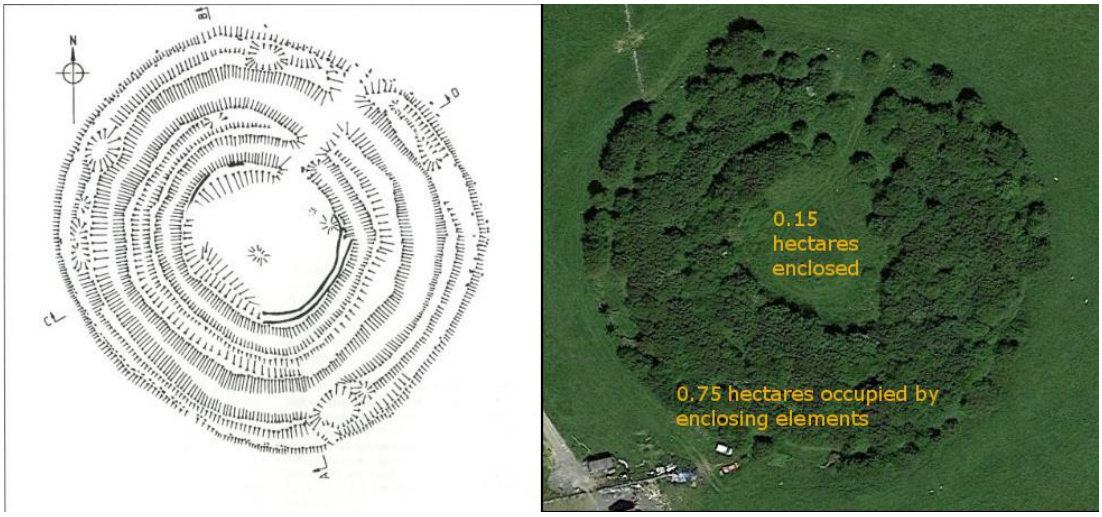

Figure 91 The multivallate enclosure at Turin, Kilmaine, Co. Mayo where the enclosing elements occupy five times the area of the space enclosed.

This chapter is chiefly concerned with the purposes and varied uses of earthen banks and fosses of medieval settlement sites and proposes that the presence of, and provision for, trees should be considered among those purposes and uses. Any suggestion that trees constituted intentional components of their enclosing elements must be foregrounded with consideration of the motivations and purposes of vallation in the first instance. The conceptualisation of the roles of enclosing banks solely in terms of defence is challenged in this chapter. What follows is essentially a historiography and critique of current thinking on vallation in the context of Irish medieval settlement enclosures and a proposal of new contexts in which they could be viewed.

6.2 Archaeology and Vallation

The word vallation is usually used in archaeology as a defining term for any boundary that is composed of earthen banks and fosses. Multivallation is the use of two or more sequential or concentric sets of banks and fosses or ditches. The word vallation comes from the late Latin *vallātio* and refers to 'a ridge, wall or bank of earth thrown up as a defence or protection, or an earthwork or fortification of this nature' (OED Online 2019, 221214). Its root is in *vallum* generally meaning 'rampart', and linked with *vallus* meaning 'stake' and connotes an upright component of a palisade fence. The word *vallum* is often used for a wall or rampart of earth, sods or stone employed as a means of defence, particularly those that were constructed by the Romans in England and Scotland (Hill 2004). Although it carries military connotations, it is also the word used for walls and earthworks that surround medieval monastic enclosures.

The same processes of enclosure have been used in the creation of prehistoric ritual and funerary monuments such as Neolithic causewayed and embanked enclosures and Bronze Age and Iron Age barrows. However, it is understood in the context of prehistoric ritual enclosures that the act of demarcating space by enclosure is imbued with a significant set of values and associations that go beyond the merely practical or utilitarian. This may be particularly true with regard to the phenomenon that Dowling (2011, 214) describes as closely-spaced multivallation, which is 'a characteristic feature of monuments of both later prehistoric and early medieval date in Ireland, (and) it was also widely employed by communities in Britain and north-west France during the last few centuries BC'. In Ireland some of the most impressive and noteworthy closely-spaced multivallate enclosures have their origins in late prehistory and are often associated with major royal complexes such as the Rath of the Synods (*Ráith na Senad*) on the hill of Tara, Rath Airthir (*Ráith Airthir*) at Teltown, Co. Meath and Rathra (*Ráith Ra*) associated with the Rathcroghan complex in Co. Roscommon. The cultural importance of these monuments in Irish medieval society is well attested in Gaelic literature. Bardic poets often compared a patron's house to mythic capitals in the same way that poets compared a patron to an idealised mythic figure as a form of praise. This is clearly demonstrated in two poems of the early 14th century in praise of Aodh Ó Conchobair's (overlord of Connacht) house at Cloonfree. The first poem which begins *An tú aris, a raith Teamhrach?* ('Is it thou once more, Rath of Tara?) suspected to be written by Aongus Ruadh Ó Daluigh (Quiggin 1913, 333–34) compares Cloonfree to Tara and also to Cruachain. In the second poem beginning '*Tomhur mhuir Chruachna í gCluain Fraoich'* the poet compares Cloonfree to Cruachain, Tara, Oileach

and Cashel, 'the four great early fortifications of Ireland' (Finan and O'Conor 2002, 75). The quadrivallate enclosure known as Tlachtga or the Hill of Ward, Co. Meath provides evidence for activity ranging from the late Bronze Age to the high medieval period where, according to AFM (1167.10), Ruaidrí Ua Conchobair (King of Connacht) presided over a national synod of kings and prelates (Davis et al. 2017, 95). Its origins are assumed to be as a funerary monument that marked the beginning of an assembly landscape. Two main phases of construction are suggested for the archaeological features on the hilltop. The first is the creation of a hengiform enclosure (*c*.195m diameter) in the late Bronze Age and the second is the creation of the multivallate monument of Tlachtga itself in the late Iron Age/early medieval period (ibid, 97).

Current scholarship argues that the significance of prehistoric artificial boundaries 'stemmed from the perception of boundaries as liminal spaces' (Dowling 2006, 15; 2011). Dowling (2011, 217) argues that closely-spaced multivallation in the late Bronze Age and Iron Age was 'restricted to ritual and funerary monuments'. Thus, as socially significant spaces, they were invested with profound, 'non-utilitarian' significance. It is against this background that *ráth* type enclosures (both univallate and multivallate) made their appearance and became the most common form of enclosed settlement in the early mediaeval period. While a desire for defence and protection is expressed to some degree in the morphology and distribution of early medieval settlement enclosures, they also served non-utilitarian purposes such as reflecting or signalling status (6.3; 6.6.1) and codifying aspects of the law (6.4). The accepted view is that multivallation in particular, was used to define the boundary of high-status monuments in late prehistoric and early medieval Ireland (Dowling 2011, 214). FitzPatrick (2004, 52; 2015b, 52) has shown that ancestral attachment and pedigree of place were of central importance in medieval Gaelic consciousness. This is demonstrated in the manner and means by which traditional assembly places were appropriated and managed in medieval Ireland and is also evident in the use of antique church sites as Gaelic parish centres throughout Ireland (FitzPatrick 2006, 70). This could equally be applied to medieval settlement enclosures.

6.3 Settlement Enclosures and the Idea of Defence

An informed perspective on the roles and continued purposes of enclosing banks around settlement sites has been beset by the orthodoxy that their morphology reflects military motivations and a desire for defence and protection. The archaeological evidence,

however, has long shown that an informed perspective does not hinge on the resolution of this issue. Indeed, some of the most recent scholarship is less equivocal about defence as a major motive for vallation.

> '…although there are certainly some early medieval raths with defences that are so prominent and impressive that they clearly had some strategic and ideological role most raths and cashels were not primarily military fortifications.' (O'Sullivan et al. 2014, 75).

Indeed, many of these enclosures very clearly betray any motive for defence on consideration of the site chosen and its unsuitability for the location of a defensive stronghold. One such example is the multivallate enclosure in Coolamber (A7) (Figure 20 and Figure 34), which is perhaps the most impressive extant *ráth* enclosure in the locality in terms of the size of the banks and fosses and the area it occupies. However, it is inconspicuously located in the lowest part of a southern downslope in Coolamber townland and is hardly discernible from any direction until one gets quite close (see 6.6).

Yet, the discourse about defence has had a profound impact on the subject and, to some extent, still frames current understandings of enclosed settlement and Gaelic society. McCormick (1995; 2008) argued that 'ringforts' were a unique response to the value system of early medieval Ireland where wealth was based on cows. Cattle-raiding, as an accepted form of political competition, has been variously mentioned as a significant factor in the development of these sites as semi-defended farmsteads (Mallory and McNeill 1991, 188; Kerr 2007, 9). Mc Cormick (2008, 209-224) also argued that advances in dairying techniques in the early medieval period led to a significant increase in food production and consequently, an increased population. This interpretation has helped to dispel the military connotations that accompany the term 'ringfort', as it had been formerly applied to the full range of medieval settlement enclosures in Ireland, but it does not cover the entire set of enclosures which are too numerous and varied in morphology to be simply semi-defended farmsteads. Their 'defences' may indeed have been built as a counterpoint to cattle-raiding as opposed to a counter-measure to any other type of conventional warfare, but some morphological features, like multivallation for instance, confound effective and practical measures of defence or livestock protection. Multiplication of the number of banks does not augment defensive strategy; alternative motivations must be considered in order to explain it.

All who venture into research on medieval settlement enclosures in Ireland are confronted to some degree with this seemingly unresolvable issue, which has generated a

considerable corpus of ideas and interpretations that are sometimes conflicting and sometimes complimentary. O'Sullivan et al. (2014, 75) discuss how the 'problem' with seeing them as fortresses has been understood since the earliest antiquarian investigations (see (Molyneux 1725, 209; Sampson 1802, 499) and that it still 'remains unclear, (…) exactly how important the enclosing features were in terms of defensiveness. Mallory and McNeill (1991) argued convincingly that they (the typical *ráth* enclosure) were not defensively effective. Some arguments cited were practical observations relating to undefended entrances, the length of the defended perimeter, the lack of a 'fighting platform or perimeter fence', the fact that ditches were often allowed to silt up (Mallory and McNeill 1991, 198) and that they do not tend to become any more defensive over time (Kerr 2007, 7). This encouraged others to argue that they may be seen as 'defensible', if not 'defensive' (Lyttleton and Monk 2007) meaning that they could be adapted quite easily for defence if the need arose. Others further argued that perhaps they should be seen as defensive only in so far as would be necessary to protect cattle. (McCormick 1995, 34; McCormick and Murray 2007). This succession of arguments, regardless of any individual merit, demonstrates that there is a difficulty in extricating the subject from the idea that defence must be the fundamental or dominant motivation for the existence of the *ráth*. It also shows how the common mental image of medieval settlement (not helped by terminology such as 'ringfort' as discussed below) is framed by the idea of conflict. Despite a long history of noting and observing that they were not essentially defensive, it still seems that removing defence as a chief concern leaves too great a vacuum. Unless it can be filled by something of equal practicality and cultural poignancy, the argument for defences will remain.

Instead of too hastily exploring alternative dominant motivations for the creation of medieval enclosed settlements, it is worth first interrogating the 'difficulty' itself. If we ask where it emerges, we are first confronted with an inherent problem with terminology. The idea of defence as a chief concern has been expressed in, and compounded by, the words and language that have been used in relation to medieval settlement enclosures. We think in words and words in turn frame the way we think.[36] The use of the militaristic term 'ringfort' (implying a fortified site) is an enduring example. That this word was chosen in

[36] Research in the field of cognitive science demonstrates how language shapes the way we think concluding that '(1) language is a powerful tool in shaping thought about abstract domains and (2) one's native language plays an important role in shaping habitual thought' (Boroditsky 2001, 1).

the first instance, and continues to be used, illustrates how medieval Irish society and culture has been characterised as dominated by warfare and political turmoil more so than by pastoralism and social hierarchy. It may be similarly argued that the word 'vallation' (from the Roman vallum, 6.2) and its derivatives (univallate, multivallate etc.) contribute to the persistence of the idea of military fortification as a chief concern. The subject is further obscured by the chosen terminology at the expense of considering alternative interpretations.

FitzPatrick (2009, 53) advocates removing the word 'ringfort' from the discussion of medieval settlement enclosures and embracing the colloquial Gaelic words *ráth*, *lios*, *caiseal* and *caher,* as they are naturally imbued with appropriate meanings. Few would disagree with this. The militaristic term 'ringfort' suggests circular uniformity and could never have served the diversity of sites it had hoped to. Despite the fact that quite a share of academic effort has been spent in disentangling the word 'ringfort' from the lexicon of medieval settlement enclosures (FitzPatrick 2009; Kinsella 2010; O'Sullivan et al. 2014, 48-50) difficulties remain that are discernible in how various commentators have chosen to re-adapt and apply the old terminology. In particular there is a certain disjuncture surrounding appropriate uses of the words 'rath' in English and the word '*ráth*' in Irish and the manner in which they are variously used and interpreted. The original Gaelic words have specific meanings that relate to particular types of sites and aspects therein. The original meaning of the Gaelic word '*ráth*' is specific to the earthen enclosing element of a medieval settlement site. It denotes the space created through the movement of earth (the bank and fosse itself), and not the space enclosed by it (which is denoted by the word *les* and later *lios*) and the words *caisel* and *caher* refer to stone-built enclosures (Ó Ríordain 1953; FitzPatrick 2009, 272–73). In fact, FitzPatrick (2009, 273) noted that the use of the word *ráth* 'in both early medieval and later medieval contexts was not exclusive to what 20th- and 21st-century archaeologists call the 'ring-fort', but was in fact used of any earthen rampart enclosing a space'. These were distinctly prescriptive terms for specifically created spaces.

Kinsella (2010, 91) advocated avoiding the use of terms such as ringfort and *ráth* entirely, suggesting instead the term 'enclosed settlement' and stating that it 'accurately refers to the dwelling-places of early medieval families and their retainers who were engaged in farming and small-scale industrial and craft activities' (ibid). He argues that sites can be classified 'according to their function such as livestock enclosure, enclosed iron-smithing forge etc.' (ibid. 91). However, a counter argument may be made that the terms which the

early medieval writers used are the accurate ones for these monuments (see FitzPatrick 2009) and that avoiding words such as *ráth* and *lios* deprives the subject of fundamental meanings. Similarly, using the word 'rath' in English may also deny a portion of meaning pertinent to the word's origin. O'Sullivan et al (2014, 48) give a comprehensive overview of both the traditional and current terminology and classification, and offer the following as a guide to the conventions they choose to use:

> '.., we use the general term early medieval 'settlement enclosure' rather than 'ringfort' (which has military connotations); we use the term 'raths' when referring to earthen enclosures, 'cashels' for stone-built enclosures, and 'other settlement enclosure' when the type of enclosure under discussion is not clear…' (ibid, 48)

This system of nomenclature works well in general. It distinguishes between earthen and stone-built enclosures and purges the word 'ringfort' from the lexicon of Irish medieval settlement studies, but in its desire for generalisation it denies any prescribed meaning that may be conveyed by the Irish words. The words 'raths' and 'cashels', as cited in the above quotation, are new (English Language) words, corruptions of the plural Gaelic words that obfuscate their etymological origins. The same authors are indeed aware of this, as demonstrated by their further statement that 'the most common early medieval settlement enclosure type is the rath – a modern word derived from the Old Irish *ráth*, meaning 'earthen rampart'' (ibid, 50). This latter statement acknowledges that there are differences between the old meaning and the new, but it does not address them.

6.4 Understanding the Term *Ráth*

The dictionary of the Irish language lists two separate meanings for the word *ráth*. The first is a legal term meaning (a) a surety, guarantor or (b) suretyship: a guarantee, pledge. The second meaning is 'An earthen rampart surrounding a chief's residence, a fort' (www.dil.ie). From an archaeological perspective, the second meaning tends to be the most used definition of the word. However, in a paper on suretyship presented at the third Indo-European Conference at the University of Pennsylvania, Binchy (1970, 360) postulated a link between the two meanings of the word. Kelly (2011, 167–68) summarises Binchy's work saying that the word *ráth* or 'paying surety', 'is doubtless closely connected with *ra(i)th* fort-stronghold', so its basic meaning is 'one whose function is to strengthen or secure a contract'. The temptation here may be to regard the relationship between the two meanings of the word as an analogy between 'a guarantor

that strengthens and secures a contract' and 'a rampart that strengthens and secures a property'. However, the relationship seems to have more substance than this simple analogy.

It may be that the *ráth* (rampart) secures a contract in the same way that its human counterpart does. In this way, the building of an earthen bank and fosse may be instituting the guarantee of certain rights, entitlements and obligations as arbitrated between landowners and their clients. It is a contract inscribed on the land. The enclosing element defines a space within owned land where certain inalienable rights are afforded to the occupier. This idea ascribes a certain agency to the earthwork itself. The rampart becomes the *ráth* (surety or guarantor) by guaranteeing, with what it encloses, that the occupier fulfils his obligations as client, just as the human *ráth* or guarantor does so 'by guaranteeing with his own property that the principal (i.e. the party for whom he is going surety) will fulfil his side of a contract' (Kelly 2011, 168). If we allow this, then perhaps it may be that, in its original meaning, the word *ráth* did not refer to the earthen banks of an enclosure, but that the earthen banks of an enclosure originally referred to the word *ráth,* (i.e. the surety it provided).

In Binchy's (1941, 102–3) presentation of the law tract *Críth Gablach* (which dates from *c*. AD 700), he outlines the three types of surety, 1. *Naidm*, which he calls the enforcing surety, 2. *Aitire*, which he calls the hostage surety and 3. *Ráth*, which is a surety guaranteed by pledging property or the 'paying surety' as Kelly puts it (Kelly 2011, 168).[37] Stout (1997, 113–14) argued that most univallate *ráth* enclosures, the most numerous among Irish medieval enclosure types, were occupied by the free non-noble classes (*bóaire* and *ócaire)*. They were not primarily defensive fortifications (if at all) yet it seems that this form of settlement required the construction of earthen banks, whatever their purpose. These free-farmers would have had to build their own enclosures (O'Sullivan et al. 2014, 82), which may account for the insubstantiality of many of their ramparts. This may perhaps be due to an inability to marshal a certain degree of labour; however, it is equally likely that the building of the *ráth* was firstly a legal requirement. This gives further context to the manner in which *Críth Gablach* prescribes the buildings and types of tools and equipment that ought to be found within the early medieval house (3.6) (Kelly 1997,

[37] Kelly goes on to say that over time, type three (the *ráth*) emerges from type two (*aitire)* so that by the 8th century the *ráth* has become the normal surety (ibid, 364). Type one *(naidm)* 'must have been a member of the 'grades of nobility' (ibid, 362) and remains essential. He notes also that the *naidm* always seems to function in association with the *ráth*.

361–63; 1997, 463; O'Sullivan 2008; Jones 2012). These may be seen as included in the property pledged by the *ráth* and contained within it. The law tracts *Críth Gablach* (Law of Status) and *Cáin Aicillne* (Rules of Base Clientship) outline the highly structured hierarchical nature of Gaelic society in which the various grades of kings, lords and commoners are described. 'It was a society bound together by political and kinship affiliations and a socio-economic system revolving around the institution of clientship, whereby a lord provided a fief of land, livestock and equipment in return for *bés tige* (annual food-rent) of calves, meat, grain, dairy produce, winter hospitality, labour or military services.' (O'Sullivan et al. 2014, 325). The appearance of the *ráth* might thus be seen as an instrument for the management and regulation of such careful prescriptions and a means of arbitrating certain aspects of the law. Indeed, how does a society with no written contracts operate such an advanced system of law? *Críth Gablach* outlines various penalties for trespassing into an enclosure or a house within, which is illustrated by O'Sullivan et al.:

> 'A person may open (the gate of?) the *les* from the outside without penalty—presumably to ensure that they can legally come up and announce their presence. If a person enters into the l*es* of a *mruigfer* without permission, however, they will be obliged to pay five *séuit* in restitution for the initial entry (a *sét* being the standard unit of value, equivalent to a three-year-old dry heifer). If they venture in further into the enclosure and open the door of the house, they will incur a fine of another five *séuit*. If they go even further and look into the house, they will be due to pay a fine of one cow (MacNeill 1923; Kelly 1997, 431–33). Thus, we can see that there is a growing sense of 'privacy' as one moves into an enclosure, with the seriousness of a violation of the law of hospitality varying according to whether it took place within the house, in the rath enclosure itself or immediately outside in the area adjacent to the rath (*faithche*), or even further out in the outfield (the *sechtar faithche*; see Ó Carragáin 2010, 220)' (O'Sullivan et al. 2014, 85).

Kelly (1997, 168) also notes that 'a person crossing another's land may even acquire legal entitlements'. Thus, we can see the manner in which space is constructed, marked, named and imbued with meanings essential to the functioning of society. This was a society where written contracts were little used (Kelly 1997, 163), yet legal agreements were fundamental. We know from *Uraicecht Becc* that 'a freeman who sells off his land loses his free status. Conversely, if an outsider (*deorad*) buys a land-holding he is reclassified as a person of legal standing (*aurrad*)' (Kelly 1997, 424). In the absence of written legal documentation, how are such legalities recorded and applied? Kelly further explains how landlessness entails legal restrictions. *Berrad Airechta* points out that a contract made with

a landless person (*dither*) is invalid unless authorized by a propertied superior' (ibid. 425). It must also be borne in mind that there are some unenclosed settlements whose artefactual remains bear comparison with those from univallate enclosures. Sites at Ballyvollen, Co. Antrim (Williams 1985), Drumadonnell, Co. Antrim (McSparron 2001) and Terryhogan, Co. Antrim (McSparron 2007) revealed sherds of souterrain ware which has a date range of the 8th to 12th centuries AD (Ryan 1973). Excavations at an early medieval farmstead on Valentia Island, Co. Kerry revealed a substantial farming settlement site that saw continuous occupation from the 6th century to the 13th century and which was never enclosed (Hayden 1997, 1998, 1999, 2000) thus suggesting that 'the occupants of certain univallate enclosures and certain unenclosed settlements may have been of similar social or economic status' (O'Sullivan et al. 2014, 115). Perhaps the differentiating factor here is the presence or absence of certain legal guarantees?

Processes of vallation in Gaelic Ireland appear to have codified certain aspects of the law. Navigating those agreements must certainly have involved using the landscape itself as a parchment to be read. For example, the law tract *Berrad Airechta* includes an 'immovable rock' (*ail anscuichthe*) among the seven things that can prevent the overturning of a contract (ibid). Essentially, the enclosing earthworks are marking space, etching or writing into the landscape the laws, customs and agreements of a people with an oral tradition. O'Sullivan et al. (2014, 323) noted with interest that 'both early Irish secular and ecclesiastical sources define enclosures as spaces for sanctuary and legal protection', recalling a suggestion made by Ó Carragáin (2010, 59) of the possibility that those values derived from prehistoric traditions of enclosure, in respect of barrows and hilltop enclosures, for instance. Indeed, as discussed earlier (6.2), multivallation is a major aspect of Irish prehistory, which may have had some influence on its medieval expression.[38] From this point of view, the enclosing elements of these settlements are indeed architectural expressions that display social and symbolic meanings in much the same way that Creighton and Higham (2005) have argued that medieval town walls can be viewed as 'moral cordons' that separate the order within from the chaos outside.

[38] See (Dowling, G. "The architecture of power: an exploration of the origins of closely spaced multivallate monuments in Ireland", in R. Schot et al. (eds) Landscapes of Cult and Kingship (FCP 2011), pp.213-31

It is, therefore, likely that social and ideological meanings have been embedded in the enclosing elements of medieval settlement sites from their earliest appearance. This is perhaps best expressed in the manner by which the institution of hospitality operated in Gaelic society, which will be discussed in more detail below (6.6). As the physical embodiment of legal contracts, they connected people and places in deeply meaningful ways. Over time, they become cultural monuments where ancestry and identity are preserved. Their continued use and re-use for centuries, as a standard architectural form, attests to their importance as major aspects of social organisation and social identity. These qualities endured far beyond their original uses and were instrumental in ensuring the continued preservation of the monuments. In this perspective, they should also be representative of an aesthetic sensibility, which poses questions about what that might have been?

6.5 Palisade Fences

The often used reconstruction drawing (Figure 92) by Shaw, of an early medieval univallate settlement enclosure reflects the popular assumption that wooden or timber palisades were a standard component of medieval enclosure.

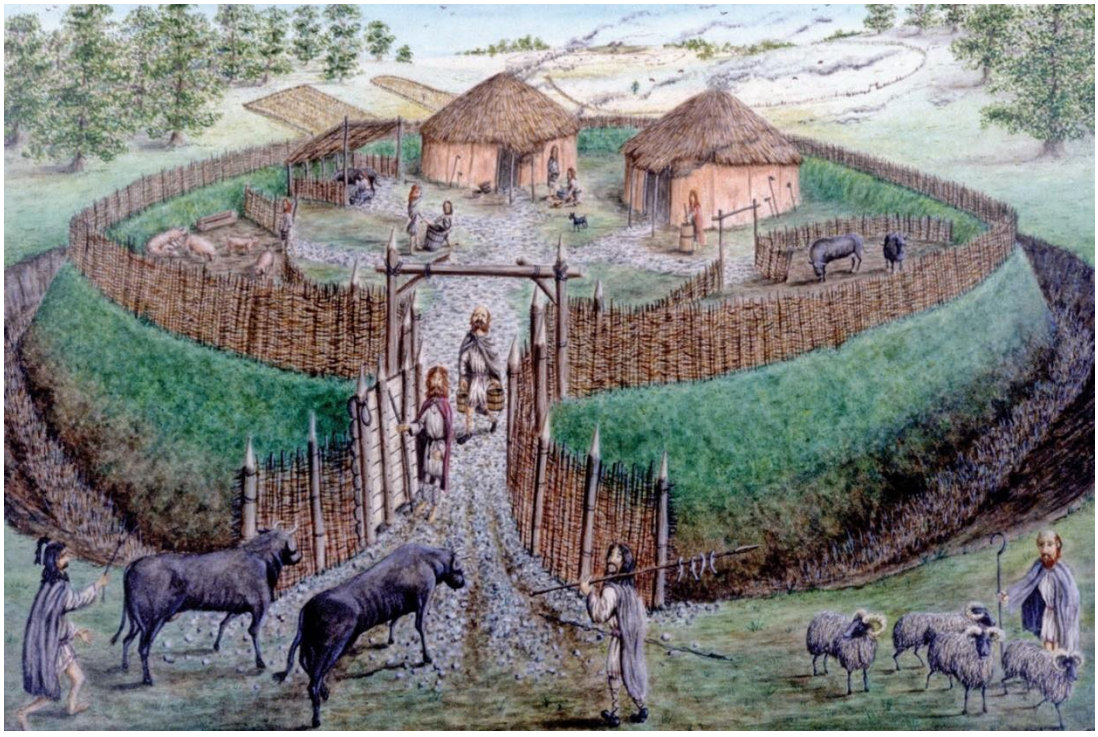

Figure 92 Reconstruction drawing of an Irish early medieval settlement enclosure. (Drawing by S. Shaw: Image © Crown Copyright. Northern Ireland Environment Agency)

Since the 1920s over 3,600 excavations have been undertaken on early medieval and potential early medieval sites in Ireland (O'Sullivan et al. 2014, 29). Searching for the term 'palisade' in the database of Irish excavation reports at www.excavations.ie returned 189 results at the time of writing and only 13 of those results were related to excavations at settlements described as 'ringfort' or 'rath'. This sample is some indication that the inclusion of palisade fences on the tops of the earthen banks of enclosures may not have been a typical feature as is often assumed. Palisaded enclosures without associated earthworks were certainly a site-type that existed prior to the major phase of *ráth* building. Several of those sites where palisades have been encountered through excavation of an earthen enclosure have shown that the palisade in question pre-dated the building of the banks and fosses and was therefore not associated with it. A settlement enclosure at Aghadegnan, Co. Longford (Carroll 1991; Kerr et al. 2010, 397) was originally a series of unenclosed structures that later developed into a palisaded enclosure, before eventually developing into a univallate *ráth* in the 5th/6th century (O'Sullivan et al. 2014, 68; 2014, 71). Excavation of the northern half of this site revealed a pre-bank palisade trench that cut through two earlier circular houses, one of which yielded a calibrated C14 date of 431 AD from a charcoal sample (Carroll 1991). The building of the palisade did not respect the earlier unenclosed phase and the later *ráth* was built over the infilled palisade trench. Ironworking material from the top layer of the pre-bank palisade trench gave a calibrated date of 534 AD and animal bone from the basal layer or the bank gave a C14 date of 636 AD. Other dates from this site imply a continuity of occupation from the 5th to the 10th century (ibid). Williams (1985, 71) argued a similar progression of a palisaded enclosure predating a *ráth* at Coolcran, Co. Fermanagh where a line of stake-holes was noted in a layer beneath the later bank. Similar patterns have been observed at early ecclesiastical enclosures. An enclosure fosse with an internal palisade slot constructed with interrupted stone-packed post-holes was recorded at Ahgavea ecclesiastical site, Co. Fermanagh (Ó Baoill 2000, 13). This slot was from 0.1m-0.2m deep and varied in width from 0.2m to 0.4m over the 5.6m distance that was uncovered. The wall slot of a later structure lay over the palisade trench. At Lisleagh II, a 'ringfort' in Co. Cork, the excavator noted a palisade trench that had been back-filled and a roundhouse (possibly early medieval) erected over it (Monk 1988, 58).

Evidence for revetment palisade trenches have been recorded along the inner edge of the enclosure bank of some *ráth* sites. Such a trench, 0.9m wide and 0.7m deep was discovered at Coolowen, Co. Cork along the inner face of the bank (Twohig 1973: 0007). The bank

survived to a height of 1.5m above the level on which it was built and was constructed from soil excavated from an outer fosse 2.5m wide and 2m deep. Similarly at Loughbown II, Co. Galway, the excavator noted that the profile of an internal post-hole and linear trench feature suggested a palisade revetting the bank and preventing its spread onto the site interior (Bower 2006, 2008b, 78). At the multivallate enclosure in Narraghmore, Co. Kildare, which was excavated by Fanning in 1971, it was reported that 'A cutting across the eastern defences showed that the outer bank had been strengthened by a stone facing. Otherwise, the structural composition of this bank consisted of boulder clay upcast from the fosse and placed on the original ground surface that showed as a dark-grey layer. Apart from the stone facing, the other two banks were of a similar construction. Both fosses had been dug through the undisturbed boulder clay and had filled up with a soft, dark-brown fill containing fragments of animal bone. Excavation of the inner bank revealed traces of what was probably a form of palisade trench on the edge of the inner slope. It showed as a continuous line (c. 0.4m in width and 0.3m in depth) of soft dark fill in the undisturbed boulder clay' (Fanning 1971a:). Again, it appears that this palisade trench served as the footing of a timber revetment. Trenches for revetment palisades were also uncovered at Letterkeen, Co. Mayo (Ó Ríordáin and McDermott 1952, 97) and at Lisduggan, Co. Cork (Twohig and McCormick 1990, 1). While it could also ensure a steep insurmountable façade, these examples seem to relate to the construction of the bank and fosse where stabilisation of the earthwork was undoubtedly the main function, and not to the provision of a freestanding security fence associated with the bank. Occasionally, positive evidence for a palisade on the top of the bank is uncovered. Monk (1988, 58) reported 'the presence of a trench-set palisade on the crown of the bank, a series of uprights of *c*.8cm diameter, probably woven together with wattlework' at Lisleagh I in Co. Cork. He also noted that 'the strip immediately inside the palisade had been so compacted by walking that it probably protected the bank from erosion' (ibid).

There are several cases where the excavator notes that no evidence for a palisade was detected throughout the excavation process. This was noted by Fanning (1971:21) at an enclosure occupied in the later medieval period at Pollardstown, Co. Kildare, a site which also appears to have been a residence of the FitzGerald earls of Kildare in the 16th century.[39] Similarly, at Lisduggan North, Twohig and O'Kelly (1973:0009) interestingly report that 'There was no evidence for palisades, stone or turf revetments or any such

[39] See www.logainm.ie/pollardstown for more detail

structural feature either inside, outside, or on top of the ring-fort bank. There was no evidence in the form of post-holes or bedding trenches for the existence of a gate structure in the vicinity of the entrance'. It appears that in some cases the earthen banks served only to demarcate space.

A notable and perhaps essential quality of the earthen bank is the ability to accommodate a diversity of functions. After satisfying the social and ideological roles inherent in the act (or fact) of enclosure itself, they could be adapted in various ways to suit the needs and preferences of individual occupiers which may, to some extent, account for the diverse manners in which they were created, used and maintained. Important among such diverse functions is the incorporation of trees as bank-crowning components. Newly made earthen banks would not have been bare and denuded for long and creeping vegetation growth must have been managed. Using earth as an enclosing element may in fact be seen as a choice to surround one's dwelling space with plant-life. The long-term use of such enclosures would inevitably lead to the development of traditional methods and means of their care and maintenance. The likelihood is that, in many cases, trees were incorporated as hedging. A desire for security can be very successfully met with a hawthorn hedge and may be far more efficient and resourceful than building and maintaining a timber or wattle palisade. The possibility also remains that, from early in their use, trees may have been incorporated and maintained on and within many of these earthen enclosures for aesthetic reasons. In such a scenario, the Tudor cartographer, Richard Bartlett's *c*.1602 depiction of an enclosure on the hill of Tulach Óg, Co. Tyrone (Figure 10) may have captured a morphological expression with a long pedigree.

6.6 Enclosures and the Institution of Hospitality

The earliest appearance of medieval earthen banked settlement enclosures was a phenomenon of the 6th to 7th centuries AD and was not a gradual evolution of monument type (O'Sullivan et al. 2014, 77). Most of the early Irish law-texts originated in the 7th to 8th centuries AD (Kelly 2011, 1) and they relate directly to the everyday issues encountered by the people who occupied these sites. They describe the customary practices and institutions that developed in that society. One of the most pronounced institutions of early medieval Irish society was hospitality, references to which are distributed across a number of law tracts, and it remained a defining feature of the Gaelic world through to the late medieval period. The institution of hospitality may be seen as a

particularly vivid network of relationships between a diverse set of actors among which are people, enclosures, texts and (in a symbolic sense) trees. O'Sullivan (2004) provides a thoroughly comprehensive treatment of this subject in her book *Hospitality in medieval Ireland 900 – 1500*. She describes how 'a great deal of emphasis was placed on the general duty of all householders to provide hospitality' (ibid, 18), with many rules and regulations governing the custom. In principle, everyone was entitled to receive hospitality at the home of another, regardless of their rank, and, as Simms (1978, 68) relates it, 'every free landowner above the junior rank of ócaire was theoretically expected to be 'ready to receive king or bishop or doctor or judge from the road, and for the visits of every company' (MacNeill 1923, 291)'. The level of hospitality that one was expected to provide or receive was proportional to the status of the householder and visitor respectively (see Simms 1978). These rules governed everyday custom and social interactions and must be, to some extent, inscribed in the matrix of enclosed settlements where the *ráth* (enclosing bank/surety), as described earlier (6.4) may be a prime component of that language; for among those enclosures, the genesis and daily running of that 'long-established and prominent social institution' took place.

Old and early Middle Irish sources identify the professional hospitaller as *briugu* and the late Middle and early modern sources use the term *brughaigh* for this official (O'Sullivan 2004, 120; Mac Eoin 1999, 169). The word *bíatach* (food-provider) is also frequently used interchangeably with *briugu* and *brughaidh* in early and late medieval sources (ibid. 120-121) although by the 11th or 12th century, it seems to become the word for a general food-providing commoner class (O'Sullivan et al. 2014, 80). Another term for a guest-house, *'tech n-oeged'*, is occasionally encountered and it seems to denote an enclosure utilised specifically for the dispensation of hospitality. It appears in the 10th-century tale of Buchet of the Laigin, a wealthy guest-house keeper whose dwelling is described as *tech n-oeged fer n-Herenn* (a guest-house of the men of Erin) in the Yellow book of Lecan[40] and Simms (1978, 69), tells us that in the middle Irish period the great monasteries ran specialist establishments to provide hospitality for their visitors. 'We hear of the Lis-aiged, the 'guest-enclosure', at Armagh and the guest-house at Clonmacnoise, each with its own erenagh, or ecclesiastical administrator, in charge' (Ibid.). Therefore, it is hypothesised that a direct relationship exists between the practice of enclosure and the institution of hospitality. This ought to be true at least for those sites occupied or operated by people

[40] See (Greene 1955, 27)

who performed the role of professional hospitaller. By examining the links and relationships between them, the following considers how the institution of hospitality may be read in the settlement matrix of early medieval Ireland and how the customs and practices associated with hospitality continue in its later medieval expression.

6.6.1 Hospitality and Multivallation

O'Sullivan (2004, 15) describes the significance of the (early) medieval Irish hospitaller to the medieval Irish traveller as 'monumental', however, despite this choice of words, there are no specific distribution or morphological means of determining which monuments within the corpus of early medieval settlement sites may be the actual *bruiden* (hostels) of early medieval Ireland. O'Sullivan (2004, 122) also notes that unfortunately 'there are no surviving inventories or accounts describing the structure or furnishings of an actual guesthouse'. Therefore, our conception of the early medieval *bruiden* must be pieced together from literary and historic sources that make specific reference to such places. For example, *Bretha Nemed Toísech*, an Old Irish law tract, tells that the reputation of a hospitaller depends on his having 'a dwelling on a public road' (CIH 2220. 8-9) and it is specified in *Uraicecht Becc* that three highways should lead to a superior hostel (CIH 1608.33-4). Of note also is the descriptive aspect of Da Derga's hostel in the Middle Irish narrative tale belonging to the Ulster cycle *Tógáil Bruidne Dá Derga* (The destruction of Da Derga's Hostel), which alludes to the relationship between the hostel and roadways. It is given to us in the text by *Mac cecht*, 'the road whereon thou art *going* towards him was the boundary of his abode. It continues till it enters his house, for through the house passes the road' (Stokes 1901, 36). This suggests that junctions, crossroads and places on established medieval thoroughfares are likely locations for the siting of dedicated hostels (see O'Sullivan 2004, 122). The townland of Bohernabreena (*Bóthar na Bruíne*) which literally means 'road of the hostel' is on the eastern bank of the river Dodder (mentioned in the climax of the story) in southwest Co. Dublin. The name Bohernabreena is variously suggested to commemorate the location of Da Derga's legendary hostel (Joyce 1875, 289; MacNeill 1935, 9). If MacNeill is correct in suggesting that the hostel was immediately overlooked from a position on Mountpelier hill then the likely location is perhaps the site now occupied by St. Anne's RC Church on the bend of Bohernabreena road in the same townland (Figure 93).

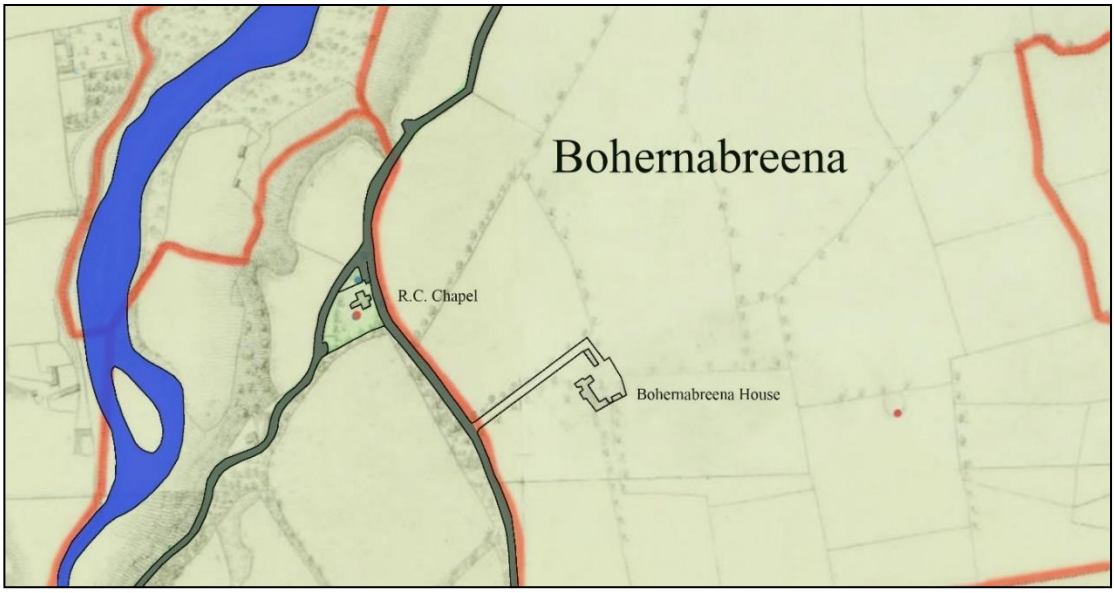

Figure 93 Site of St. Anne's RC Church on Bohernabreena rd., Co. Dublin.

The sources also suggest that, in early medieval Ireland, a person could attain status through the provision of hospitality and some of the highest status individuals in Gaelic society were professional hospitallers (*briugu*) who operated dedicated hostels. Thus, the early medieval *bruiden* was sure to be a high-status site or adjacent to one, making bivallate and other multivallate raths possible candidates. The location of the quadrivallate enclosure at Cooleagh, Co. Tipperary (B1) (5.4.4) is worth considering in this regard. It is located at the crossroads formed by the main north-south thoroughfare between Killenaule and Fethard and the east-west road from Mullinahone to Cashel. Although this site offers good views of the landscape to the south, it does not occupy a prominent height. Its location is not conspicuous from any approach and its impressive size only becomes apparent in its immediate presence.

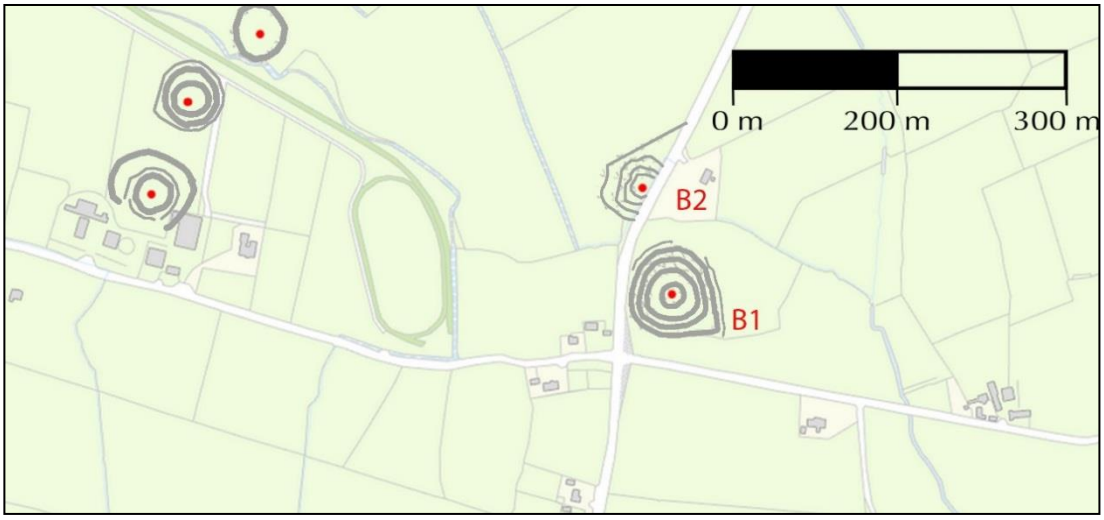

Figure 94 The quadrivallate enclosure situated at the crossroads in Cooleagh, Co. Tipperary. OS map c.1840

Notable too is the close proximity of several other multivallate enclosures suggesting that this was an important high-status locality (Figure 38). A number of other sites resonate with this observation. The trivallate enclosure in Lackan townland 1.75 km east of Ardrahan in Co. Galway is located at the junction of the regional road R347 and the local road L4520. The enclosed space is *c*. 60m in diameter and contains two souterrains. The antiquity of these two routeways is further expressed in the fact that they are the townland borders. This site is heavily overgrown with a mixture of CY4 and CY1 tree-cover, which is to be expected because Lackan townland is part of the immediate estate of Cregaclare Demesne. A very ordered layout of trees is depicted on the 1st ed. OS map (*c*. 1840) indicating that this site was re-purposed as a feature of designed landscape at some point prior to the survey (Figure 95). Ash is the dominant overstorey species at this site today with a lot of elder and blackthorn in the understorey. Hawthorn and Hazel are absent from this site.

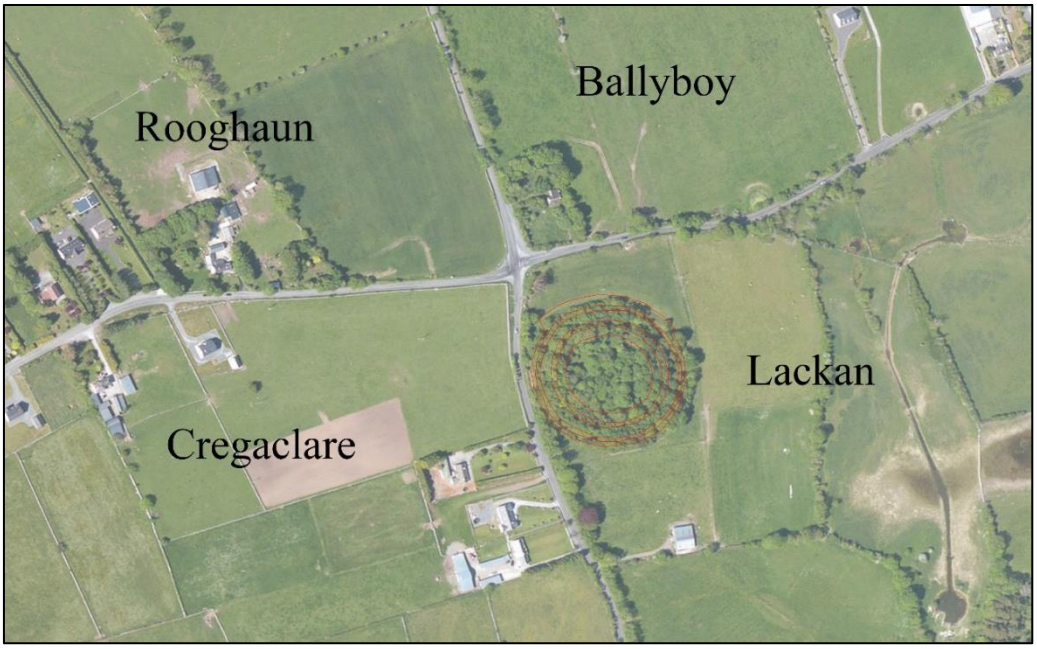

Figure 95 Trivallate enclosure at crossroads.in Lackan, Cregaclare Demesne, Co. Galway

At Kilreekil, Co. Galway where two local roads meet the regional R446 running SW from Aughrim to the town of Loughrea there is another substantial trivallate enclosure (52.5m E-W; 46.5m N-S) with a three-chambered souterrain. Once again, the location of this impressive site on the western downslope of a low hill offers some extensive views to the north and west but is itself obscured from view and inconspicuous from any approach until in its immediate vicinity. Today this site supports a sparse population of hawthorn trees on the middle and outer banks of the northern section only (Figure 96). The *ráth* enclosure in Coolamber, Co. Westmeath (site A7 - Figure 34), as mentioned earlier (6.3) is also inconspicuously located on the lowest point of the southern downslope of a low rise. This site appears to have originally been a trivallate enclosure and is located *c*. 150m from the old roadway that traverses the adjacent townland of Boherquill (*Bóthar an Choill* – road of the hazel) and depicted on the 1st ed. OS map *c*. 1838 (5.3). Comparable too is the trivallate enclosure (42m N-S; 44m E-W) in Turin Co. Mayo which is adjacent to the N84 1km south of Kilmaine village. This site also has evidence of a possible collapsed souterrain in the interior. Souterrains are usually dated to between the 9th and 12th centuries AD although some are earlier (O'Sullivan et al. 2014, 66; Clinton 2001, 89–95; Warner 1986, 111–12). They are most frequently explained as places for the storage of food due to their ability to maintain a constant cool temperature, which may make them an essential addition to an early medieval *bruiden*.

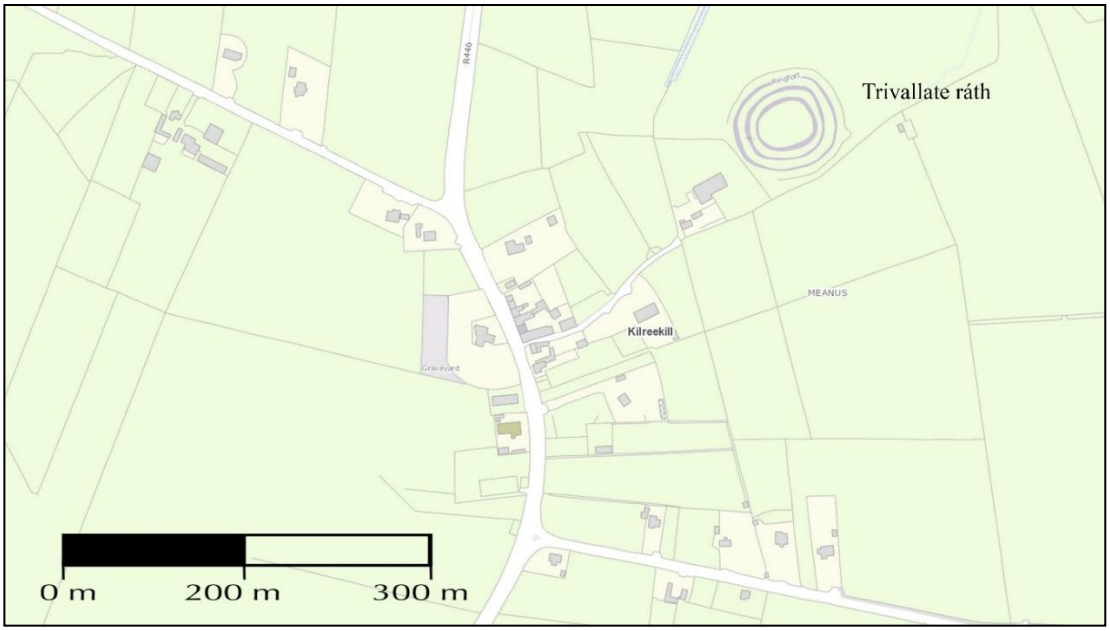

Figure 96 The trivallate enclosure at Kilreekil, Co. Galway. The village of Kilreekil is essentially a crossroads on the regional route R446 that connects Loughrea to the SW with Ballinasloe to the NE.

Multivallation was rare and it certainly appears that its social significance was more related to the scale of the banks and fosses than to the area enclosed by them (O'Sullivan et al. 2014, 82). Considering this, along with the view that these sites were certainly not suitable military fortresses, it makes sense that these earthworks were perhaps intended more to be experienced up-close rather than feared from a distance or avoided. Such a view is encouraged by the presence of berms and wide flat-topped banks observed at many sites. The multivallate enclosure at Turin, Co. Mayo (E1) (5.7) has bermed walkways on its outer and middle banks, and the middle banks of the multivallate enclosures at Cooleagh, Co. Tipperary (B1) (5.4.4), Coolamber, Co. Westmeath (5.3.4), Swellan, Co. Cavan (E4) and the inner bank of Doontorpa in Croagh North, Co. Clare (0), all present as wide flat-topped banks that may be interpreted as walkways (Figure 97). From this perspective, the banks of medieval enclosures (particularly multivallate enclosures) may have been spaces where occupiers and visitors spent time, places that were intended to be actively experienced by people, where they were encouraged to circumambulate and perhaps admire, rather than being passive elements that enclosed the active spaces.

Figure 97 Wide flat topped banks and berms at four multivallate enclosures

The earlier suggestion that a legal language is embedded in the act of enclosure may offer further weight to this reading of medieval multivallation. As Mac Eoin (1997, 484) puts it, 'The Laws state that the *briugu* advanced to the rank of *flaith* 'noble' by possession of wealth and the provision of a social service. The tract on status, *Uraicecht Becc* (UB 14) has: *comgraid briugufri flaith diambe diablad lais gach graid de tir ɳ trebad* 'the Briugu is of equal status with a noble if he has twice the land and property of any grade'. Mac Eoin further suggests that this passage means that the *briugu* could rise to any rank for which he had double the qualificatory possessions (ibid). In respect of the laws of hospitality therefore, the doubling of the banks of an enclosure, and thus the obligations and/or entitlements that they may have afforded, may be an expression of such social mobility.

The narrative literature that was composed and recited in medieval Ireland can often contain information noteworthy for its description of places. The Middle Irish tale *Tógail Bruidne Dá Derga* (Stokes 1901) also contains the following references describing ridges or embankments outside the hostel that are the scene of much of the violence.

> 'And when he shall chance to come upon you out of the house, as numerous as hailstones, and grass on a green, and stars of heaven will be your cloven heads and skulls, and the clots of your brains, your bones and the heaps of your bowels, crushed by him and scattered throughout the ridges' (Stokes 1901, 190).

> ‘Then with trembling and terror of Mac cecht they flee over three ridges.’ (*Teigsit íarum tar teóra foithribi la crith & omun Meic Cécht.*) (Stokes 1901, 191).
>
> ‘Conall Cernach arises, and takes his weapons, and wends over the door of the Hostel, and goes round the house. Three hundred fell by him, and he hurls back the reavers over three ridges out from the Hostel, and boasts of triumph over a king, and returns, wounded, into the Hostel.’ (Stokes 1901, 319).
>
> ‘After this he went on and reached Dá Derga's Hostel before morning. When Mac cecht went across the third ridge towards the house, 'tis there were twain striking off Conaire's head.’ (Stokes 1901, 323–24).

The term *tar teóra foithribi*, is translated by Whitley Stokes as ‘over three ridges’. Foithribi, being the plural of *fu(i)th(a)irbe*, is defined in DIL as ‘a (man-made) ridge, an embankment around a house’. Da Derga’s hostel is clearly being described as a trivallate *ráth*. Indeed, Kerr’s (2007, 82) examination of the distribution of multivallate sites has shown that agriculture was highly unlikely to be their primary function, pointing out that ‘the altitude bands and soil quality were clearly of little interest to the constructors of multivallate *ráth*s’. He goes on to suggest that their location probably owes more to localised political geographies than to the physical environment (ibid). This interpretation dovetails quite well with the idea that an early medieval *bruiden* was likely to be a multivallate enclosure. O’Sullivan (2007 126) says that hospitallers were arbitrators and peacemakers of territorial disputes and that ‘the laws contend that they are agents of mediation always in every territory in which they are living (…) and that the hospitaller’s house was often used as a centre for holding judicial council or a gathering place for spirited debates and lively legal activities’ (ibid).

It is estimated that 20% of Irish earthen-banked settlement enclosures are multivallate having two or more sets of concentric banks and fosses (Stout 1997b). Bivallate enclosures make up the greater share of them while trivallate and quadrivallate enclosures are much rarer. (1.2) Very few examples have been archaeologically excavated, but some include Garranes, Co. Cork (Ó Ríordáin 1942); Ballycatteen, Co. Cork (Ó Ríordáin and Hartnett 1943); and Baunogephlure, Co. Carlow (Stafford and McLoughlin 2011). Garranes was a notably high-status site. Excavation produced evidence that the site was the venue of specialised fine metalworking. Sherds of Imported Red Slip Ware and Late Roman amphorae (Bii ware) were also uncovered (Ó Ríordáin and Ryan 1942). These wheel-made amphorae were typically used for the transportation of wine (Doyle 2009; Thomas

1959, 92). Ballycatten revealed very little evidence for residential occupation and its significance has been interpreted as military, based on its impressive size and location. The fill material in the fosses of the trivallate enclosure in Baunogephlure, Co. Carlow contained considerable quantities of animal bone (Stafford 2005:067).

O'Sullivan and Harney (2008, 66) say that the use of multivallation seems not to be about the size of internal settlement space but about the scale and impressiveness of the earthworks. This view implies that the banks of these sites are indeed being used to signal wealth and status, and is usually combined with the argument that fort-building was a stock form of forced labour. This is implied in a section of *Lebor Gabála Érenn*[41] (Macalister 1938 88-89), that refers to *manchuine* as the service due from a tenant to his chief in return for stock (www.dil.ie). Byrne (1973, 32) suggested that *Crith Gablach* explicitly links the size and number of the enclosing earthworks with the status of the occupier 'insofar as they testify to the number of clients that can be called upon to construct and maintain the enclosure' (Dowling 2011, 213). The marshalling of labour as a display of status may well have featured within the circumstances that created these monuments, but surely not as its instigating factor or its primary focus. The ability to marshal a large labour force certainly illustrates a plausible mechanism for expressing wealth and status (O'Sullivan and Harney 2008, 66). However, little effort has been made to link this idea with other aspects of Gaelic society (such as hospitality), which may inform how such mechanisms actually operated. The danger is that enclosures, particularly multivallate *ráth* sites, may become envisioned simply as homesteads of wealthy people with a surplus of labour that is opportunistically transformed into a kind of competitive showmanship. It makes the known role of the *ráth*-builder somewhat invisible and it also tends to ignore the possibility that earthen banks, as spaces in their own right, may have functioned to some extent as gardens set aside for the display, cultivation, management and enjoyment of nature.

Trees (in particular hazel) on the banks of enclosures may have been used to signal status or express social standing, with particular relevance to the role of hospitality. An Old Irish legal poem which begins 'if thou be a king thou shouldst know the prerogative of a ruler' (Binchy 1970, 152–68), presents a metaphorical link between hazel as the hospitaller of the wood and the 'fragility of the hospitaller's wealth' (O'Sullivan 2004, 130) in Gaelic

[41] See references in Ancient Laws of Ireland, glossary, s.v. manchuine.

society. The king is asked by the poet 'what are the most oppressive cases of tree cutting for which fools are punished?' to which he answers, 'the hospitallers of the forest, the ivied hazel (*briugid caille coll eidnech*). A danger from which there is no escape is the penalty for (felling) the noble sacred tree' (Binchy 1971, 157). The poet then clarifies that a person is entitled to take a handful of ripe nuts to keep hunger at bay, which is the metaphorical reference to the 'common right of all members of the community to enjoy, within specified limits, (…) the food and entertainment of the hospitaller' (O'Sullivan 2004, 131). Metaphorically, cutting down a hazel tree is compared to abusing the institution of hospitality and is therefore an offence that ought to incur the most oppressive punishment. O'Sullivan infers that it is the primary function as a food provider in early medieval Ireland that gives both noble status to the hospitaller and noble or sacred status to the hazel tree. Given that hazel is also associated with knowledge, wisdom and kingship (3.6) there can be little doubt that it was also embedded with meanings that far outweighed this one role. Hazel was regularly lauded for its beauty in medieval texts, both as trees and as material employed in architecture and, as demonstrated in chapter 2 (3.5; 3.6), it was frequently called upon to aid in praising a noble patrons house. In the same way, praise for the noble patron's hospitality was frequently used by praise poets as a stock motif (O'Sullivan 2004, 27). It is not unthinkable that living trees were incorporated into the built environment, in this sense, to serve as aesthetic devices and symbolically framing the living space within the cultural institution of hospitality. Such an interpretation may explain why hazel is the '*bile ráth'*, the great tree of enclosures (3.6.1).

6.6.2 Later Medieval Hospitality

While the customary occupation of earthen-banked enclosures may have gone into decline in the later medieval period, the institution of hospitality continued, albeit in evolving form, as a defining cultural phenomenon. This is most notable among the learned professions and service families of Gaelic lords who lived on the mensal lands (*lucht tighe*) of the lordships (FitzPatrick 2013; 2015, 174). The continued use of some older monuments is frequently encountered through the high and late medieval periods. This is particularly the case with traditional places of assembly and inauguration (see FitzPatrick 2001, 173). There is also evidence for the later and continued use of various types of antique sites such as *ráth* enclosures and *crannógs*. Two such places that were used in the early medieval period as places where sick kings were tended or went to die (FitzPatrick 2015a, 184) may be considered as types of *bruidhne* (hostels). The island settlement called

Island McHugh on Lake Catherine, Co. Tyrone, functioned 'from the thirteenth century onwards as an important O'Neill residence and high status estate centre' (Brady and O'Conor 2005, 127-36), and which FitzPatrick (2015, 184) suggests became associated in the thirteenth century with the emergence of the Meic Con Midhe as poets to the Uí Néill of Tír Eoghain. This association between older island residences and later medieval service families finds a parallel at Cró-Inis on lough Ennell in the midlands where, according to the AFM (1022: 2) 'Mael-Sechlainn the great, the last effective king of Ireland ended his days' (Macalister 1937, 248). The multivallate enclosure of Dun-na–Sgiath, onshore and to the north of Cró-Inis, is considered a royal seat along with the latter.

Figure 98 Aerial image (c.2012) and OS map (c.1901) of Dun na Sriath and Cró-inis, Lough Ennell, Co. Westmeath.

Cró-Inis was re-fortified as a towerhouse in the 15th century and was the residence of the Ó Cobhthaigh poets in the territory of Machaire Uí Thighearnáin (FitzPatrick 2015a, 184). The Annals of Connacht record that 'Domnall Ó Cobhthaigh and his two sons were treacherously killed by Maelsechlainn, son of the son of Art O Mailsechlainn, and by Feidlim, son of the son of Fiacha Mag Eochacain, on Crowinis in Loch Ennell, in his own

house. He was a man of wide accomplishment and his house was an open guest-house' (AConn 1446: 2).

A similar relationship may exist between Tully fort, Co. Monaghan (D1) and Emy *crannóg* on Emy Lake 1km to the northeast. Gaelic Irish settlement in the McKenna lordship of Truagh (5.6.2) continued to focus on native enclosed settlement forms up to the early modern period (McDermott 2010, 373). This *crannóg* is depicted on the Jobson map of Monaghan, *c*. 1591, beside which is a fragmentary inscription where only the name 'Patrick' can be read (McDermott 2010, 389) and thus suggesting that the chief residence of Patrick McKenna, chief of the sept, was shared between the fort in Tully townland and this associated *crannóg*. These settlement enclosures remained in use until they were destroyed by English forces in the 17th century where we are told in Friar Mellans 'A narrative of the wars of 1641' that in May 1643 the soldiers of Tyrconnell, under the command of Sir Robert Stewart 'came to McKenna's residence (boile Mec Ciona) [baile Meic Cionaith] and took it, together with much wealth' (MacAdam 1896, 219).

Indeed, the relationship between the use of older monuments by later medieval service families and the dispensation of hospitality is a recurring phenomenon. Given the state and nature of preservation of so many settlement enclosures it seems likely that many of them were long maintained and remained available for certain uses. A bivallate *ráth* at Rathangan, (Ráith Imgáin) Co. Kildare is a good example. This enclosure, just to the west of the modern village of Rathangan (which is essentially a crossroads), is situated on a rise with good views in all directions. The interior is a large raised platform measuring 60m E- by 58m N-SW. It is enclosed by a 2m wide bank and a 6.5m wide fosse with evidence of a further counterscarp bank on the east and south sides of the fosse (Figure 99).

Figure 99 Looking south along the fosse in the western end of Rathangan enclosure.

This important royal fort has had a consistent high-status profile from the early medieval period, where it was powerfully associated with the kings of Uí Failge (Smyth 1982, 34; Charles-Edwards 2000, 528), through to the end of the late medieval period when Calbhach Ó Conchobhair 'revived the ancient power of Uí Failge' (Smyth 1982, 112) and recovered something of the regions 'ancient reputation for the patronage of learning and of the Arts' (ibid). It is described in an Early Irish poem as belonging to a respective succession of kings that lived and died during the 6th and 7th centuries. The king-list in the poem compares favourably with the list of Huí Failgí kings as preserved in the Book of Leinster (Smyth 1974, 509). The pertinent lines of the poem run as follows:

> 'The fort over against the oakwood
> it was Bruidge's, it was Cathal's,
> it was Áed's, it was Ailill's,
> it was Conaing's, it was Cúilíne's,
> and it was Mael Dúin's
> The fort endures after each king in turn
> and the royal hosts sleep in the earth'.
> (translated by G. Murphy in *Early Irish Lyrics* (Oxford 1956), p. xvi)

This high-status site maintained its role as a place to receive royalty and dispense hospitality well into the later medieval period. It is chronicled in the *Annals of Ulster* (AU 1433:3) and in the *Annals of Connacht* (AConn 1433: 2) as the venue for a feast held in AD 1433, when a general invitation of hospitality (*gairm coitchenn*) was issued on 'the assumption of the blessed Lady Mary in haruest at, or in, Rath Imayn' (ibid) by Mairghréad, daughter of the Ó Cearbhaill (Margaret O'Carroll), chief of Éile, and wife of Calbhach Ó Conchobhair, chief of Uí Failge.

Figure 100 The royal enclosure of Rathangan, Co. Kildare (c. 1901) situated along the R401. Insert is an aerial image of the enclosure c. 2012.

In his *Beatha Aodha Ratuaidh Uí Dhomhnaill* (Life of Red Hugh O'Donnell), written in the early 17th century, Lughaidh Ó Cléirigh, (a member of the Uí Cléirigh historians and poets to the Uí Dhomhnaill chiefs of Tír Conaill), recounts the election and inauguration by Ó Domhnaill of Tibbot Burke in 1595 at Ráith Eassa Caoide, an event which is described as taking place with an assembly of thousands present. This *ráth* enclosure is near Kilmaine in South Mayo. It had been re-appropriated by the Mic Uilliam Íochtair as their inauguration place as early as AD 1333 (AConn 1333.11) (5.7.2). Of note at Kilmaine is the close proximity to Ráith Eassa Caoide of two substantial multivallate enclosures; the quadrivallate hilltop enclosure called Lisnatreanduff 2km to the west in the townland of Ballymartin and the multivallate *ráth* at Turin (5.7.1) 2.3km to the south. The suggestion is that these monuments may too have benefitted from the care and management of this antique landscape by those charged with such service. Indeed, there

are several accounts from the late 16th century that suggest that older enclosures were used by Ó Néill and Ó Domhnaill during their political campaigning throughout the country. In the *Calendar of State Papers Relating to Ireland* (1599, 475) we are told that Ó Néill 'encamped at a place near Ralian (Rathlihen), or O'Molloy's house called Gortacorra (Gort an Churraigh)' where he 'created new midland lords and allies of this choice' (FitzPatrick 2004, 219). Again, we are in an antique landscape for Gortacur is situated 1.5km south-west of Mullaghcrohy (Mullach Croiche), the inauguration place of Ó Maolmhuaidh. There is a *ráth* enclosure in Gortacur townland (47m N-S by 42m E-W) situated on high ground with extensive views in all directions. It contains a long low rise, which may have been a path of stone and earth, that runs from its entrance gap to the centre (www.archaeology.ie OF024-041). This morphological feature may also be related to the choice of this monument as the impromptu inauguration venue used by Ó Néill. However, the most likely candidate for the venue offered by O'Molloy for Ó Neill's camp is the *ráth* (OF024-042001) immediately north of Gortacur in Rathmurragh townland. This large enclosure (*c*.55m in diameter), surrounded by two concentric banks separated by a wide intervening fosse, is the largest of a group of five enclosures that occupy the high ground south of and overlooking Rathlihen. It is morphologically very similar to the royal enclosure at Rathangan but further detailed examination is currently restricted by a dense overgrowth dominated by hazel. The fact that Gortacur is cited as the venue for these activities supports the view that the older monuments were being actively curated and managed by high-status people who kept them available for social and cultural uses.

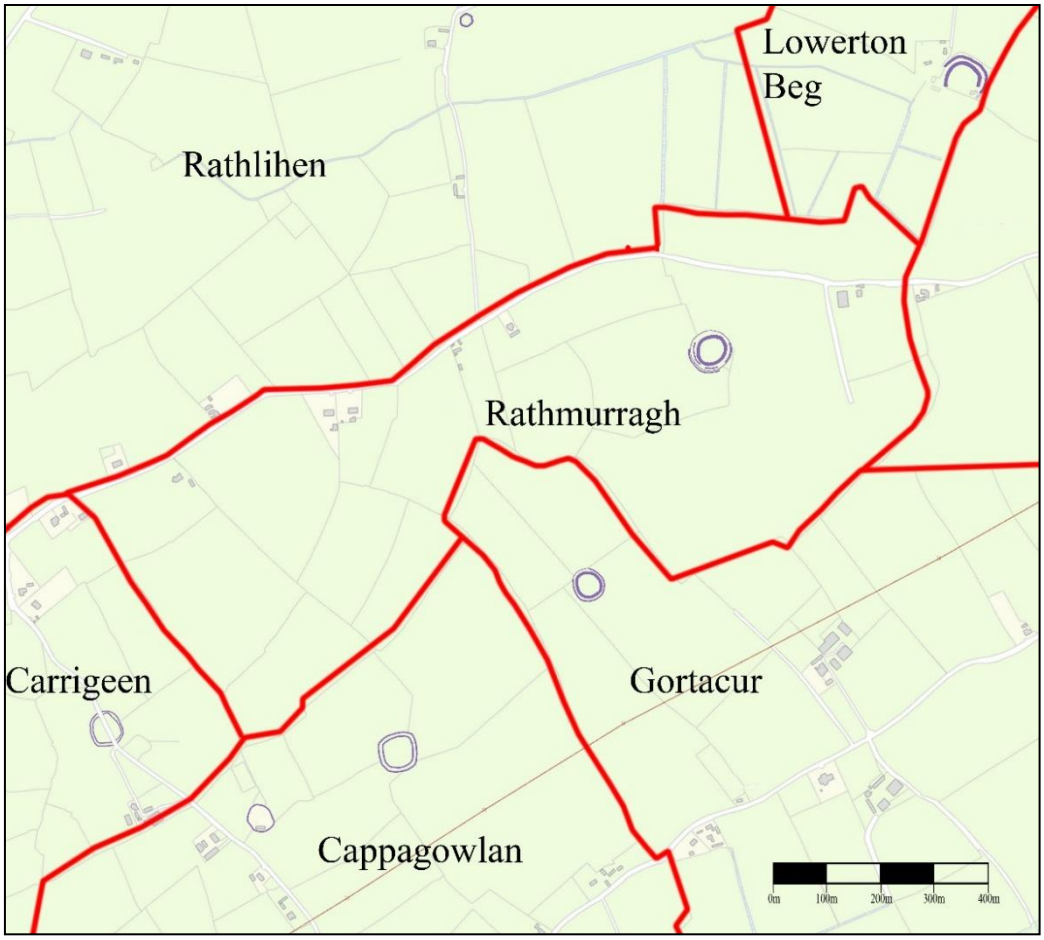

Figure 101 Map showing the bivallate enclosure in Rathmurragh townland, the univallate enclosure in Gortacur, The site of Rathlihen castle (top centre) and the south-western portions of Mullaghcroghy and Lowerton Beg townlands just north of the village of Mountbolus (top left) (source: www.archaeology.ie)

6.7 Summary Conclusion

The word *ráth*, in its early Irish medieval context expresses something culturally poignant that plays an important role in how the earthen-banked settlement enclosures of medieval Ireland are understood. In tracing its etymology and re-assessing the original meanings of the word it has been shown that the earthen banks of medieval enclosures may be considered as multifunctional artefacts that served the occupants of enclosures practically and ideologically.

The consideration that there was a legal language encoded in the early medieval settlement landscape must appear foremost in commentary on the subject. While many sites may display features that undoubtedly reflect defence and/or status as motivations for their creation, they are also undoubtedly encoded with legal sureties that directed the behaviour of those who acted and interacted with them.

The complex system of law-making and law-abiding is at odds with the perception of a society in a perpetual state of readiness to defend against the threat of neighbours. Gaelic society went to great efforts to outline its laws of status, hospitality, the legal relationships between people and property and the different tiers and roles they occupied. This chapter has argued that the institution of hospitality is embedded in the matrix of enclosures and can be used to populate the settlement environment with actions. Notable among the actions of people in the later medieval period is a culture of care and careful management of earlier monuments and their associated landscapes. Such practices among the high-status learned class would have been instrumental in the formation and maintenance of a general cultural disposition toward extant settlement enclosures whether used or unused. This has undoubtedly contributed significantly to the level of survival of medieval monuments to the present.

An emphasis on the need for defences and protection would appear to be outweighed by a concern for ideas or values relating to status and prestige. Multivallation may indeed reflect the status of the occupier, but that does not mean that status display was its purpose. It simply means that multivallation was associated with high-status activity. A more satisfactory explanation is needed to explain how these physical manifestations speak.

I have argued that trees possibly served as aesthetic devices and aids to the expression of social identities on these sites. In a society where hospitality as a cultural practice is very important, the way that it is presented must also be very important. The manner by which the *ráth* was presented, both to the occupant and the visitor is almost certainly an expression of the occupiers' standing in society where the visitor may perhaps read their capacity for dispensing hospitality. The institution and practice of hospitality must be visible in the settlement/built environment of medieval Ireland. I have argued that hazel trees were imbued with valued symbolic meanings that associated them closely with the institution of hospitality and, as such, would have been choice species for inclusion in the aesthetic and practical presentation of medieval settlement enclosures used in the dispensation of hospitality.

7 Living Trees as a Managed Resource of Medieval Enclosures: Discussion

7.1 Introduction

The aim of this research was to problematize and investigate perceived and observed relationships between living trees and Irish medieval earthen settlement enclosures. This was carried out through a combination of desk-based research, which drew mainly on the emic portrayal of trees in Gaelic historical and literary sources alongside a campaign of fieldwork on a corpus of treed settlement enclosures in the four provinces of Ireland. Actor-network theory (ANT) was used as the theoretical framework and a chief methodological approach of this thesis. In this way, various strands of evidence for relationships with trees in the life-histories of Irish medieval earthen settlement enclosures were examined. The main hypothesis put forward was that, as objects of high value, living trees were intentionally planted and managed for utility and aesthetic purposes, on the banks of Irish medieval settlement enclosures in the medieval period. It was further suggested that such practices have resulted in continued relationships between trees and enclosures that can be discerned in the traditions that have preserved the monuments in such remarkable numbers. The perception that live hedging may have been purposefully planted on the banks of enclosures in the medieval period as a prudent means of further securing an enclosure is problematized and investigated in this thesis. It also addresses the idea that some trees existing on sites today may be relict of medieval planting. One important outcome of this research is that settlement enclosures need to be viewed, not in terms of conflict and defence, but in respect of cultural identity and ideology which is evidenced in the construction, maintenance and long-term occupation of the Gaelic *ráth*.

Chapter 1 outlined and described the range, origin, distribution, chronology and morphology of Irish medieval earthen-banked enclosures as the canvas upon which the roles of trees are investigated in this thesis. The record of medieval settlement enclosures in Ireland testifies to a culture of curation and management of archaeological monuments that begins with their building and occupation phases in the early medieval period and in some instances continues throughout the later medieval period and into the modern. The fact that they survive in such unprecedented numbers in the Irish landscape is of enormous significance in this thesis and has been interpreted as highly pertinent to the expression of

medieval Gaelic cultural practices. The idea of identity emerged as a general and recurring theme, linking trees to Gaelic settlement and settlement practices, throughout this thesis.

Chapter 2 introduced ANT and explored how it provides a means of identifying and analysing the myriad relationships between trees, medieval enclosures and people, as active agents assembled in meaningful networks of relationships. The idea that long-term relationships exist between trees and medieval settlement enclosures is rationalised in this chapter, thus presenting the possibility that some trees on enclosures today may be relict from medieval tree planting and management practices. Most importantly however, has been the ability of ANT to negotiate the protracted timescale of Irish medieval settlement enclosures and follow how actors such as trees, people and indeed the earthen banks of the enclosures are assembled and disassembled in different networks of relationships over that time.

Chapter 3 examined the representation of trees and medieval Irish earthen-banked settlement enclosures in the corpus of medieval written and pictorial sources as a means of discerning their roles within the settlement landscape and society of the time. This examination demonstrated that trees were indeed associated with settlements for utility and aesthetic purposes. It identified the existence of an arboreal aesthetic used in Gaelic society as a cultural norm in the presentation of places. Hazel, associated with ideas of kingship, beauty, belonging and hospitality (6.6), and thus linked to Gaelic expressions of cultural identity, stand out as the species most specifically associated with this arboreal aesthetic in the settlement environment. Indeed, trees as hedges have an immediate connotation of aesthetic consideration in the perception and presentation of place. This is where hazel comes to the fore. It is not only a raw material for building or a hedging species. It could provide the aesthetic presentation of places that is described in the literary descriptions of landscapes and settlements as abounding in healthy hazel trees and reflecting a bounteous landscape under the rule of a successful king or lord. If hazel was used in literature to convey the wealth, bounty and beauty of a household or landholding then it stands to reason that actual hazel trees were also used in reality to convey the same thing. This will be discussed in more detail below.

The fieldwork methods and results outlined and described in chapters 4 and 5 were undertaken to investigate and analyse the relationships between a selection of medieval earthen enclosures and the trees that are found upon them today. Specific patterns of tree-cover were identified across the selected study sites indicating that many sites harboured

intentionally planted hazel and hawthorn trees. These were categorised as CY2 tree-cover, defined by the presence of hazel in discernible order on the banks of enclosures and CY3 tree-cover, defined by hawthorn in discernible order on the banks of enclosures. I have presented the argument that such trees may owe their existence to continuity of traditional practices relating to the specific treatment of these species on the sites in question. Rather than implying that some trees encountered on medieval enclosures may be ancient relict specimens, CY2 and CY3 tree-cover may indicate that the planting and management of these trees was, to some degree, an ongoing and continuous practice with origins in the medieval period. Consistencies in these types of tree-cover were identified in all provinces suggesting that such traditional practices were widespread.

Chapter 6 considered the motivations behind the creation of earthen settlement enclosures and the particular phenomenon of multivallation in the early medieval period. The need for defence had long been perceived as the first purpose of their creation, perhaps because it is readily understood as a motivation that justifies the effort that it takes to create them. The argument was put forward that the main motivation behind the creation of the enclosures was first and foremost ideological in the sense that they referred to status and the rights and privileges of people more than they served to protect or defend a site in any military sense. Through this analysis, the network of relationships between earthen vallation (particularly multivallation), hazel trees and the Gaelic institution of hospitality was identified and explored (6.6) and the potential roles of trees on the banks of enclosures became more visible.

In drawing together the findings from each chapter, I have proposed that the manner in which the record of extant monuments has been carefully preserved and managed by people for centuries has included the mindful protection and management of the trees associated with them. Trees also feature significantly in the popular perceptions of the sites they are found upon today and play important roles in the folkloric traditions associated with them. Through analysing the relevant folklore, it has been shown that some trees that are associated with the monuments today remain bound in traditions of preservation and protection and still pertain to a representation and preservation of cultural identity. Thus, the themes of cultural identity and continuity of traditional practices are identified throughout the protracted timescale under which the relationships between trees and medieval settlement enclosures have been considered in this thesis.

7.1.1 Networks and Agents

The fundamental importance of trees in Gaelic material culture is certainly evident in the archaeological record where their value as resources in building, craftwork and the manufacture of tools and weaponry is made explicit (O'Sullivan 1994). However, trees were also powerful icons in Gaelic social life and have left a considerable impression in medieval literary sources (Kelly 1997, 385–89; Lucas 1963; Cusack 2011). In investigating the roles of trees in the religions of early medieval England, Bintley (2015, 154) has suggested that 'Deeper insight can sometimes be revealed by attempting to view the Anglo-Saxon world as it would have been experienced by those living in it: enmeshed and entangled in a web of texts, objects and landscapes'. This emic perspective is equally true for the Gaelic world and quite pertinent too from the point of view that within the Gaelic world, trees appear to have been naturally viewed as active agents that operate in the social realm. This is comprehensively expressed in the Old-Irish tree-list (see Table 1) as preserved in the 8th-century legal tract *Bretha Comaithchesa* (Kelly 1976, 107–24; Kelly 1997, 385–89). As well as their economic value, their symbolic value is conveyed in the anthropomorphic presentation of the list which ranks the trees using the human titles of 'Nobles' and 'Commoners' and affords them protection under law in a manner that echoes the laws for people (CG 316-9), (AL v 24.10), (Kelly 1976, 107) (3.3). The deeper insight that emerges is that Gaelic society did not treat the economic and symbolic value of trees separately (i.e.) and nor should we. If we do, we may fail to see such things as the aesthetic value in the practical use of trees or indeed the practical benefits to cultivating an arboreal aesthetic. These ideas, and the idea that the relationships between trees and enclosures are intricately linked to cultural identity and its preservation are a consistent aspect of the networks examined in this thesis.

7.1.2 Reading the Trees

In the record of extant monuments and the trees found upon them today, tree-enclosure relationships are, for the most part, self-evident and directly observable in the landscape. Indeed, the phenomenon that initially inspired this study was the presence of tree-cover observed through aerial imagery on many sites across the country, and the perception of some degree of order and intentionality to the presence of hazel and hawthorn trees that were encountered on the banks of some enclosures. The campaign of fieldwork outlined and described in chapters 4 and 5 was undertaken in order to establish how such trees were

related to the overall life-history of the monuments they occupied. The two recurring patterns of tree-cover of most significance that were identified in the fieldwork sample were CY2 as veteran hazel trees arranged in an orderly fashion on the banks of enclosures and CY3 as hawthorn in an orderly fashion on the outer banks of enclosures, thus complementing the initial observations. Descriptive survey identified CY2 tree-cover on 16 (43%) of the 37 surveyed sites and CY3 tree-cover on 19 (51%) of them. Six of these sites contained both CY2 and CY3 tree-cover, thus there were a total of 29 sites that contained either CY2 or CY3 tree-cover. This essentially means that (not counting CY1 tree-cover) 78% of the sites examined in this research showed some evidence that trees had been intentionally planted on their banks at some point in the past (5.11). CY2 hazel tree-cover was almost exclusively associated with multivallate enclosures in the fieldwork sample (5.11; 5.12) and thus, there would appear to be a correlation between the presence of hazel (as CY2 tree-cover) and high-status sites. At least 11 of the 16 enclosures (68%), but potentially all of them where CY2 hazel tree-cover was identified were multivallate (see 5.11). There was one univallate *ráth* enclosure in Milltown St. John, Co. Tipperary (B5) and four in the Co. Monaghan cluster (D1, D2, D3 and D5) that contained CY2 hazel trees. However, in each of these cases it was noted that these were apparently multivallate enclosures the outer banks of which had been levelled and backfilled into their fosses. This was most notable at Tully, Co. Monaghan (D1), in the late medieval personal demesne lands of the McKenna chief (McDermott 2010, 392), where the adjacent road still respects the line of the original outer bank at a distance of over 20m from the remaining extant bank and fosse (Figure 58). McDermot (2010) has made the case for the late occupation of the early medieval enclosures and *crannógs* in this locality, which 'reflect(s) a constant negotiation of identity' (A. J. Horning 2007).

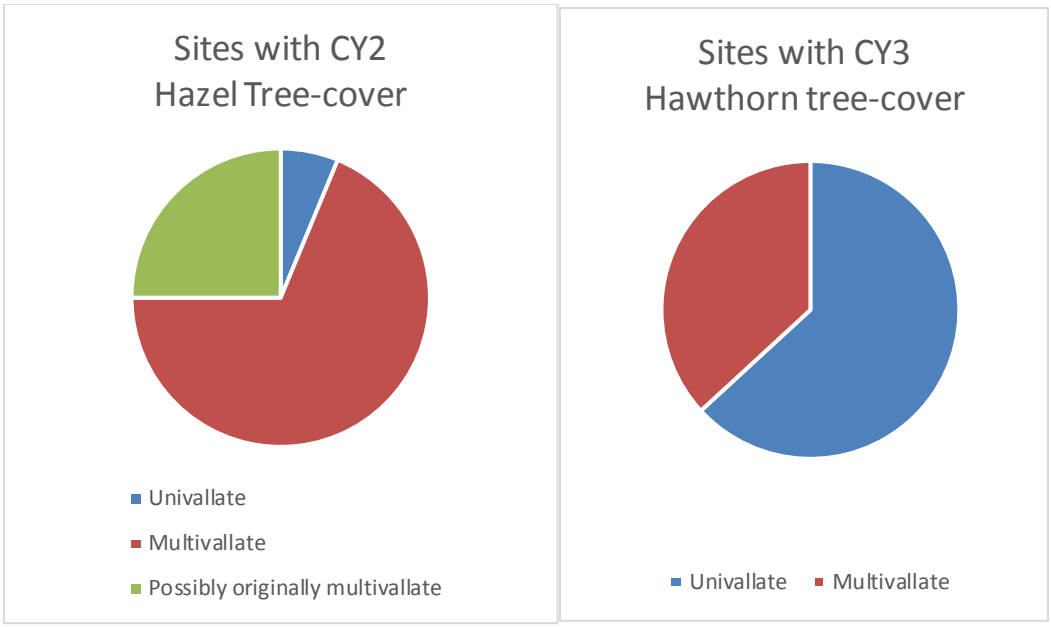

Figure 102 Distribution of CY2 and CY3 cover on univallate and multivallate sites

This pattern of hazel associated with multivallation was most pronounced on the larger enclosures such as the quadrivallate sites of Turin, Co. Mayo and Cooleagh (B1), Co. Tipperary and the trivallate enclosure (A7) in Coolamber, Co. Westmeath. In each of these cases the hazels flanked the edges of the wide flat-topped interior banks creating tree-lined berms. This trend was echoed on a smaller scale on the bivallate enclosures of Doontorpa, Co. Clare, Lisduff, Co. Westmeath (A1), Coolamber (A6), Co. Westmeath, Milltown St. John (B4), Co. Tipperary, Rylane (C3), Co. Clare and Emy, Co. Monaghan. Similarly, 12 of the 19 sites (63%) where CY3 hawthorn tree-cover was identified were univallate enclosures. This pattern is well illustrated in Cluster C, Co. Clare, which had the weakest representation of CY2 hazel tree-cover which was identified on only one enclosure out of the nine investigated. This enclosure was also the only multivallate enclosure in the cluster. Six of the remaining eight univallate enclosures revealed evidence of CY3 hawthorn trees.

The planting of hawthorn on the banks may certainly have served a variety of purposes over the life-history of the monuments. Creating hedges is a form of purposeful tree management in which the qualities and properties of particular tree species are exploited. Hedged earthen bank and ditch systems have a long history of use as boundaries and enclosures (Hooke 1989, 123; Rackham 1997; Kelly 2011, 372) (1.3; 2.5) and, species such as hazel and hawthorn have a long history of use in the contexts of settlement and enclosure. Hawthorn is a choice hedging species, ideal for the protection of a site and the exclusion of large animals. The association between hawthorn and medieval settlement

enclosures is also prominent in folkloric traditions where their careful protection is advised and encouraged. They are variously depicted as protectors of the sites imbued with supernatural abilities such as instant regeneration and the ability to exact retribution for damage by people that they, or the sites that they grow upon, have incurred.

However, hedge-setting is not the most likely manner of tree management in all situations where they were included as components of settlement enclosures. The possibility that the banks were used specifically for the propagation and cultivation of certain valued species must be considered. This idea is particularly pertinent to the interior banks of multivallate sites where the creation of additional hedges makes little sense. Multivallate sites like Turin, Co. Mayo and Cooleagh (B1), Co. Tipperary with their wide interior berms, are notable examples that suit this interpretation. Their wide flat-topped interior banks make little sense architecturally unless they accommodate the movement of people upon them. The presence of trees can also give purpose to these morphological anomalies. In its present state, the enclosure at Turin contains over 100 hazel trees that line the berms on the interior banks. If it does indeed reflect the manner in which this site was used in the past then it might be interpreted as an organised grove of trees granting easy access to hazel coppice and the harvesting of nuts.

The implications of these findings are that the trees defined by CY2 tree-cover and CY3 tree-cover are culturally significant trees that reflect aspects of traditional cultural curation and management of archaeological monuments. Indeed, each of the categories of tree-cover that were identified and recorded in this study to some extent refers to specific actions of people in the past. CY1 tree-cover attests to the landscaping and 'improvement' activities of the 18th and 19th-century landed gentry, whereby extant medieval enclosures were often appropriated as designed landscape features and planted with trees, (usually tall non-native species such as beech and sycamore or timber trees such as pine) (TDS 1806; McParlan 1802 p.116-117) (3.7). As discussed in chapter 3 (2.7) some CY1 tree-cover may also be the result of deliberate planting in the 19th century of timber trees for their economic value (ibid). Thus, it can be inferred that those who undertook improvement recognised the value of early medieval enclosures as places that were, to some degree, suited to the management of trees. I am of the opinion that this had long been recognised by the Irish who valued and managed trees on the enclosures although for different reasons. While ash, elder, willow, holly, blackthorn and oak trees were also encountered on enclosures across the selected fieldwork sites, hazel and hawthorn were the only species encountered, (outside of sites defined by CY1 tree-cover), that displayed

both a semblance of orderly and deliberate planting and the potential to be of a significant age. Often viewed merely as bushes, scrub or underwood, hazel and hawthorn would not have been regarded by the English land-owning classes as trees of value, if indeed they considered them as trees at all. They stand in sharp contrast to those typical of CY1 tree-cover. This contrast broadly reflects the Irish and English uses of and attitudes towards the monuments and the roles that trees can play therein. In this sense, old monuments that were of significant cultural value to the communities that reverently preserved them for centuries, could be used to make assertions about cultural dominance when re-appropriated as features of designed landscapes and planted with highly visible non-native species. A case in point may be observed in the contrast between Doontorpa, the bivallate *ráth* in Croagh North, Co. Clare (5.8) and the bivallate *ráth* in Ballyallaban (Figure 6) 1km to the east. Ballyallaban has been appropriated as a designed landscape feature associated with Ballyallaban House and planted with ornamental beech and sycamore (CY1 tree-cover) while Doontorpa remains a prominent grove of hazel (CY2 tree-cover) in a landscape that has undergone extensive changes in the era of 'improvement'. Its preservation is even more notable because of this. The fact that the Rathborney Roman Catholic Chapel, built for his tenants by the Marquis of Buckingham in AD1795, was constructed immediately adjacent to the *ráth* of Doontorpa may indicate that this site was chosen for the chapel because of the cultural importance of the *ráth*. This illustrates how the roles of trees, and of preserved medieval monuments, as agents in the pronouncement of cultural identity, were recognised on both sides of the native-colonial discourse.

In the case of Turin, Co. Mayo both contrasting tree-cover categories appeared to be present on the same site indicating that the cultural dialogue between Irish and English modes of practice played out simultaneously on the same site. Map evidence and results from the pollen analysis of material extracted from the fosse fill indicate that this site appears to have harboured CY1, CY2 and CY3 at the same time up to the 19th century. Pine stomata with a concentrated presence in the core at a depth that was carbon dated to between 1801 and 1940AD complements the OS map evidence of C. 1890 that depict a plantation of conifers in the interior of the enclosure. There is no pine present at the site today, indicating perhaps that it had been deliberately planted and harvested for timber when mature. The map evidence also suggests that the banks of this site were under continuous deciduous tree-cover throughout this period. Again, it may be the case that the enclosure and the trees were being used as vehicles for expressing and asserting identities in the political landscape. This idea has also been suggested with regard to the manner in

which the enclosure (B4) in Milltown St. John, Co. Tipperary (5.4.4.4) has been bisected by a road. This section of road appears to have deliberately targeted two enclosures. The fact that enclosure B4 was excavated right through to create the road and yet remains undestroyed may illustrate how such monuments were re-appropriated in the discourse of identity.

The idea that both settlement enclosures and living trees were important in the formation and expression of Gaelic cultural identity has been repeatedly encountered in this thesis, as have the ideas of persistence and continuity with regard to Gaelic cultural practice. The implications of these findings will be discussed in detail in the following sections.

7.1.3 Placenames and Trees

A high proportion of Irish placenames are indicative of land use pertaining to trees with none more pronounced than those that use the term Derry (*doire*, meaning oak or oakwood) (2.7; 4.2.1). Placenames that utilise terms for enclosure or settlement such as rath, lios, cathair and baile also make up a vast portion of the c.70,000 Irish townland names. While there is an abundance of placenames that combine terms for both trees and settlement it proved very difficult to identify extant tree-named enclosures with trees on them today. For example, an enclosure labelled Liscoll (hazel enclosure) in the townland of Lisbaun, Claremorris, Co. Mayo has two small hawthorns on it bank and is otherwise treeless. In many cases the monuments that bear these tree related names are obliterated entirely from the landscape and in other cases where extant enclosures are associated with tree related placenames, such as at 'Attycuil' (the house site of hazel) in Rathclooney, Co. Clare, there is little or no evidence remaining of the particular species that has been referred to. In some cases, however, such as at C1 'Knocksallaghmore' and C2 'Knocksallaghbeg' (meaning the willow hill) in Rylane, Co. Clare, the missing trees can be made visible again through a combination of factors. Despite the fact that sites C1 and C2 in Rylane occupy the highest points of the drumlins that they are built upon, the fields they are in are very wet and marshy which are the ideal conditions in which willow thrives. Indeed, local knowledge attested to the clearance of willow near the summit of Knocksallaghmore about 20 years ago (5.5.4.1). It may be the case that willow was used to manage the soil conditions at these settlement sites and the trees in turn become associated with the visual presentation of the sites. Visibility and intervisibility between sites in this location certainly appears to have been an important feature of this settlement

landscape (see 5.5.4.3). In this view it is no wonder that the settlement sites as visible landmarks would take their name from the trees that surround them. There is also the possibility that sites such as these were utilising and managing willow industriously and that the names 'Knocksallaghmore' and 'Knocksallaghbeg' are derived not only from the tree-cover that thrives here but also from the activities of those who elected to dwell there.

In this thesis I have argued that poetic references to trees being associated with settlement enclosures must have been inspired by reality in order for them to make sense to the audience of the day. Placenames that combine terms for trees and settlements like *Lios an Choill*/Lissakyle (the enclosure of the hazel), Co. Tipperary ought to be viewed in the same way. They testify to trees that defined the settlements they name.[42]

7.2 The Emic Portrayal of Trees and Enclosures in Medieval Ireland

My examination of the portrayal of trees in the historical and literary record has shown that trees were associated with settlement enclosures in the medieval period for utility and aesthetic purposes. This is vividly expressed in early medieval poetic references to hazel as the '*bile ráth*' or '*róbili ráth*' (the great or venerated tree of enclosures) which occurs in numerous place-names (3.8.1), in Middle-Irish stories and in early medieval poetry (3.6.1). In chapter 6, I looked extensively at the phenomenon of earthen vallation in medieval Ireland and concluded that it was as much a symbolic expression of ideology as it was a physical expression of the need to protect or defend the sites where it was used. Ideological or symbolic functions of settlement enclosure are arguably more difficult to reconcile with the expense of such effort, unless the practical benefits of those functions can be made apparent. If a defensive capacity was not the most important function or motivation for the creation of the earthen banks of enclosures in medieval Ireland then their origins and widespread use may owe more to social and ideological motivations associated with codifying laws and rights (4.4). In this way, the banks of medieval

[42]Other examples include: Lios an Choill/Lissakyle, Co. Tipperary, Lios an Choill/Lisaquill, Co.Monaghan, Lios an Choill/Lisaquill, Co. Longford, Lios Coill/Liscuill, Co. Galway, Lios an Coill/ Caherlissakill, Co. Galway, Lios an Choill/Lisacul, Co. Roscommon, *Ráth* Choill/ Rathkyle, Co. Kilkenny, *Ráth* Choil Uachtarach /Rathcoyle Upper, Co. Wicklow, *Ráth* Choil íochtarach /Rathcoyle Lower, Co. Wicklow, *Ráth* Coill/Rathkyle, Co. Wexford, Garraí na gColl/Garrynagoul, Co. Cork, Lios na Saileach/Lisnasallagh, Co. Cork, *Ráth* Saileach/Rathsillagh, Co. Wexford, *Ráth* Saileach Uachtarach/Rathsillagh Upper, Co. Kildare, *Ráth* Saileach íochtarach/Rathsillagh Lower, Co. Kildare.

settlement enclosures may be seen as objects that aid in the organising of social institutions and in directing social behaviour. They were used to regulate the use of space and distinguish the status of the enclosed site and of its occupants, which would make them highly practical elements of social organisation. In other words, the ability to imbue the banks of an enclosure with meaning could be of immense practicality. From this perspective, the multi-functionality of earthen-banked enclosure is highlighted, and it provides a meaningful context within which the intentional inclusion of trees has been considered. Vallation and trees are inextricably linked. Together they constitute the enclosed settlement form and it is only when they are considered together that the role of vallation can be best understood.

7.2.1 Gaelic Cultural Identity and the Arboreal Aesthetic

If trees were routinely included as component features for any of the above-mentioned reasons then their role in the provision of an aesthetically considered presentation of those places must also be considered and added to the list of practical uses for trees in medieval Ireland. Trees have a universal aesthetic appeal, which was undoubtedly exploited in the presentation of Gaelic settlement environments. There are numerous references to trees (in particular hazel) as objects that reflect the idea of beauty in relation to dwelling places and occupation. The emic portrayal of trees in Gaelic historical and literary sources confirms the existence of an arboreal aesthetic. It is inferred in descriptions in Gaelic poetry and literary sources (2.6) and is perhaps most succinctly expressed in the term *bile rátha,* which explicitly links medieval earthen enclosures with living trees. Descriptions of settlement forms in later bardic poetry also refer to trees as aesthetic components of settlement environments. The 16th-century poet Tadhg Dall Ó hUiginn describes the splendour of Lios Gréine as a ‘fair stead amidst green-topped hazel-trees’ and his description of the picturesque landscape about Lough Gill in Sligo includes ‘white, thickly-growing hazel-trees’ about their border ditches’ as a vivid image. These textual references are distributed across a significant timescale, which indicates a degree of continuity of the arboreal aesthetic within Gaelic traditions. They paint vivid pictures suggesting that trees were an important part of the presentation of place (particularly in relation to settlement sites). In this view, the enclosures and the trees associated with them exist in a cultural context that originates in the early medieval period (when the majority of these monuments were introduced to the Irish landscape) and continues to the 17th century. Despite inevitable changes in the roles performed by people, trees and the

earthworks over that time-period, an essential connection with identity has remained and is tangible in the widespread culture of protection and preservation of archaeological monuments in Ireland.

Late medieval references in English administrative records and representations by English illustrators frequently associate the Irish and Irish culture with trees and the idea that the 'wild' Irish live in the woodland (2.7). This is viewed in this study as further evidence of the existence of a culturally important arboreal aesthetic. Bartlett's map picture depicting the high-status settlement of the Ó hAgáin stewards of Tulach Óg (Figure 3) as an enclosed dwelling with trees on the banks and within the enclosure is a remarkable example. We cannot look at this image without acknowledging that Bartlett is very consciously portraying the Irish through the use of settlement enclosures and trees as cultural indicators. The image encapsulates both the importance of old monuments to Gaelic society and of cultural identification with trees. It was drawn at a time when that cultural identity was most under threat and on the horizon of its demise. The settlement site depicted is also surrounded by woodland that (it has been suggested) mockingly evokes the image of a satyr, thereby making an explicit association between the Irish and wild woodland creatures (Herron 2007, 299) (2.4). The symbolic importance of trees to Gaelic society and the use of tree symbolism by English administrators and observers to depict the Irish are linked by the idea that trees were central to Gaelic expressions of cultural identity and that they were visually prominent in the settlement environment.

The continued management and preservation of all sites throughout the entire medieval period testifies to ongoing traditional practices of which high-status sites such as Rathangan in Co. Kildare, Ráith Eassa Caoide in Co. Mayo and Tulach Óg in Co. Tyrone are exemplars. Considering how important the ideas of ancestral attachment and pedigree of place were in Gaelic society, it is no wonder that the record of settlement monuments saw such careful treatment within long-lived traditions, for it appears that nothing could have been more detrimental to the Gaelic mind-set than to lose touch with ancestry and to lose a sense of belonging to the place in which you live. The record of medieval settlement monuments and the corpus of modern folklore pertaining to them and the trees they harbour, retain the vestiges of those medieval traditions. What is being managed essentially is the aesthetic presentation of place as an expression of identity and long-lived cultural practices. While this does not constitute direct evidence that enclosures were planted with trees as a matter of course, it is none-the-less an important discussion-point because it has the potential to put other literary references into a context that have not been

considered. For example, if it were the case that hazel trees were associated with settlement enclosures in the medieval period, they would also have inevitably become devices for the presentation of aesthetic.

7.2.2 Hazel and High-status Enclosures: Legacies in the Landscape?

The species hazel has been prominent throughout every aspect of this study. It features significantly in Gaelic literature from the earliest law-tracts to late-medieval poetry and is the most frequently mentioned species in relation to the arboreal aesthetic discussed above. It appears as the second most valued tree, a 'noble of the wood' in the 8th century 'old-Irish tree list' (Kelly 1976, 107–24; Kelly 1997, 385–89) (table 3) (2.3), and continues throughout medieval literature as a potent poetic symbol associated with kingship, high status, hospitality and architectural beauty. As such, the incorporation of hazel on the banks of settlement enclosures is a very fitting choice of species. Hazel is also commonly encountered on the banks of early medieval settlement enclosures today and is represented as CY2 tree-cover in this study. Several of the sites and clusters where CY2 tree-cover was encountered are on the early medieval royal lands and later medieval mensal lands of Gaelic elites. The multivallate enclosure in Turin, Co. Mayo, the moated site in Cloonfree, Co. Roscommon and the greater portion of the Monaghan and Clare clusters are readily identifiable with lands of early medieval royal householders and of later medieval service families in the lordships. The suggestion has been made that cluster B in Co. Tipperary, which is in the hinterland of the caput of the kings of Munster at Cashel, may also represent the household lands of service kindred. This may account for the high density of different kinds of *ráth* enclosures in this landscape. While the clusters were ultimately chosen from visual evidence of treed enclosures in aerial images, it may be significant that high-status locations have been identified as a result of that visual inspection. Significant too is the fact that CY2 tree-cover has also been identified in each of the selected clusters and that it appears to be exclusively associated with multivallate sites, providing another perspective linking hazel trees with high status. All the sites where hazel was encountered, except D1, Tully and D2, Dunmadigan in Co. Monaghan, were multivallate enclosures.

While the campaign of fieldwork was not successful in establishing scientifically whether or not the hazel that exists on these sites are relict or descended from those planted in the medieval period, such possibilities remain plausible. The general layout and positions of

the hazel trees on the banks of these enclosures indicate that they have indeed been intentionally planted at some point in the past. The sizeable girth of hazel stools (many in excess of 2m diameter) on many of the sites allows us to estimate specimens to be at least 200 years in age but there is no reason to assume that they are not considerably older. The absence of any historical records referring to the planting or otherwise of such trees suggests that trees of this kind may have been associated with these sites for at least as long as they have been abandoned as occupied settlements. From this perspective, the 12th-century poem beginning *Ráithe fó foiss fogamar* that describes the trees 'by the rampart of the house site with the broken wall' or 'half-ruined fort' and their crop of hazelnuts that drop from the *robili ráth*, 'the great tree of forts' (Greene and O'Connor 1967b, 142) may be considered in terms of a long legacy of relationships between hazel and hawthorn trees and enclosed settlements.

Robili ráth draws a very specific relationship between settlement enclosures and trees. A *bile* is an extraordinary tree and functions in the ideological sphere as well as the practical. A *bile ráth* may indeed provide practical benefits such as shelter, food or raw materials, but its quality as *bile* indicates that it also acts and communicates in the social world. In the early Middle Irish poem beginning *'Ráithe fó foiss fogamar'* (see 3.6.1), the *robili ráth* (great tree of enclosures) is hazel. It has been noted that hazel was highly valued, both symbolically and for its utility. It was used as a stock motif that symbolised kingship (high status), beauty and bounty and was the metaphorical 'hospitaller of the wood' and thus synonymous with the ubiquitous Gaelic institution of hospitality (4.6.1). An identifiable network of relationships between enclosures, hazel, hospitality, high status and multi-vallation has emerged in this study. Hazel appears to be of central importance to the arboreal aesthetic in Gaelic settlement. The image of hazel branches bending with the weight of a good harvest of nuts is regularly used as a poetic device to praise the landowner but it also illustrates the value of hazelnuts as a valued luxury food item. The possibility that hazel trees were specifically cultivated and propagated for nut production in medieval Ireland is a subject worthy of further research. Propagating hazel toward the goal of producing big nuts in plentiful harvests would involve the careful selection of cultivars and specific knowledge of hazel management such as selective stem cutting to allow chosen stems to grow and develop spreading canopies. Such trees could certainly come to be imbued with special status and viewed as a source of pride. In this context, trees can transform how medieval earthen settlement enclosures are viewed and understood. With this in mind, reading the *robili ráth* in the autumn poem as recorded in the 12th century,

suggests that hazel, the great tree of forts bowed down with the weight of a good nut harvest on the banks of a possibly dilapidated *ráth*, is an important component of place identity. In this view, trees were intentionally incorporated on the banks of enclosures from an early stage in the life-history of the settlement enclosures and may be seen as an integral part of the enclosure as a symbol of Gaelic identity.

7.2.3 Linking Past and Present

The different categories of tree-cover and the trends and patterns identified in their distribution are indicative of certain practices relating to the intentional planting of trees in the recent past, the early modern period and the likely existence of earlier related tree planting traditions. Perhaps the most difficult relationship in the network to concretise is that between the idea of use of hazel in these places in the early and high medieval periods and the physical presence of hazel on sites today. The fact of long-term site management gives context to the tradition of tree management. On the other hand, if we are to think that the practice of tending and managing trees was a part of the same mechanisms that insured the preservation of monuments for centuries, then it is plausible that the existence of hazel on these sites results from the continued practice of favouring that species at the sites. It is possible that this is an embedded traditional practice. The tradition of curation of the sites themselves are the precedent for the survival of practices. Trees have been an important part of that tradition and through that mechanism the fact that certain species remain present indicates that the species has been tended at these sites as a matter of tradition. This same mechanism translates into the superstition and folkloric references that are associated with the preservation of sites and trees. i.e. the dangers of interference (see sections 5.3.3; 5.4.3; 5.5.3 and 5.6.3 on folklore relating to the study clusters).

7.3 Long-lived Traditions and Cultural Practices

The idea of persistence and continuity in respect of the ongoing curation and management of settlement enclosures is another major theme that permeates this thesis. It frames the overlapping timescales of people, trees and earthworks in a network of long-lived traditions and cultural practices. While it is generally accepted that medieval settlement enclosures were built and occupied primarily in the early-medieval period (1.4), it is undeniable that they maintained a continued cultural significance throughout the entire medieval period and that some enjoyed late medieval and early modern occupancy (1.5).

Archaeological excavation such as those at Mackney, Co. Galway (Delaney 2009), Loughbown, Co. Galway (Dillon et al. 2007) and Ballymacash, Co. Antrim (Jope and Ivens 1998) confirm a degree of longevity of use and successive phases of occupation as common aspects of some medieval settlement enclosures (1.5).. The chronology and distribution of the estimated 60,000 early medieval settlement enclosures throughout the island of Ireland predicates the existence of widespread and cohesive cultural values pertaining to social organisation. I have argued that the culture of curation and management that has ensured the preservation of enclosures in such unprecedented numbers is inextricably linked to the expression of Gaelic cultural identity. Whatever importance the enclosing earthworks had during their occupation, they continued to serve an important role in the landscape as places of considerable cultural attachment and places of remembrance. In this sense, traditions that would become deeply rooted were born with the creation of enclosures, aspects of which survived well beyond the sites' occupancy phases. Such aspects as the continued protection and management of the sites themselves must be seen as long-term traditional practices. Often connected to family names such as Lismacaffry, Lisryan, Rathbrenan or Rathcormack, they embody a record of ancestral settlement and represent an enduring sense of place and belonging. In this sense, they are important repositories of traditional knowledge where cultural memory is stored and cultural identity can remain authenticated. Throughout the entire timeframe they retain an importance as symbols of cultural practice and identity. The act of protecting and preserving them in the landscape can therefore be read as a means of protecting and preserving cultural practice. The record of early medieval settlement enclosures thus represents both practical and ideological continuity. After generations of use, they would have become antique monuments associated with ancestry and place identification, and would consequently inherit a portion of the status previously afforded to the *sídh*-mounds of the older tradition (2.8).

The paramount importance to Gaelic consciousness of ancestral attachment and pedigree of place (see FitzPatrick 2004, 52; 2015b, 52) is central to these traditions. As discussed in chapter 4 (4.2), these values can be seen in the manner by which important traditional monuments and places, such as parish churches at monastic sites, and assembly sites endured for centuries both in collective consciousness and as venues for long-lived customary practices. These same values are perhaps the mechanism that drive the active preservation of enclosures, the difference being that their preservation is not specifically linked to the continuation of their original primary purpose (settlement). In chapter 6, the

continued use of early medieval enclosures into the later medieval period was discussed (6.6.2) with particular reference to high-status sites and sites with an identifiable pedigree or ancestral attachment such as the enclosure at Rathangan, Co. Kildare (Smyth 1982, 34; Charles-Edwards 2000, 528) or the Uí hÁgáin residence at Tulach Óg, Co. Tyrone (FitzPatrick 2004, 146–48) (Figure 10). The kind of overt continued use that these high-status/high-pedigree sites saw cannot be applied to all sites in general, but the conscious connection with ancestry and place pedigree can. The fact that these sites in general have been preserved in their thousands indicates that they were still being used to maintain connections to the past and to describe and name the landscape long after their use as dwelling places ceased. This does not exclude them from alternative uses but it has, in general, prevented them from being destroyed.

This research has shown that there are close relationships between the preservation of monuments, the presence of trees and the expression of identity. This has implications for the question of when earthen settlement enclosures were abandoned as places of habitation, for surely this point in time would mark a change in how trees were managed on the sites. The inability to fix this point to a particular date, along with a certain amount of evidence for the late use of monuments, suggests that they remained active within Gaelic consciousness through the later medieval period even if they were not being directly occupied. If they had been entirely 'abandoned' we would not have inherited such an unprecedented level of extant monuments. The folkloric traditions that have evolved from such preservation are explicit about how these monuments should be treated. The earthworks should never be levelled and the trees should never be cut or rooted out. This must be viewed as a form of management. This careful preservation continues to a large extent today through these mechanisms of superstition and folklore without the preservers necessarily understanding the origins of those traditions. They cannot be viewed simply as abandoned sites that have survived to this extent because they have been left untouched. Such survival does not result from inaction, but from action and interaction chiefly between people, earthworks and trees.

The way that we find many of these sites today (replete with trees) is likely to be the way that they could have been encountered 200 years ago. How different might it be from 400 years ago and beyond? The folklore certainly suggests that trees have long been a part of the cultural ideology that has seen the preservation of these monuments. They have become embedded in popular perceptions as fairy-trees in the same way as the enclosures have become fairy-forts. Use of the term 'fairies' aside, both the trees and the enclosures

are components of the same assemblage that has been checked and balanced for centuries as important material culture.

The banks of medieval earthen settlement enclosures provide ideal conditions for the long-term survival of hazel and hawthorn trees and indeed such trees have a long history of association with them. These trees cannot simply be viewed as wild or natural and otherwise unrelated or unimportant to the archaeological understanding of the monuments. The morphological definitions of the medieval enclosures in the Irish landscape ought not to be confined to the contours of the earthwork alone but should include its vegetation as dynamic fabric. When these places are visited and studied for the purposes of understanding the human past there should be no eagerness to separate the 'natural' vegetation from the 'cultural' earthworks but efforts ought to be made to view the monument, its vegetation and the people who have been enmeshed as a meaningful whole

.

Conclusion

The archaeological record of Irish medieval earthen settlement enclosures is one of places and spaces where people lived for generations in the medieval period. The fact that they have survived to the present day in such great numbers is an indication of the degree to which they were regarded as important cultural objects worthy of careful protection. As places that had enjoyed generations of inhabitants, and were mindfully protected from destruction, their survival attests to ongoing human engagement with them, which has been characterised in this study as traditional curation and management. Such action was rooted in the cultural importance of nurturing the pedigree of places, which has been recognised as a key settlement value in Gaelic society (FitzPatrick 2004, 2015b) (6.2). Trees have undoubtedly been an important feature of that curation and management.

From the outset of this study, medieval settlement enclosures, with particular reference to the *ráth*, have been viewed as deeply hybrid objects, the material and semiotic meaning of which have evolved and changed over time. Through the use of Actor-Network theory, resource management of living trees on enclosures has been presented as a network of relationships between people, trees and the earthworks that span their lifetimes. This has provided a means by which the roles of trees within that settlement environment can be discerned and discussed, and it has shown that such relationships are of much greater significance than was previously understood.

There may be some trees living upon the banks of settlement sites today that had their genesis in intentional planting during the medieval period. However, this may be equally due to the preservation of traditions and practices relating to the treatment of settlement enclosures and the trees growing on them as it is due to the ability of certain tree species to survive and persist for significant periods of time.

Challenges were met in the attempts to establish the age of individual hazel and hawthorn trees and chronologies for the type of tree-cover encountered at selected sites. In the course of field investigations, no living hazel or hawthorn trees were encountered that preserved material identified to be older than c.112 years (4.3.1).

Of the five sites where core samples from the fosse fill material were obtained for pollen analysis, only those that were obtained at, Turin, Co. Mayo (5.7.5) and Cloonfree, Co. Roscommon (5.9.4), were found to have a successfully preserved pollen profile, essentially demonstrating that there is no effective way of selecting sites that will

guarantee useful results. This could be remedied by a significant increase in the number of sites targeted and an increase in the number of samples processed per site. Such a strategy was outside the budget consideration of this project.

The proposal that trees were cultivated and managed in the medieval period as components of the earthen banks of settlement sites was borne out by the examination of historical, literary and pictorial sources. The results of that investigation predicated the existence of a Gaelic arboreal aesthetic. Hazel was clearly singled out in Gaelic culture as a species physically and symbolically linked to settlement through the arboreal aesthetic and to the Gaelic institution of hospitality. With that in mind, trees in Gaelic literature ought not to be viewed solely as poetic references and potent symbols, but as representations of their physical presence in the landscape and lives of the people who wrote, heard and were the subject of the literature. The manner in which enclosed settlement forms were presented and adorned with trees was in itself an expression of cultural identity.

Further Research

The view of Coppins and Coppins (2010, 48-54) that far more research is required to fully understand the behaviour and life-history strategies of hazel trees remains true today and may be also applied to hawthorn as a multi-stemmed tree capable of utilising a similar survival strategy. Research following the exploratory investigations of Gulliver (2002), where the investigation of hazel genetics was undertaken to establish whether neighbouring hazel stools are genetically diverse or clones, would be of enormous benefit to a variety of academic disciplines including archaeology, landscape history, geography and the natural sciences. Such an approach could be used to compare the genetic profile of trees living on the banks of enclosures today with samples of preserved material (such as hazelnuts) excavated from securely dated contexts at the same sites, and could potentially establish the duration that certain trees have persisted at a site. Furthermore, the selection and propagation of specific cultivars as choice specimens in the past may register in genetic comparisons between the trees on a site and between the trees across a cluster of sites, thus potentially revealing evidence for historic tree management specifically related to the production and propagation of hazelnuts, which were a highly valued food item in the medieval period. The excavation of a sondage in the fosse of selected sites may be of more benefit than obtaining cores and would increase the potential

for discovering datable material from a secure context that could be matched to the pollen profile and compared genetically to living trees.

The extent to which trees were incorporated into medieval settlement enclosures could be further tested through the selection of a far greater sample of sites informed by the methodology, theoretical framework and findings of this thesis. This would increase the chances of obtaining useful pollen data and provide a much higher data resolution for the reconstruction of localised historical tree-cover.

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Internet Resources

Bing Maps, Digital and Aerial Imagery, (https://www.bing.com/maps)

Fiontar & Scoil na Gaeilge (DCU) and The Placenames Branch **(**Department of Culture, Heritage and the Gaeltacht) 'logainm.ie - Bunachar Logainmneacha na hÉireann - Placenames Database of Ireland'(http://www.logainm.ie/)

Google Maps, Digital and Aerial Imagery, (www.google.ie/maps)

Historic Environment NI, (https://www.communities-ni.gov.uk/topics/historic-environment)

Historic Environment Viewer WebGIS, (http://webgis.archaeology.ie/historicenvironment/)

Irish Excavation Reports, (https://excavations.ie/mapsnew/)

Loganim, 'logainm.ie - Bunachar Logainmneacha na hÉireann - Placenames Database of Ireland'(http://www.logainm.ie/)

NFC, The Schools Collection, https://www.duchas.ie/en/cbes

O'Donovan's Ordnance Survey Letters, (http://www.askaboutireland.ie/reading-room/digital-book-collection/digital-books-by-subject/ordnance-survey-of-irelan/)

Ordnance Survey of Ireland mapviewer', (http://maps.osi.ie

Record of Sites and Monuments, Historic Environment Viewer WebGIS (http://www.archaeology.ie)

The Digital Repository of Ireland (https://repository.dri.ie/catalog/v6936m966)

The Journal of Eachtra Archaeological Projects (http://eachtra.ie/index.php/journal/)

Transport Infrastructure Ireland, (https://www.tii.ie/tii-library/archaeology/)

Trinity College Dublin, 'Homepage of The Down Survey Project' in The Down Survey Website, 2013 (http://downsurvey.tcd.ie/)