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Archaeological Excavation Report
E3867 - Derrydonnell More, Co. Galway

Cashel

EACHTRA
Archaeological Projects

Final Archaeological Excavation Report

Derrydonnell More

Co. Galway

Cashel

Date:	**October 2010**
Client:	**Galway County Council and National Roads Authority**
Project:	**N18 Oranmore to Gort**
E No:	**E3867**
Excavation Director:	**Tori McMorran**
Written by:	**Tori McMorran & Finn Delaney**

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Summary

The site was a recorded early medieval enclosure or cashel (GA096:085) which was depicted on the first edition Ordnance Survey map of the area. The site was levelled and destroyed by land clearance and was not visible above ground. The foundation level of a non-circular wall, which consisted of an inner and an outer face with an internal rubble core, was partly traced around the perimeter of a low knoll. One small, internal, stone feature was identified below a stone deposit which covered the entire interior of the site. A beautifully preserved baluster-headed ringed pin, dated from the 7th to the 8th century, was recovered during the excavation along with a crinoid fossil bead of possibly similar date. No suitable dating material was recovered during the excavation.

Townland	Derrydonnell More
Parish	Athenry
Barony	Athenry
County	Galway
Ministerial Order Number	A045
E Number	E3867
OS Map Sheet	GA096
National Grid Reference	146551/225358
Elevation	28.9 m OD
Site Type	Destroyed cashel

Acknowledgements

The excavation director was Tori McMorran and the site supervisors were David O'Reilly, Gregorz Kiarszyk and Rafal Panfil. The field crew included Simon Bolton, Dorota Krenc, Stanislaw Lackowski, Ewa Lazaj, John Patrick Lehane, Colm McKermott, Niamh Naughton, Przemyslaw Radniecki, Artur Rosiek, Karol Rosiek, Aleksandra Ryzlak, Lukasz Lugowski and Mateusz Lugowski. The senior archaeologist was Finn Delaney and the post-excavation managers were Penny Johnston and Jacinta Kiely. Choryna Kiely, Filip Debniak and Fiona Greene were involved with the administration of the project. Illustrations are by Ben Blakeman and Maurizio Toscano. Specialist analysis was undertaken by Mary Dillon, Sara Camplese, Susannah Kelly and Farina Sternke. Joseph O'Brien was the resident engineer for consultant engineers Hyder Tobins. The project was commissioned by Galway County Council and was funded by the National Roads Authority. The Project Archaeologist was Jerry O'Sullivan.

1 Introduction

This report constitutes the final excavation report for a destroyed and levelled cashel in Derrydonnell More townland, Co. Galway (Fig 1). The site was excavated as part of the archaeological excavation programme in advance of construction for the N18 Oranmore to Gort road scheme. The site was a Recorded Monument (GA096:085) located within the lands acquired for the new road. Surviving sub-surface remains were identified by archaeological testing during Phase 1 investigations (E3702) along the route. The excavation revealed the partial outline of a destroyed and levelled cashel. One possible stone feature was all that survived internally.

2 Background to the scheme

The N18 Oranmore to Gort (Glenbrack to Rathmorrissey) national road scheme was approved by An Bórd Pleanála on 7th June 2007. The development will consist of approximately 27.2 km of dual carriageway, and all associated works. The area of archaeological investigations lies within the footprint of the proposed scheme as defined by the Compulsory Purchase Order (CPO) published by Galway County Council on 1st August 2006. Eachtra Archaeological Projects was commissioned by Galway County Council to undertake Phase 1 archaeological testing and Phase 2 excavation of sites directly affected by the proposed development

3 Topography geology and hydrology

The underlying geology in the surrounding area is Carboniferous limestone of the Burren and Tubber formations bordered by Namurian shales and sandstones to the west, in Clare, and Devonian old red sandstone to the east, in the Slieve Aughty uplands. Glacial till overlies the bedrock to varying depths (0–5 m) and the soils derived from the till are generally shallow brown earths. The topsoils are characteristically thin and dry but, enriched by the limestone parent material, support moderately good grass pastures. There are boulder fields and expanses of bedrock exposure typical of karst limestone country.

The present landscape is gently undulating and divided by simple stone walls with clear views in most directions, which are now broken somewhat by modern development. The Slieve Aughty Mountains are visible rising to the east and south-east. Due to the shallowness of the overlying strata the land-use capabilities have always been limited and the land today is primarily used as pasture for sheep and cattle.

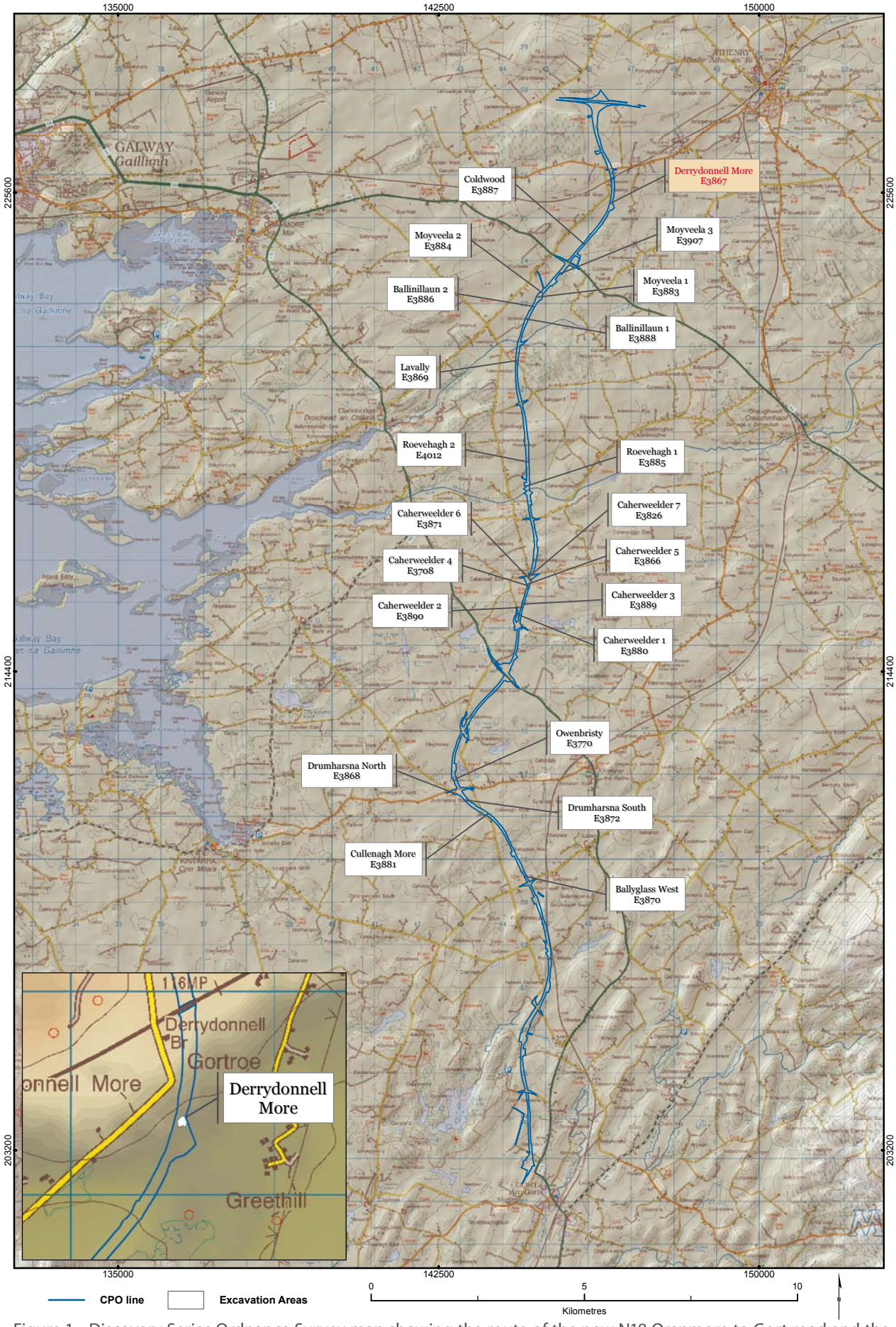

Figure 1: Discovery Series Ordnance Survey map showing the route of the new N18 Oranmore to Gort road and the location of all the excavation sites.

4 Archaeological and historical background

The townland name Derrydonnell More can be understood in a number of ways. The common interpretation of Derry is from the Irish *Doire* meaning a wood or woodland but more specifically relating to an oak wood. The second part of the name Donnell may come from *Dónal* a personal name or Donnell/O'Donnell a family name. The last part of the name, More, is more ambiguous and can be interpreted as *Mór* meaning big or great; *Mór* meaning a wall, house, rampart or fortress; *Mor* or *Mhagh* from *Machaire* meaning a plain or More from *Mórdha/Móradh* from Moore a personal or family name.

One of the earliest references to this area is found in The Annals of the Four Masters (UCC) under the date 1213–14 which describes how Derrydonnell got its name. In that year a steward of O'Donnell went to Connaught to collect his master's tribute or rent. He visited the house of a poet, Murray O'Daly, and began to wrangle with him. The poet being enraged, seized a large axe and killed the steward. O'Donnell on hearing of the incident gathered a large body of troops and pursued O'Daly into Derrydonnell in Clanrickard, a place named after him because he encamped there for a night.

Ringforts and cashels are the classic early medieval (c. AD 500 – 1100) settlement type, and are among the most common archaeological monuments in the country. Ringforts consist of circular areas, defined by banks and external ditches, and excavation often reveals the remains of dwelling houses and outbuildings for extended families. Ó Ríordáin (1942) described the ringfort as 'a space most frequently circular, surrounded by a bank and fosse or simply by a rampart of stone'. In areas where there is little field stone, the banks are generally of earth, while in stony areas, the banks may be of stone, with either stone-cut ditches, or no ditch at all. Those with earthen banks are referred to as raths, while those with stone banks are known as cashels. Cashels tend to be much smaller then earthen examples typically measuring 15–25 m in diameter (Stout 1997,16). According to Stout (1997, 20) ringforts were not built to repel prolonged sieges, or designed to annex territories and populations but rather to repel the lightning cattle raids, which were endemic during the Early Christian period in Ireland. They are generally viewed as representing the homesteads of the free social classes as recorded in the 7th/8th century law tracts in early medieval Ireland. Upon archaeological excavation, they have generally been dated to the second half of the first millennium AD. The majority of cashels are located in western Ireland where stone was abundant as a resource.

Stout (1997, 99) has shown that a pocket of dense ringfort settlement exists on the shallow brown earth soils of the lowlands south of the Dunkellin river. The cashel at Derrydonnell More, while lying to the north of the Dunkellin river, does appear to lie at the heart of a landscape which appears to have been densely occupied during the early medieval period, with a large number of settlement remains (cashels and ringforts) still visible on the present landscape and even more so on the first edition Ordnance Survey map (Fig 2). The Record of Monuments and Places lists seven ringforts/cashel sites within 1 km of the cashel at Derrydonnell More (Fig 4 and 5).

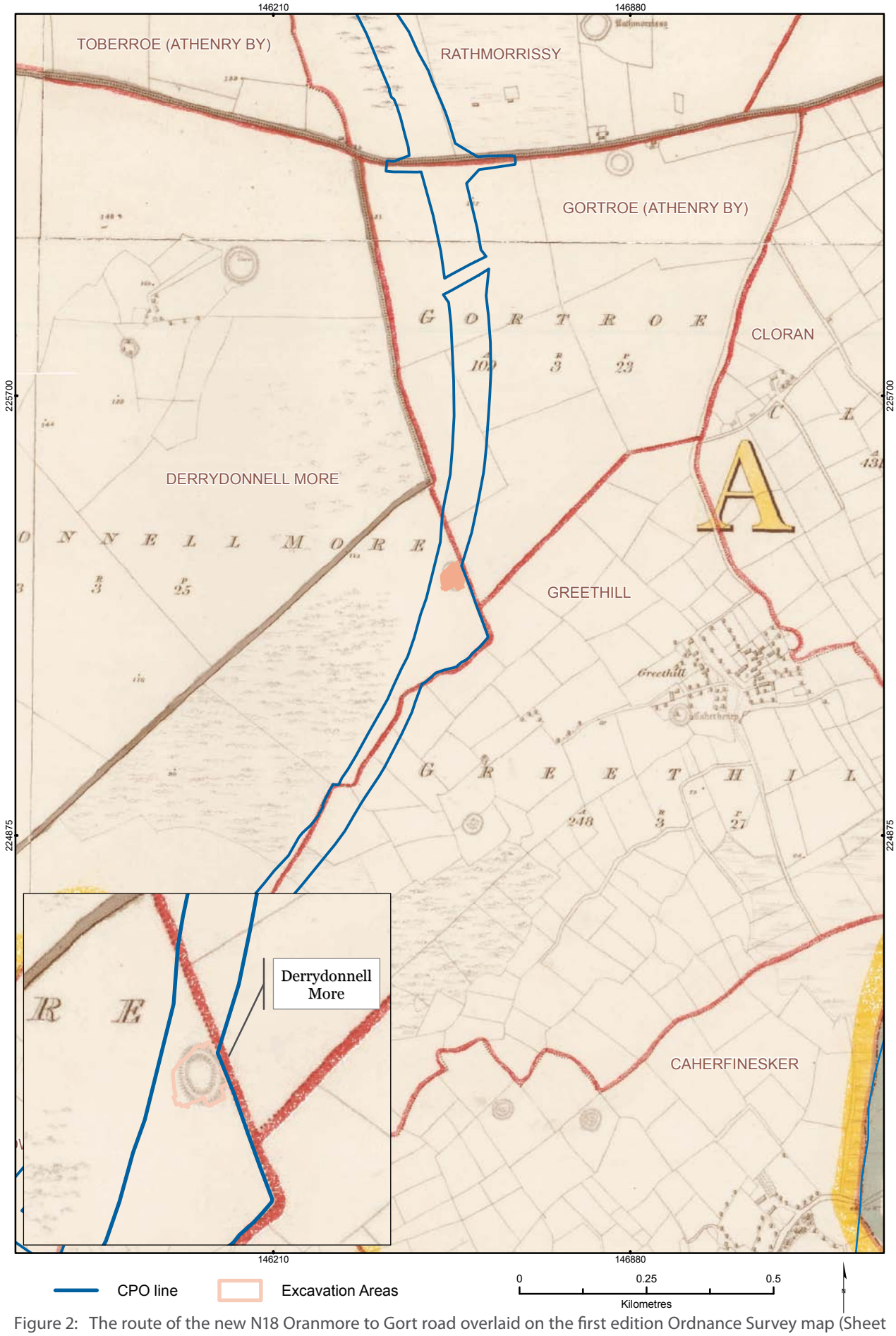

Figure 2: The route of the new N18 Oranmore to Gort road overlaid on the first edition Ordnance Survey map (Sheet GA096). The excavation site at Derrydonnell More is also highlighted.

South Galway is located within the diocese of Kilmacduagh, founded in AD 1152 at the Synod of Kells, which was joined to form the modern diocese of Galway, Kilmacduagh and Kilfenora in 1866. The boundaries of Kilmacduagh were co-extensive with the later territory of Uí Fiachrach Aidhne. However, the territory may have been more extensive in the early medieval period (Byrne 1973, 84). South Galway has two baronies: Kiltartan in the south of the region, and Dunkellin further to the north. The area has some of the best examples of early medieval stone masonry in Ireland (Harbison 2005, 11). It is also associated with Guaire Mac Colman (renowned 7th-century king of Connacht), also know as Guaire Aidne who epitomised Christian kingly hospitality during the medieval period in Ireland.

Continuity of settlement in the area is visible in the number of later sites also extant in the immediate vicinity, including the remains of a 15th-century tower house known simply as Derrydonnell Castle, a windmill and a medieval church site known as Templegal (Fig 4). Stone was the predominant building material in this area, presumably due to the thin cover of soil directly overlying limestone bedrock.

The 1837 first edition Ordnance Survey map of the area portrays a marked difference in field layout on either side of the townland boundary between the townlands of Coldwood and Greethill to the east and Derrydonnell More and Moyveela to the west (Fig 2). The western townlands are shown as having larger open fields. The cashel at Derrydonnell More is marked on the map as an oval doughnut-shaped feature (usually denoting a cashel) directly to the east of the townland boundary between Derrydonnell More and Gortroe and located within the more open field system. The ground to the south-west of the cashel is marked as rough ground. The preponderance of cashels and ringforts in the area is very noticeable on the first edition Ordnance Survey map. The cashel is not marked on the 25 inch Ordnance Survey map which was surveyed in 1892 (Fig 3).

In 1967 the site of the cashel was described as 'does not appear of archaeological interest' after an investigation by the OPW in advance of proposed agricultural improvements (DEHLG). In 1983 the sites and monuments survey team from UCG (1997) recorded no trace of an enclosure at this location and no upstanding evidence was recorded during fieldwork for the Environmental Impact Statement (EIS) for the road scheme (Galway County Council 2006) .

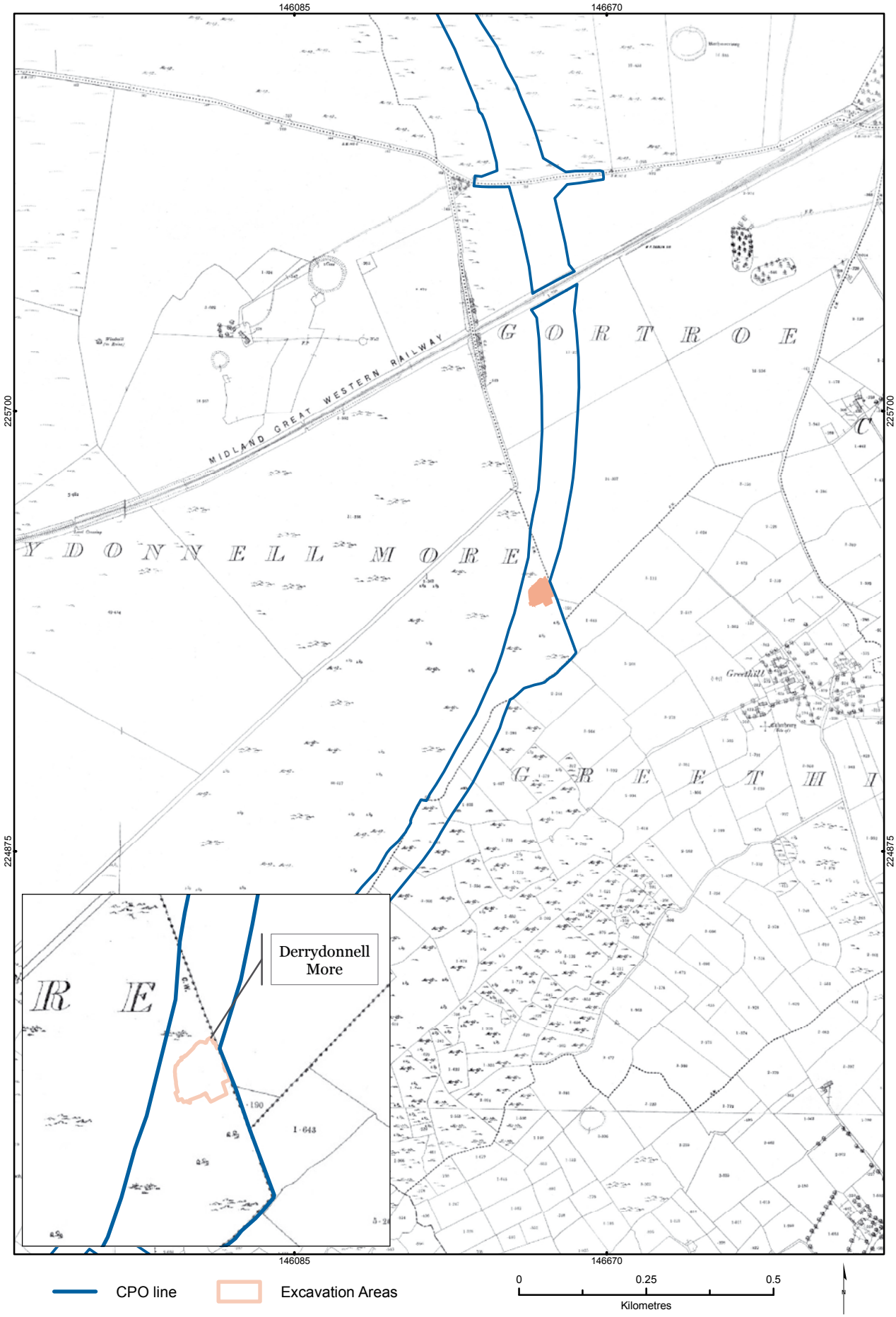

Figure 3: The route of the new N18 Oranmore to Gort road overlaid on the 25 inch Ordnance Survey map (Sheet GA096). The excavation site at Derrydonnell More is also highlighted.

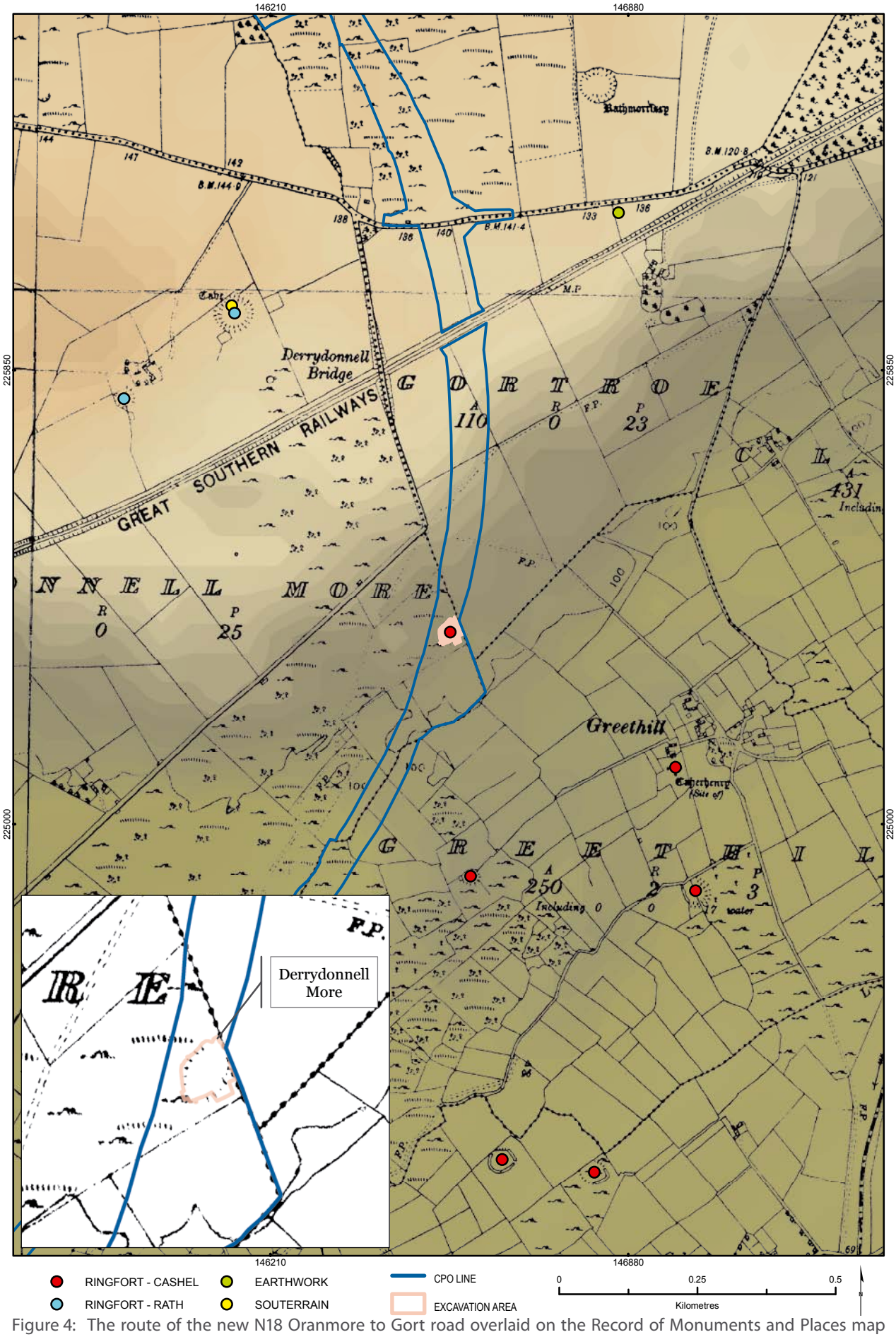

Figure 4: The route of the new N18 Oranmore to Gort road overlaid on the Record of Monuments and Places map which is based on second edition Ordnance Survey map (Sheet GA096).

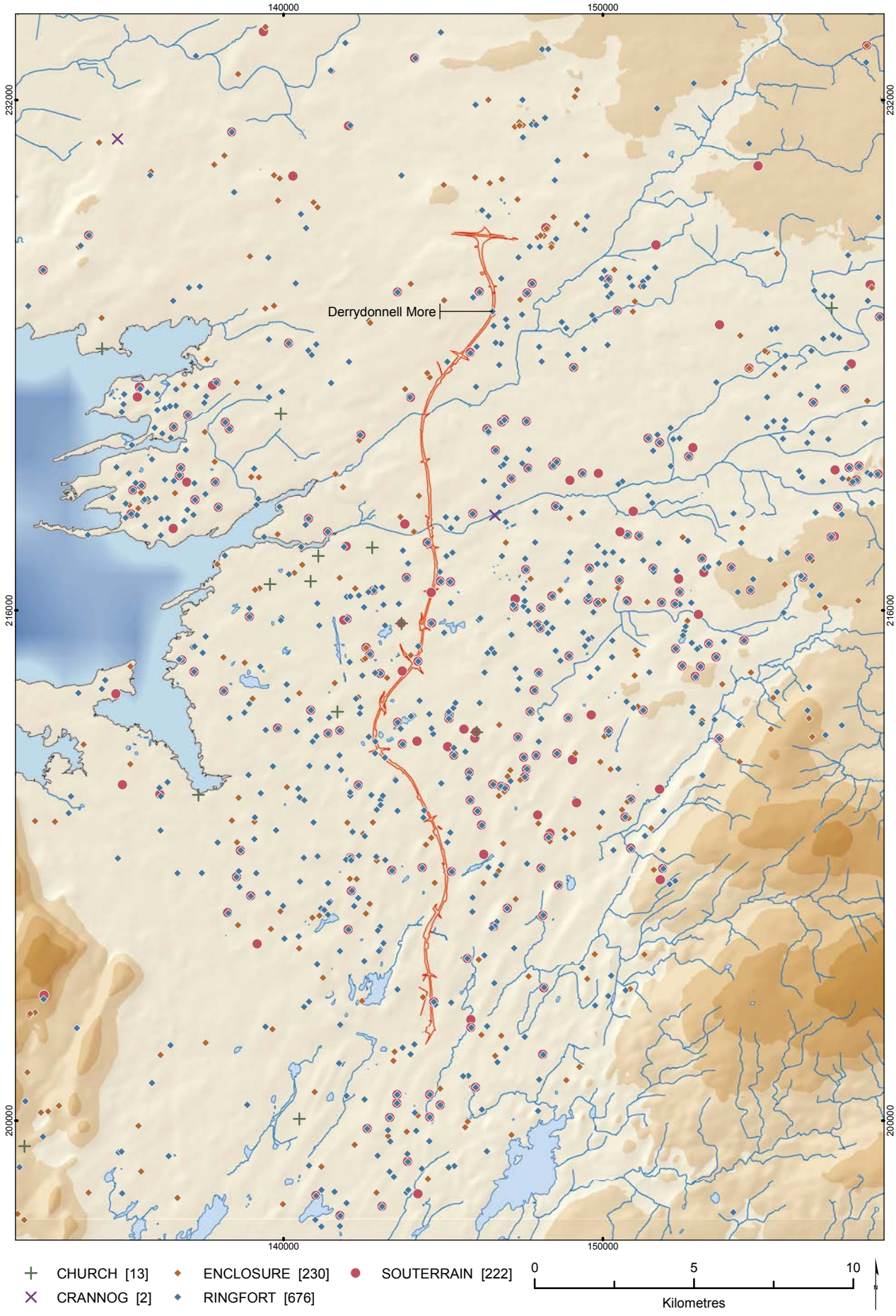

Figure 5: A distribution map showing the location of early medieval sites surrounding Derrydonnell More. It is based on the RMP/SMR data-set which has been overlaid on a digital elevation model.

Plate 1: Looking south across the excavation site in Derrydonnel More. Showing the surrounding landscape and the view to the south which is the prevailing aspect of the site (Airshots).

5 Site description

Derrydonnell More is situated to the south-west of Athenry, on the eastern side of the current Athenry to Clarinbridge third class road (NGR 146551/225358) (Fig 1). The site of the cashel is located on a local high point within an undulating landscape divided by stone walls and primarily used as grazing pasture for sheep and cattle (Plates 1 and 2). The eastern boundary of the excavation area was formed by a north/south-running stone-built townland boundary wall between Derrydonnell More and Gortroe. The wall also partly marks the limit of the lands made available for the scheme.

6 Methodology

Phase 1 hand testing (E3702) of the site involved excavating ten test trenches (42 sq m) within the area of the cashel as depicted on the first edition Ordnance Survey map. No traces of the site were found so a further 1133 sq m was machine stripped and during this work the possible remains of parts of the cashel wall were discovered. On this basis a further seven trenches were hand excavated to investigate the nature and possible extent of these remains.

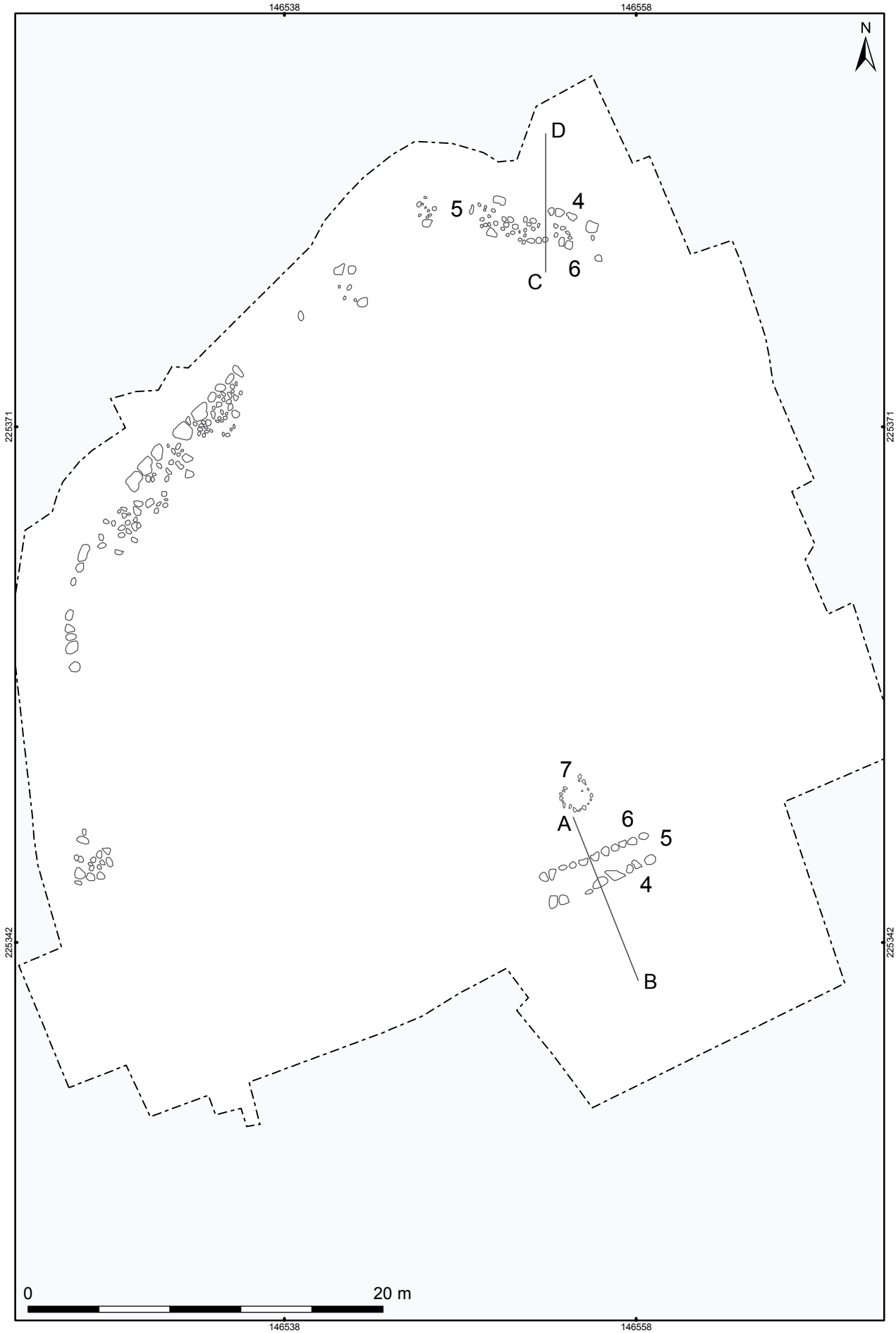

Figure 6: Post-excavation plan of the site at Derrydonnell More.

Plate 2: Looking west across the excavated site in Derrydonnel More (Airshots).

The Phase 2 excavation involved the manual de-sodding of an area measuring approximately 45 m x 55 m. The site was then subjected to an intensive hand clean. The identified features were fully excavated by hand and recorded using the single-context recording system with plans and sections being produced at a scale of 1:20 or 1:10 as appropriate. A complete photographic record was maintained throughout the excavation.

7 Excavation results

The partial sub-surface remains of a cashel wall with a minimum internal diameter of 34 m were excavated (Fig 6). A single possible internal stone structure was identified and a beautifully preserved baluster-headed ring pin (E3867:1:1) and crinoid fossil bead (E3867:1:2) were recovered from the topsoil (C.1). The topsoil across the site was a dark brown, silty, stony clay with a maximum depth of 0.35 m but was much shallower in places. The underlying natural subsoil (C.2) was brownish, grey, limestone gravel mixed with medium to large sub-rounded stones.

7.1 Possible buried topsoil

Three separate deposits of brown silt (C.10, C.11 and C.12) were recorded to varying depths underlying the better preserved remaining segments of the cashel wall and the

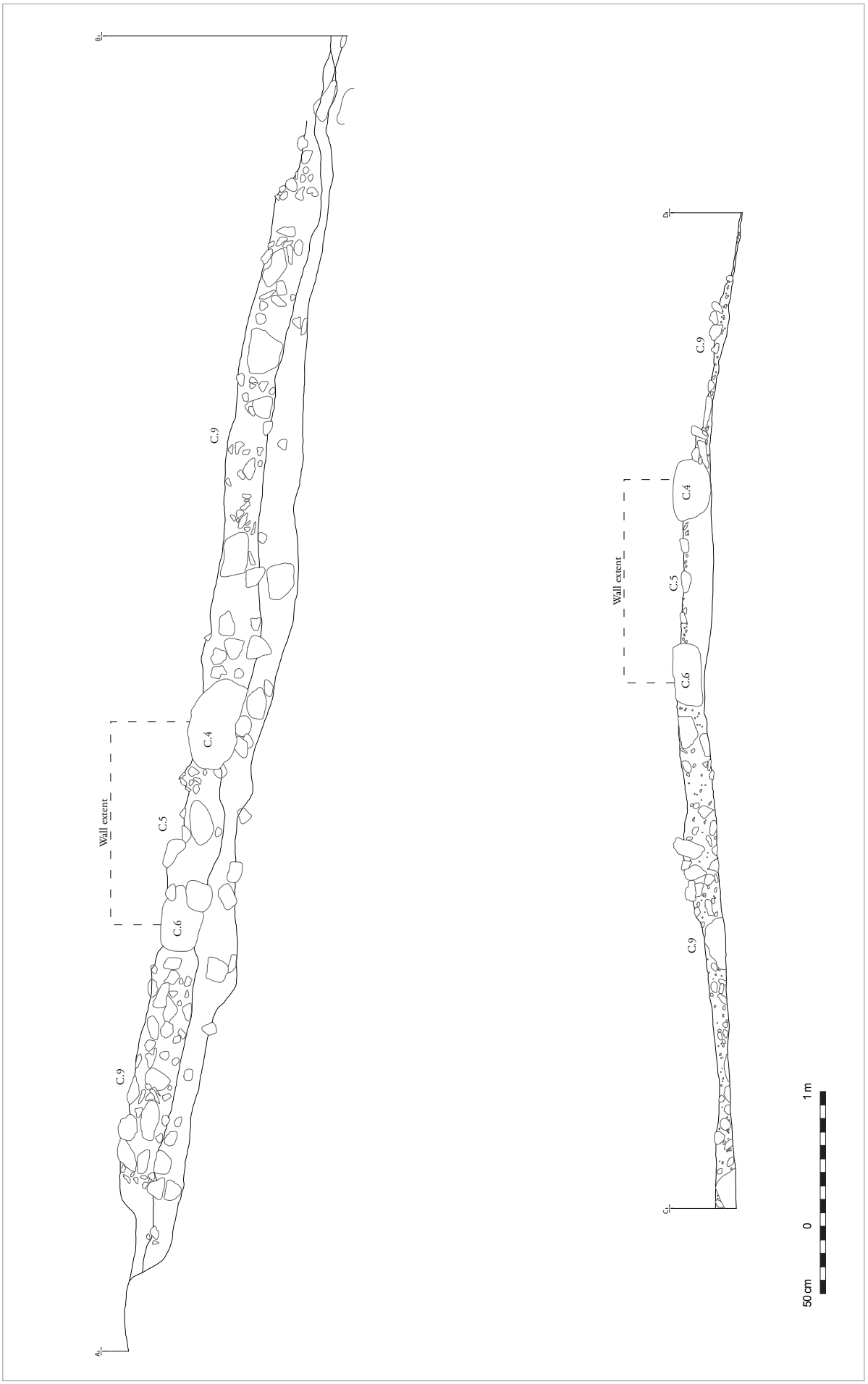

Figure 7: Section drawings across the remains of the cashel wall at Derrydonnell More.

Plate 3: Looking east along the best preserved section of the enclosing wall to the south of the site prior to excavation.

thicker deposits of the stone spread (Fig 7). These layers were the possible remnants of an old ground surface which had been preserved below the cashel wall and the stone deposits either side of it. A soil micro-morphology sample of the deposit was taken, however it proved unsuitable for analysis.

7.2 The enclosing wall

The enclosing element of the cashel consisted of a 0.9 m wide double-faced wall (C.4 and C.6) with an internal rubble core (C.5). Only a single course of the foundation level of this wall survived to any degree. This course was constructed using large slabs on the external face and smaller more rounded boulders on the internal face (Plates 3 – 6). The wall foundations could only be partly traced around the projected line of the enclosing enclosure. In parts only the more substantial outer line of facing stones survived intact and in other parts all trace of the enclosing wall had been removed (Plate 7). The wall followed the irregular shape of the upper break in slope defining the low knoll on which the monument was constructed, so that its circumference was flattened or straightened in places.

7.3 Internal circular stone feature

A small circular setting of medium to large stones (C.7) with a possible gap to the north was located just inside the southern surviving elements of the cashel wall. The feature had

Plate 4: Looking east along the best preserved section of the enclosing wall to the south of the site after removal of the stone spread to the north and south

Plate 5: Looking east along the best preserved section of the enclosing wall to the south of the site after excavation of a section through the wall and showing the underlying deposits.

Plate 6: Looking south-east along a preserved section of the cashel wall to the north of the site.

an internal diameter of 0.64 m. The stones forming this circular feature appeared to be set into the subsoil, however, there was a lot of root disturbance in the immediate vicinity. The feature may represent the surviving remains of an internal structure of indeterminate function. The feature was covered by the levelled rubble core (C.9) from the enclosing wall so it is possible that it was contemporary with the original use of the cashel.

7.4 Stone deposit

A deposit of dark greyish brown gravely silt, which contained occasional lighter brown clay deposits and frequent medium to large stones and boulders (C.9), was identified below the topsoil across the site. The deposit contained some animal bone and an iron nail or bolt (E3867:9:1). The deposit had a maximum depth of 0.40 m and directly overlay the natural underlying gravel (C.2). It seems likely that the stone deposit originated as part of the rubble core of the cashel wall and was dispersed across the area after the removal of the larger, outer, facing stones and the subsequent collapse or levelling of the enclosing wall. The stone deposit was at its deepest and most concentrated on either side of the remaining portions of the cahel wall.

Plate 7: Looking south-west along a section of the cashel wall to the north-east of the site along which only the outer facing stones survived.

8 Specialist analysis

8.1 Metal finds

The three metal finds recovered from the site were analysed by Sara Camplese (Appendix 4). A ringed pin (E3867:1:1) with a decorated perforated baluster head was recovered from the topsoil and was conserved by Susannah Kelly. These types of pins are strongly associated with ringforts and are generally dated from the 7th to the 8th century. A copper-alloy ring (E3867:1:3) recovered from the topsoil, and an iron nail (E3867:9:1) recovered from the stone deposit below the topsoil, are probably modern finds.

8.2 Lithic artefact

A crinoid fossil (E3867:1:2) was examined by Farina Sternke (Appendix 5). The object may have been used as a bead and therefore may date to the early medieval period. Alternatively, it may simply have been naturally occurring.

8.3 Plant Remains

The plant remains were examined by Mary Dillon (Appendix 6). In total two of the 11 samples contained plant remains. A sample from the stone deposit (C.9) and one from the possible buried topsoil (C.10) contained one degraded wheat or barley grain each. Barley is often the most common cereal from early medieval sites while wheat increases in popularity in the later medieval period.

8.4 Charcoal analysis

The charcoal samples were examined by Mary Dillon (Appendix 7). In total 25 charcoal fragments from six samples were analysed. The most common wood types identified were pine and ash. It is likely that the pine fragments are derived from more recent burning episodes as the tree was removed from large parts Ireland during the medieval period and was not re-introduced until 18th century.

9 Discussion

The Early Medieval Archaeology Project (EMAP) has found reports that 16 cashels were excavated in Ireland from 1970–2002 (O'Sullivan and Harney 2008, 61).The study reveals that these sites typically showed evidence for domestic and agricultural activity and metal/ironworking. Finds of personal items of adornment were recognised as a common feature. Internal stone built structures and souterains were identified and quernstones were a frequent discovery. Associated field systems have also been identified. The study also concluded that cashels can be dated to the second half of the first millennium AD and are broadly contemporary with ringforts in early medieval Ireland.

Three cashels have recently been excavated in Co. Galway along the route of the N6 Galway to Ballinasloe road scheme. Carnmore West was excavated by Bruce Sutton (forthcoming) and consisted of a large cashel which measured 55 m in diameter. It had an associated sub-oval annex measuring 50 m in diameter and was located c. 6 km to the west-north-west of Derrydonnell More. The cashel walls were constructed using two rows of large limestone blocks with a rubble core. The outer face contained large stones with a more regular facing than the interior. Apart from a souterrain very few features were excavated in the cashel interior. A number of kilns and a U-shaped dry-stone structure were identified close by. A field system centred on the cashel was also recorded. The construction details of the cashel wall are mirrored at Derrydonnell More and a similar pattern of very few identifiable internal features was also noted. The cashel at Carnmore West was located on the boundary of three townlands which directly mirrors the situation at Derrydonnell More.

A cashel and a roundhouse were excavated by Colum Hardy (forthcoming) in Coolagh townland which was located 11km to the west-north-west of Derrydonnell More. It was a large cashel with a diameter of approximately 50 – 60 m and an eastern entrance. The cashel wall had a rubble core. The remains of a drystone structure with a diameter of 6 – 7 m were excavated in the interior of the cashel. Evidence for ironworking, in the form of metallurgical waste, smithing hearth cakes (SHCs) and crucible fragments were found at Coolagh. The animal bone recovered from the site indicated a strong preference for dairy farming.

Part of a cashel in Faranablake townland just to the south of Athenry and 3 km east of Derrydonnell More was excavated by Tom Janes (forthcoming). The circular drystone enclosure was approximately 50 m in diameter. The lack of domestic artefacts recovered, and the absence of any domestic features such as hearths, or structural walls/postholes suggested to the excavator a non-domestic use. Janes points out that the ringfort excavated at Garryduff II, Co. Cork (O' Kelly 1962–1964), provides an example of a similar site that may never have functioned as a domestic site but rather as a livestock enclosure intended to prevent animals from straying, or to protect them from raiders. The animal bone recovered from Faranablake consisted almost entirely of domesticated animals, predominantly cattle, followed by sheep and/or goat. This is consistent with assemblages recovered from

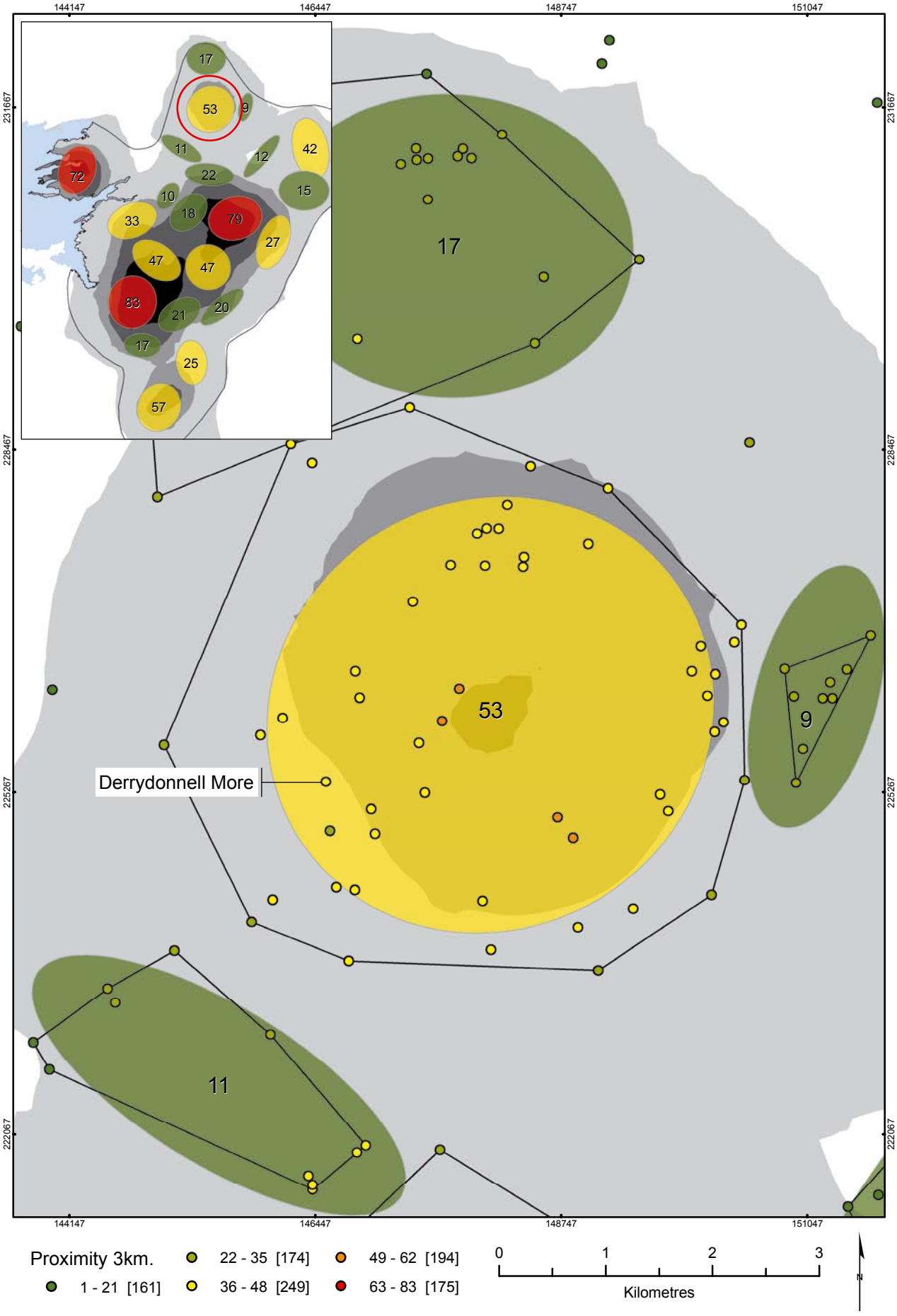

Figure 8: Plan showing Derrydonnell More within the clusters of early medieval enclosures surrounding the new N18 Oranmore to Gort road. The insert shows the level of clustering of early medieval enclosures in the study area.

other enclosures (McCormick & Murray 2008), lending evidence to the importance of cattle and dairy farming to the economy in early medieval Ireland.

It is likely that the three cashels described above and the site at Derrydonnell More were located within the sphere of influence of the Uí Fiachrach Aidhne and that the sites were either occupied by a member of one of the septs of this regional ruling dynasty or at the least were under its control. The area was on the boundary with The Uí Máine territory to the north and east. The site at Derrydonnell More is located within the barony of Athenry and lies just to the north of the traditional directly ruled territory of the Uí Fiachrach Aidhne which corresponds to the dioceses of Kilmacduagh and the two baronies of Dunkellin and Kiltartan.

From a look at the distribution maps of early medieval enclosure sites in the surrounding area it appears that the cashel at Derrydonnell More is located within a dense network of sites (Fig 5). The impression has been validated statistically and the site has been shown to lie within a strong cluster of early medieval enclosures. The statistical analysis was based on a study area surrounding the route of the N18 Oranmore to Gort road. The study area includes 975 early medieval enclosure sites, and stretches from Gort to Athenry and from the burren lowlands to the west and the Slieve Aughty uplands to the east (Fig 8).

A series of analysis were applied to the early medieval enclosure sites within the study area to establish the level of clustering. A proximity analysis grouped the sites into five different classes depending on the number of neighbours in a 3 km radius. The results ranged from 1 (the site itself) to 83 and the five classes were colour coded ranging from green to yellow, orange and red. An interpolation technique was then applied to transform the data from a series of points to a continuous surface. This interpolation was done to account for the probability that the sample analyzed is not complete and to increase the legibility of the patterns shaped by the site distribution. The result, produced by an ordinary kriging interpolation, is the grey scaled background that shows the main concentrations of sites located in the centre of the study area and on the coast. The areas outside these concentrations show a dispersed/random distribution.

A second phase of analysis has been carried out on the data within the main concentrations to identify the amount, the size and the location of the clusters themselves. A minimum number of 10 sites and a threshold distance of 3 km have been used as parameters to define a cluster. The result of this analysis was the identification of 22 ellipsed shaped areas which represent the idealised cluster boundaries across the study area. The clusters have been ranked into three categories (yellow, green and red) depending on the numbers of sites within each of the clusters. The excavated cashel at Derrydonnell More is located at the edge of the largest cluster in the northern part of the study area.

Within the study area it was found that there was a density of 0.74 early medieval enclosure sites per sq km, which is relatively high compared with the Irish national mean of 0.55 sites per sq km given by Stout (1997, 53).

Even though Derrydonnell More cashel is located beside a townland boundary and within 50 m of the dividing point between three townlands it has been shown that within

the larger study area the location of the ringforts, cashels and enclosures does not have any statistically significant relationship with the position of the townland boundaries.

A study of the altitude range of the enclosures within the study area returns a mean figure of 33 m OD. The analysis also clearly demonstrates that middle-low altitudes are clearly preferred, with the majority of the sites located between 20 and 35 m OD (almost 50 % of the total). Altitudes higher than 90 m seem to be really avoided (2.5%), as well as positions lower than 10 metres (less than 5%). 70 % of the enclosures are located lower than 40 m OD and more than 90 % lower than 55 m OD. The cashel at Derrydonnell More is located at 29 m OD which conforms to the general impression of altitude preference for the overall site-type within the study area.

A more useful measure than altitude is the idea of prominence in the landscape and a Topographic Position Index analysis has been done on the location of the enclosures within the study area. The analysis shows that the majority of the sites have positive values, indicating relatively prominent positions, with 56% of the sites located in areas higher than the immediately surrounding terrain. Considering that the landscape within the study area is quite flat it is very significant that the majority of the sites are located in area of prominence. 56% of enclosures are located on small ridge/hills that account for just 36% of the total area.

The aspect of the sites was also analysed. The only perceptible preference is for south and south-east oriented positions; however, the preference is not statistically significant. The cashel at Derrydonnel More has a south to south-east aspect and is located on a low knoll within an area of relatively flat land.

The definition of the ringfort as a monument type allowed for a variety of shapes and according to the EMAP study there is emerging evidence from excavations that the monument type includes a range of ground plans including circular, oval and even squarish and rectilinear (O'Sullivan and Harney 2008, 62). The cashel at Derrydonnell More was represented as an oval enclosure on the first edition Ordnance Survey map and the excavation revealed it to have an irregular outline – with flattened or straight segments - which followed the perimeter of the low knoll on which it was built.

The cashel at Derrydonnell More appears to have been destroyed sometime between the survey for the first edition Ordnance Survey map in 1837 and the 25 inch Ordnance Survey map in 1897, as it is not depicted on the later map. The 19th-century destruction presumably removed all above ground traces of what was evidently a large stone-built structure and also destroyed any internal and external associated features which may have been present. Even without deliberate destruction, the shallow bedrock and the nature of the subsoil, consisting as it does of glacial till, does not lend itself to the preservation of features such as pits and postholes. The stone in the cashel was probably a valuable resource and was re-used in field walls and other 19th-century stone structures in the surrounding area. The only stones from the wall which were not removed elsewhere were the lowest foundation stones which had been set into the underlying subsoil. The EMAP study has shown, however, that it is not unusual for excavated cashel sites to produce very little structural evidence or in fact very little evidence for early medieval occupation at

all (O'Sullivan and Harney 2008, 62). Of the 16 excavated cashels recorded in the study only seven produced significant archaeological features. It is possible that some/many ringforts and cashels were not used solely as dwellings and that many may have been temporary enclosures for cattle, as has been suggested by McCormick (1983 and McCormick & Murray 2008). The lack of evidence for structures and artefacts from many of the excavated examples, including Derrydonnell More lends credence to this possibility. The ringed pin (E3867:1:1) recovered from the topsoil on the interior of the cashel at Derrydonnell more has a perforated baluster-head decorated with two collar grooves above and below the perforation. It has a spiral ring and circular shank which is slightly bent at the tip. It is very similar to a bronze pin found in Cork City (Carroll and Quinn 2003, 275). These pin types are generally associated with ringfort sites and are dated from the 7th to the 8th century. A crinoid fossil (E3867:1:2) possibly used as a bead may also date to the early medieval period.

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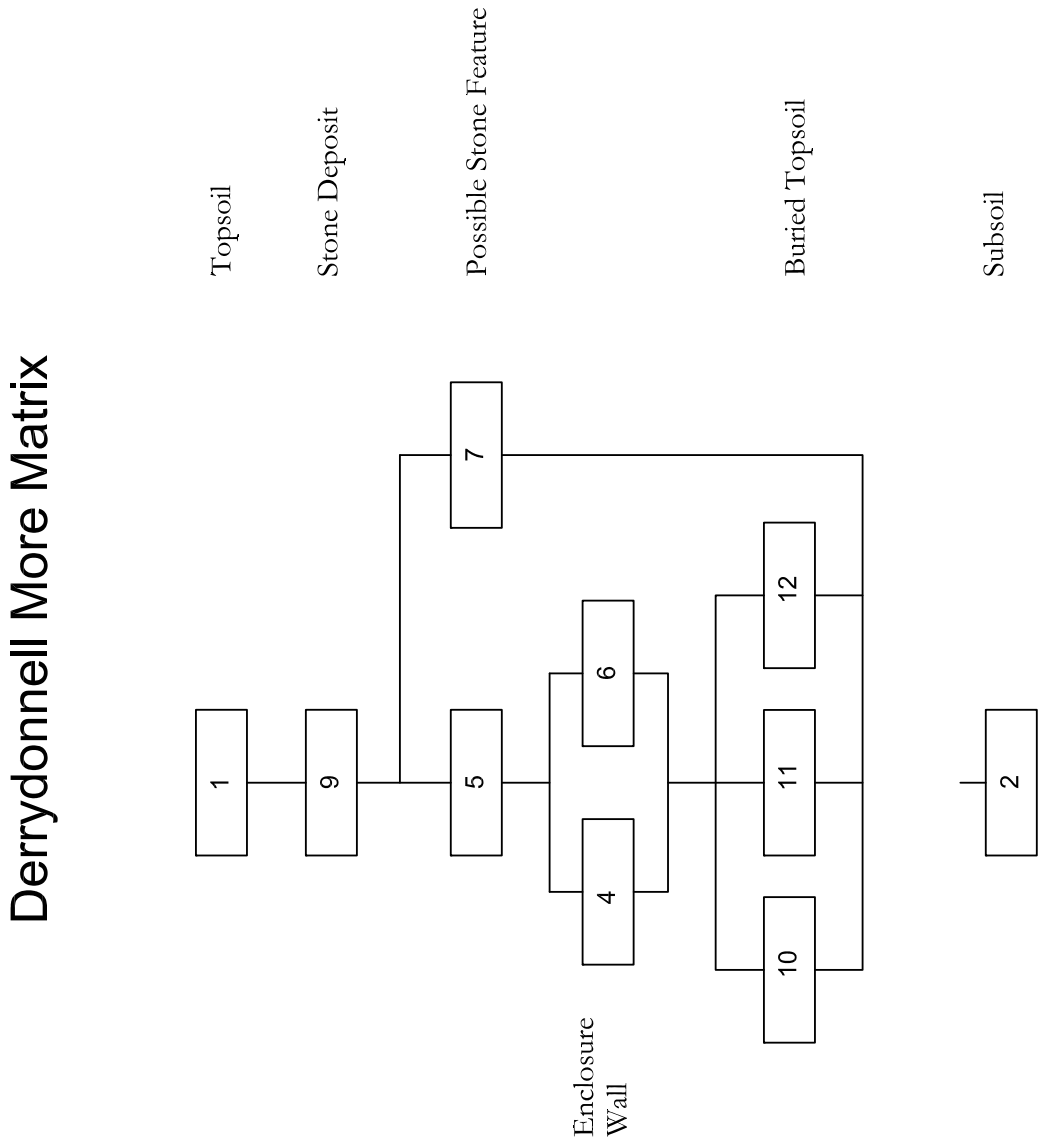
Appendix 1 Context register

Please see attached CD for context register.

Appendix 2 Stratigraphic matrix



Appendix 3 Groups and subgroups

Natural Deposits – Group 1

Natural subsoil – Subgroup 1001

Context Numbers – C.2

Description
This was a mid-brownish grey limestone gravel with occasional medium and large sub-rounded stones.

Interpretation
The deposit represented the natural underlying subsoil across the entire site.

Topsoil – Subgroup 1002

Context Numbers – C.1

Description
The topsoil across the site was a dark brown silty stony clay with a maximum depth of 0.35m but was much shallower in places where the underlying stony deposit (C.9) was thicker. A number of artefacts were recovered from the topsoil during its removal by hand. These included a spiral ring, baluster headed ringed pin, a plain ring, possibly from a ringed pin, a columnal crinoid fossil and a small quantity of more recent glass and iron fragments. Some burnt bone was also recovered.

Interpretation
The topsoil formed above the stony deposit which resulted from the rubble core of the enclosing wall after the deliberate levelling of the enclosure.

Possible buried topsoil – Subgroup 1003

Context Numbers - C.10, C.11 and C.12

Description
These layers consisted of a dark orangey brown silt containing patches of yellowish sandy clay, a moderate frequency of pebbles and occasional medium to large stones. The layers were recorded to varying depths underlying the better preserved remaining segments of cashel wall and thicker deposits of the stone spread (C.9) covering the area interior and exterior to the line of the cashel wall.

Interpretation
These layers are possible remnants of an old ground surface preserved below the cashel wall and the stone spread deposits either side of it.

Enclosing wall – Group 2

Context Numbers – C.4, C.5 and C.6

Description
An outer line of stones (C.4) consisted of large, flat limestone slabs with maximum dimensions 0.98 m x 0.54 m x 0.35 m. The inner line of stones (C.6) contained sub-rounded boulders with maximum dimensions 0.49 m x 0.52 m x 0.26 m. These two rows were set into the underlying deposits and were on average 0.90 m apart. Between these two rows of stone lay tightly packed small to medium sized (0.12 m x 0.14 m x 0.04 m to 0.09 m x 0.11 m x 0.04 m) angular and sub-angular rubble stones (C.5) mixed with dark brown silt. This deposit contained frequent small white snail shells, animal bone and a high density of root material. In parts only the more substantial outer line of facing stones survived in tact.

Interpretation
The enclosing element of the cashel comprised a double wall with an internal rubble core fill. Only a single course, the foundation level, of this wall survived to any degree. This course was constructed using large slabs on the external face and smaller more rounded boulders on the internal face. The wall foundations could only be partially traced around the projected line of the enclosing enclosure.

Internal circular stone feature – Group 3

Context Number – C.7

Description
A small circular line of medium to large stones (C.7) with a possible gap in the northern side was located just inside the surviving elements of the cashel wall to the south. The feature had a maximum internal diameter of 0.64 m (north-south). The base of this feature contained medium sized limestone slabs (0.16 m x 0.20 m x 0.14 m to 0.32 m x 0.23 m x 0.13 m) set into the natural subsoil (C.2).

Interpretation
The stones forming this circle appeared to be *in situ* but there was a lot of root disturbance. It may represent the surviving remains of an internal structure of indeterminate function. The feature was covered by the leveled rubble core (C.9) of the enclosing wall so it is possible that this feature is contemporary with the use of the cashel.

Stone spread – Group 4

Context Numbers – C.9

Description

Dark grayish brown gravelly silt which contained occasional lighter brown clay deposits and frequent medium to large stones and boulders. The deposit contained some animal bone and an iron nail or bolt. The deposit had a maximum depth of 0.40 m and in the interior directly overlay the natural underlying gravel (C.2).

Interpretation

It seems likely that the overlying spread of similar sized and shaped stone originated as part of the rubble core fill of the cashel wall which was spread after the removal of the larger outer facing stones and the subsequent collapse or leveling of the upstanding remains.

Appendix 4 Metal finds catalogue

Three metal finds were recovered at Derrydonnell More, all coming from features that can be considered topsoil. As regards the copper-alloy ring (find E3867:1:3) and the iron nail (find E3867:9:1), they are both most likely modern in date. The bronze ringed pin definitely has an earlier dating, and it is a residual find (see catalogue below).

Bronze

Ringed Pin (E3867:1:1) *Bronze.* L. 125.4 mm., D. (of shank) 4.1 mm., D. (of ring) 19.8 mm. Complete. Conserved. Ringed pin with perforated baluster head decorated with two collar groves above and below the circular perforation (D. 3.7 mm.). Shank circular in section, slightly bent at tip. Spiral ring. Very similar to a bronze pin found in Cork City (Cfr. Carroll & Quinn 2003, 275, Fig.5.9:1). This type of pins is normally associated with ringfort sites and is dated to the 7th/8th century. It is definitely pre-Viking, since no pins with the same characteristics were recovered from the large assemblage of pins from the Viking Age settlement in Dublin. This early medieval dating also goes accordingly with the fossil bead found in topsoil (C.1) (See Sternke, this report).

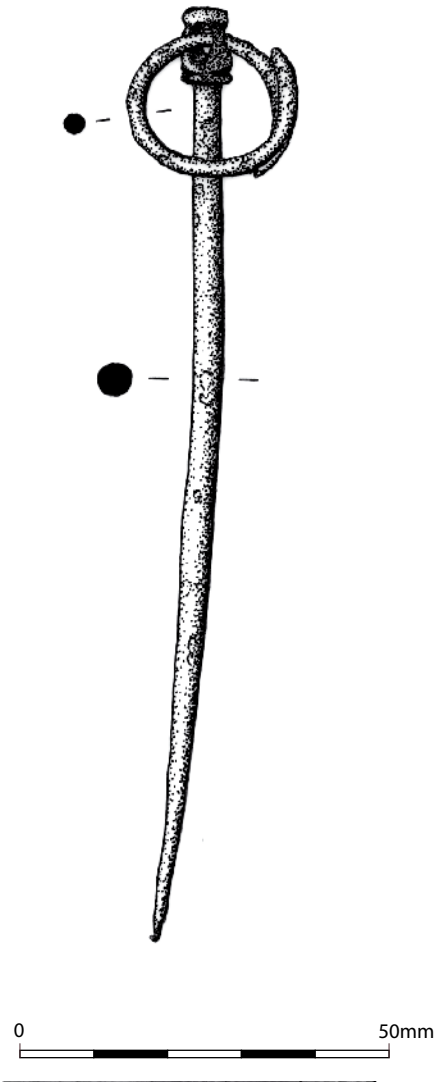


Figure 1: Bronze ringed pin.

Copper-Alloy

Ring (E3867:1:3) *Cu.Alloy.* D. 22.6 mm., D. (in section) 1.7 mm. Complete. Circular in section. Smooth surface. Either a finger ring or part of an artifact. Corroded.

Iron

Nail (E3867:9:1) *Fe.* L. 120.2 mm., Th. (of shank) 9.7 mm., D. (of head) 21.6 mm. Complete. Carpentry nail. Shank straight and square in section. Circular head. Corroded.

Plate 1: Bronze ringed pin.

Plate 2: Bronze ringed pin – detail of head.

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Appendix 5 Stone artefacts

Farina Sternke

Introduction

One lithic find from the archaeological excavation of a site at Derrydonnell More, Co. Galway was presented for analysis (Table 1). The find is associated with a possible levelled cashel.

Find Number	Context	Material	Type	Condition	Cortex	Length (mm)	Width (mm)	Thickness (mm)	Complete	Retouch
E3867:1:2	1	Crinoid Fossil	Bead?	Slightly Weathered	n/a	18	10	10	Yes	No

Table 1 Composition of the Lithic Assemblage from Derrydonnell More (E3867).

Quantification

The lithic is a crinoid fossil.

Provenance

The find was recovered from the topsoil (C3).

Condition

The fossil survives in slightly weathered and complete condition.

Technology/Morphology

The fossil may have been used as a bead (see also two definite examples from another excavation of an early medieval enclosure on this project: (E3770) Owenbristy. It measures 10 mm in diameter and 18 mm long.

Dating

The possible bead in this context most likely dates to the early medieval period.

Conservation

Lithics do not require specific conservation, but should be stored in a dry, stable environment. Preferably, each lithic should be bagged separately and contact with other lithics

should be avoided, so as to prevent damage and breakage, in particular edge damage which could later be misinterpreted as retouch. Larger and heavier items are best kept in individual boxes to avoid crushing of smaller assemblage pieces.

Conclusion

The lithic find from the archaeological excavation at Derrydonnell More, Co. Galway is a crinoid fossil which may have been used as a bead and therefore may date to early medieval period.

This site makes a minor contribution to the evidence for early medieval settlement and land use in Co. Galway.

Appendix 6 Plant remains

Mary Dillon

Introduction

This report gives the results of the analysis of plant remains from samples taken during excavation at Derrydonnell More (E3867) in Co. Galway. The excavation found a possible cashel. A total of 11 samples were submitted for plant remains assessment and subsequent analysis. Plant remains were recovered but were very low in frequency.

Methodology

Bulk soil samples were collected on site and were processed by the client. The flots were sorted and scanned for plant material using a low-powered binocular microscope (magnification x 10 to x 40). Nomenclature and taxonomic orders follows Stace (1997).

Results

In total, two of the 11 samples contained plant remains (Table 1). S. 8 from C.9 (a layer spread over the site) and S.9 from C.10 (a layer below the rubble from the cashel wall) each containeone degraded wheat or barley grain. The degradation of the cereal was such that a definite identification could not be made. Barley is often the most common cereal from early medieval sites while wheat increases in popularity in the later medieval period.

While other ringforts and cashels have produced abundant plant remains, Drumharsna South, a cashel excavated from the same area as Derrydonnell More, contained very few plant remains (Dillon 2008). The lack of plant remains from both Drumharsna South and Derrydonnell More may be a consequence of the lack of domestic or industrial contexts at either site.

Conclusion

The samples from Derrydonnell More had very few plant remains (total 2 No.). The plants remains that were recovered were identified to be either wheat or barley grains.

Sample	Context		Plant remains
8	9		1 Wheat (Triticum spp.)/Barley (Horduem)
9	10		1 Wheat (Triticum spp.)/Barley (Horduem)

Table 1. Plant remains at Derrydonnell More.

References

Dillon, M. 2008. Plant remains from Drumharsna South. Unpublished report produced for Eachtra Archaeological projects.

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Appendix 7 Charcoal analysis

Mary Dillon

Introduction

This report gives the results of the analysis of charcoal from samples taken during excavation at Derrydonnell More (E3867) in Co. Galway. The excavation found a possible cashel. A total of six samples were submitted for analysis. The samples from this site contained land **molluscs and** a very small amount of charred seed. Charcoal was found in five of the six samples.

Methodology

Bulk soil samples were collected on site and were processed by the Eachtra Aarchaeological Projects. All charcoal fragments that measured 2 mm or greater in the transverse section were identified. Each fragment was prepared for microscopic examination by fracturing it by hand and thereby exposing a clean surface along transverse, radial and tangential planes. All three planes were examined at a range of magnifications. For reference literature Schweingruber (1990) was consulted. The number and weight of fragments were recorded for each wood type.

Results

In all, just 25 fragments of charcoal were analysed from the 6 samples. One of the samples (S.8 from C.9) had no charcoal. S.3 from C. 8 and S. 14 from C.10 had only charcoal frompine and S.9 from C.10 had only ash charcoal.

In Fig. 1 and 2 percentage frequencies and percentage weight of the various wood types, based on fragment count and dry weight respectively, are shown. The most common wood types based on fragment count were pine. (56%) and ash (36%). Hazel (4%) and birch (4%) were also identified (see also Table 1).

When the results of percentage weight are taken into account the results change (Fig. 2, Table 2.). This is because ash fragments identified were very small and weighed very little. Thus ash forms a lower percentage and the other wood types percentages rise accordingly.

Discussion

The most common wood type, pine, could represent different species depending on the date of the samples it came from. *Pinus sylvestris* was native to Ireland but is thought to have become extinct in the early medieval period (Molloy and O'Connell 2004). It was reintroduced along with other *Pinus* species in the 18th century. *Pinus* spp. charcoal is rare from most site types as it was absent from Ireland for a long period of time. There is a

possibility that the *Pinus* charcoal came from burnt roots as it was, in both samples where present, unaccompanied by other charcoal types.

Ash (*Fraxinus excelsior*) was the second most wood type present in the samples. It is commonly found on archaeological sites of all ages. This is probably due to the fact that it burns well and would have been readily available in Co. Galway during the medieval period.

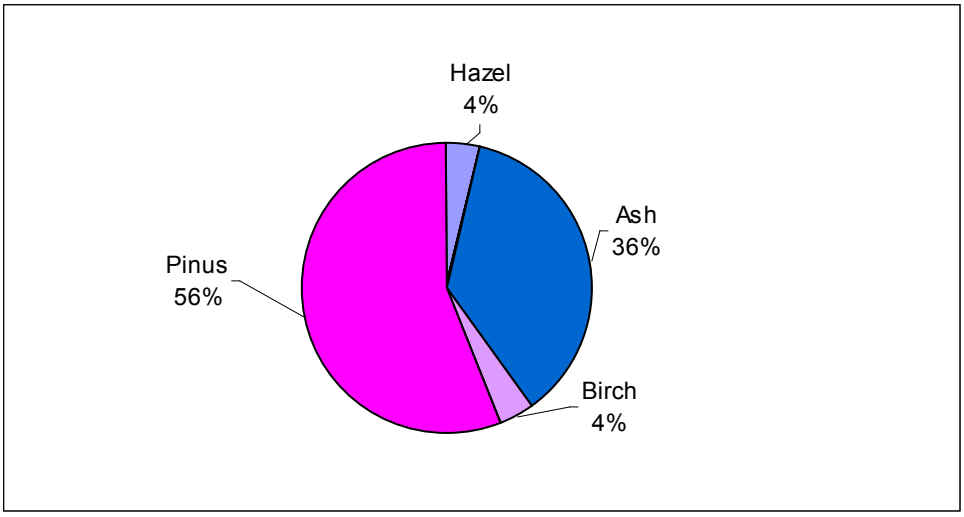

Fig. 1. Percentage fragment frequency.

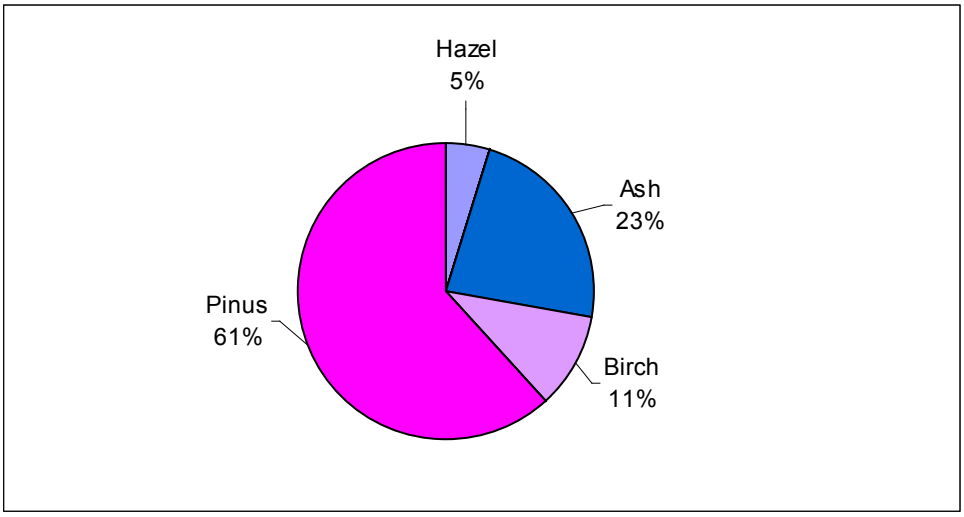

Fig. 2. Percentage weight.

Comparative studies

According to WODAN, the Irish wood and charcoal database, no substantial charcoal analysis has been carried out from cashel sites. However, nearby Drumharsna South cashel produced a small amount of charcoal that was analysed by the author (Dillon 2008). Similarly to Derrydonnell More, the samples from Drumharsna South produced

little charcoal. *Prunus* spp. and oak were the most common wood types identified. A number of ringforts were excavated as part of the N6 road scheme in east Co. Galway and the charcoal from these sites was analysed (Dillon 2007a; 2007b). They produced large quantities of charcoal. However, in contrast to these sites, Derrydonnel More cashel had little in the way of domestic or industrial archaeology. Therefore, it is not surprising that the charcoal assemblage from this site has little in common with that from these ringforts.

Conclusion

In total, five of the six samples analysed from this site contained charcoal. Charcoal was scarce in these five samples. The reason for the scarcity of charcoal is probably linked to the lack of domestic or industrial archaeology found here. The samples were dominated by pine.

Sample	Context	Hazel	Ash	Birch	Pinus spp.
3	8				8
5	9			1	
8	9				
9	10		2		
11	10	1	7		
14	10				6

Table 1. Fragment frequency

Sample	Context	Hazel	Ash	Birch	Pinus spp.
3	8				0.2
5	9			0.07	
8	9				
9	10		0.05		
11	10	0.03	0.1		
14	10				0.2

Table 2. Weight in grams

References

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Molloy K., O'Connell M. (2004) Holocene vegetation and land-use dynamics in the karstic environment of Inis Oírr, Aran Islands, western Ireland: pollen analytical evidence evaluated in the light of the archaeological record. *Quaternary International,* 113, 41–64

Schweingruber, F.H. 1990. *Mircoscopic Wood Anatomy*. Swiss Federal Institute for Forest, Snow and Landscape Research, Birmensdorf.