Abstract: Little archaeological work has been undertaken on nunneries in later medieval Ireland as spaces of female spirituality. This is in part due to the fact that they are generally less well preserved than contemporary male monasteries. Even less research has been done on male or female monastic estates, their topography and the networks they represent. These estates are known to have existed from documentary sources and would have included a variety of land holdings, rights and benefits. Through the use of the nunnery of St Mary’s Timolin, Kildare, as a case study, this paper assesses its nunnery estate and concludes that, for the most part, it was a consolidated estate within easy reach of the nunnery itself. This desk-based study using historical evidence hopes to highlight the archaeological research potential of fieldwork on the Timolin holdings and the future potential to study other nunneries in this way.

Keywords: nunnery; monastic estate; place name; archaeological monument; townland; spiritualities; temporalities.

Resumen: Es poco el trabajo arqueológico que se ha realizado en los monasterios de mujeres de la Irlanda tardomedieval en tanto que espacios de espiritualidad femenina. Esto se debe en parte al hecho de que generalmente se han conservado peor que los monasterios masculinos contemporáneos. Todavía más escasas son las investigaciones acerca de las propiedades monásticas masculinas o femeninas, de su topografía y de las redes que representan. La existencia de estas propiedades nos es conocida a través de fuentes documentales y sabemos que incluían gran variedad de tierras y de derechos y beneficios. A través del convento de Santa María de Timolin, Kildare, tomado como caso de estudio, este ensayo evalúa sus dominios y concluye que en su mayor parte, se trataba de un sólido conjunto de tierras situadas a poca distancia del propio monasterio. Basado en evidencias históricas, este estudio pretende resaltar el potencial de la investigación arqueológica y del trabajo de campo realizado sobre las explotaciones de Timolin y abrir perspectivas de futuro para el estudio en esta misma dirección de otros monasterios.

Palabras clave: monasterio femenino; dominio monástico; nombre de lugar; monumento arqueológico; townland; espiritualidades; temporalidades.
SUMMARY


1. CHRONOLOGY, SETTLEMENT AND TENURIAL FRAMEWORK

Later medieval Ireland is generally considered to cover the period c. 1170-1540, although archaeological evidence suggests a longer phase from about 1100 until the late seventeenth century¹. This period of history was transformative for medieval Irish society and is bracketed by the coming of the Anglo-Normans in 1169 from England and the Dissolution of the Monasteries in the 1530s². The Anglo-Normans (also referred to as Anglo-Irish, particularly in subsequent generations) introduced an administrative system based on common law which was different to the existing Gaelic system. Society remained divided as the Anglo-Normans failed to conquer the entire country and so both systems co-existed in the later medieval period³. Anglo-Norman Ireland refers to that part of Ireland that experienced intensive Anglo-Norman and English colonisation from the late twelfth to the early thirteenth century⁴. These territories were concentrated in the eastern and southern parts of the island, though boundaries between the Anglo-Norman and Gaelic lordships were somewhat fluid throughout the period⁵. Indeed, after 1350 large portions of these territories had been re-conquered by the Gaelic Irish and Ireland has been described as a “patchwork” of lordships which had a multiplicity of regional frontiers⁶.

The settlement pattern in the Anglo-Norman controlled parts of Ireland was in many ways similar to that of England, although a diversity and complexity in the settlement of Ireland has been identified⁷. Manors were

⁴ M. Murphy, K. O’Conor, Castles and deer parks, p. 53.
⁷ K. O’Conor, The Archaeology, p. 109; T. Barry, Rural settlement in medieval Ireland, pp. 112-118.
created around masonry and earthwork castles which were employed for defence and administration. Farming was carried out at many of them. Other archaeologically identified settlement types include walled towns, unenclosed villages (deserted medieval villages or DMVs), rural boroughs, dispersed defended farmsteads such as moated sites, and unenclosed house clusters. In addition, field systems have also been identified in the settlement pattern of Anglo-Norman Ireland. This has been described as a “manorialized” landscape in which features associated with lordship and symbols of seigneurial power have been identified such as dovecotes, rabbit warrens, fishponds and deer parks, which together form elite “landscapes of lordship.”

The tenurial framework employed by the Anglo-Normans in Ireland also had similarities to the English system. Most of the land of the colony was held of the king by tenants-in-chief, who sub-infeudated holdings to lesser lords and knights. Land of the manors was tenanted at several levels of tenure: free tenants, famers, gavillers, cottars, burgesses and betaghs (equivalent to English villeins). Each position had various rights and responsibilities attached and in some cases one tenant might hold land by more than one form of tenure. Mirroring the rest of society in later medieval Ireland, the administration of the church in Gaelic Irish and Anglo-Norman areas also differed. The church in Anglo-Norman areas was a particularly strong force within the settlement pattern and tenurial framework outlined. A diocesan and parish system had been established in Ireland prior to the arrival of the Anglo-Normans though it was not until the thirteenth century that it was properly implemented (and much later in Gaelic Irish areas). From the outset of the colonisation Anglo-Normans had granted land and patronised houses of all the monastic orders, both male and female. Indeed, the establishment of male religious houses has been considered a tool of colonisation, with the founding of female houses later consolidating the new settlements. However, research undertaken by the writer suggests that at least in some areas nunneries were part of the initial phase of settlement as several nunneries were the first religious house established in a particular locality.

10 M. Murphy, K. O’Conor, Castles and Deer parks in Ireland, p. 53.
14 R.E. Glasscock, Land and People, pp. 220-221.
15 R. Gilchrist, Gender and Material Culture, p. 41. D. Hall, Women and the Church, p. 81.
2. NUNNERIES IN LATER MEDIEVAL IRELAND

There are approximately 65 female religious houses or nunneries known to have existed in the later medieval period on the island of Ireland. This compares to almost 153 nunneries in England, 15 in Scotland and three in Wales16. Not all of these nunneries were in use at the same time, and the vast majority of nunneries were established in the late twelfth and early thirteenth century. In some cases, nunneries are known to have moved location, for example, nuns from Annaghdown Co. Galway are thought to have later moved to Inishmaine. While there are extant archaeological remains of several later medieval nunneries in Ireland their preservation varies considerably. In just three cases, Killone, Molough and St Catherine’s can their claustral layouts be traced above the ground. It has been suggested, based on archaeological survey and fieldwork that many nunneries, particularly those which re-used early medieval ecclesiastical sites or those that remained in Gaelic Irish areas after the Anglo-Norman colonisation, may not have ever employed the standard claustral layout, generally expected at later medieval monastic sites17.

There is not an extensive body of published literature available for later medieval nunneries in Ireland and they are usually briefly mentioned in the context of male religious houses18. While nunneries have been studied in their own right by historians, they have remained a vastly under-studied resource for archaeologists19. There is, as yet, no archaeological synthesis of nunneries in Ireland and there has only been one research excavation carried out at a later medieval nunnery20. There have been nine archaeological investigations in the vicinity of nunneries, of which four are thought to have uncovered remains of the nunneries or nuns21. Of these only

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17 T. Collins, *An Archaeology of Female Monasticism*.
20 T. Collins, *Excavations at St Catherine*.
21 Summaries of these investigations can be found at http://www.excavations.ie/Pages/Search.php?year=&county=&site_no=&site_name=&site_type=&report_text=nunnery&author=&grid_ref=&smr_no=&excavation_license_no=&Submit=Do+Search. [accessed: 01/04/2014]. Unpublished reports and grey literature is archived at the National Monuments Service, Department of Arts, Heritage and the Gaeltacht.
one has been fully published\textsuperscript{22}. Nunneries have been rarely chosen as an archaeological topic for post graduate study with two unpublished Masters theses being completed on the island of Ireland in the last twenty years\textsuperscript{23}.

Nunneries in Ireland were much fewer in number than their male counterparts, where it is estimated that almost 400 male religious houses were established throughout the period\textsuperscript{24}. Despite the lesser numbers, both Gaelic Irish and Anglo-Norman families founded nunneries. In some cases, such as Kilculiheen, Co. Waterford, the initial foundation was made by a Gaelic king but later benefaction was provided by the Anglo-Norman community\textsuperscript{25}. The distribution of later medieval nunneries in Ireland is reflective of the settlement pattern of their founders. In most cases, a nunnery was established near the founder’s settlement or castle, in secluded rather than isolated locations. In several instances, a nunnery was located within a walled town or immediately outside it, for example, St Peter’s Cell, Limerick, St Mary De Hogges, Dublin or Kilculiheen, Waterford.

Nunneries in Britain are commonly perceived as being poorer than their male counterparts and this has been proved to be sometimes the case, with the exception of some larger nunneries\textsuperscript{26}. In many cases, nunneries were of a similar status to lesser male houses. Furthermore, it has been postulated that nunneries may have been deliberately poor, as a conscious decision to strictly follow a vow of poverty\textsuperscript{27}. A comparison of the seven larger religious houses in Co. Kildare at the time of the Dissolution shows the nunneries of Graney, valued at £73 13s 4d and Timolin, valued at 106s 8d, ranked third and seventh respectively. The nunnery at Kildare town at this time was a small establishment and was valued at 43s 6d. In addition, there were several smaller male houses in the county that were valued at much less than the nunneries. It can be concluded, in the case of the Kildare nunneries at least, that the nunneries were relatively wealthy when compared to their male counterparts and that Timolin was typical of a later medieval religious house there\textsuperscript{28}.

\textsuperscript{22} J. Higgins, \textit{The Tisrara}.
\textsuperscript{23} R.A. Treacy, \textit{Medieval Nunneries}. S. Ronan, \textit{Irish Nunneries}.
\textsuperscript{24} A. Gwynn, R.N. Hadcock, \textit{Medieval Religious Houses Ireland}.
\textsuperscript{25} Ibidem, p. 311.
\textsuperscript{26} J. Burton, \textit{Yorkshire Nunneries}.
\textsuperscript{27} R. Gilchrist, \textit{Gender and Material Culture}, p. 41-44.
3. NUNNERY ESTATES

Studies of monastic space and female spirituality are usually confined to nunnery cloisters and churches and how these spaces might have been used by the female communities and others. Within later medieval society, the religious houses, while undertaking various religious functions, also took the position as lord, in the management of lands, other rights and privileges over churches, vicarages, rectories and tithes. These were either bestowed on the house by the patron and later benefactors, or through direct acquisition, and formed a monastic estate. Estate income was divided into spiritualia, monies generated from spiritual sources such as churches, and temporalia, income gained from secular sources such as land and granges. In the religious houses of England prior to the thirteenth century, estate income was usually derived from the direct management (perhaps through a bailiff) of monastic lands rented to tenants. After this time, leasing of land for cash became common practice. This shift also occurred in medieval Ireland. This was particularly the case from the fourteenth-century onward, when the medieval economy changed, due to pressures such as disease and war, which subsequently led to a smaller workforce. This produced a more cash-based economy.

Differences have emerged in how different monastic orders, both male and female, established and managed their estates over time, and some have been found to have been very extensive. Historical evidence of monastic estates in Ireland for all orders, whether male or female, is much

30 Curran has noted that priories in Scotland were explicitly considered lords over a lordship and some in the late thirteenth-century had to swear fealty to the King. K. Curran, Religious Women, pp. 39-103. K. Perkins-Curran, “Quhar say ye now”, p. 125.
32 J. Bond, Monastic Landscapes, pp. 25-29. P. Greene, Medieval Monasteries, p. 133. E. Power, Medieval English Nunneries, p. 100. B. Golding, Gilbert of Sempringham, 392-443. K. Stöber, Late Medieval Monasteries, pp. 1-8. There are some archaeological difficulties in using the term “estate” to describe many monastic holdings. Not least because an estate suggests a consolidation of a number of manors, which many of the smaller religious houses never actually possessed, see S. Moorhouse, Monastic Estates, p. 68. In the meagre evidence available for nunnery estates in Ireland a few are recorded as possessing manors, see D. Hall, Women and Religion, pp. 372, 373, 375. I am grateful to Dr Hall for sharing her unpublished research with me.
36 J. Bond, Monastic Landscapes, pp. 34-39.
37 M. Jurkowski et al, English Monastic Estates.
less extensive than abroad\textsuperscript{38}, general trends can be traced. Nunnery estates, where they have been studied, are generally considered constricted and over-specialised. They were usually constructed of small dispersed parcels of land which caused them to be less productive and yield lower returns than their male counterparts, which by contrast, consolidated their lands to yield surpluses\textsuperscript{39}. However, an alternative interpretation of this difference is that the non-consolidation of nunnery estates may have been a deliberate policy, in effect releasing the nuns from the responsibilities and distractions of running a large home estate, and even the wealthiest English nunneries had insignificant holdings when compared to the larger male monasteries\textsuperscript{40}.

Unlike Britain, the documentary evidence of later medieval nunneries in Ireland is very sparse and no internal nunnery documents are known to exist, which might elucidate the running of their estates. Despite this, there are some tantalising glimpses into their management of both temporalia and spiritualia. St Mary de Hoggis, Dublin rented out lands at Skinner’s Street in the town, while the nunnery itself leased this land from the archbishop of Dublin. Grace Dieu Co. Dublin re-negotiated rent of its holdings at Swords several times and leased its church, rectory and manor at Portrane for either a cash sum of eight pounds per year, or forty measures of corn and forty of malt, at the discretion of the abbess. The nunnery of Lismullin Co. Meath sub-let land, as it rented one hundred and thirty seven acres of arable land at Betaghestone Co. Louth, from Augustinian canons at Colp and placed its own tenants on the land, presumably at a profit\textsuperscript{41}. This is a particularly interesting arrangement as Colp was a cell of Llanthony Prima in Monmouthshire and seemed to function primarily as a grange\textsuperscript{42}. This is a scarce example of an interaction between a nunnery and its male counterpart. Lismullin Co. Meath held the rectory at Kilpatrick Co. Meath at its dissolution, while Graney Co. Kildare was given all the churches in the barony of Bray, by its founder Walter de Riddlesford. The Gaelic Irish nunneries of Kilcreevalnty Co. Galway and Killone Co. Clare also had spiritual income from tithes and rectories\textsuperscript{43}. However, all the religious houses in medieval Ireland, along with others, were entitled to a portion of spiritualities and so, on occasion, there was stiff competition in their division.

\textsuperscript{38} B.J. Graham, \textit{Medieval Irish Settlement}, pp. 26-27. For an overview of available monastic sources for Ireland see P. Connolly, \textit{Medieval Record Sources}, pp. 45-49.


\textsuperscript{40} J. Bond, \textit{Medieval Nunneries}, p. 77.

\textsuperscript{41} D. Hall, \textit{Women and the Church}, pp. 137-140.


\textsuperscript{43} See K. Nicholls, \textit{Rectory, Vicarage and Parish}. 
In some instances, nunneries had to fight to maintain their rights of tithes and advowsons with archbishops, bishops and even the laity.\footnote{A. Empey, *Layperson in the Parish*, pp. 7-48. D. Hall, *Women and the Church*, p. 145.}


Only two later medieval nunneries’ estates have been considered in their own right. The holdings of the Cistercian nunnery of Plary, Co. Westmeath were mapped and compared to its nearest Cistercian male house. This showed that the nunnery’s estate holdings were far more dispersed than the male house and none of the nunnery’s holdings was adjacent to the nunnery. This was in stark contrast to the male house where the monastery was placed centrally within its consolidated holdings. However, at Graney nunnery, Co. Kildare, all its landholdings were consolidated around the nunnery, though its churches were not.\footnote{G. Carville, *Impact of the Cistercians*, pp. 245-250. G. Carville, *St Mary’s Abbey Graney*, pp. 41, 49. D. Hall, *Women and the Church*, pp. 148-149, 153.} Despite these historical and geographical studies, it is still largely unknown how a nunnery estate might archaeologically manifest itself in the medieval landscape as no archaeological study has been undertaken to date. Research questions can be posed, such as how close was a nunnery to its holdings? Were those holdings consolidated or dispersed? Are there any archaeological

features that might be remnants of the nunnery's holdings? In order to assess the potential for such an archaeological study, Timolin Co. Kildare, an Anglo-Norman foundation, has been taken as a case study. Before this assessment is made, an overview of archaeological features that might comprise a monastic estate in later medieval Ireland is provided.

Moorhouse has created a model formed of several features that together might constitute a monastic estate. Most of the information pertaining to monastic estates must first come from documentary sources: charters, rights, accounts, cartularies, registers and maps. Archaeological evidence can then clarify and expand the historical sources. The study of monastic estates in Ireland is, therefore, at a disadvantage as much of its documentary evidence is no longer available and so the archaeological evidence becomes ever more important. The archaeological evidence of the establishment and development of monastic estates in the English landscape includes wayside crosses (which are associated with monastic lands in the contemporary documents) and granges (monastic farms), which may have varied considerably in size. Many granges had specific functions such as agrarian (arable), vaccaria (cattle), bercaria (sheep) and equicium (horses). Relatively few granges have been extensively excavated in Britain and even fewer have been archaeologically investigated in Ireland. Some granges may have grown to be monasteries in their own right, or may have re-used abandoned monastic sites. However, most of the granges in England known through field survey and building analysis suggest that most of them were not laid out as monasteries, but rather had more in common with the architecture of the lay landowning classes and lay manors. A fiant dated to 1547 noted six “closes” owned by the nunnery at Lismullin, Co. Meath: Le High Parke, Le Lowe Parke, Le Hors Parke, Le Moote Parke, Le Kill Parke and Le Broode Parke, which suggests that this nunnery had lands with specific functions some which might be interpreted as granges.

52 C. Platt, The Monastic Grange.
56 K. Nicholls, Irish Fiants, vol. 1, p. 89.
Mills are another archaeological indicator of monastic estates\textsuperscript{57}. Rights to build mills and water rights were part of a “manorial monopoly” enjoyed by both lay and monastic estates\textsuperscript{58}. They provided a convenient block grant of income to a monastic house, as mills could have been directly used by the monastery, while also providing an income when others paid to use it\textsuperscript{59}. In addition to water mills, horse, tide and wind mills are known, which were used for a variety of purposes. Fulling mills are also known, used in the preparation of cloth. Water-powered corn mills are the most common form of mill in England associated with monastic houses, and may have been held many miles from the monastery itself. More unusual mill-types are also listed, such as mills used in the manufacture of iron and bark for the tanning process\textsuperscript{60}. The excavations of mills at the Cistercian abbey of Bordesley, England showed that they had a variety of purposes, including metalworking and repair of metal items\textsuperscript{61}. Unfortunately, in most cases in the Irish evidence where water mills are recorded at nunneries, a precise function is rarely specified\textsuperscript{62}. There is no documented evidence for larger scale industries in nunnery estates in medieval Ireland such as tanning, quarrying, mining, ceramic tile and brick production, glass making, iron manufacture and working, bell production, or salt-panning\textsuperscript{63}. Further historical evidence of English nunnery estates shows additional holdings including woodland, clay pits, urban property, markets and fairs, along with various rights\textsuperscript{64}. Other features, usually associated with secular elite landscapes may also identify monastic estates in the landscape such as fishponds, rabbit warrens, parks, gardens and woodland\textsuperscript{65}. Other indicators, some often more elusive in the archaeological record, include unenclosed features like barns, kilns, bread ovens, bird and animal traps, archery butts or animal pound enclosures, such as horse corrals, dovecotes, haystacks (which were protected by shallow ditches in England), peat stores, sheep folds and washes and hut sites related to the use of upland pastures. These features are, the ordinary things of the countryside that were familiar to medieval people\textsuperscript{66}.

\textsuperscript{58} K. O’Conor, The Archaeology, pp. 33-34.
\textsuperscript{59} S. Moorhouse, Monastic Estates, pp. 52-53.
\textsuperscript{60} J. Bond, Monastic Landscapes, pp. 310-324.
\textsuperscript{61} M. Aston et al, Bordesley Abbey Project.
\textsuperscript{62} N.B. White, Extents.
\textsuperscript{63} J. Bond, Monastic Landscapes, pp. 343-353. P. Greene, Medieval Monasteries, pp. 146.
\textsuperscript{64} J. Bond, Medieval Nunneries, p. 79; D. Hall, Scottish Monastic Landscapes.
\textsuperscript{65} K. O’Conor, The Archaeology, pp. 34-35. M. Murphy, K. O’Conor, Castles and Deer Parks, p. 54-64.
\textsuperscript{66} S. Moorhouse, Monastic Estates, p. 62.
Fish was an important part of the monastic diet and ponds, rivers and coastal supplies of fish were exploited. Fishing rights and rights to weirs were jealously protected. Rabbits were introduced in the twelfth century into Britain, and later, Ireland and were exploited for meat and fur. Moorhouse suggests that most monastic houses would have had a warren and a warrener to maintain it. Warrens may manifest themselves as low narrow constructed mounds, known as pillow mounds, which encouraged the rabbits to burrow. Only three rabbit warrens are recorded in Ireland and none appear to be associated with monastic estates. The unusual quartering of the interior of a large enclosure adjacent to Shanid Castle, Co. Limerick, one of the residences of the patrons of the nunnery of St Catherine d’Conyl, may show its re-use as a rabbit warren. Extensive monastic deer parks are also known from England, though there are no known monastic medieval deer parks known in Ireland. Deer Island is located in the Shannon Estuary near the village of Ballycally Co. Clare, which may be related to the nunnery of Killone, which possessed landholdings there.

Many monasteries and nunneries held urban and rural properties as part of their estates. The urban property may have been used as monastic lodgings when on business and also as a source of rental income. Some had gardens. The Anglo-Norman nunneries at Timolin held a messuage in the medieval town of Gowran, Co. Kilkenny, while Grace Dieu, nunnery Co. Dublin held a messuage and seven cottages in the town of Lusk, Co. Dublin. Molough Co. Tipperary held one messuage in the medieval town of Clonmel. The Gaelic Irish nunnery at Kilcreevanty Co. Galway held a house, garden and eel weir in Cong and a tenement in Tuam.

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70 They are at Laharankeal, Baldoyle, and Badgerhill. The Badgerhill example is the only one considered to be possible medieval date.
71 I am grateful to Con Manning senior archaeologist with the National Monuments Service for drawing this possible re-use of this site as a rabbit warren to my attention. 6 June 2012.
73 Medieval deer parks in Ireland are only known to have belonged to bishops and lay persons. Fiona Beglane pers comm. 6 July 2012. F. Beglane, *Parks and deer hunting*. M. Murphy, K. O’Conor, *Castles and Deer Parks*, pp. 67-70.
74 H. Weir, *Deerparks*, pp. 54-55.
4. PLACE NAMES AS INDICATORS OF NUNNERY ESTATES

Place name evidence is useful in identifying monastic estate features in Britain, such as deer parks or rabbit warrens, which are associated with place names such as burg, burrow, buries, coning-erth or conygarth. This approach proves useful in an Irish archaeological context. Place name evidence has been used in the identification of deer parks, and perhaps for rabbit warrens, such as Snugburrow townland situated near holdings of Timolin nunnery. Other Irish place names indicate specific female monastic activity in an area. The word Calliagh or Cailleach and its many derivates, originating in the Irish for “veiled one” has been accepted as relating to females and particularly nuns. These place names are commonly directly associated with nunneries, such as Templenagalliaghdoo, Ballynagallagh, Monasternagalliaghdubh, Callystown or Calliaghstown. Sometimes this association is obscured through translation, such as Collinstown or Kellystown.

In several instances, townland or place names also contain this derivative form which may not be necessarily close to the nunnery itself. It is suggested that these townland names may embody a memory of being held by a nunnery as part of its wider estate. For example, the village of Ballycally (which locally is thought of as “town of the nuns”) in Co. Clare on the basis of its name is suggested to be associated with Killone nunnery. Similarly, the townland of Ballycally, Co. Mayo is located to the northwest of the nunnery at Annies. Other examples include Farrangalliagh (land of the nuns), Monagalliagh (bog of the nuns), Rossengalliagh (wood of the nuns), Ballynagalliagh (townland of the nuns), Calliaghstown (town of the nuns), and possibly even Collierstown, the Irish of which is Baile na

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78  M. Murphy, K. O’Conor, *Castles and Deer Parks*, p. 66. F. Beglane, *Parks and Deer Hunting*.
gCailleach\textsuperscript{87}. In all these cases, there is little or no documented historical evidence to link the nunneries with these locations, though the root of the place name suggests otherwise.

5. TIMOLIN COUNTY KILDARE

St Mary’s, Timolin was selected in order to assess the estate of a later medieval nunnery situated in an area of later medieval Ireland under Anglo-Norman control. There is now no above ground register of the nunnery at Timolin, and it is presumed to have been located somewhere in the centre of the modern village\textsuperscript{88}. The only extant feature relating to the nunnery is a thirteenth century stone effigy, now in the Church of Ireland grave yard, which is thought to be that of its founder\textsuperscript{89}. Therefore, the only possible extant traces of this nunnery might be found in its wider monastic estate.

Timolin nunnery was founded in about 1199 by Robert Fitz Richard De Valle, as an Augustinian house of Arroasian observance. His granddaughter Lacelina became the first abbess. It was dissolved in the 1530\textsuperscript{90}. It has been suggested that the nunnery may have been abandoned before formal suppression due to its location near the frontier and the encroachment of the native Kavanaghs. Furthermore, Timolin’s dissolution was advantageous to the influential Archbishop Alen of Dublin, who regained control of six parish churches and the right of presentment for the crown at several more\textsuperscript{91}. The nunnery and its holdings appear several times in various state papers, such as the Fiants, inquisitions, crown surveys, the Kildare Rental of 1518, papal taxations and the dissolution survey\textsuperscript{92}. By assessing this historical evidence and tracing the locations mentioned on archaeological mapping, an outline can be created of what Timolin’s nunnery estate once was. It had various holdings and other interests, both spiritual and temporal, at twenty seven locations\textsuperscript{93}.

\begin{footnotes}
\item[88] A. Thomas, \textit{Walled Towns}, vol. 2, p. 239.
\item[90] J. Hunt, \textit{Irish Medieval Figure Sculpture}, p. 164.
\item[92] B. Bradshaw, \textit{The Dissolution}, p. 37, 43.
\end{footnotes}
Of those, three remain unidentified94. A further one location could only be narrowed to the parish. The remaining twenty three locations have been traced to townland location. This assessment has shown that the holdings were, for the most part, consolidated near the nunnery itself at Timolin, in counties Kildare, Laois and Wicklow, with smaller dispersed holdings in the counties of Limerick, Wexford, Kilkenny and north Kildare (Table 1 and Figure 1).

The precise land holding of the nunnery within each townland is not now known. It is possible that the nunnery may have held the entirety of a townland (or more than one townland, in cases where they have been later subdivided). In regard to income such as tithes, it is not known how the nunnery collected these, from whom, or where they lived, although theories can be postulated. In order to assess any possible archaeological remnants of the monastic estate, the recorded archaeological monuments of each townland have been listed and considered, to investigate if any patterns emerge.

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94 They are Armakirma, Edderdrumbeg and Heytelye. I also have been unable to locate these places.
### Table 1. Location and type of holding of the nunnery of St Mary’s Timolin related to townland and contemporary archaeological monument types.

<table>
<thead>
<tr>
<th>Townland identification</th>
<th>Parish</th>
<th>Barony</th>
<th>Historical record of type of holding, spirituality (S) or temporality (T)</th>
<th>Archaeological Monuments within townland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballydusker Co. Wexford</td>
<td>Killinick</td>
<td>Forth</td>
<td>Rectory (S)</td>
<td>No archaeological monuments recorded. OS sheet 47.</td>
</tr>
<tr>
<td>Ballynadrumny Co Kildare</td>
<td>Ballynadrumny</td>
<td>Carbury</td>
<td>Not known</td>
<td>KD003-019001- Church</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KD003-019002- Graveyard</td>
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<td></td>
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<td>KD003-019003- Graveslab</td>
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<td>KD003-019005- Graveslab</td>
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<tr>
<td>Brownstown Co. Kildare</td>
<td>Churchstown</td>
<td>Narragh and Reban West</td>
<td>Tithes, 2 parts (S)</td>
<td>No archaeological monuments recorded. OS sheet 34.</td>
</tr>
<tr>
<td>Burnchurch, Co. Kilkenny</td>
<td>Burnchurch</td>
<td>Shillelogher</td>
<td>Rectory (S)</td>
<td>KK023-053001- Church</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KK023-053002- Graveyard</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KK023-053003- Font</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KK023-054---- Ritual site - holy well</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KK023-072001- Church</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KK023-072002- Graveyard</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KK023-072003- Graveslab</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KK023-099---- Ritual site - holy well</td>
</tr>
</tbody>
</table>

---

95 These townlands were listed in the 1518 Kildare Rental, some of which was deleted in the original manuscript. See G. Mac Niocaill, *Crow Surveys*. These places have also been referred to in subsequent historical evidence which has been cited above. This evidence has been tabularised by Hall, *Women and Religion*, pp. 360-361. G. E. Hamilton, *The names of the baronies and parishes*. E. Kane, ‘A brief study’.

96 Types of holding have been listed temporally in the case of land that was held (for direct use by the nunnery, rent or lease) and spiritualities in the case of “income” derived from church benefices such as tithes. In the case of rectories, this could be an entitlement of a sum, but does imply that a church was there, as rectories and vicarages were benefices attached to churches See K. Nicholls, *Rectories and Vicarages*, pp. 53-43.

97 I have suggested that this place can be identified to Ballydusker townland from placename evidence. www.logainm.ie/54018.aspx [accessed: 29/02/2012].

98 I have suggested that this place can be identified to the townland and parish of the same name Burnchurch in Co. Kilkenny based on place name evidence. www.logainm.ie/26122.aspx [accessed: 29/02/2012].
<table>
<thead>
<tr>
<th>Location</th>
<th>Sublocation</th>
<th>Feature</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crookstown (East, Lower, Upper) Co. Kildare</td>
<td>Narraghmore</td>
<td>Narragh and Reban East</td>
<td>Tithes (S)</td>
</tr>
<tr>
<td>Dollardstown Co. Kildare Dunboyke Co. Wicklow</td>
<td>Tankardstown Hollywood</td>
<td>Kilkea and Moone Talbotstown Lower</td>
<td>Rectory (S)</td>
</tr>
<tr>
<td>Glassely Co. Kildare</td>
<td>Narraghmore</td>
<td>Narragh and Reban East</td>
<td>Rectory and tithes (S)</td>
</tr>
</tbody>
</table>

Enclosure
Ritual site - holy well
Mill - unclassified

KK023-100
KK023-101
KK023-102
<table>
<thead>
<tr>
<th>Gowran&lt;sup&gt;99&lt;/sup&gt;</th>
<th>Gowran</th>
<th>Gowran</th>
<th>Land, message and garden (T)</th>
<th>KK020-060-- Historic town --</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grangemellon</td>
<td>Tankardstown</td>
<td>Kilkea and Moone</td>
<td>Rectory (S)</td>
<td>KDO037-009-- Mound -- KDO037-010-- Gatehouse -- KDO037-011-- Castle - KDO037-020-- unclassified KDO037-074-- Ritual site - holy well KDO037-064-- Burial ground -- KDO037-065-- Field system --</td>
</tr>
</tbody>
</table>

| Inchaquire Co.     | Narraghmore | Narragh and Reban East | Land, 31 acres (T) and Tithes, 2 parts of tithes (S) | KDO032-034-- Enclosure -- KDO032-035-- Ringfort - rath -- KDO032-036-- Enclosure -- KDO032-039-- Castle - unclassified -- |
| Kildare<sup>100</sup> | | | |

| Kilmead Co.        | Narraghmore | Narragh and Reban East | Tithes, 2 parts(S) | KDO031-027-- Burial ground -- KDO031-028-- Moated ground -- KDO031-032-- Settlement deserted - medieval |
| Kildare<sup>101</sup> | | | |

| Kildare<sup>101</sup> | | | |

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99 I have suggested that this place probably relates to the historic town of Gowran Co. Kilkenny and to the townlands of Gowran and Gowran Demesne.

100 I have suggested that this place can be identified to the townland of Inchaquire in the parish of Narraghmore and barony of Narragh and Reban East in Co. Kildare based on placename evidence Inse Mhic Uidhir. www.logainm.ie/25128.aspx [accessed: 29/02/2012].

101 This townland was particularly important in the Late Iron Age and Early Medieval period. It was the centre of the territorial kingdom of the Uí Dúnlainge, kings of Lenister. A carved pillar stone decorated with spirals was found re-used as a lintel in the castle when it was being demolished, P.F. Wallace, R. O Floinn, Treasures, pp. 172, 180.
<table>
<thead>
<tr>
<th>Townland</th>
<th>Parish</th>
<th>Place of Interest</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narraghmore Co. Kildare</td>
<td>Narragh and Reban East</td>
<td>Rectory, tithes (S) and land (T)</td>
<td>KD032-029-046</td>
<td>Ringfort - Rath Castle - Unclassified</td>
</tr>
<tr>
<td>Old Grange Co. Kildare</td>
<td>Fontstown</td>
<td>Narragh and Reban East</td>
<td>Land (T)</td>
<td>KD032-055</td>
</tr>
<tr>
<td>Skerries North and South, Co. Kildare</td>
<td>Narraghmore</td>
<td>Narragh and Reban West</td>
<td>Unknown</td>
<td>KD031-021-022-039</td>
</tr>
<tr>
<td>Spratstown Co Kildare</td>
<td>Narraghmore</td>
<td>Narragh and Reban East</td>
<td>Unknown</td>
<td>No archaeological monuments recorded. OS sheets 32 and 36.</td>
</tr>
<tr>
<td>Templescoby Co. Wexford</td>
<td>Templescoby</td>
<td>Bantry</td>
<td>Rectory (S)</td>
<td>WX025-041-055-056</td>
</tr>
<tr>
<td>Threecastles Co. Wicklow</td>
<td>Blessington Lower</td>
<td>Talbotstown</td>
<td>Land plus 2 acres for access (T)</td>
<td>WI005-031-032-104</td>
</tr>
<tr>
<td>Unlocated 'Armakirma'</td>
<td>-</td>
<td>-</td>
<td>Land (T) and tithes (S)</td>
<td>Location not known.</td>
</tr>
</tbody>
</table>

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103 I have suggested that this place Ballinsprat can be located to *Baile Spróit* or Spratstown from placename evidence. [www.logaimm.ie/24916.aspx](http://www.logaimm.ie/24916.aspx) [accessed: 29/02/2012].
104 I have suggested that this place can be identified to the townland and parish of the same name Templescoby Co. Wexford based on placename evidence. [www.logaimm.ie/52704.aspx](http://www.logaimm.ie/52704.aspx) [accessed: 29/02/2012]. The townland of Templescoby does not contain a church site. The other 4 townlands in the parish of Templescoby do not contain any recorded archaeological monuments. Excavations in advance of the N30 roadway in the townland of Moneytucker revealed a large enclosing element, verified through aerial photography around the site of a medieval church within the grounds of the Church of Ireland Church. The excavator stated that this medieval church was attributed to the nuns of Timolin sometime in the thirteenth century. [http://www.excavations.ie/Pages/Details.php?Year=&County=Wexford&id=12738](http://www.excavations.ie/Pages/Details.php?Year=&County=Wexford&id=12738) [accessed: 01/04/2014]. Moneytucker has not been indicated in any of the previous sources cited as being related to Timolin.
It is acknowledged that Timolin’s holdings were probably amassed over a long period of time from its establishment until its dissolution, but as can be seen from table 1, spiritualities were the greater holding for Timolin nunnery. These comprised tithes, rectories and in one case at Uregare, a vicarage. A total of six entitlements to tithes were held. In some cases these were shared with others, though it is not recorded who these entities were. A total of 14 rectories were held, of which in three cases the location remains unknown. Of the remainder, five places do not have the archaeological remains of a church recorded, Ballydusker, Grangemellon, Narraghmore, Templescoby, and Usk. This is difficult to explain as rectories were usually

<table>
<thead>
<tr>
<th>Location</th>
<th>County</th>
<th>Townland</th>
<th>Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlocated ‘Heytelye’</td>
<td></td>
<td>-</td>
<td>Rectory (S)</td>
<td>Location not known</td>
</tr>
<tr>
<td>Unlocated Co. Wexford ‘Edderdumbeg’</td>
<td></td>
<td>-</td>
<td>Rectory (S)</td>
<td>Location not known</td>
</tr>
<tr>
<td>Uregare Co. Limerick</td>
<td>Uregare</td>
<td>Coshma</td>
<td>Rectory &amp; Vicarage 107 (S)</td>
<td>Enclosure -- Enclosure -- Enclosure -- Enclosure -- Field system -- Church --</td>
</tr>
<tr>
<td>Usk or Usk Little Co. Kildare</td>
<td>Usk</td>
<td>Narraghmore and Reban East</td>
<td>Rectory (S)</td>
<td>KD032-020-- House - fortified house KD032-027-- Ringfort - rath -- No recorded archaeological monuments in Usk Little</td>
</tr>
<tr>
<td>Youngstown Co. Kildare</td>
<td>Narraghmore</td>
<td>Narragh and Reban West</td>
<td>Unknown</td>
<td>KD031-036-- Enclosure --</td>
</tr>
</tbody>
</table>

105 I have suggested that this location can be equated with the parish of Rossdroit. This parish contains 18 townlands and so the location of the rectory within that parish cannot be precisely pinpointed.

106 There is a parish of Uregare and townland in Co. Limerick and it is suggested that this is the location. It is situated in the baronies of Coshma and Smallcounty. www.logainm.ie/30920. aspx [accessed: 29/02/2012].

107 The rectory and vicarage of Uirgare were described as possessions of the religious house at Tymolin in 1578 (K. Nicholls, *Irish Fiants*, vol. 2, p. 468).
attached to churches and it is unlikely that the presence of a church would evade the archaeological record. At both Narraghmore and Grangemellon castles are recorded and it is possible that the rectory may have been attached to chapels there. The recorded temporal holdings of Timolin nunnery were exclusively land. It held parcels of land, usually of recorded extent at Dunbrin, Inchaquire, Oldgrange, Threecastles and at an unnamed place. It also held urban property in the medieval town of Gowran.

Most of the holdings were located within ten kilometres of the nunnery and they form three discrete groupings, situated to the north, northwest and southwest of Timolin itself. As such, the Timolin nunnery estate holdings were for the most part consolidated, with a couple of outliers. The first consolidated holding lay directly to the north of Timolin in the townlands of Crookstown East, Lower and Upper (four kilometres distant), Spratstown (five kilometres), Inchaquire (five and a half kilometres), Narraghmore (six kilometres), Mullamast (two and a half kilometres), Usk and Usk Little (nine and a half kilometres). All but the townlands of Usk and Usk Little are adjacent to each other.

The second consolidated holding of Timolin lay to the northwest in the five townlands of Glassely (five kilometres distant), Kilmead (six and a half kilometres), Old Grange (seven kilometres), Youngstown (seven kilometres) and Skerries (north and south nine kilometres). The nunnery land at Old Grange and the townland name is suggestive of a monastic function.

The third fairly consolidated holding of Timolin was located to the southwest in the townlands of Dollardstown (seven kilometres distant) and Grangemellon (ten kilometres), where it each held a rectory. Again, in the case of Grangemellon its name is suggestive of a monastic connection and is interesting as the archaeological monuments now extant there (a mound, gatehouse, the site of a castle, holy well, burial ground, field system and enclosure), are indicative of a monastic grange – and suggest more than just the rectory holding of the nunnery recorded in the documents. The location of Grangemellon on the left (eastern) bank of the River Barrow would have provided access to water, fishing and water power. Furthermore, the positioning of a small townland, called Snugburrow, immediately to the west of Dollardstown, and not far from Grangemellon is very suggestive of a possible location of a rabbit Warren (as discussed above).

108 Distances that follow are based on the presumption that the location of the nunnery of St Mary’s Timolin was in the town centre.

109 Caution is advised as ‘Grange’ was popular in the nineteenth century and can be misleading and so should only be considered tentatively when used to indicate monastic estates without historical evidence. See M. Aston, *Monasteries*, p. 125.
Furthermore, immediately to the east of Dollardstown and Grangemellon lie the townlands of Grangerosnolvan, Grangerosnolvan Upper and Grangerosnolvan Lower. These are not historically connected with Timolin, but “Grange Nolven” was noted by Archdall in the eighteenth century as having a nunnery, which was no longer extant and Moran further notes that there was neither church nor graveyard there. Lewis, writing in the nineteenth century also makes note of the tradition of a nunnery in the parish of the same name\textsuperscript{110}. In the 1530s, Grangerosnolvan is recorded as a grange in the possession of Cistercian monks at Baltinglass, Co. Wicklow\textsuperscript{111}. It is possible that the relatively sparse historical accounts may have overlooked Timolin nunnery having an actual grange at this location.

Timolin held non-consolidated estate holdings at greater distances from the nunnery. They were located in counties Kildare, Laois, Wicklow, Wexford, Kilkenny and Limerick. The greater distances of these holdings suggest that it was a benefactor from these areas that bestowed a gift to the distant nunnery. Two in northern Kildare, Brownstown which lies fifteen kilometres to the west of Timolin, and Ballynadrumny which is much further afield and located fifty kilometres to the north. Its holding in Laois was at Dunbrin which is situated on the River Barrow on its right (western) bank directly opposite Grangemellon and just twelve kilometres from Timolin. Therefore, Dunbrin could be considered to be part of the south western consolidated holdings of Timolin. This townland now contains a motte castle, a church and no fewer than nine enclosures\textsuperscript{112}. Timolin had two separate holdings in west county Wicklow at Dunboyke and Threecastles. It is not known how much land Timolin was granted at Threecastles, though it was granted two acres \textit{in addition}, so that it might access the lands and the new grant. This place has been identified as near Timolin itself\textsuperscript{113} but this research suggests that it is Threecastles Co. Wicklow, and so the nuns may have already had land near Threecastles\textsuperscript{114}. Timolin also had a rectory in \textit{Tamplescobe}, and an unknown holding in Rossdroit parish Co. Wexford. Interestingly, there is a townland within Rossdroit parish called Ballygillistown, which may indicate the presence of nuns in the locality in the past.

\textsuperscript{112} These have been identified by Dr Gillian Barrett from aerial photography analysis, which have been described as part of a multi-period landscape. See C. O’Brien, [On line] \textit{Survey notes} [accessed: 08/01/2012].
\textsuperscript{113} D. Hall, \textit{Women and the Church}, p. 135.
\textsuperscript{114} M. Murphy, M. Potterton, \textit{The Dublin Region}, pp. 102, 145-148, 155, 160.
The Co. Kilkenny income was from both spiritualities and temporalities, having a rectory at Burnchurch and a messuage and garden at Gowran, fifty five kilometres from Timolin. Gowran was a thriving centre in the medieval period. The holding of the nunnery of the rectory and vicarage in Co. Limerick was by far the most distant being more than one hundred and sixty kilometres from Timolin.

6. CONCLUSION

This paper assessment has considered Timolin’s nunnery documented estate holdings. Its nunnery estate has been investigated through the historical evidence and traced on archaeological mapping. The purpose of this paper was an attempt to investigate an estate of a later medieval Anglo-Norman nunnery in Ireland. Timolin was used as a case study. While it has left no above ground trace of its nunnery complex or precinct, which can be archaeologically studied, the documentary evidence of its estate is available for scrutiny. Monastic estates of nunneries in later medieval Ireland can be considered as being spaces of female spirituality, as both the spiritual and temporal holdings of the nunnery overtime are representative of the female communities’ interaction with their wider landscapes. The result of the analysis of Timolin is surprising in that for the most part its holdings were consolidated in three fairly large groups to the north, northwest and southwest of the nunnery itself. Mullamast is separate but very close to the north and northwest groupings. In relation to the nunnery’s consolidated holdings they are mostly ten kilometres or less from Timolin. These holdings encapsulate a wide variety of resources, the land quality varies from good to poor, upland and lowlands are represented and there are several rivers.

Its holding in county Laois could be considered part of the southwest consolidated group of holdings. It is suggested that these holdings may have been granted by benefactors who were local to the nunnery and may have used its facilities and services. They may even have been related to some of the nuns. Most interesting perhaps is the identification of a suitable location for a nunnery grange in the southwest group at Grangemellon/Grangerosnolvan. This location has many of the indicators associated with granges found in England.

The more distant holdings of Timolin at Wicklow, Kilkenny and especially Limerick are suggestive of distant benefactors most of whom are
not recorded in history. The dissolution survey of the nunnery at Timolin sheds some light on its interactions in its wider community and how its temporal land holdings discussed above may have been used. In 1538 the house of nuns at Timolin possessed amongst other land, ten messuages occupied by tenants. Customs included that tenants worked on the demesne land, in addition to each tenant and cottager owing two days weeding, two days reaping and two days digging turf. Each tenant gave the nunnery a hen at Christmas, and those that sold beer donated one gallon of beer from each brewing\textsuperscript{116}.

At the onset of this desk-based analysis of the Timolin holdings there were immediate limitations. Most obviously, the documentary evidence is not complete and so in reality it is likely that the total holdings of the nunnery were not recorded. It is suggested that place name evidence could be used in future to expand the knowledge of the estate. For example, the townlands of Kilbride Co. Wicklow, Ballygillistown, Ballygillane Littile and Ballygillane Big, Sanctuary, Co. Wexford and Ballycolloo, Co. Limerick are all townlands immediately adjacent to recorded holdings of Timolin, which may highlight unrecorded evidence of nun’s interaction in the wider landscape.

In addition to the patronage bonds, the nunnery community would have developed important relationships with lay individuals and communities through their continued management of their holdings and estates. This created a social landscape that had to be negotiated through various obligations of the nuns to their benefactors, such as hospitality and prayer, to their tenants, in their roles as landlord and rent collector, and to their neighbours, through rights of way and various entitlements, almsgiving, some pastoral care and church services. Indeed these obligations were reciprocated, with all these sections of society also having social obligations to the nunnery. It was through these negotiations and interactions that social networks and landscapes were created and transformed.

There is a general dearth of archaeological scholarship on monastic estates of both medieval male and female houses in Ireland, and as such the British record has been relied upon to elucidate the Irish evidence. Future studies of monastic estates in Ireland would greatly benefit from more archaeological investigation and targeted excavation to ascertain the precise nature and date of archaeological monuments currently extant on and near lands once held by monasteries and nunneries such as Timolin. The townland of Skerries would be a good location to commence such an archaeological project\textsuperscript{117}. By coupling historical and archaeological evidence in the future, interactions and networks

\textsuperscript{116} N.B. White, *Extents*, p. 171.
\textsuperscript{117} M.P. Flynn, *The Townland of Skerries*. 

\footnotesize ANUARIO DE ESTUDIOS MEDIEVALES, 44/1, enero-junio 2014, pp. 51-80
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between the nunnery community and at least some of the inhabitants and users of these monuments might be reasonably proved, particularly at those places closest to the nunnery. Timolin has been used as a case study to assess the potential of mapping such a nunnery monastic estate and to investigate how consolidated its estate was. While it is impossible to “get into the heads” of a medieval person or religious house, it is interesting to try and reach some present day understanding of how a nunnery may have been perceived and interacted in society through its monastic estate.

7. BIBLIOGRAPHY

Bradley, John *The precinct of St John’s Priory, Kilkenny at the close of the Middle Ages*, “Peritia” 22-23 (2011-2012), pp. 317-345.


Hunt, John, *Irish Medieval Figure Sculpture 1200-1600*, Dublin, Irish University Press, 1974.


Murphy, Margaret; O’Conor, Kieran, *Castles and Deer parks in Anglo-Norman Ireland*, “Éolas” 1 (2006), pp. 53-70.

Murphy, Margaret; Potterton, Michael, *The Dublin Region in the Middle Ages, settlement, land use and economy*, Dublin, Four Courts Press, 2010.


Wardell, John, *The History and Antiquities of St Catherine’s Old Abbey, Co. Limerick*, “Journal of the Royal Society of Antiquaries of Ireland” (1904), pp. 41-64.


www.archaeology.ie [accessed: 01/04/ 2014].

www.excavations.ie [accessed: 01/04/ 2014].

www.logainm.ie [accessed: 19/07/2012].

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