

Excavations at Caherconnell Cashel, the Burren, Co. Clare: implications for cashel chronology and Gaelic settlement

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[Accepted 30 June 2009. Published 21 April 2010.]

Abstract

Caherconnell Cashel is one of several hundred stone ring-forts distributed across the Burren, Co. Clare. Unlike the majority of these smaller sites, Caherconnell measures over 40m in diameter, and is enclosed by 3m-high walls in a good state of preservation. The cashel's location along a natural routeway, evidence for continued use of the immediate area for settlement over a long period, and excavated remains all point to the elevated status of this site. A series of radiocarbon dates place activity at Caherconnell between the tenth and early seventeenth centuries AD, thereby providing new evidence for the dating of such cashels, continuity of occupation and some indication of how wealthy Gaelic families lived in the medieval period.

Introduction

The site at Caherconnell in the Burren, Co. Clare (CL009-03010), is commonly referred to as a cashel, a term implying a dry-stone version of the earthen rath or ring-fort. The typical ring-fort appears to have been built between the sixth and tenth centuries AD to house a farming family and its associated activities. There is, as yet, no discernible difference between the dating of earthen raths and their stone counterparts. Both are generally accepted as being early medieval, with the majority of dated excavated sites built between approximately AD 600 and AD 900 (Stout 1997, 24). There is little, if any, evidence for the construction of ring-forts after the twelfth century. The few sites where construction is dated, by their excavators, to the eleventh century or later are often associated with intrusive Anglo-Norman groups and may, therefore, be seen as something of a departure from the ring-fort tradition. The average earthen ring-fort measures 30–35m in diameter, and its stone equivalent 20–25m. Recent work by the authors at Caherconnell has started to distinguish this site from the general ring-fort type in a number of important ways.

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doi: 10.3318/PRIAC.2010.110.133

Caherconnell is a well-preserved example of a large Burren cashel that had seen neither detailed study nor excavation. It is located in the townland of Caherconnell, Kilcorney Parish, Burren Barony, Co. Clare (NGR 123600 199500) (Fig. 1). The landscape in the immediate vicinity is part of the 'High Burren' and consists of karst limestone, currently under pasture. The cashel lies at approximately 130m above Ordnance Datum and is located to the immediate west of the R480 road that links Leamaneh and Ballyvaughan.

Physical landscape

Caherconnell Cashel is located close to the centre of the Burren, on the southern border of the Burren uplands, a little over 8km west of Carran Village. The cashel is strategically positioned near the intersection of two natural routeways through the uplands, both of which are marked by modern roads. The north–south routeway runs from the coast at Ballyvaughan, south past Glensleade Castle, Caherconnell and on to Leamaneh Castle where it meets a major east–west routeway leading to Kilfenora.



FIG. 1—Location of Caherconnell, Co. Clare.

This north–south routeway is today marked by the R480 regional road, and is one of three main routes leading from the interior of the Burren to its northern coast. The third-class road that runs east–west just to the south of Caherconnell links the medieval sites of Castletown Castle to the east, Cahergrillaun Cashel, Caherconnell Cashel, Kilcorney Ecclesiastical Foundation, Lissylisheen Castle, Binroe Castle, and the O’Davoren Law School at Cahermacnaghten.

Although Caherconnell Cashel does not occupy the highest land in the area, being situated just above the 130m contour with the land rising to 160m to the north-west and south, it does have a commanding view of its immediate landscape. The site occupies the edge of a kilometre-wide terrace overlooking a shallow valley to the south and south-east (1km wide across its base). This shallow basin contains some of the most fertile soils in the Burren, suitable for both grazing and crop cultivation.

Cultural landscape

Today, one of the most striking visual aspects of the Caherconnell landscape is the lack of archaeological remains in the fertile valley to the south of the site, and contrasting survival of features on the surrounding higher slopes. This is hardly surprising, with the fertile lowland soils of the valley having attracted continuous agricultural activity and associated land improvements/clearances for decades if not centuries.

The valley is ringed by archaeological sites of varying periods. Perched right on its edges are Caherconnell and two immediately adjacent cashel-like enclosures, a handful of enclosures to the east, and the early ecclesiastical foundation of Kilcorney to the west. All of these are of probable early medieval origin. Slightly farther out from these are a number of prehistoric sites, cairns and megalithic tombs. These are generally in higher locations overlooking the valley, and include Poulabrone portal tomb to the north; megalithic tombs to the east, north-west and south-west; and cairns to the west and south, including Poulawack approximately 1km due south of Caherconnell. Apart from later activity at Kilcorney Church, no visually identifiable medieval remains are present in the immediate area. The nearest castle is a tower-house in Glensleade Townland, roughly 3km to the north (the ruins of which are still visible).

Historical/political landscape

It is probable that up to the twelfth century, the Burren comprised one large territory or chiefdom, ruled by the *Corcomruad*, a confederation of related peoples and territories. It has been suggested that in the earlier part of the early medieval period, at least, that this territory spread over the entire area now covered by the baronies of Corcomroe, Burren and Inchiquin (Gibson 1990, 386–7). From at least the seventh century AD, the *Corcomruad* came under increasing pressure from groups along their borders, groups such as *In Déis Tuaiscirt* (later *Dál Cais*) to the south-east. These groups managed to push the *Corcomruad* north, reducing their historically recorded territory to the area of the modern baronies of Corcomroe and Burren. Annal entries for the tenth century clearly reflect the establishment of *Dál Cais* rule over *Corcomruad*, specifically that of its ruling sept *Uí Thoirdelbaig*. After the death of *Máel Sechnaill* in 983 (*Uí Thoirdelbaig* king of *Corcomruad*), the rule of *Corcomruad* moved between the descendants of his son, *Lochlainn*, and his nephew, *Conchobar*

(Gibson 1990, 382). The role of Caherconnell within Corcomruad during this early period is unknown, with no specific reference to it in early documentary sources.

Two relevant events occurred in the region in the late twelfth/thirteenth century. Ecclesiastical parishes were created, based on existing secular territories, and the chiefdom of *Corcomruad* was split in two. The descendants of *Conchobar*, the O'Connors, ruled the western half (now the barony of Corcomroe), and the descendants of *Lochlainn*, the O'Loughlins, controlled the eastern sector (now the barony of Burren). Caherconnell fell under the rule of the latter. The new parishes formally recorded such territorial borders and land ownership, and also promoted lay patronage of local churches through efforts to secure parish status for individual territorial units.

Kilcorney Parish, in which Caherconnell is located, is the smallest surviving parish in the diocese of Kilfenora. The nave-and-chancel parish church is located approximately 1km west of Caherconnell Cashel on the opposite side of the Caherconnell Valley. The earliest part of the parish church, its nave, may date from the late eleventh/twelfth century, with additions in the thirteenth century, and again in the fifteenth/sixteenth century (Ní Ghabhláin 1995, 440–2). Traces of an earlier monastic enclosure are visible in the surrounding fields and field boundaries. It is probable that the early monastery received patronage from the local O'Loughlin lord in the twelfth/thirteenth century to build/improve the stone church on the site, perhaps in seeking parish church status. In creating and overseeing parishes, the Bishop of Kilfenora would have looked to the presence of a suitable church and a well-defined lay territory. The latter, at least, necessitated the presence of a powerful and wealthy local lord. It has been suggested that Kilcorney Church served not only as a parish church, but also as a proprietary church throughout the Middle Ages, a church owned by its patron and situated close to their residence (Ní Ghabhláin 1995, 199, 232). The most likely candidate for such a residence is Caherconnell Cashel. Its strategic location, impressive morphology, and excavated economic evidence from this period, suggest that an important member of the local ruling O'Loughlin sept lived within.

By the fourteenth century, the dual chiefdoms of O'Connor and O'Loughlin were well established, sub-divided into smaller territorial units (*tuatha*) linked to parishes, and the whole subject to the O'Briens of Thomond (of *Uí Thoirdelbaig* descent). Caherconnell and its parish, Kilcorney, formed part of the larger territory of *Tuath Eannuigh*. The rest of this tuath comprised the parishes of Noughaval, Kilmoon, Killeany and one-quarter of Rathbourney. The most likely reason for this splintering of a single tuath into multiple parishes was 'an inability of any single sept to take control of the tuath' (Nugent 2007, 171), suggesting relatively equal status of the septs within each of the constituent parishes. The Kilcorney/Caherconnell sept of the O'Loughlins, then, was strong enough to maintain a relatively important role within the tuath.

The sixteenth-century *Composition book of Connaught* (Freeman 1936) records *Tuath Eannuigh* as the largest (37.5 quarters) in the O'Loughlin chiefdom/Burren Barony (Nugent 2007, 142), however the O'Loughlin capital was in the adjoining smaller (20.3 quarters) tuath of *Muinntear Arga*. The division of *Muinntear Arga* into just two parishes (Drumcrehy and Rathbourney, the largest parish in the

barony) may reflect the control and power of the barony-ruling O'Loughlin sept. It might be inferred, then, that although the Kilcorney/Caherconnell sept was subordinate to the ruling sept, it was on a par with a number of other O'Loughlin septs within the chiefdom.

Recovery from the widespread European fourteenth-century economic decline can be seen in the construction of tower-houses and a surge in church-building and improvements across the Burren. The leading noble families now moved from cashels into tower-houses, occasionally building one within the other, as at Ballyganner to the east of Kilfenora. The capital of the entire O'Loughlin territory/Burren Barony was at Gragan Castle in Rathbourney Parish. In Kilcorney Parish to its east, the ruling O'Loughlin sept moved north from Caherconnell to Glensleade where they established their new capital, building the only castle or tower-house in the parish. The sixteenth century saw the creation of baronies in Clare, including those of Corcomroe and Burren, mirroring the long-established territories of the O'Connors and O'Loughlins. This century also saw the loss of most O'Connor lands in Corcomroe Barony to direct O'Brien ownership, facilitated by the second Composition of Connaught agreement in 1585. This agreement assimilated the region into the New English administrative system, sparking the decline of traditional Gaelic kindreds. The New English orientated O'Briens prospered under the new system (Nugent 2007, 108–09). In Burren Barony, however, the O'Loughlins managed to retain their lands whilst paying tribute to the O'Briens (Ní Ghabhláin 1995, 31–2).

The seventeenth century saw some major changes in land ownership in Burren Barony. At the start of the century, most of Kilcorney was owned by the O'Loughlins, with the 'half ploughland of *Kil Colmán Baire*' (i.e. Poulmaskagh Townland) in the south-west of the parish in O'Davoren hands (MacNamara 1912–13a–c). A document of 1607, however, saw the fertile 'bailes' of Poulmaskagh and Caherconnell transferred from the O'Loughlins (with no mention of the O'Davorens) to their O'Brien overlords (Gibson 1990, 101–02). Slightly later, in 1641, these lands once again changed hands. The *Books of survey and distribution* (1636–1703) record the forfeiting of 'Karconnell' by Donogh O'Brien to 'transplanted papists' John and Laurence Comyn (Simmington and MacGiolla Choile 1967) who then occupied their new lands in Kilcorney Parish.

The cashel

The enclosure at Caherconnell is a circular, dry-stone ring-fort or 'cashel' (Pl. I), measuring 42m in external diameter, with walls up to 3m wide at the base and reaching 3m in height. The quantity of stone tumbled from the walls suggests at least another metre in original height. The walls are composed of rough horizontal courses of local limestone blocks and slabs, with smaller stones used to fill the gaps between them. Occasional vertical seams are visible along the external face of the wall. The inner face of the wall has been rebuilt in several places—as evident in the vertical and angled setting of the replaced stones. Although Westropp noted the lack of any internal wall terraces or steps (Comber 1999, 54), it is possible that



Pl. I—Caherconnell from the east.

some of the rebuilding and tumble may mask such features. A narrow ledge (0.5m wide) does run along the inner face of the wall to the south (Pl. II). The entrance gap is situated on the east of the site, with Westropp recording vertical jamb-stones defining its external edges at the end of the nineteenth century. A modern timber stairs currently fills this gap and few, if any, traces of the original entrance can be discerned.

The modern interior of the cashel is visibly raised above that of the external ground surface, an average of 0.9m in the difference. Excavation has proven that this is due to a build-up of occupation material within the enclosure. The interior surface is now somewhat uneven, marked by relatively frequent grassed-over stones and other features.

Internal features (Fig. 2)

Dividing wall

The interior is divided in two by the remains of a partly grassed-over dry-stone wall running roughly east–west across the site. Though the edges of this wall are masked by collapse, it is possible to identify the original double-faced wall with a rubble core, approximately 1–1.3m wide. A maximum of four courses is discernible, though the tumble on both sides would suggest a greater original height. This wall is probably quite late in date, perhaps contemporary with Structure A (the subject of the excavation reported here).



PL. II—Ledge along inner face of cashel wall.

Structure A

One of two visible internal structures, Structure A is situated just inside the north wall of the cashel, and was the focus of the 2007 excavation. Rectangular in plan (with its long axis running east–west), it is defined by a partly grassed-over dry-stone wall still visible to the west and south, but hidden by cashel tumble to the north, and almost completely denuded to the east. Stretches of original, *in situ*, walling are visible amongst the collapse, particularly along the south sidewall. Here, the wall has an internal and external facing of contiguous limestone slabs set on edge. The grassed-over nature of the area between the faces prevents the positive identification of a rubble core or horizontal coursing. The original width of the wall reaches a maximum of 1.2m, and is now 0.25m high. Internally, the structure measures roughly 10m by 5m. Prior to excavation the structure’s relationship with the cashel wall was uncertain. A possible entrance was identified in the collapsed stone near the eastern end of the south sidewall.

Structure B

Structure B is built up against the north-west wall of the cashel. It is sub-rectangular in plan, with its interior divided in two by a rather flimsy dry-stone wall. Internally the structure measures approximately 7.5m by 5m. The north wall forms part of the dividing wall running across the site. Up to six horizontal courses are extant on this side. The eastern wall is poorly constructed, much collapsed and partly overgrown, perhaps explaining the difficulty in positively identifying an entrance or entrances along its length. The entire structure appears rather late.

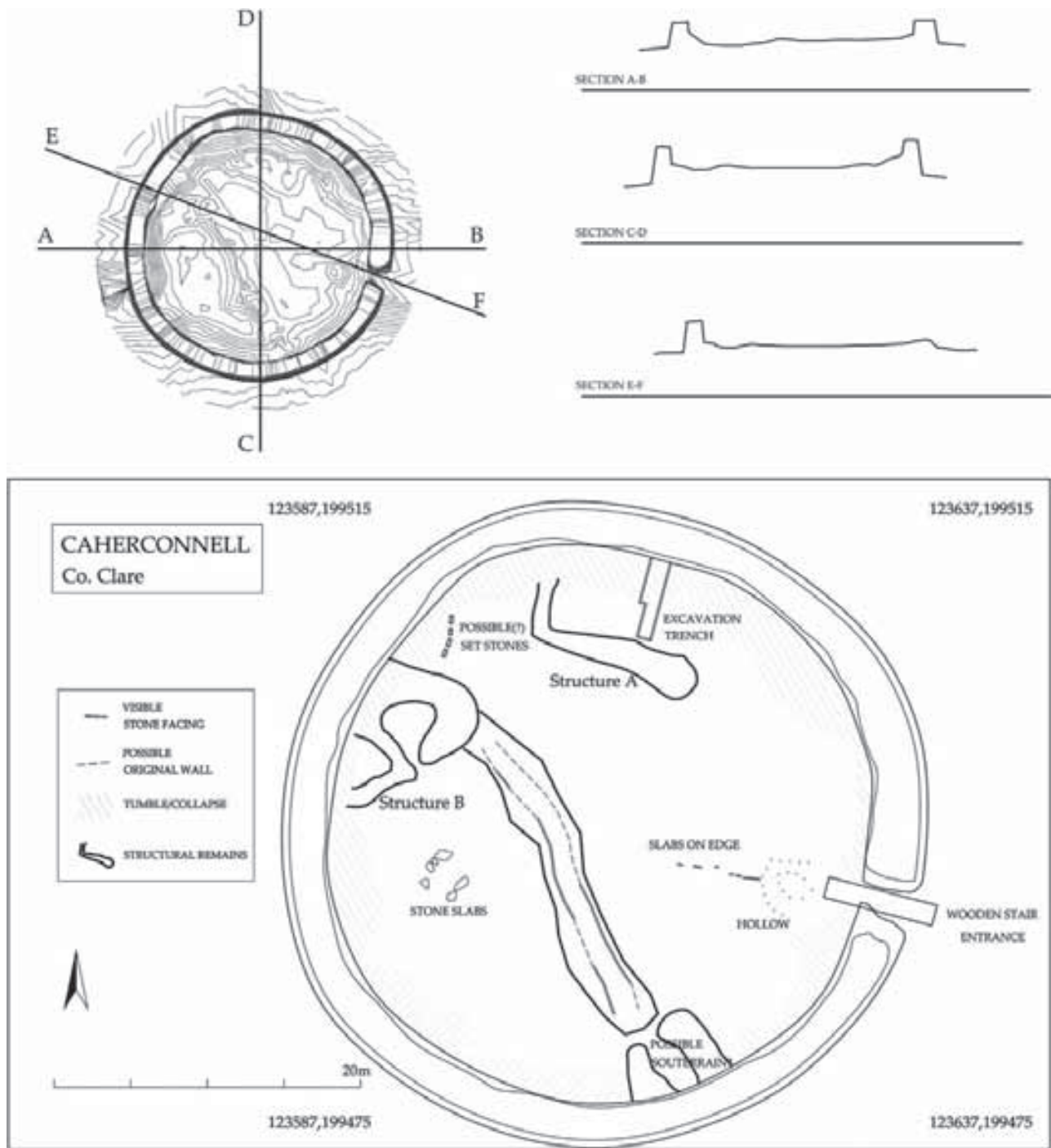


FIG. 2—Plan of cashel showing principle features and location of trench. Survey by Liam Hickey.

Possible souterrain

The eastern end of the dividing wall does not run cleanly up to the cashel wall. Rather, roughly 5m from the cashel wall, there is a gap followed by the apparent splitting of the wall into two raised 'banks' with a sunken area between. The hollow between them (4m by 1.5m, and up to 0.5m deep) contains partially grassed-over large stones and slabs, some of which are in a horizontal position with voids visible beneath them. This hollow may represent a souterrain or an area of collapse from the adjacent cashel wall.

Sunken area and slabs inside entrance

The surface immediately inside the entrance is marked by a sunken area or hollow, measuring approximately 2m by 3m, and 0.3m deep. Leading towards the sunken area from the west is a discontinuous line of slabs set on edge. Only their tops are visible above ground today so it is possible that, below the modern surface, the line is continuous.

External features (Pl. III)

Caherconnell Cashel forms part of a wider preserved archaeological landscape, and a number of ancient features can be seen in the immediate vicinity, particularly to its south and south-east. Closest to the cashel (just east of its entrance) is a small, partially grassed-over cairn of large stones, measuring 6m north–south by 5m east–west and 1m in height. The possibility that this feature is a prehistoric burial mound cannot be ruled out. Field-walking has also identified a probable barrow to the north-east of the cashel, and two possible boulder burials to the west.

To the south-east, and slightly downhill from the cashel, are the remains of a subterranean dry-stone structure, the roof of which has collapsed into the interior



Pl. III—Caherconnell and surrounding landscape.

(Pl. IV). These remains were the subject of excavation in 2008 (licence number 08E0535), with initial investigations suggesting both prehistoric and medieval activity. Farther south are more extensive remains, comprising two cashel-like enclosures with ancient field walls emanating from them, and smaller house-like enclosures scattered about the area.

The excavation

Background

The excavation at Caherconnell was a voluntary undertaking organised by the authors in conjunction with the landowner, John Davoren of Burren Forts Ltd, during Heritage week 2007. A single trench was targeted at part of the rectangular structure, Structure A, to explore its date and function and to examine its relationship with the cashel wall. The small trench (5.4m north–south by 1m east–west) was placed towards the eastern end of the structure, running from its interior up to the cashel wall, and perpendicular to the long axis (Pl. V).

Phases (Figs 3 and 4)

Four archaeological and one geological phase were identified. Phase 0 comprised strongly karstified limestone bedrock, characterised by clints and grykes orientated



Pl. IV—Semi-subterranean dry-stone chamber.



PL. V—Outline of trench prior to excavation.

approximately north–south. The surface of the bedrock sloped very gradually downwards from south to north. The fissures in the bedrock were filled by silty clay (deposit 65—not illustrated). This Phase I deposit was loose, dark blackish-brown silt with frequent inclusions of limestone chips (derived from the bedrock) and infrequent animal bone and charcoal. The deposit was probably partly natural and partly archaeological and continued beneath the cashel wall, therefore presumably pre-dating the construction of the cashel, or coinciding with it.

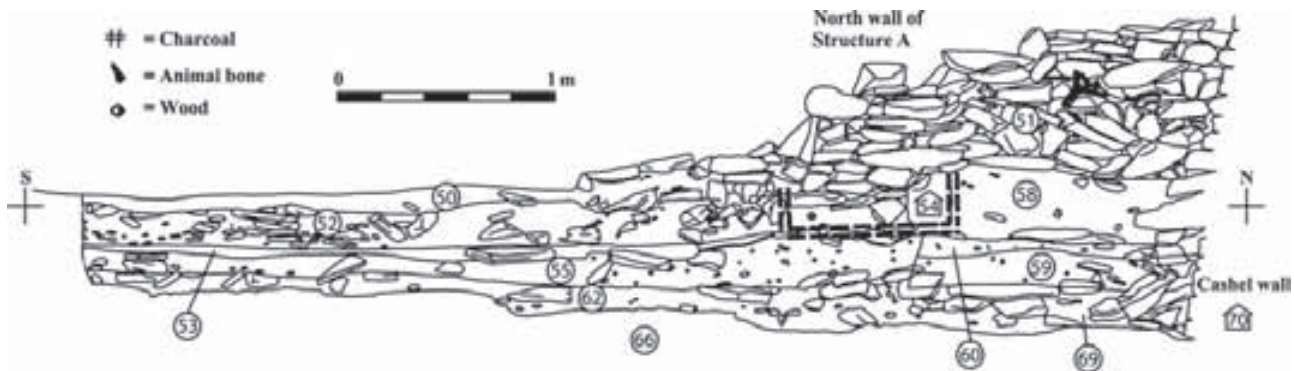


FIG. 3—East-facing section of excavation trench.

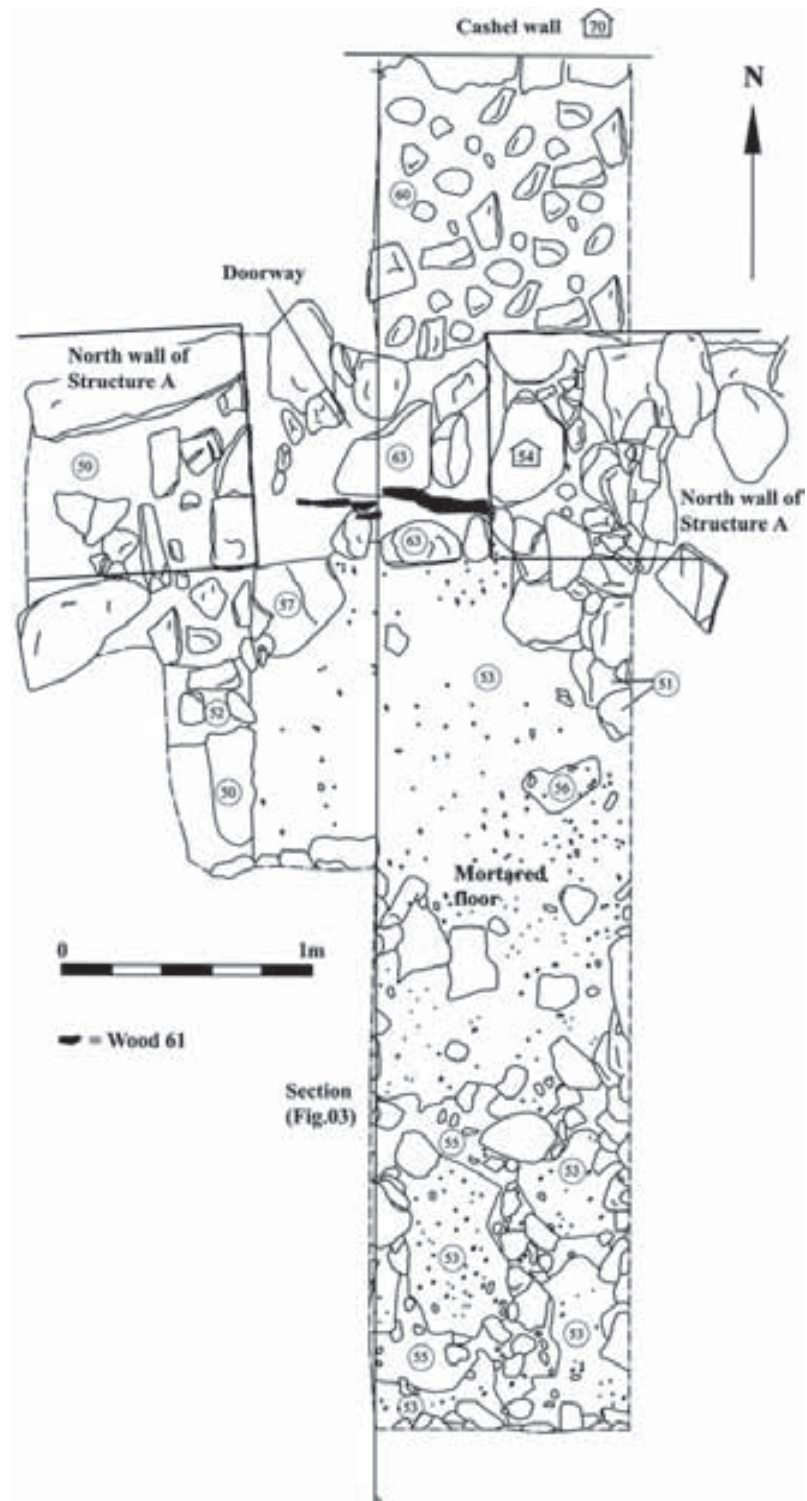


FIG. 4—Plan of trench showing north wall, doorway and internal floor of Structure A.

Phase II saw the construction of the cashel wall (70) from large limestone blocks placed directly upon the silty clay above the bedrock. There was no foundation course for the dry-stone wall. Abutting the inside face of the cashel, and overlying deposit 65, rich dark-brown clayey silt (0.09m–0.3m thick) was recorded. This deposit (62 at south end and 69 at north end) included large pieces of limestone (maximum dimensions 0.5m by 0.3m by 0.15m) and was darker at the northern part of the trench, probably due to the absence/presence of an overlying floor surface (see Phase III, deposit 53 below).

The large pieces of limestone within deposit 62 could be interpreted as tumble or collapse from an unrecognised early building, however, the limited scale of the trench prevents definitive identification. Two conjoining pieces of a probable sandstone mould/whetstone and fragments of a quernstone were recovered from the deposit. Immediately above this was deposit 55 (0.25–0.3m thick), moderately loose, dark-brown silty clay. Inclusions comprised occasional limestone fragments and frequent charcoal pieces. At the northern end of the trench, and outside the area sealed by the Phase III floor surface (see below), deposit 55 was darker in colour and recorded as 59.

Archaeological artefacts and considerable quantities of animal bone were recovered during excavation and post-excavation processing of samples from deposit 55. These included parts of two rotary quernstones; an iron arrow-head; a conical iron object; iron slag; a bone comb; a sheep rib with cut marks; and a possible bone-pin fragment. The lower of these Phase II deposits may represent *in situ* archaeological layers relating to early occupation of the cashel, however the upper layer appears to have derived from other parts of the monument and been used as levelling material prior to the construction of the overlying Phase III structure. The relatively small and ‘keyhole’ nature of the single excavation trench did not allow the identification of their origin.

Phase III is marked by the building of the rectangular Structure A. The excavation examined its northern wall (54), locating a doorway through it and a floor surface (53) within (Fig. 4). The removal of cashel tumble (51) and ensuing excavation demonstrated that Structure A was free-standing and not keyed into the cashel wall or built up against it, rather the structures were separated by a 1m-wide gap (Fig. 5).

Foundation, Structure A

The foundation for the north wall of Structure A was built of large limestone pieces that measured up to 0.5m by 0.2m by 0.2m. These slab-like stones were placed horizontally and formed a level and secure surface on top of which wall 54 was constructed. The foundation stones also underlay the doorway in the north wall (see below).

North wall, Structure A

The north wall (54) of Structure A was of dry-stone construction, oriented east–west, and roughly parallel to the cashel wall. The wall was defined on either side by large limestone slabs set on edge. The space between these revetting slabs was filled by smaller limestone slabs and pieces laid in horizontal courses. The core of the wall at the east side of the doorway was characterised by a loose matrix of small limestone pieces and light brownish silty clay in three to four courses. At this point the wall

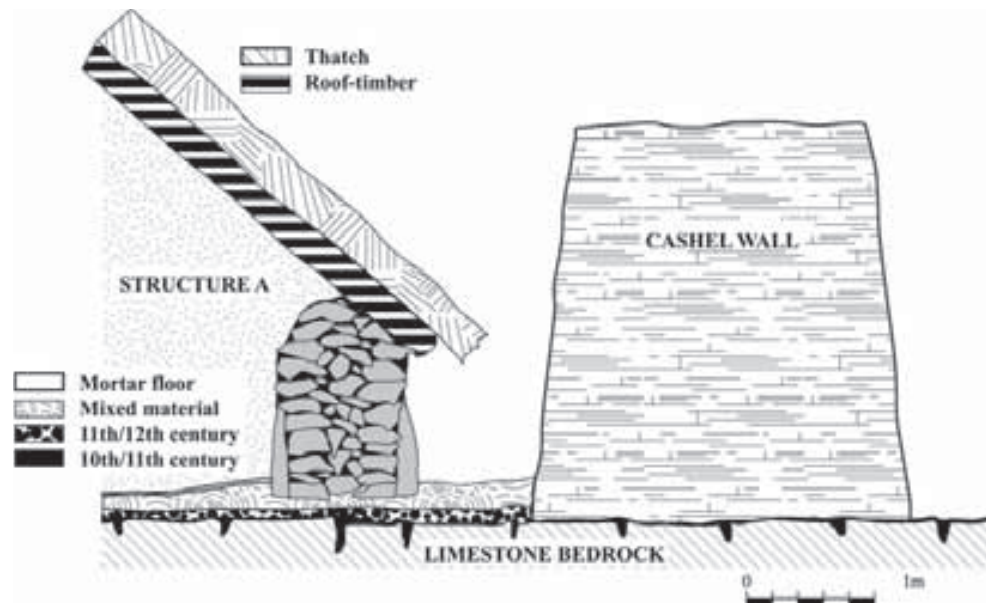


FIG. 5—Conjectural reconstruction section of House A and cashel wall.

stood 0.42m high and was typically 0.95m wide. The top of the surviving wall on the east side of the doorway was 0.8m above the top of the entrance paving (63).

Doorway in north wall, Structure A

The doorway in the north wall of Structure A (Pl. VI) was 0.98m wide and was situated across from the possible doorway noted on the modern ground surface in the south wall, though not directly opposite. At the threshold of the doorway mid- to dark-greyish-brown clayey silt was recorded (60). This had a maximum thickness of 0.1m and had a maximum width, observed in the trench, of 1m. Above this, and isolated beneath the door ‘step’ (see 63 below), was a loose, and in places sticky, silty clay of mixed hue. Charcoal, small pieces of floor surface (53) and pieces of degraded timber were found within it. The last (0.03m in width) comprised fragments of yew (S. Lyons pers. comm.) and ran 0.84m from east to west across the inner edge of the doorway. Its location suggests part of a wooden door or door frame (61).

Deposit 63 comprised seven to ten limestone slabs laid flat across the surface of the doorway. Not contiguous, the stones were on the level of the internal floor surface (53), ranged from 0.16m to 0.48m in maximum dimension, and were up to 0.08m thick. The slabs represent a deliberate paving of the doorway and would have formed a slightly raised threshold or ‘step’.

Floor, Structure A

A firm, but friable, cream-coloured, lime-based mortar surface (53) was recorded across the full extent of the trench within Structure A. This floor had a maximum thickness of 0.05m and was thinner/more worn towards the south or middle of the structure. Deposit 53 consisted of an aggregate (mortar) of small, <5mm, lithic fragments (probably limestone) set in lime cement (M. Feely pers. comm.). Above the



PL. VI—Entrance in the north wall of Structure A.

floor, and in the immediate vicinity of the doorway, mid- to pale-grey-brown clayey silt was noted (57). Two fragments of iron artefacts, a nail or pin head and a hook or clasp, were recovered.

Phase IV represents post-Structure A activity. Overlying the structure, both internally (52) and externally (58), was a layer of tumbled stone in a dark-brown humic clayey silt matrix. The limestone pieces had maximum dimensions of 0.4m by 0.2m by 0.1m. This layer probably resulted from the collapse of Structure A. Dark-brown, rooty topsoil (50, 0.25m thick) was recorded above this in the south of the trench. It probably derived, in part, from animal manure as cattle were kept inside the cashel in modern times.

At the north end of the trench a deposit of limestone tumble (51) from the cashel wall was recorded. This was up to 0.9m thick, with stones averaging 0.5m by 0.35m by 0.15m. This tumble partly filled the gap between the north wall of Structure A and the inner face of the cashel wall. Occasional blocks of sandstone, including two whetstones; two fire-blackened stones; and three stones possibly associated with metalworking, were discovered amongst this tumble.

Artefacts

Artefacts from the excavation trench (see Appendix A for catalogue) included a fragment of a possible stone anvil, a fragment of two deliberately worked stones, a stone bearing slag-like accretions, and two whetstones from the general tumble overlying the



Pl. VII—Quernstone 55:01.

remains of the house wall. More closely linked with the house were a fragment of an iron nail and a corroded strip of iron, possibly part of a hook or clasp. The remaining artefacts came from pre-house layers, and included fragments of two upper rotary quernstones (Pl. VII); seven pieces of worked flint and one piece of worked chert; a fragment of a probable pin-mould also used as a whetstone (Pl. VIII); the remains of a single-sided bone comb of ninth to thirteenth century date (Pl. IX); the pointed end of a bone-pin; a worked sheep rib (Pl. X); a small fragment of tubular iron; a conical iron object (Pl. XI); and a finely made barbed and tanged iron arrow-head (Pl. XI). The range



Pl. VIII—Mould/whetstone 62:01.



Pl. IX—Bone comb 55:04.



Pl. X—Worked bone 55:20.



Pl. XI—Conical iron point 55:06 and iron arrow-head 55:03.

of artefact types recovered is similar to other assemblages dating from the end of the early medieval period and start of the medieval, from the tenth to thirteenth century AD.

Stone

The probable anvil-stone from Caherconnell (Fig. 6) is rather rare, as very few anvils of any date are known in Ireland. A very small iron anvil was found at Garryduff, Co. Cork (O'Kelly 1962); its work surface measuring a mere 30mm × 30mm. A possible stone anvil is known from the bivallate ring-fort of Rathgurreen, Co. Galway, and measured 460mm × 870mm (Comber 2002, 153). Other anvils include a stone example from Clogher, Co. Tyrone (Scott 1990, 23), and a possible iron example from Randalstown Crannóg, Co. Antrim (Wood-Martin 1886, 168). Excavation at an

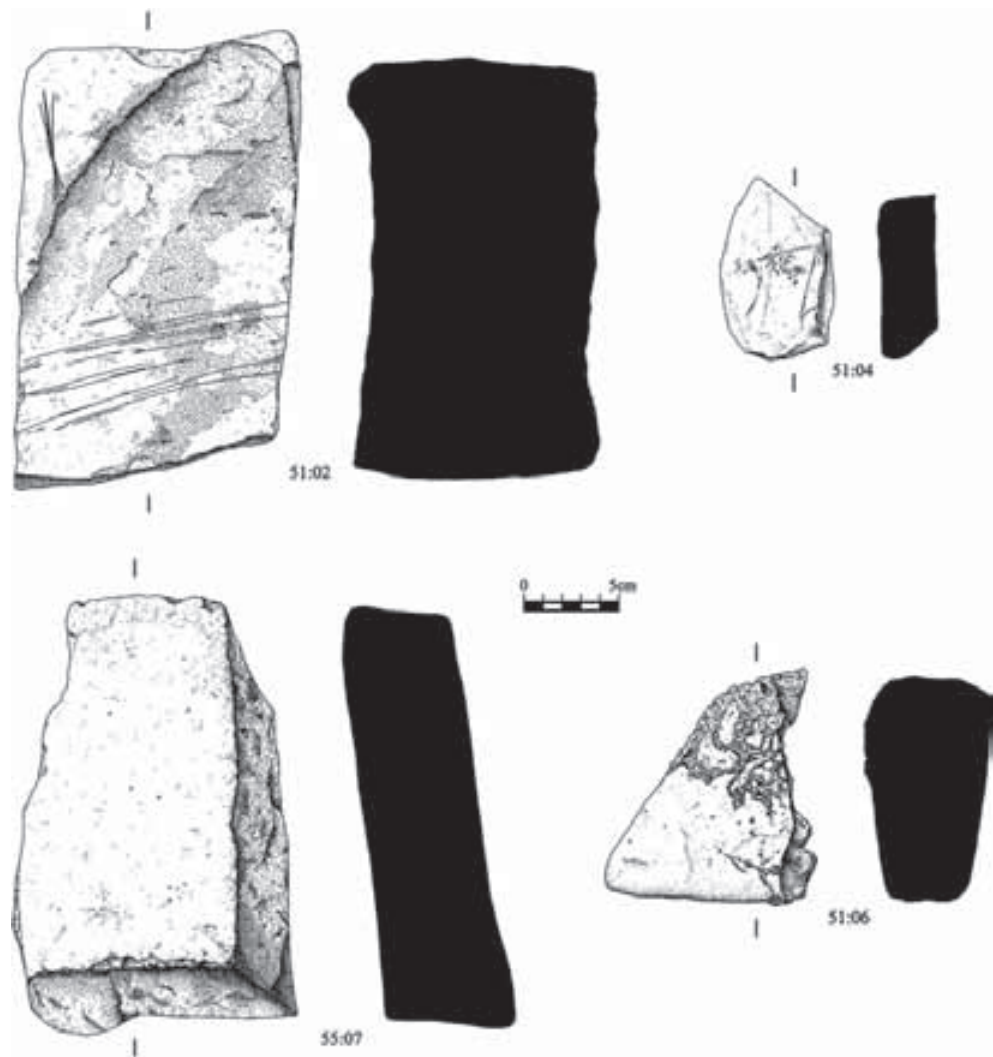


FIG. 6—Stone artefacts. Drawn by Michelle Comber.

early medieval enclosure at Cahircalla More, Co. Clare, produced two stone artefacts that may have functioned as small metal-working anvils, found in association with iron-working debris (Comber in Hull and Taylor forthcoming).

Whetstones or hones are numerous and are found on a large number of early medieval and medieval sites. Most sites have produced a few fragments while a smaller number of excavations have uncovered large quantities of whetstones, e.g. 107 at Carraig Aille, Co. Limerick (Ó Ríordáin 1949); 125 at Garryduff, Co. Cork (O’Kelly 1962); 524 at Cahercommaun, Co. Clare (Hencken 1938); and 234 from medieval Waterford (Hurley *et al.* 1997, 410–21). The Caherconnell examples (Fig. 7) are not decorated or perforated, so were probably not valued personal possessions as some whetstones may have been (O’Connor 1991, 47). The vast majority are of sandstone. The light wear visible on the Caherconnell pieces suggests their use in



FIG. 7—Whetstones. Drawn by Michelle Comber.

sharpening finer blades, with the length of the blade drawn across the face of the stone.

Hand-rotated querns are relatively common finds at early medieval and medieval sites and generally consist of two flat, thin discs, the upper stone perforated to facilitate the insertion of a handle. Find 55:01 (Fig. 8, Pl. VII) from Caherconnell fits into Caulfield's 'Disc B' quernstones (1966). Not closely datable, they usually have between two and four handle holes. Other excavated examples are known from early medieval sites at Reask, Co. Kerry (Fanning 1981, 133–5); St. Gobnet's, Ballyvourney (O'Kelly 1952, 30–2) and Carrigillihy, Co. Cork (O'Kelly 1951, 76–7); medieval Waterford (Hurley *et al.* 1997, 424–9); fourteenth–sixteenth century Caherquillamore (Ó Ríordáin and Hunt 1942), and seventeenth-century Thady's Fort (Rynne 1964, 255), both in Co. Limerick.

Assemblages of flint and/or chert like that from Caherconnell (Fig. 9) are found on a large number of early medieval settlements. It seems probable that some,

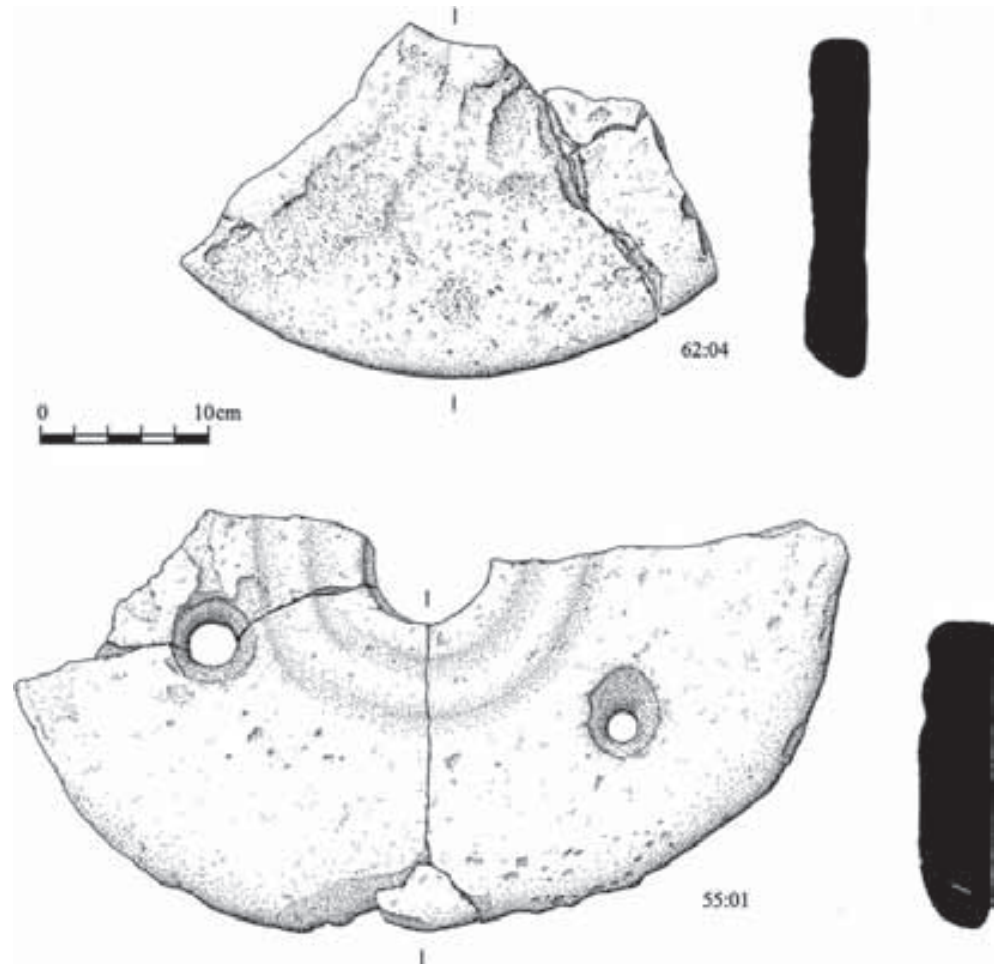


FIG. 8—Quernstone fragments. Drawn by Michelle Comber.



FIG. 9—Flint and chert. Drawn by Michelle Comber.

at least, formed parts of larger objects such as drills or lathe cutting-tools. At Reask, Fanning suggested the use of recovered lithics as simple lathe tools. A flint point, for example, was probably the implement used to perforate one of the stone spindle-whorls from the site (Fanning 1981, 136–8).

Bone (Fig. 10)

Bone and antler combs have been found on a number of early medieval and medieval sites. They were used to both comb, and wear in, the hair. Some are plain, while others

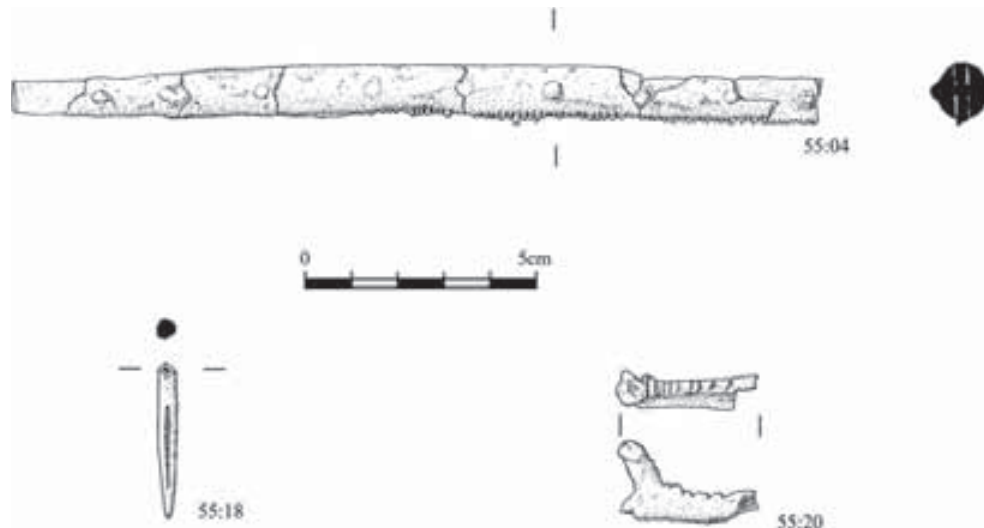


FIG. 10—Bone artefacts. Drawn by Michelle Comber.

are decorated. The single-sided Caherconnell comb (Pl. IX) fits best into Dunlevy's Class G (1988). These are single-edged, composite, highly polished, long, and straight-backed, with narrow D-shaped side-plates, and are frequently undecorated. They comprise eight to eleven teeth-plates, with six to eleven metal rivets. Regular saw nicks are visible on the side-plates. They average 150mm to 220mm in length, and 12mm to 30mm in depth, and date from the ninth to the thirteenth century. Twelfth- and thirteenth-century contexts in Waterford produced 52 Class G combs (Hurley *et al.* 1997, 654–6); with other examples known from Strokestown, Co. Roscommon (Dunlevy 1988, 367–8); Knowth (Dunlevy 1988, 402–05) and Lagore, both in Co. Meath (Hencken 1950, 189–90).

Iron (Fig. 11)

The function of the conical point (55:06) from Caherconnell is uncertain (Pl. XI). Five similar socketed iron objects were identified as spear ferrules at Garryduff (O'Kelly 1962, 63–4). These items measured 30mm to 50mm long, and 10mm to 18mm in maximum diameter. None are as pointed as the Caherconnell example. Find no. 505 from Carraig Aille (Ó Ríordáin 1949, 78) also resembles 55:06, though is slightly longer. Three iron objects were identified as ferrules by Hencken at Cahercommaun (1938, 49). These take the same form as the Caherconnell example, though are larger, ranging from 75mm to 122mm in length. Eight iron ferrules were found at Lagore, mostly unstratified (Hencken 1950, 98). These are similar in shape to the Caherconnell example, though are longer, ranging from 63mm to 118mm in length. There are no published medieval comparisons.

Alternatively, the artefact may represent a projectile point, and most closely resembles the British Museum's type M6 (Jessop 1996). These are long, narrow-

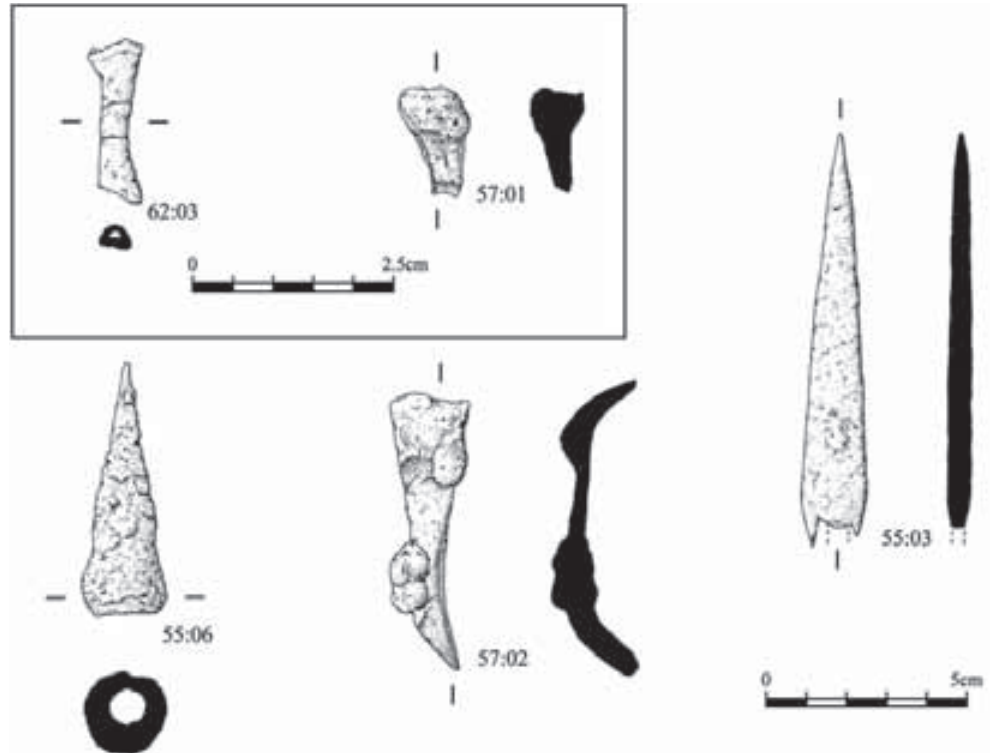


FIG. 11—Iron artefacts. Drawn by Michelle Comber.

socketed conical points, dating from the eleventh to the fourteenth century AD. The Caherconnell piece falls within the length range of 50mm to 70mm, however it is much larger in diameter with an external measurement of 18mm as opposed to the maximum of 12mm for M6 arrow-heads. The sockets of medieval arrow-heads are, in general, much more slender than 55:06. They were once thought to be armour-piercing weapons; however recent research has revealed this as unlikely (Starley 2005). The Caherconnell example is an unlikely arrow-head due to its size and shape, however it may have been the head of a larger projectile weapon or part of a prod or goad.

Objects identified as arrow-heads are very rare in early medieval Ireland, but more common on medieval sites. Three tanged iron arrow-heads were found at Carraig Aille (Ó Ríordáin 1949, 78) and a possible example at Leacanabuaille, Co. Kerry (Ó Ríordáin and Foy 1943, 92). These arrow-heads may have been employed in military activities or hunting, or both. A similar object, described as a possible spear-head by O’Kelly, was excavated at Garryduff I (1962, 42–5). At 73mm long, 22mm wide and 4mm thick, it is shorter and thinner than the Caherconnell example (55:03) (Pl. XI), and a little wider. Its dimensions suggest that it is too short to be classed as a spear-head. The Caherconnell example is very well made, however it does not match any of the medieval types known in Ireland or identified by the British Museum. It most closely resembles a group of medieval Irish arrow-heads described as ‘spike-like bodkin blades’ by Halpin (in Hurley *et al.* 1997, 538–52). Of the 70 or so datable Irish examples (all from Hiberno-Norse towns), most fall

between the tenth and twelfth centuries (Hurley *et al.* 1997, 541). The Caherconnell arrow-head shares a tang and general slender form with these artefacts, however it is still broader and more triangular in shape than them, and also has barbs. A group of broader, triangular arrow-heads is also known from medieval contexts and, while these often have barbs, they are always socketed.

Site economy

Diet

The food economy at Caherconnell appears to have been relatively varied. The analysis of the 15.7kg of recovered bone (see Appendix B by E. Murray available online at www.ria.ie/publications) suggests that the inhabitants ate mostly beef and pork, with sheep providing lesser quantities of meat, despite being present in almost equal quantities to cattle. Instead, sheep were probably exploited for their wool, with a greater incidence of older animals in the faunal assemblage. Cattle herds represented a traditional form of wealth, while the sheep were very well-suited to the local landscape. There is some evidence of dairying amongst the cattle bones, reflecting another element of the inhabitants' diet. Eggs were probably provided by a few domestic fowl kept within the cashel. All of these animals were butchered within or near the cashel, with most of the carcass used. Other possible foods evident in the archaeological record include venison from hunted red deer; hazelnuts probably gathered from local woodland; and fish from the coast.

The inhabitants of Caherconnell also had access to wheat, barley, and possibly oats. The small quantities of relevant organic remains represent a background scatter, and not evidence of on-site processing or storage of uncleaned grain (see Appendix C by L. Cramp available online at www.ria.ie/publications). Such activity is, however, represented by the two upper quernstones recovered, both of which showed evidence of use in the form of starch residues and phytoliths (unfortunately not enough to identify cereal species) (K. Hardy pers. comm.). These grains would largely have been used to produce various gruels, porridges and breads.

Manufacturing

At least some of the stone artefacts discovered during excavation may have been manufactured at Caherconnell. If the sandstone querns and whetstones were made on site, the stone had to be imported as there is no sandstone in the immediate locality. The nearest source of sandstone lies roughly 5km to the west or north-west. It is, perhaps, more likely that the objects were made closer to their rock source, and then brought to the site. Stone-working on site may have been limited to more structural efforts.

That there was a plentiful supply of raw material for bone-working at Caherconnell is apparent in the quantity of animal bone recovered from this single, small trench. Finished artefacts include the comb and probable pin shaft. On-site working of bone is seen in the small piece of worked bone bearing parallel cuts or grooves along one surface (Pl. X). The faunal assemblage also points to the deliberate removal of sheep and goat horns, and the skinning of cattle, cat, and occasionally deer and goat.

Woodworking at Caherconnell is represented by the length of preserved timber associated with the door of the Phase III house, and the probable iron nail fragment. The primary timbers exploited, according to charcoal analysis, were hazel, ash and hawthorn.

Slag is the most commonly found evidence of iron-working on excavated sites. It can represent smelting (primary production of iron bloom from ore in a furnace); bloom-smithing (processing of the bloom to produce workable iron); and forging (the working of metal to form an object). Some very small fragments of iron slag were recovered from Caherconnell. Unfortunately, the iron slag fragments were too small and abraded to reveal whether they were produced by smelting or smithing (L. Keys pers. comm.). It is possible that the finished iron objects from the site may have been manufactured at Caherconnell.

Evidence of non-ferrous or precious metalworking is slight; however it seems likely that the whetstone/mould was employed in this process. The groove present on one surface of the piece is deliberately carved, and not the result of repeatedly sharpening a metal object. Although broken, this matrix closely resembles the pointed end of a pin shank. If this is the case, then this piece would have functioned as a mould into which molten metal was poured. As iron was never molten during this period, this piece suggests non-ferrous metalworking.

Indications of trade at Caherconnell are meagre. If the aforementioned mould represents on-site working of non-ferrous metals, then the raw material for that activity had to be imported. Raw metal/ingots could have been obtained from another settlement or metal-production source for secondary metalworking, while ore for primary metalworking would ultimately have to come from farther afield. Copper, for example, may have originated in the south-west of Ireland. The *Dál Cais* who were overlords of the Burren in the tenth and eleventh centuries also controlled areas of the south-west—such as Killarney in Kerry—rich in non-ferrous ores. More local trade and exchange may be represented by a single scallop shell, meagre fish remains and possibly the sandstone artefacts.

Discussion

Radiocarbon dates

Five samples were submitted to Queen's University Belfast for radiocarbon determinations and the results are shown in Table 1. Deposit 65 represents the earliest material recovered during excavation, from immediately beneath the cashel wall. Deposit 62 is likely to derive from occupation material that was laid down in the period between the early eleventh century AD and the early thirteenth century AD. Deposit 55 has produced two very different dates, suggesting a mixed deposit comprising earlier occupation material and later fifteenth- to seventeenth-century remains. This may represent an attempt at levelling the surface before the construction of Structure A. Deposit 57 is associated with the use of Structure A.

These dates suggest that the cashel was probably constructed sometime between the early tenth century and the mid-twelfth century (in so far as evidence from a single, small trench can reflect activity throughout the entire site). This is corroborated by occupation material that dates to between the tenth and early thirteenth

TABLE 1—Radiocarbon dates obtained using Calib Rev 5.0.2 (Reimer *et al.* 2004).

<i>Lab code</i>	<i>Deposit</i>	<i>Sample material</i>	<i>Yrs BP</i>	<i>Calibrated date ranges</i>
UBA-8562	57	Sheep bone third phalange	384 ± 33	AD 1449–1513 and 1600–1617 one sigma AD 1442–1525 and 1556–1632 two sigma
UBA-8563	62	Charred hazelnut (<i>Corylus avellana</i>)	944 ± 44	AD 1029–1054 and 1077–1154 one sigma AD 1017–1188 and 1199–1206 two sigma
UBA-8564	65	Animal bone vertebra fragment	1021 ± 32	AD 989–1027 one sigma AD 901–916, 967–1046, 1090–1121 and 1139–1149 two sigma
UBA-8565	55	Charred hazelnut (<i>Corylus avellana</i>)	447 ± 51	AD 1415–1485 one sigma AD 1400–1524 and 1558–1631 two sigma
UBA-9068	55	Cattle femur	898 ± 18	AD 1050–1083, 1124–36 and 1151–1173 one sigma AD 1044–1099, 1119–1142 and 1147–1210 two sigma

century. These decades saw the establishment of *Dál Cais* control over *Corcomruad*, through the imposition of rulers from the *Uí Thoirdelbaig* sept. These kings enforced regular tribute from the territory to their overlords and kinsmen. Strong, defensible settlements, like Caherconnell, would have been vital in the initial acquisition of power, and its maintenance. Either of the early *Uí Thoirdelbaig* kings, *Anruadán* or *Máel Sechnaill*, could have used a cashel such as Caherconnell to impose their rule over the native *Corcomruad*. The constant vying for power that ensued between the descendants of *Conchobar* and *Lochlainn* could also have utilised cashels (and fertile lands) such as Caherconnell. The eleventh- and twelfth-century building activity visible at Kilcorney Parish Church could also be interpreted as a statement and demonstration of status and power by its patrons, the local lay rulers—most likely the occupants of nearby Caherconnell Cashel. That this parish and its church had wealthy and powerful patrons is evident in the very survival of the parish—the smallest in the diocese of Kilfenora. Other similarly sized parishes were integrated into larger units as they were deemed too small.

There is a hiatus in the *excavation record* between the early thirteenth century and the end of the fourteenth century (though excavations of an adjacent dry-stone structure in 2008 produced top-soil finds that included two coins, one of Edward III dating to the fourteenth century, and one possibly of Edward I from the late thirteenth/early fourteenth century). The fourteenth century saw economic decline in Europe, and this is probably reflected in the archaeological remains, or lack thereof, at Caherconnell Cashel. With much of the population of Ireland (and elsewhere) affected by plague, war and famine, many settlements may have fallen out of use.

The rectangular structure within the cashel was built and occupied sometime between the early fifteenth century and the mid-seventeenth century. The fifteenth century saw economic recovery, physically embodied in the construction of new castles and churches. Such activity is funded by, and associated with, the nobility or ruling families. The relatively small number of tower-houses in the Burren (approximately 40) suggests that the lesser nobility and middle classes lived in other forms of

non-castle settlement. The excavations at Caherconnell have shown that they probably inhabited earlier cashels, building new houses within the enclosure walls and repairing and improving these where necessary. The lower classes probably lived in unenclosed huts and houses scattered across the landscape, or gathered together in small ‘clachan’-like groups. The probable cessation of activity in the early/mid-seventeenth century might well be related to the transfer of ownership of the site and its lands from O’Loughlin to O’Brien, or from O’Brien to Comyn.

Status

The good-quality artefacts such as the arrow-head, pin-making mould, bone comb and quernstones were recovered from pre-house deposits 55 and 62, indicating relatively high-status activity within the cashel around the start of the second millennium AD. The smaller number of artefacts and absence of any pottery associated with the use of Structure A do not suggest as high a status in the later period.

Several factors indicate that this site—and its early occupants at least—were of relatively high status. The imposing morphology of the site, its walls and diameter, sets it apart from the vast majority of cashels in the Burren. The aforementioned well-made artefacts from the site also raise the inhabitants above the standard subsistence farmer. Strategic positioning along a routeway possibly contributed to the importance and wealth of the family at Caherconnell, and it is unlikely that an ordinary farming family would have controlled such a potentially important routeway. The significance of the site is also reflected in its continued use over several centuries. The place was clearly of a high-enough status to create a desire to be associated with it many years after its initial construction and use.

The status of Caherconnell Townland’s occupants in the earlier part of the early medieval period is, as yet, unknown. Some time between the tenth and twelfth century the main cashel at Caherconnell was built, probably by the branch of the O’Loughlins that ruled the territory of Kilcorney Parish. The site may have been abandoned during the economic downturn of the fourteenth century. From the fifteenth to early seventeenth century the cashel was, once again, occupied, perhaps this time by O’Loughlins of lesser nobility, with the parish-ruling family now based at Glensleade Castle to the north, and the barony-ruling family at Gragans Castle in the neighbouring parish of Rathbourney to the west.

Medieval Gaelic settlement

Very little is known of Gaelic settlement in Ireland towards the end of the early medieval period and from the arrival of the Anglo-Normans in the twelfth century. Caherconnell, with its relatively late dates, has provided evidence of both. Dry-stone rectangular houses are known from about the ninth century onwards, e.g. Rinnaraw, Co. Donegal (Comber 2006) (Fig. 12). The Caherconnell example probably dates from the fifteenth to the mid-seventeenth century and fits into the general pattern described below. Very few native houses of this period are known or have been excavated.

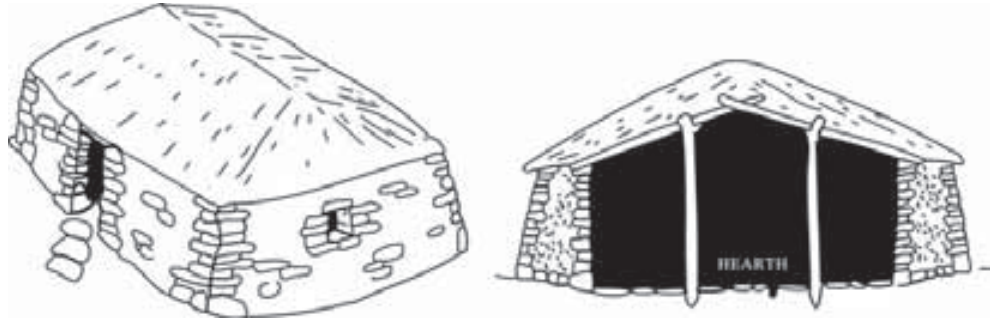


FIG. 12—Excavator’s reconstruction of house at Rinnaraw, Co. Donegal (after Fanning in Comber 2006).

Although slightly earlier in date than the Caherconnell house, a small number of rectangular medieval houses have been investigated. An example was partly excavated within the north end of a rectangular enclosure at Tildarg, Co. Antrim (Brannon 1984). It measured 16m by 6m; had 1.5m-wide walls of sod/clay; no deliberate floor; and a side entrance. Radiocarbon dates placed its use between the twelfth and fourteenth century. A sub-rectangular, two-roomed house at Glenmakeeran, Co. Antrim, had dimensions of 10.2m by 5.2m; opposing entrances; sod walls; a central hearth; and a cobbled/gravelled floor (Williams and Robinson 1983). Medieval pottery provides a rough date for the structure. Approximately 130 sub-rectangular house-sites are known at Goodland, Co. Antrim (Sidebotham 1950; Horning and Brannon 2004). Approximately 65 of these have opposing doorways; and the largest measures 13m by 7m. A small number have been excavated, with Hut A revealing walls of earth/sod and medieval pottery.

Two houses were excavated at Jerpointchurch, Co. Kilkenny, in 1973, one replacing the other. Both measured approximately 10m by 5m internally (like the Caherconnell house), with the earlier example probably dating to the early thirteenth century. This house had mud walls and was single storeyed. Its replacement in the late thirteenth/early fourteenth century, however, was a two-storey building of mortared stone. This house was attached to the Anglo-Norman borough of Newtown Jerpoint, and may even have been a manor house (Foley 1989).

A small number of more accurate chronological comparisons are also known. The remains of six rectangular stone houses of fourteenth to sixteenth-century date were uncovered in urban Waterford (Hurley *et al.* 1997, 187–9). They ranged in size from 9.2m by 3.7m to 18m by 6.5m; had mortared walls; and natural floors (with the exception of one instance of a flag floor, and one timber floor). Two rectangular houses with stone courses/foundations and mortar of yellow clay and small stones were uncovered at Caherguillamore, Co. Limerick (Gailey 1984, 20; Ó Ríordáin and Hunt 1942). The larger comprised two rooms and measured 13.1m by 6.1m, while the smaller measured 9.9m by 5.6m. Both had entrances in their sidewalls, off-centre hearths, and dated from the fourteenth to the sixteenth century.

At Ballynacallagh on Dursey Island, off the Beara Peninsula, Co. Cork, a cluster of six or seven houses was identified (Breen 2005, 143–8). Dating to the fifteenth/sixteenth century, Site 3 was partly excavated. The dry-stone walls of the

structure were built directly on bedrock, while an internal partition; central hearth; partial paving; and side entrance were also recorded. Seven houses were located at Bray on Valentia Island, off the Iveragh Peninsula, Co. Kerry (Breen 2005, 100; Hayden 1995, 1998, 1999, 2001; Walsh 1995). One of these was excavated, revealing a rectangular, stone-built structure measuring 6.7m by 3.4m internally. The house had a central hearth; opposing entrances in its sidewalls; and was radiocarbon dated to between the fifteenth and early seventeenth century.

The ring-fort at Thady's Fort, Co. Clare, enclosed a rectangular house built of stone with a yellowish mortar, measuring 13.4m by 6.2m, with double-faced walls 0.6m high and 0.75m thick. The entrance was located in a long, sidewall, and the house was dated to the first half of the seventeenth century by its excavator (Rynne 1964). Five rectangular structures excavated at Rough Point, Killybegs, Co. Donegal, were also dated to the start of the seventeenth century (Coyne and Collins 2004). They ranged in size from 10m by 5m to 15m by 5m, and were mostly built of stone bonded with clay. There were occasional traces of mortar (Structure 1), and internal paving (Structures 1 and 3). The closest excavated house of this type to Caherconnell is at the ecclesiastical site of Noughaval in the Burren. Located just south-east of the medieval parish church, this rectangular stone house measured 8.75m by 6m, had double-faced stonewalls and possible opposing doorways. The use of the house dated from the seventeenth to the nineteenth centuries, with a thirteenth-century occupation level uncovered beneath the house (Ní Ghabhláin 1991, 12).

None of these houses use the wall-construction method employed at Caherconnell, with the bottom course faced internally and externally with large limestone slabs set on edge along the long-axis of the wall. Neither is there evidence of a deliberately mortared floor. Of course, only one of the above examples is found within an earlier ring-fort (Thady's Fort—and even this is debatable, as Rynne suggested the enclosure itself might be quite late), perhaps representing a slightly different building tradition to that seen at Caherconnell. It is unlikely, however, that the Caherconnell house is unique. The often grassed-over foundations of rectangular stone houses are frequently visible within cashels in the Burren. The most well-known examples are perhaps those from sites such as Cahermacnaghten (RMP CL09-01.10) and Cahermore (CL16-20.16), however dozens more can be found in cashels in, for example, the townlands of Ballybaun (CL16-20.07); Ballyganner North (CL09-63) and South (CL09-59.31); Ballyshanny (CL09-97); Caherfadda (CL16-49); Cahermackirilla (CL09-84.16 and CL09-79); Clooneen (CL09-59.81); Kilfenora (CL16-18); Leamaneh North (CL16-20.26); and Poulacarran (CL09-83). These range in size from a mere 4m by 3.2m at Ballybaun, to 14m by 7m at Kilfenora, with most falling between 8m and 10m in maximum length. Many of these may represent medieval use of cashels in the Burren.

Caherconnell and the Irish cashel

Caherconnell falls into a category of large dry-stone cashels, of which several are known on the Burren. Other excavated Irish cashels include the nearby Cahercommaun (Hencken 1938); Carrowdotia farther south near Ennis (Hull and Taylor forth-

coming); Rinnaraw in Co. Donegal (Comber 2006); and Loher (O’Flaherty 1986) and Cathair Fionnurach (Gibbons 1994) in Co. Kerry. The last two have not been published (outside of brief entries in the *Excavations* bulletin), and Rinnaraw consists of a very small cashel, in no way comparable with Caherconnell. Approximately one-third of Carrowdotia Cashel was excavated, a circular enclosure defined by both earthen bank and dry-stone wall. The interior, however, produced little evidence of human activity, and it is of earlier origin, dating from the sixth to mid-seventh century AD. The only vaguely comparable site is that of Cahercommaun, however the latter is trivallate and also earlier in date.

The Caherconnell excavation suggests that this cashel was built later than previously thought. Analysis of the radiocarbon and dendrochronological dates from excavated ring-forts and cashels has shown that the majority were constructed and occupied from the beginning of the seventh century AD through to the end of the ninth (Stout 1997, 24). The work at Caherconnell proposes a construction date sometime between the early tenth century and the mid-twelfth century (right at the end of the early medieval period), and continued occupation until, perhaps, the middle of the seventeenth century.

The late dates for the cashel’s construction and use are not unique, but are significant. O’Conor, in his study of medieval rural settlement in Ireland (1998, 89–94), posed the question ‘The medieval ringfort—fact or fiction?’, a topic of some debate amongst archaeologists. Very few excavated ring-forts (of which there are at least 250) were constructed between the tenth and twelfth centuries (according to the dates published by their excavators). Ballyegan, Co. Kerry (date suggested in Byrne 1991); Ballymacash, Co. Antrim (C14 dating in Jope and Ivens 1998); and Scholarstown, Co. Dublin (Keeley 1985–7, C14 date in Youngs *et al.* 1987, 179); were possibly built in the tenth century, Shaneen Park, Co. Antrim (Evans 1950, date suggested in Proudfoot 1958) in the eleventh century; Ballyfounder, Co. Down (date suggested in Waterman 1958); and Dromore, Co. Antrim (date suggested in Collins 1968) in the twelfth century. These are pre-Norman in date and, therefore, of probable native construction.

While other sites continued in use during the tenth to thirteenth centuries, most of the occupation evidence dies out around the tenth century. Only a few ring-forts were used continuously into the twelfth/thirteenth century; Killanully (C14 dates in Mount 1995) and Lisnagun, Co. Cork (C14 dates in O’Sullivan *et al.* 1998); and Seacash, Co. Antrim (C14 dates in Lynn 1978). A number of other ring-forts were altered in the late twelfth/thirteenth century to transform them into non-ring-fort Anglo-Norman type monuments such as mottes, baileys and ring-works. Dromore, Co. Antrim (Collins 1968) is described as a ‘ring-work’ with twelfth-century associations by its excavator; Seafin, Co. Down (Waterman 1955), was re-used as a bailey in the thirteenth century; Dunsilly, Co. Antrim (McNeill 1991–2), Ballyfounder (Waterman 1958), Castle Skreen II (Dickinson and Waterman 1959), Lismahon (Waterman 1959) and Ballynarry (Davison 1961–2), all in Co. Down, and Carnmoney, Co. Antrim (in Delaney 1970, 1) were heightened into mottes; and Castleskreen I (Dickinson and Waterman 1960) had a tower-house built on it in the fifteenth century. Most of these sites are in areas of intense Anglo-Norman activity and may represent Norman take-over and alteration of native settlements.

It is clear from this cursory glance at the excavated evidence that the use of ring-forts (earthen raths or stone cashels) after the tenth century is rare, and the building of ring-forts even more so. The probable construction of Caherconnell in the tenth or eleventh century, then, and its use into perhaps the seventeenth century, marks something of a break from this pattern. This may, in part, be due to its location in a Gaelic-controlled area, and not an Anglo-Norman one. There have been few excavations of this monument type in the western parts of Ireland that were controlled by Gaelic lords in the medieval period. Caherconnell, with its adjacent smaller cashels and enclosures, offers the potential to study continued use of native economic, political and social systems, perhaps from the early medieval period through into the seventeenth century, with the general lifestyle unaffected by direct Anglo-Norman influence.

Conclusion

In summary, two main periods of activity were identified. The earlier dates to the end of the early medieval period and is associated with the construction and primary use of the cashel. The later dates around the fifteenth/sixteenth century and is associated with the construction and use of the rectangular house. The results of this small-scale excavation have provided evidence for the continued use of settlement enclosures in some areas, contributed to the knowledge of native medieval houses and to a reassessment of the dating of cashels (and, perhaps, ring-forts in general). It is clear that, in some parts of Clare at least, medieval Gaelic families continued to use traditional forms of settlement. Initially, this probably comprised uninterrupted occupation of certain cashels built during the early medieval period. Later medieval activity within cashels may represent a political as well as practical exploitation, with occupants seeking a physical and symbolic link with their ancestral past.

Acknowledgements

Thanks to the field staff who gave their time for free; TVAS (Ireland) Ltd post-excavation staff; Emily Murray (QUB), faunal analysis and assistance with radiocarbon dates; Liam Hickey and Cormac Bruton, digital survey; Steve Ford, lithic analysis; Lynne Keys, iron slag information; Susan Lyons, timber identification; Lucy Cramp, carbonised plant remains and charcoal; Karen Hardy, quernstone residue analysis; and Martin Feely, geological analysis of the floor material. Special thanks go to the Davoren family and their staff at the Caherconnell Visitor centre (Burren Forts Ltd), without whom this work would not have been possible.

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Appendix A

Artefact catalogue The finds are grouped by material. Entries commence with artefact type, followed by excavation find number, figure and/or plate number (where relevant), a description of the object, and its dimensions in millimetres. Abbreviations used include L for length, W for width, D for depth and Th for thickness.

Stone

Whetstone (Fig. 7, 07E0820:51:01)

Rectangular piece of fine-grained sandstone, rectangular in section. Almost complete, one fragment missing. The broad faces of this piece are relatively flat with occasional bruising or pecking. The two long sides, however, are polished smooth, probably from use as a whetstone. Their adjacent long edges/angles are rounded and either chipped or worked smooth. The two ends are flat, though rough. 132mm L × 60mm W × 46mm Th.

Worked stone (Fig. 6, 07E0820:51:02)

Sub-rectangular block of fine-grained sandstone, sub-rectangular in section. One side is moderately smoothed, the other surfaces rough and uneven. One broad face may have been deliberately worked or shaped to produce a slightly dished surface. This surface shows signs of burning, being both blackened and heat-reddened. In addition, the smooth side bears faint straight-line incisions or cuts towards one end, running across the entire width of the face. Deeper incisions are visible on the 'dished' surface, almost parallel with the short axis of the block and running across the entire width of the face. The 'un-carved' or raised surface remaining in the corner of this face bears the deepest cuts on the piece, roughly oriented along the stone's long axis. This block of sandstone was brought into the site for a specific reason, and has clearly been used for sharpening metal blades, and was very possibly associated with a fire or hearth of domestic or industrial nature. The piece may constitute a fragment of a larger block possibly used as a hearthstone and casual whetstone, or possibly an anvil upon which some material, such as metal, was worked. 228mm L × 145mm W × 130mm Th. 18mm maximum observed depth of 'dished' surface. 60mm L × 1mm W × 1mm D (deepest incisions).

Worked stone (Fig. 6, 07E0820:51:04)

Small fragment of sandstone with flat surface. This surface is blackened and bears a number of shallow, straight scratched lines at varied angles. There is also an area of pecking or bruising near the centre. It appears that the flat surface was used for cutting and/or hammering. The blackening may be due to proximity to a fire. 92mm L × 59mm W × 40mm Th. 47mm L longest scratch. 24mm × 18mm area of pecking.

Worked stone (Fig. 7, 07E0820:51:05)

Fragment of rounded sandstone with one smooth side and adjacent edge/angle. Uncertain whether or not the rounded profile is natural or artificial, or if the smooth surface was deliberate or caused by wear. There are a couple of straight, short incisions or cuts across the rounded angle next to the smooth face. This might suggest that the stone had been used as a whetstone. 102mm L × 104mm W × 54mm Th. 17mm L × 1mm D longest cut.

Stone with accretion (Fig. 6, 07E0820:51:06)

Sub-triangular fragment of sandstone, broken along 'base' of triangle. Sub-rectangular in section. Four of its surfaces bear accretions that appear metallurgical in appearance, possibly slag. One side face is possibly fire- or heat-reddened. It is not possible to determine whether or not the stone itself has been deliberately shaped. It appears to have come into contact with metal-working residue. 112mm L × 122mm W × 66mm Th. 4mm maximum Th of accretion.

Whetstone (Fig. 7, 07E0820:51:07)

Rectangular piece of sandstone, square with rounded corners in section. Broken at one end. All four faces and long edges are smooth and appear to have been used for sharpening or smoothing. Three of the faces have also been used for hammering, each bearing areas of obvious bruising or pecking. The unbroken end is heavily chipped and bruised and may also have been used for hammering. 89mm L × 39mm W × 37mm Th. 1mm maximum D of pecking.

Quernstone (Fig. 8, Pl. VII, 07E0820:55:01)

Four adjoining fragments of the upper stone of a rotary quern. Made of coarse, quartz-rich sandstone, ideal for grinding. The grinding surface shows signs of wear from use. The stone is well-shaped along its edges (being gently rounded) and upper surface. Although the latter is not polished, it is flat. Approximately half of the stone is represented by these fragments, including at least half of the central perforation, and two smaller perforations or 'handle holes'. These latter appear to have been carved out from the upper surface, as they narrow towards the lower surface. The sides of the central perforation are vertical with slightly rounded upper and lower edges. Two broad and shallow lines have been carved or 'pecked' into the upper surface of the stone, concentric with the central perforation. These give the impression of a raised lip and collar around the central hole, purely decorative in nature. 480mm original diameter. 75mm diameter of central perforation. 17–34mm diameter of intact handle hole, 27–39mm diameter of cracked handle hole. 40mm maximum Th, 33mm Th at centre.

Worked stone (Fig. 6, 07E0820:55:07)

Sub-rectangular block of fine-grained sandstone, rectangular in cross-section. Both of the broad faces have been polished smooth, either deliberately or through use. The other surfaces are uneven and rough. Three of the long angles of the piece are also worn smooth. Sandstone is not found in the immediate area, so this fragment has been imported for a specific purpose, either structural or artefactual. 220mm L × 138mm maximum W × 73mm Th.

Probable mould/whetstone (Fig. 7, Pl. VIII, 07E0820:62:01)

Two adjoining fragments of rectangular, fine-grained sandstone, rectangular in section. A carefully shaped piece, though incomplete, being broken at one end. Two of the long faces have been used as a whetstone, with one bearing a straight cut or incision and a much shorter cut or notch. There is a third, short, cut at the top, unbroken, end of this face. One of the narrower faces bears a tapering groove, running from the broken end of the piece and tapering to a point. The groove is D-shaped in section, appears deliberately cut, and probably functioned as a mould for making dress pins. If so, it may have constituted part of a bi-valve mould. A very small accretion near the tip of the groove may be metallurgical in nature 81mm L × 22mm W × 18mm Th. 21mm L × 1mm D longest cut. 20mm L × 4mm maximum W × 2mm maximum D pin groove.

Quernstone (Fig. 8, 07E0820:62:04)

Three adjoining fragments of the upper stone of a rotary quern. Made from a coarse, quartz-rich red sandstone, ideal for grinding. The surviving fragments stretch from the edge of the central hole to the original edge of the stone. The latter is finely rounded and both it, and the working surface of the stone, show signs of wear due to use. The upper surface of the stone is very roughly shaped and remains quite uneven, with no sign of any carved decoration. A relatively thin, light quernstone. 200mm from edge to central perforation. 280mm maximum L of largest fragment. 490mm estimated original diameter of quernstone. 90mm estimated original diameter of central perforation. 13mm Th at edge, 38mm maximum Th, 28mm Th at centre.

Flint and chert (Fig. 9)

Chert flake (07E0820:55:02)

Broken, possibly burnt. 21mm maximum dimension. <1g.

Flint fragment (07E0820:55:08)

Burnt, not used. 5g.

Flint fragment (07E0820:55:09)

Not used. <1g.

Flint fragment (07E0820:55:10)

Not used. 10g.

Flint fragment (07E0820:55:11)

Not used. 1g.

Flint flake (07E0820:55:13)

Broken flake. 16mm maximum dimension. 1g.

Flint core/bashed lump (07E0820:55:14)

1 spall removed. 1g.

Flint fragment (07E0820:55:16)
Not used. 1g.

Flint spall (07E0820:55:17)
11mm maximum dimension. <1g.

Flint fragment (07E0820:55:19)
Not used. 2g.

Flint flake (07E0820:62:05)
Intact. 32mm maximum dimension. 1g.

Flint flake (07E0820:62:06)
21mm maximum dimension. <1g.

Core/bashed lump (07E0820:62:07)
1 spall removed. 3g.

Flint spall (07E0820:62:08)
11mm maximum dimension. <1g.

Flint fragment (07E0820:72:01)
Not used. <1g.

Bone (Fig. 10)

Fragments of bone comb (Pl. IX, 07E0820:55:04)

Six adjoining fragments of a bone comb. The surviving stubs of the teeth indicate that the comb was single-sided. The comb had a central tooth-plate sandwiched between two semi-circular sectioned side-plates, all three secured together with small iron rivets. The rivets were evenly spaced every 11mm. Excluding the teeth, the piece is almost complete, with one end missing. There is no obvious decoration as the original surface of the comb is almost completely degraded, though it does appear to have been polished. It is clear that the teeth were carved or cut after the sections had been assembled, as the cut marks continue across the bottom surfaces of the side-plates. 138mm L × 9mm W × 8mm Th.

Point of bone pin (07E0820:55:18)

Slender straight fragment of bone, tapering to a now-rounded point. Circular in cross-section. Probably made from a pig fibula. The original surface, where visible, is polished smooth. There is a vertical cut or scratch running along three-fifths of the length, and represents either decoration or damage. 26mm L × 3mm maximum diameter. 14mm L × 1mm W × 1mm D cut.

Worked bone (Pl. X, 07E0820:55:20)

Right-angled fragment of a small animal bone, probably sheep rib (E. Murray pers. comm.) with a series of deliberate, roughly parallel nicks or cuts along one side. Reason for cutting is unknown—the piece does not resemble any known artefact type in

its current state. 22mm L × 5.5mm maximum diameter/Th 4mm maximum L of cuts, 1mm maximum D of cuts.

Metal (Fig. 11)

Iron arrow-head (Pl. XI, 07E0820:55:03)

Finely made iron arrow-head. A long, slender object, originally barbed and tanged at one end, and tapering to a fine point at the opposite end. The tang is missing, and one of the basal barbs is incomplete. The surface bears some corrosion, but is in relatively good condition. 102mm L × 17mm maximum W × 6.5mm maximum Th. 7.7mm L × 3.5mm × 2.5mm intact barb. 5.5mm W of tang. 1.4mm × 1.1mm point.

Iron point (Pl. XI, 07E0820:55:06)

Conical iron object. Corroded, though complete. It has a shallow socket at its broad end (with wood residues inside), and tapers to a point at the opposite end. Very symmetrical despite the corrosion. Possibly a ferrule or point for a goad or javelin-type implement. 62mm L. 1.6mm diameter of point. 18mm external diameter of socket, 12mm internal diameter of socket. 6mm maximum D of socket.

Iron fragment (07E0820:57:01)

Small fragment of corroded iron, broken at one end. Trapezoidal in shape, rectangular in section. Possible nail or pin head. Widens and thickens towards top. 13mm L × 4–8mm W × 3–6mm Th.

Iron fragment (07E0820:57:02)

Slightly curving or bent strip of tapering corroded iron. Broken at one end and hammered to a flat point at opposite end. Rectangular in section for most of its length, sub-circular towards the pointed end. May be too flat to be a nail, more likely a hook or part of a clasp or buckle. 35mm L × 1–9mm W × 2.5mm Th (4mm Th at point).

Iron fragment (07E0820:62:03)

Three adjoining fragments, probably iron. Broken at both ends and perforated longitudinally. Both ends splay outwards. A piece of a larger, unidentified, object. 21mm L × 4–7mm diameter. 1mm diameter perforation.

Appendix B

EMILY MURRAY

School of Geography, Archaeology and Palaeoecology,
Queen's University BelfastAnimal bone from
Caherconnell
Cashel

A total of 15,685g of bone was recovered from thirteen contexts. The bones were generally in a good condition and well-preserved and the majority were recovered by hand-collection (86%), with a smaller sample retrieved through the sieving of bulk samples (14%). Faunal remains were recovered from contexts dating to all four phases of activity (Table B.1) identified at the site but with the largest share, 73%, deriving from the medieval period, roughly late tenth to twelfth centuries AD (Phase II). Animal bones were also found in contexts dating to the construction levels of the cashel (Phase I) and from late- (Phase III) and post-medieval (Phase IV) phases of activity.

The method of quantification employed follows that used for the Knowth early medieval animal bone assemblage described in full in McCormick and Murray (2007). In brief, all of the recovered faunal material was examined in detail but only a selective range of clearly defined bone elements or zones were counted ('countable'

TABLE B.1—Frequency of countable specimens (NISP) for the hand-collected (HC) and sieved (sv) assemblages by phase, context and feature.

	<i>Phase</i>	<i>Context</i>	<i>Feature</i>	<i>Description</i>	<i>NISP</i> <i>(HC)</i>	<i>NISP</i> <i>(sv)</i>	<i>Total</i> <i>(NISP)</i>	<i>%</i> <i>NISP</i>
I	Pre-early medieval	65	Pre-cashel	Layer	6	–	6	1.2
II	Early medieval	55	Cashel	Layer—internal	265	15	280	58.1
II	Early medieval	55/59	Cashel	Layer—internal	9	–	9	1.9
II	Early medieval	62	Cashel	Layer—internal	28	30	58	12.0
II	Early medieval	69	Cashel	Layer—internal	3	2	5	1.0
II/III	E(early)/L(late) medieval	55/59/60/67	Structure A		13	–	13	2.7
II/III	E/L medieval	55/67	Cashel		5	–	5	1.0
III	Later medieval	57	Structure A	Floor surface	5	5	10	2.1
III	Later medieval	60	Structure A	Layer—internal	–	1	1	0.2
III	Later medieval	64	Structure A	Deposit below doorstep	2	–	2	0.4
III	Later medieval	67	Structure A	Layer external threshold	5	10	15	3.1
III	Later medieval	55/62	Cashel	Layer—internal	15	–	15	3.1
III	Later medieval	67/68	Structure A		4	–	4	0.8
IV	Post medieval	50	Top-soil	Top-soil	14	–	14	2.9
IV	Post medieval	52	Structure A	Tumble internally	7	–	7	1.5
IV	Post medieval	58	Structure A	Tumble externally	38	–	38	7.9
				Total	419	63	482	

specimens) and these represent the ‘number of identifiable specimens’ (NISP) totals. The minimum numbers of individuals (MNI) was calculated for the medieval (Phase II) assemblage only and was based on the frequency of the most commonly found bone, taking left and right sides, but not state of fusion, into consideration. Tooth wear stages for cattle and pig follow Grant (1982) and Payne (1973 and 1987) for sheep and ageable mandibles were assigned to the mandibular wear stages (MWS) of Higham (1967). The state of fusion of post-cranial bones was also recorded for all species and measurements were taken on all fused and unburnt bones following the criteria of von den Driesch (1976).

Domesticates

The range of species recorded from Caherconnell comprised the usual domesticates found on medieval sites in Ireland, namely cattle, sheep/goat, pig, horse, dog and cat (Table B.2). Medieval contexts (Phase II) yielded the largest sample of countable animal bones with an NISP of 305 (Fig. B.1), of which cattle accounted for 42% followed by sheep/goat 33% and then pig 22% (Tables B.1 and B.2; Fig. B.2). The relative frequencies of these principal species differ in the Phase II sieved assemblage suggesting a greater role played by sheep (51%) and pig (32%), and this is also implied by the estimated MNIs for the assemblage (Table B.3; Fig. B.3). The later medieval assemblages from Caherconnell (hand-collected and sieved—Figs. B.2 and B.4, and Table B.2) also suggest a much greater role played by sheep while the post-medieval assemblage (hand-collected) suggests the increased role of cattle (63% NISP) at the expense of sheep (17%). There are many issues associated with the quantification of animal bones from archaeological sites (see McCormick and Murray 2007, 9–11) and assemblages must be of a considerable size to allow any valid assessment. The phased assemblages from Caherconnell are too small to facilitate any detailed analysis. This is demonstrated by the range of possibilities presented in Fig. B.3, in which the results from different quantification and collection methods are compared. The general picture that emerges, however, appears to be that cattle and sheep were farmed in fairly equal numbers, with pig playing a less significant role. A greater frequency of sheep relative to pigs has been noted on other sites located on or near the coast from the early medieval period including Dún Eoghanachta on Inis Mór in the Aran Islands; Larrybane, Co. Antrim; and Rathgurreen, Co. Galway (McCormick and Murray 2007, Figs. 5.1 and 5.2); as the environments in the vicinity of these sites, and also Caherconnell, are more suited to sheep-rearing than to pig-farming. The nearby stone fort of Cahercommaun, occupied between the fifth and ninth centuries AD, also produced the same range of domesticates and despite the crude methods of quantification employed, it was noted that pigs were much less common than on other sites of the period (McCormick and Murray 2007, 203). In terms of meat consumed however, beef would have far outweighed any other meat consumed and indeed pigs may also have contributed marginally more meat than sheep to the diet of the occupants (McCormick and Murray 2007, Table A1:3.3).

For the Phase II assemblage the full range of skeletal elements for cattle, sheep and pig were recorded indicating that the animals must have been killed

TABLE B.2—Frequency of ‘countable’ specimens (NISP) for the hand-collected and sieved assemblages by phase and species; * = species represented by non-countable specimens only.

Caherconnell Cashel	Hand-collected (n. 419)										Sieved (n. 63)							
	10 th –11 th century			Medieval			E/L medieval			Later medieval 15 th –early 17 th century		Post medieval		Medieval		Later medieval		
	I	II	III	II	III	III/III	II/III	III	III	IV	II	II	III	II	III	II	III	
Cattle	1	127	5	5	7	37	6	1										
Sheep/Goat	5	101	5	5	18	10	24	9										
Pig	–	68	8	8	3	8	15	2										
Red deer	–	–	–	–	1	–	–	–										
Dog	–	–	–	–	–	1	–	–										
Cat	–	4	–	–	–	–	1	–										
Horse	–	2	–	–	–	2	–	–										
Hare	–	3	–	–	–	1	–	–										
Rat	–	–	–	–	–	–	–	–										
Amphibian	–	–	–	–	2	–	–	–										
Bird	–	*	–	–	–	–	–	–										
Fish	–	–	–	–	–	–	–	–										
Total NISP	6	305	18	18	31	59	47	16										
% NISP	1.4	72.8	4.3	4.3	7.4	14.1	74.6	25.4										

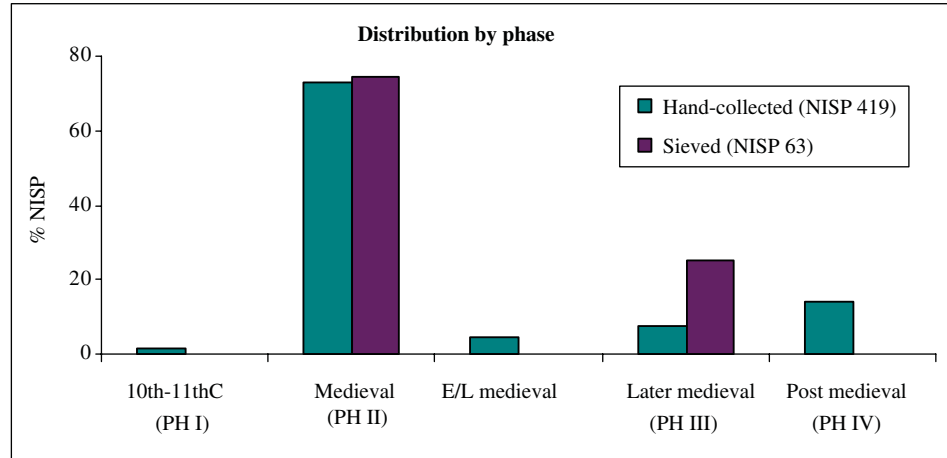


FIG. B.1—Frequency (% NISP) of countable specimens by phase for the hand-collected and sieved assemblages.

in or close to the cashel and that all parts of the carcass were brought on site and presumably utilised. Evidence of butchery was largely limited to the cattle bones and included chop and knife marks, indicative of dismemberment and defleshing. Direct signs of cooking were limited to just one countable specimen, a cattle tibia (Phase II), which had been partly singed. Ageing data was limited (Tables B.4 and B.5) but indicates that some cattle, probably bullocks, were killed before reaching their second year. This age–slaughter pattern fits within the dairy model and has been widely recorded for early medieval sites in Ireland (McCormick and Murray 2007, 51–4). Metrical data was also restricted and included just two distal metacarpals, probably from cows (distal breadth <55mm) and one estimated withers height

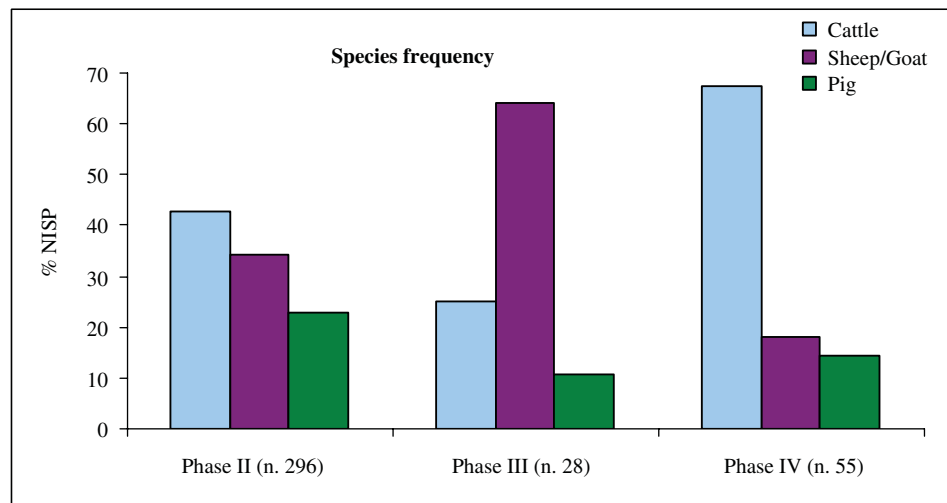


FIG. B.2—Frequency (% NISP) of the main species for Phases II, III and IV.

TABLE B.3—Caherconnell: frequency by species and element for the medieval, Phase II, hand-collected (HC) assemblage. LXT = loose maxillary tooth; LMT = loose mandibular tooth; LT = loose tooth.

<i>Phase II (HC)</i>	<i>Cattle</i>	<i>Sheep/Goat</i>	<i>Pig</i>	<i>Horse</i>	<i>Cat</i>	<i>Hare</i>
Horn-core	1	2	—	—	—	—
Skull	5	2	2	—	—	—
LXT	22	28	14	2	—	—
LMT	35	27	8	—	—	—
LT	—	—	—	—	—	2
Mandible	2	2	4	—	1	—
Atlas	2	—	2	—	—	—
Axis	2	—	—	—	—	—
Scapula	—	4	2	—	—	—
Humerus	3	3	—	—	—	—
Radius	6	5	5	—	—	—
Ulna	1	3	2	—	—	—
Metacarpal	5	1	2	—	—	—
Carpal	1	—	—	—	—	—
Pelvis	3	3	4	—	—	—
Femur	3	4	1	—	—	—
Tibia	5	5	—	—	1	—
Patella	—	1	1	—	—	—
Astragalus	6	1	1	—	—	—
Calcaneum	5	3	2	—	—	—
Metatarsal	5	1	2	—	2	—
Metapodial	—	1	5	—	—	1
Tarsal	4	1	—	—	—	—
Phalanx 1	5	1	1	—	—	—
Phalanx 2	3	—	4	—	—	—
Phalanx 3	3	3	6	—	—	—
NISP	127	101	68	2	4	3
<i>% NISP</i>	41.6	33.1	22.3	0.7	1.3	1.0
MNI	3	3	3	1	1	1
<i>% MNI</i>	25.0	25.0	25.0	8.3	8.3	8.3

of 114.6cm, which falls within the recorded range of cattle stature from medieval Ireland (McCormick and Murray 2007, 79–81).

Only one goat element (horn-core) was positively identified and it is probable therefore that the majority of sheep/goat bones from Caherconnell derive from sheep. The goat horn-core (Phase IV) displayed chop-marks at the horn-core–skull juncture indicating the removal of the horn-core and sheath from the carcass, possibly also with the hide still attached. A sheep horn-core found in the same context also displayed cut-marks in the same location.

Two minor palaeopathologies, both sheep, were recorded. One was a terminal phalanx from a Phase II context, which had an expanded articular facet and some pitted extra bony growth along its plantar side. The second specimen was a mature sheep mandible (Phase III), and the three molars in the mandible

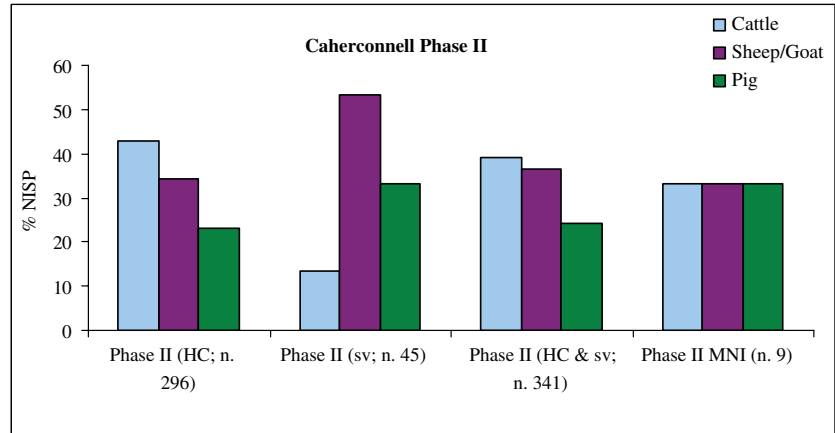


FIG. B.3—Frequency of species using different collection (HC = hand-collected; sv = sieved) and quantification methods (NISP and MNI) for the Phase II assemblage.

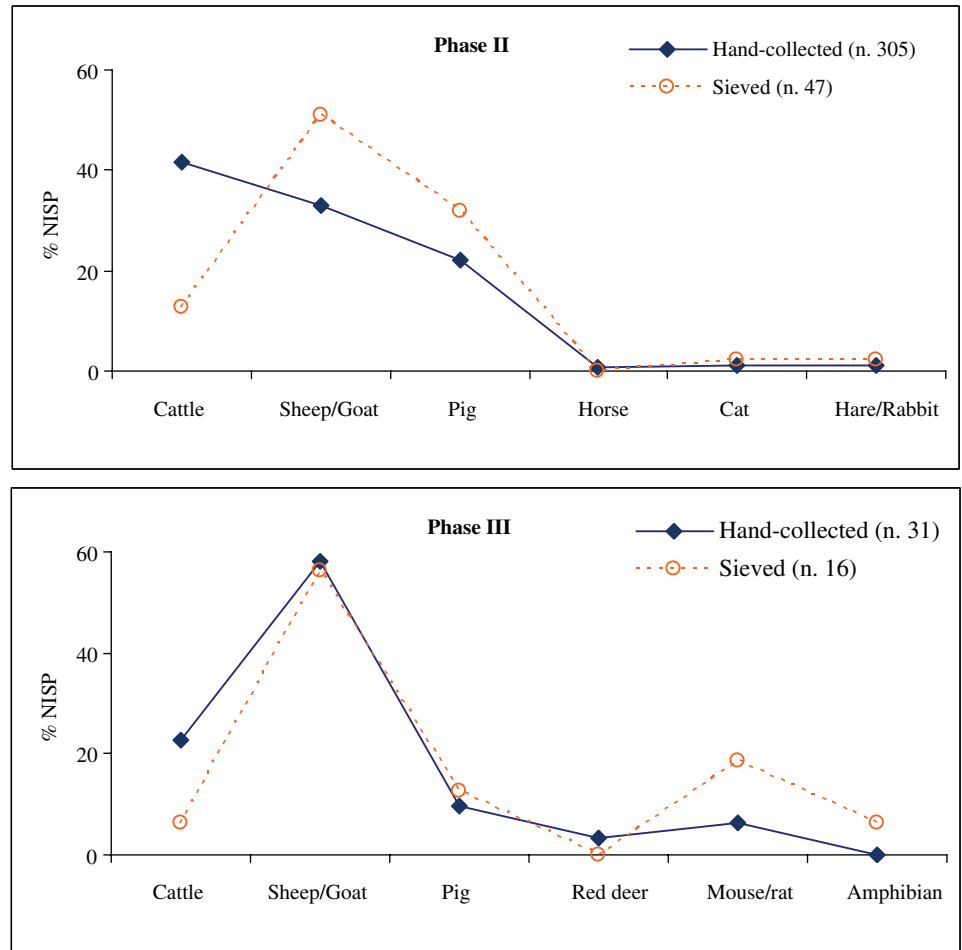


FIG. B.4—Frequency (% NISP) of species in the hand-collected and sieved assemblages for Phase II (top) and Phase III (bottom).

TABLE B.4—Tooth eruption and wear data for ageable cattle (*Bos*), sheep (*Ovis*) and pig (*Sus*) mandibles from Caherconnell from the hand-collected assemblage by Phase (Ph) and context (C). dp = deciduous premolar; P = premolar; M = molar; X indicates that the tooth wear cannot be recorded due to absence or damage.

<i>Ph.</i>	<i>C.</i>	<i>Taxa</i>	<i>dp2</i>	<i>dp3</i>	<i>dp4</i>	<i>P2</i>	<i>P3</i>	<i>P4</i>	<i>M1</i>	<i>M2</i>	<i>M3</i>	<i>MWS</i>	<i>Est. age in mths</i>
II	55	<i>Bos</i>	p	p	j	0	0	0	f	H	0	9/10	16–18
II	55/59	<i>Bos</i>	0	0	0	0	0	0	X	b	C	12	24
II	62	<i>Ovis</i>	0	0	0	A	p	14A	15A	9A	11G	17	adult
III	67	<i>Ovis</i>	0	0	0	0	0	X	15A	9A	11G	17	adult
II	55	<i>Sus</i>	X	X	g	0	0	0	b	C	0	11/12	9–11
II	55	<i>Sus</i>	0	0	0	0	0	0	X	X	E	19	19/21
II/III	55/59/60/67	<i>Sus</i>	0	0	0	0	0	0	X	X	H	19	19/21

displayed abnormal coral-like roots. Both pathologies can be classed as typical degenerative lesions of more mature animals, which would have arisen through physical stresses undergone during the course of the animals' lives. The limited age–slaughter data for sheep (Tables B.4 and B.5) also indicates the presence of older sheep.

Dog (NISP 1) and horse (NISP 4) were represented almost exclusively by loose teeth and additional evidence for dogs was represented by gnawed bones (5%). Cat bones were marginally more common and included a mandible (Phase II) with a fine knife mark on its buccal aspect indicative of skinning. Cat bones displaying signs of butchery and/or skinning are not uncommon on medieval sites in Ireland though they are relatively more frequent on urban sites (McCormick 1988) and include examples from high medieval contexts in Galway City (Murray 2004, 589). Rural examples have also been recorded including at Raystown and Knowth both in Co. Meath (McCormick and Murray 2007, 48–51).

TABLE B.5—Frequency (number) of fused and unfused epiphyses for cattle, sheep and pig for the Phase II assemblage from Caherconnell, after Silver (1968, Table A) and Reitz and Wing (1999, Table 3.5), d. = distal; p. = proximal.

<i>Caherconnell Phase II</i>		<i>Cattle</i>		<i>Sheep</i>		<i>Pig</i>	
		<i>Fused</i>	<i>Unfused</i>	<i>Fused</i>	<i>Unfused</i>	<i>Fused</i>	<i>Unfused</i>
Early fusing	Humerus d., radius p.	4	0	5	0	2	1
	Phalanx 1 and 2 p.	9	1	3	0	4	2
Middle fusing	Tibia d., metapodials d.	3	0	7	0	1	5
	Calcaneum p.	0	1	0	1		1
Late fusing	Humerus p., radius d., ulna p., femur p., femur d., tibia p.	6	4	3	4	1	3
Total fused		22	6	18	5	8	12
% fused		78.6		78.3		40	

Wild mammals, bird and fish

Remains of wild animals were uncommon (3% NISP) and included red deer, hare, rat and amphibian. A small number of bird bones were also recovered (n. 6) represented by 'non-countable' and fragmentary elements only, and of these just one specimen, part of a skull, was identifiable as domestic fowl/pheasant. Two bones from a small, probably commensal, bird species were also recovered. Fish was represented by a single unidentifiable fragment (part of a vertebra) from a Phase II context. Extensive sieving was undertaken at the site, which would suggest that this low incidence of bird and fish is real and a low frequency of wild faunal remains is a typical feature of secular early medieval sites (McCormick and Murray 2007, 104). The only exceptions to this pattern are coastal sites where marine species (bird, fish and marine molluscs) are often found and a fragment of a scallop shell, probably of the great scallop (*Pecten maximus*), was recorded from a Phase II/III context at Caherconnell.

Red deer was represented by a single complete toe bone (proximal phalanx) from a later medieval, Phase III, context. There were no signs of any surface modification and it is probable that it was imported into the site as part of a deer hide. Hare was represented by two loose teeth, and fragments of a humerus and metapodial. These were found with other food waste suggesting hare was also on occasion trapped and eaten. Amphibian bones comprised a humerus and pelvis and a couple of vertebrae ('non-countable') and were recovered from the floor surface of Structure A (Phase III). It is probable that these bones are intrusive and the animal may have buried itself in amongst the stones and occupation deposits within the cashel when hibernating. The contemporaneity of the few rat bones is less clear but it is possible that they may also be intrusive.

Conclusion

The animal bone assemblage from Caherconnell indicates that the occupants ate beef, mutton and pork and presumably farmed these animals in the vicinity of the cashel. This pattern of exploitation is similar to other secular sites of the medieval period. Other animals kept included horses, dogs and cats, possibly just one of each at any time, along with a small number of domestic fowl. Hunting was of a low priority and with the exception of the one fragment of scallop shell and possibly the fish bone; it would seem that the resources of the shore and sea, less than 10km away to the north at Ballyvaughan Bay, were ignored. Indeed the single scallop shell may have been kept as a souvenir and therefore may not represent food debris. The butchery evidence and range of elements represented would suggest that the main meat animals were butchered within or in the vicinity of the cashel, and that most if not all parts of the carcass were utilised. Hides and pelts were also either part-processed or at least stored on the site and included skins of cat and cattle, and probably also the occasional goat and deer hide. Horn was also utilised, though there is no direct evidence for antler-working.

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Appendix C

LUCY CRAMP

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Carbonised plant remains and charcoal from Caherconnell Cashel

Eighteen environmental samples were obtained. Bulk soil samples were wet-sieved and then floated over a 0.2mm mesh and the organic flots, along with fragments of hand-picked charcoal, were assessed for the presence of preserved plant macrofossils. Those considered to contain useful and identifiable material were then analysed in detail for information that might aid palaeodietary, palaeoeconomic and/or palaeoenvironmental reconstruction at the site.

All flots were sorted under a low-power binocular microscope in order to recover preserved plant macrofossils. Seeds, cereal grains and nutshell were identified at $\times 10$ – $\times 20$ magnification. Analysis of charcoal was performed using a low power binocular microscope ($\times 10$ – $\times 45$ magnification) and a high power polarising light microscope (up to $\times 450$ magnification) for the further examination of the radial and tangential sections. Where charcoal was particularly concentrated, a representative sub-sample consisting of 20 fragments was taken for identification purposes. Charcoal was identified with reference to a modern reference collection and Schweingruber (1978).

Twelve samples, consisting of nine bulk soil samples measuring between seven and 425 litres, and three samples of hand-picked charcoal, were considered worthy of further analysis. The material that could be identified mainly comprised wood charcoal; however, carbonised cereal grains and nutshell were also recovered from five deposits. One charcoal type proved unidentifiable.

The plant and tree species that were represented in the environmental samples taken from deposits at Caherconnell Cashel are listed in Table C.1 (plant remains other than charcoal) and Table C.2 (charcoal). Quantification is provided in absolute terms for grains and seeds whilst nutshell and wood charcoal fragments are quantified according to a 3-point scale of + present, ++ some, and +++ much.

Discussion

Cereal grains were recovered in low quantities from five deposits. The cereals comprised wheat, including free-threshing bread or rivet wheat (*Triticum aestivum* or *turgidum*) and barley (*Hordeum* sp.). Oats (*Avena* sp.) were also identified, although these could not be confirmed as the cultivated species and they are known to grow as wild contaminants among other cereal crops. The frequency of cereal grains was relatively low (<0.3 grains/litre) and there is no evidence from cereal chaff or arable weed seeds to indicate the processing or storage of uncleaned grain or ears/spikelets.

Fragments of carbonised hazel nutshell (*Corylus avellana*) were relatively common in the environmental samples and a single hazelnut was also recovered. As an edible nut, these remains may derive from the disposal of waste resulting from the consumption of the nuts. However, it is alternatively equally likely that the burnt

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TABLE C.1—Plant remains. Material was represented by grains/seeds unless otherwise specified; + present, ++ some, +++ much.

<i>Phase</i>	<i>I</i>			<i>II</i>			<i>III</i>				<i>IV</i>		
Deposit	65	62	69				55				67	60	58
Sample	14	11	20	1	2	5	7	10	17	15	16	6	
Sample volume (litres)	28	425	14	–	14	–	7	–	7	35	7	7	
Cereals													
Free-threshing <i>Triticum</i> sp. (<i>aestivum</i> or <i>turgidum</i>)	Free-threshing bread or rivet wheat									1			
<i>Triticum</i> sp.	Wheat										1		
<i>Hordeum</i> sp.	Barley		1	3						1	1		
<i>Avena</i> sp.	Oat		1	1						4			
Cereal indet.			1							1			
<u>Grains/litre</u>	<u>0.1</u>	<u>0.01</u>								<u>0.2</u>	<u>0.3</u>		
Other plants													
<i>Corylus avellana</i> – nutshell	Hazel nutshell			++	+					+	+++		
<i>Corylus avellana</i> – nut	Hazel nut				1								
<i>Rubus fruticosus</i> agg.	Blackberry		1	1									
Gramineae indet.	Grass				3						1		

shell and nut are simply by-products from the burning of hazel-wood as a fuel type and indeed, hazel charcoal was common in all of the deposits from which hazel nutshell was recovered (Tables C.1 and C.2). A very small number of weed seeds, including bramble (*Rubus fruticosus* agg.) and an unidentifiable grass seed, were also found.

A mixture of shrubs and trees were identified in the wood charcoal from Caherconnell deposits. The most abundant types were hazel (*Corylus* sp.), ash (*Fraxinus excelsior*) and hawthorn-type wood (*Pomoideae*). Blackthorn/cherry type charcoal (*Prunus* sp.) was recovered from two samples taken from deposit (55),

TABLE C.2—Charcoal recovered during excavation; + present, ++ some, +++ much.

<i>Phase</i>	<i>I</i>			<i>II</i>			<i>III</i>				<i>IV</i>		
Deposit	65	62	69				55				67	60	58
Sample no.	14	11	20	1	2	5	7	10	17	15	16	6	
Sample volume (litres)	28	425	14	–	14	–	7	–	7	35	7	7	
<i>Betula</i> sp.	Birch											+	
<i>Corylus</i> sp.	Hazel		+	+++	++	++	++	++	+++	+++	++	++	
<i>Prunus</i> sp.	Blackthorn, cherry etc.				+	++							
Pomoideae	Hawthorn, apple etc.			++	+	+	++	+	+		+	+	
<i>Fraxinus excelsior</i>	Ash		+	+++	++	+	+	+	+++	+++			
Indet.				+					+	+			

whilst a single fragment of birch (*Betula* sp.) was also identified from deposit (60), deriving from the internal threshold of the doorway of structure A.

In addition, a low number of fragments of an unidentifiable charcoal type were recovered from three different deposits. These fragments carried the majority of characteristics of Pomoideae charcoal but only uniseriate rays were found, without any bi- or triseriate rays, which would be expected for wood from this family. The most likely explanation is that these charcoal fragments derive from very young Pomoideae wood.

Conclusions

Twelve samples taken from deposits that were excavated in the trench investigating Structure A at Caherconnell Cashel produced identifiable plant macrofossils and charcoal. The low number of wheat, barley and oat grains is consistent with expectations for a background scatter deriving from a site that is medieval in date. The charcoal species that were identified demonstrate a mixed-fuel economy utilising scrub and trees such as hazel, hawthorn, blackthorn, ash and birch that were likely to have been growing nearby.

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