

Caherconnell Cashel, Co. Clare

Preliminary Archaeological Excavation Report for 2018 season



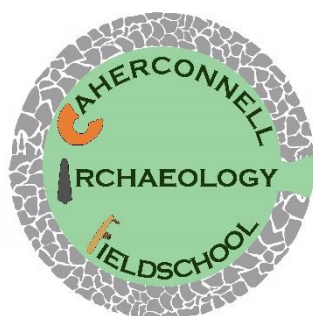
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by

Michelle Comber

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Caherconnell Archaeology Field School



CONTENTS

List of figures	ii
Acknowledgements	iv
Introduction	1
Location	1
The Cashel	2
Research framework	7
Excavation aims and methodology	9
Artefact strategy	14
Excavation results	14
Backfilling	31
Finds	33
Samples	47
Discussion	48
Conclusion	54
Further work	54
References	56
Appendix 1	57
Appendix 2	58
Appendix 3	59
Appendix 4	64



LIST OF FIGURES

- Fig. 1 Caherconnell (circled), with preserved enclosures and field walls to southwest.
- Fig. 2 Location of Caherconnell.
- Fig. 3 Caherconnell cashel, from northwest.
- Fig. 4 Survey of Caherconnell, with excavation cuttings marked (2018 Cutting I in red).
- Fig. 5 Backfilled doline – modern posts mark prehistoric post-holes on left, medieval structure on right.
- Fig. 6 Human remains from doline.
- Fig. 7 Circular and square enclosures south of Caherconnell cashel.
- Fig. 8 Survey of Caherconnell townland.
- Fig. 9 Cutting C before excavation.
- Fig. 10 Some of the 2018 team.
- Fig. 11 Wet-sieving in the field next to the cashel, and dry-sieving during the drought.
- Fig. 12 BurrenBeo volunteer learning to draw artefacts.
- Fig. 13 Bedrock in Cutting I.
- Fig. 14 Section of burial mound and cashel-wall elevation.
- Fig. 15 Extra ‘skin’ added to internal face of cashel wall.
- Fig. 16 Part of the midden (262), showing animal bone and lighter coloured ashy material.
- Fig. 17 Select contexts from Phase 4: Early occupation in Cutting I.
- Fig. 18 Well-preserved section of (33) slab surface.
- Fig. 19 Select contexts from Phase 5: Middle occupation in Cutting I.
- Fig. 20 North-facing section of fire-pit (left); pit after excavation, Scale 0.3m (right).
- Fig. 21 Structure (180) from north.
- Fig. 22 Post-setting (260), and linear feature (261).
- Fig. 23 Slab surface (28).
- Fig. 24 Select contexts from Phase 6: Late occupation in Cutting I.
- Fig. 25 Hearth (249)/(252), with heat-shattered stone visible around edge. Scale 0.3m.
- Fig. 26 Rock-cut pit (258).
- Fig. 27 Select contexts from Phase 7: Final occupation in Cutting I.
- Fig. 28 Wall (247).
- Fig. 29 Lime-mortar surface (248). Scales 1m and 2m.
- Fig. 30 Stone tumbled from the cashel wall (22) in Cutting I.
- Fig. 31 Pre-excavation, post-excavation with walls (180) marked by slabs on surface.
- Fig. 32 Quern fragments, from up to 7 different stones.
- Fig. 33 Whetstones.
- Fig. 34 Rubbing/polishing stones.
- Fig. 35 Hammer stones.
- Fig. 36 Faceted bead.
- Fig. 37 Flint leaf-shaped arrowhead, and chert scraper.
- Fig. 38 In situ bone comb.
- Fig. 39 Bone-comb fragments.
- Fig. 40 Bone pins and points.
- Fig. 41 Antler tine/handle.

- Fig. 42 Iron nails.
- Fig. 43 Iron knives (including shears blade on left).
- Fig. 44 Iron awls/points.
- Fig. 45 Iron fittings, possibly from scabbards.
- Fig. 46 Iron suspension hook.
- Fig. 47 Bronze, and silver, stick pins.
- Fig. 48 Bronze sewing needles.
- Fig. 49 Miscellaneous bronze items: decorated stud and button, strap fittings, and chape.
- Fig. 50 Red bead with length of iron inside.
- Fig. 51 Adjoining sherds of bulbous/rounded glass bottle.
- Fig. 52 Collection of iron fragments, crucible sherds and mould fragment.
- Fig. 53 Evidence of on-site bone-working: bone bead, two comb roughouts; iron pronged tool (possibly also used in leather-working).
- Fig. 54 Evidence of textile production: iron, bronze and bone needles, bone spindle-whorl.
- Fig. 55 Drawknives.
- Fig. 56 Sickle and smaller curved blades.
- Fig. 57 Iron arrowhead.
- Fig. 58 Samples of charcoal and coprolite.
- Fig. 59 Metalworking slag.
- Fig. 60 Length of north-facing section, Cutting I.
- Fig. 61 Fine polishing stone, bone pin/stylus.
- Fig. 62 Head of silver pin.
- Fig. 63 Silver long-cross coins: c.1300AD (left), c.1250AD (right).
- Fig. 64 Iron horseshoe fragment.
- Fig. 65 Fragments of clay pipe.

Table 1. Radiocarbon dates from the cashel

(after Reimer, P.J. et al. 2009 Radiocarbon 51, 1111-1150 and Reimer, P.J. et al. 2013 Radiocarbon 55, no.4).



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Introduction

This report documents the preliminary results of the 2018 season of archaeological excavation at Caherconnell Cashel, Co. Clare (NGR 123622 199486, SMR CL009-03010) (Figs 1 and 2). Test excavation in 2007 demonstrated the archaeological potential of this site to address questions of native settlement in medieval Ireland. An international field school, the Caherconnell Archaeological Field School, was established in 2010 to provide a secure source of funding and quality control for research excavation at Caherconnell.



Fig. 1 Caherconnell (circled), with preserved enclosures and field walls to southwest.

Location

Caherconnell Cashel is located in the townland of Caherconnell, Kilcorney parish, Burren barony, Co. Clare (Fig. 2). The landscape in the immediate vicinity is part of the 'High Burren' and is karst limestone. The land is currently used as pasture. The cashel lies at approximately 130m above Ordnance Datum, on the northern slopes of the shallow, but fertile, Kilcorney valley. The valley is ringed by archaeological monuments of various age. Settlement enclosures of probable Early Medieval date (mostly cashels) are situated on the valley slopes, while prehistoric sites (mostly megalithic tombs) can be found on the highest points in the area (including Poul nabrone to the north, and Poulawack to the south). Caherconnell cashel is one of four drystone enclosures in the townland of that name, and is located to the immediate west of the R480 road that links Leamaneh and Ballyvaghan, a natural routeway through the Burren uplands.

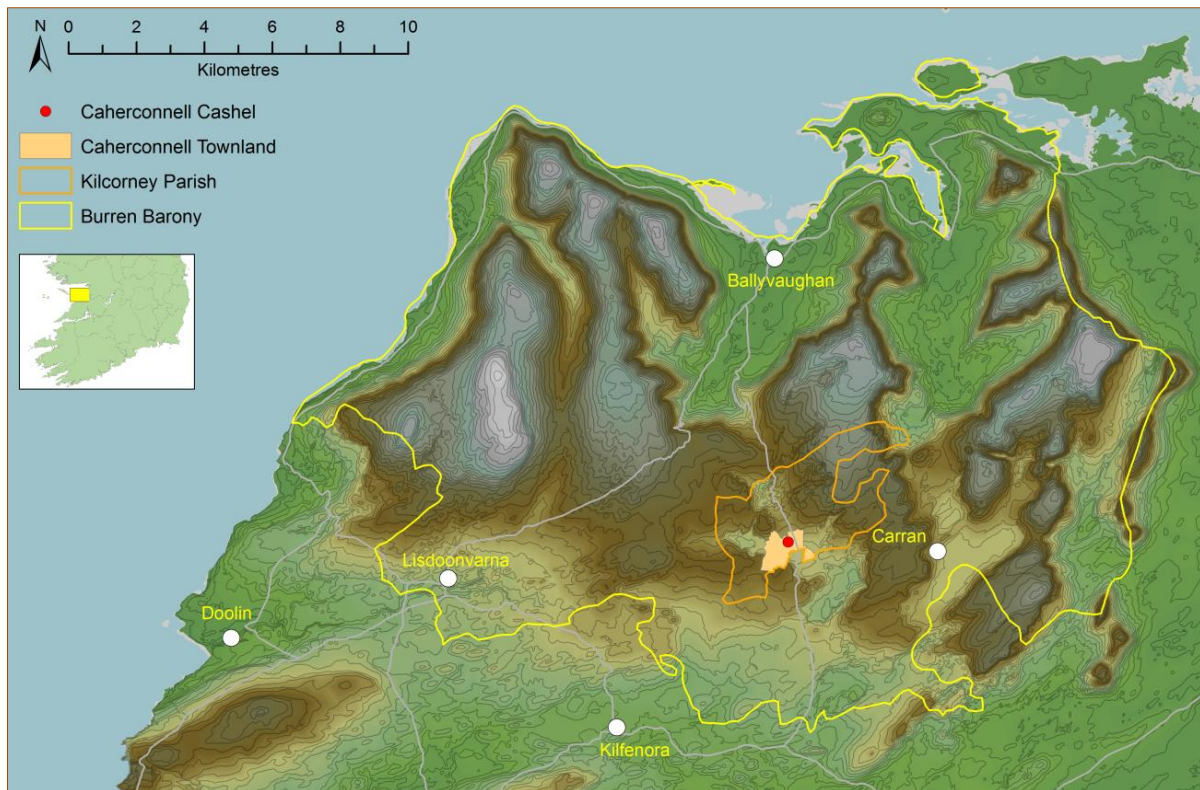


Fig. 2 Location of Caherconnell.

The Cashel (Fig. 3)

The enclosure at Caherconnell is a circular, drystone ringfort or ‘cashel’. It measures 42m in external diameter, with walls up to 3m wide at the base and up to 3.6m high.



Fig. 3 Caherconnell cashel, from northwest.

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 – evident in the vertical and angled setting of the replaced stones. Although Westropp noted the lack of any internal wall terraces or steps, it appears that some of the rebuilding and tumble simply masked such features. A narrow ledge does run along the inner face of the wall to the south (and was also identified in some excavation cuttings). This is

approximately 0.3m – 0.5m wide. In addition, a short flight of steps was discovered just inside the entrance during excavations in 2010. 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 19th century. A modern timber access stairs filled this gap prior to the 2010 excavation and few, if any, traces of the original entrance could be discerned.

The modern interior of the cashel is clearly raised above that of the external ground surface, an average of 0.7m 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. The partially grassed-over wall tumble around the circumference of the interior gives it a somewhat ‘dished’ appearance. Before excavation, a number of features were visible above the surface.

Internal Features (Fig. 4 below)

Dividing Wall

The interior was divided in two by the remains of a partly grassed-over drystone wall running roughly east–west across the site in a slightly curving fashion. Though the edges of this wall were masked by collapse, it was possible to identify a double-faced wall with a rubble core, approximately 1–1.3m wide where the original width was visible. A maximum of four courses was discernible, though the tumble on both sides suggested a greater original height. This wall is quite late in date, contemporary with Structure A (the subject of the 2007 and 2015 excavations).

Structure A

One of two visible internal structures, Structure A is situated just inside the north wall of the cashel, and was the subject of the 2007 and 2015 excavations. Rectangular in plan (with its long axis running east–west), it was defined before excavation by a partly grassed-over drystone wall 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 were visible amongst the collapse, particularly along the south side wall. Here, the wall had an internal and external facing of contiguous limestone slabs set on edge. The grassed-over nature of the area between the faces prevented the positive identification of a rubble core or horizontal coursing. The original width of the wall reached a maximum of 1.2m, and 0.25m in surviving height. Internally it measured roughly 10m by 5m. Prior to excavation its relationship with the cashel wall was uncertain. The small 2007 excavation showed that Structure A was free-standing rather than keyed into the cashel wall, had opposed doorways near the eastern end of the structure, had a limestone mortar floor and was likely to have been constructed and occupied between the early 15th and early 17th centuries (Comber and Hull 2010).

Structure B

Structure B is built up against the west wall of the cashel and was excavated in 2017. It is sub-triangular in plan, with its interior divided in two by a rather flimsy drystone wall. It measures approximately 8m by 6.5m. Its north wall forms part of the dividing wall running across the site (C.48) and, prior to excavation, was partially covered with vegetation. Up to six

horizontal courses are extant on this side. The remaining eastern wall is not very substantial. The walls were much collapsed and partly overgrown, perhaps explaining the difficulty in positively identifying an entrance or entrances. The most likely position of such was along the eastern length of wall. Before excavation, the entire structure appeared rather late in date.

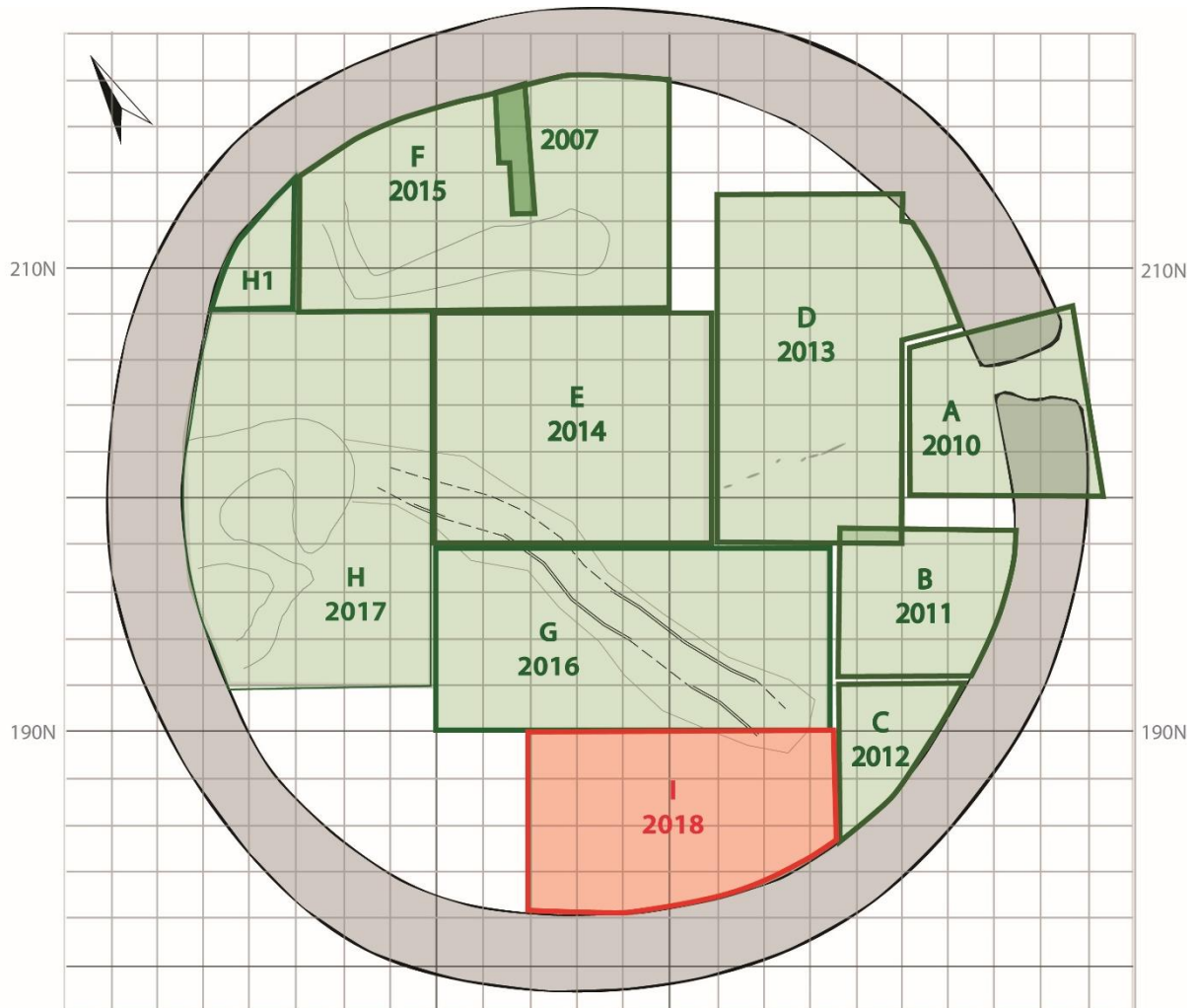


Fig. 4 Survey of Caherconnell, with excavation cuttings marked (2018 Cutting I in red).

External Features, Caherconnell townland

A number of non-modern features can be seen in the immediate vicinity of Caherconnell cashel, particularly to its south and southeast. Closest to the cashel (just east of its entrance) is a small, partially grassed-over cairn of large stones. This measures approximately 2.5m in diameter and 1m in height. The possibility of a prehistoric burial mound or covered well cannot be ruled out. To the north of the cashel lies a small, sub-circular barrow, 11m by 14m in diameter, of probable Late Bronze Age or Iron Age date.

The 2008/9 focus of test excavation (08E0535) was a doline (Fig. 5), a natural sink-hole, located approximately 20m southeast of Caherconnell Cashel. Attention was drawn to this geological feature by limited visible remains of a partially collapsed stone chamber. Excavation, however, unearthed a much greater range of evidence.



Fig. 5 Backfilled doline – modern posts mark prehistoric post-holes on left, medieval structure on right.

The earliest activity within the sheltered doline was associated with a rectangular house defined by post-holes, with an internal stone-lined hearth. The house is of Early Bronze Age date. Prehistoric artefacts from the excavation included a fragment of a possible saddle quern, polished stone balls/marbles, a sherd of Neolithic pottery, and thousands of pieces of worked chert (the local substitute for flint) of both Neolithic and Bronze Age type. Also recovered, though possibly reflecting slightly later activity, was a small assemblage of Middle Bronze Age pottery. Anna Brindley has suggested that this may represent the remains of Middle Bronze Age/Late Bronze Age flat cemetery that once existed in the vicinity of the doline, though she does not rule out the possibility of the pottery having served a domestic function (pers. Comm.).

The stone structure partly visible prior to excavation was revealed as a circular chamber built against two walls of the doline. The chamber's walls (at least 1m thick) probably originally rose into a corbelled stone roof, judging by the quantity of collapsed stone found in the interior of the structure. A wide entrance gap led into a 2m-diameter chamber that contained a pit filled with semi-articulated animal bones, and some scattered preserved grain. The discovery of a medieval bedding mortar at the base of the wall, in conjunction with a small assemblage of medieval artefacts and some radiocarbon dates, suggest a medieval date for the, as yet unique, structure. It may have been built by the adjacent cashel dwellers, perhaps as a store (explaining the wide entrance, bone and grain remains, and lack of occupation evidence or hearth within the chamber).

The final event revealed by excavation within the doline was the placing of human remains within the partly silted up entrance of the medieval structure (Fig. 6). The remains comprised



disarticulated bones of at least three individuals, largely those of an adolescent though missing most of the long bones.

Fig. 6 Human remains from doline.

The bones were radiocarbon dated to the 15th/16th century AD, a time when a branch of the ruling Gaelic O'Loughlin family was living in the adjacent Caherconnell cashel. It seems likely that the remains were accidentally disturbed

elsewhere, sometime after the 15th/16th century, and redeposited in the doline. Perhaps part of an ancestral cemetery of the O'Loughlins was uncovered by farm or building works at a time when it was no longer marked or known as a burial place. The now missing long-bones could have been wrongly identified and discarded as animal bones. However, once a human skull was encountered, the remaining disturbed bones could have been gathered together and simply placed in what was then a convenient hole in the ground.

Caherconnell cashel is one of four drystone enclosures in the townland. Lisnandrom is the westernmost of the four, measuring 28m in diameter. It sits on top of a low inland cliff, with conjoined structural foundations located at the foot of that cliff. Situated between Lisnandrom and Caherconnell are two possible boulder burials and miscellaneous other features. Due south of the main cashel are more extensive remains, comprising a circular cashel, a sub-square drystone enclosure, ancient field walls, routeways, and smaller house-like enclosures scattered about the area (Fig. 7). An old route-way also skirts Caherconnell and runs off to the south-southwest.

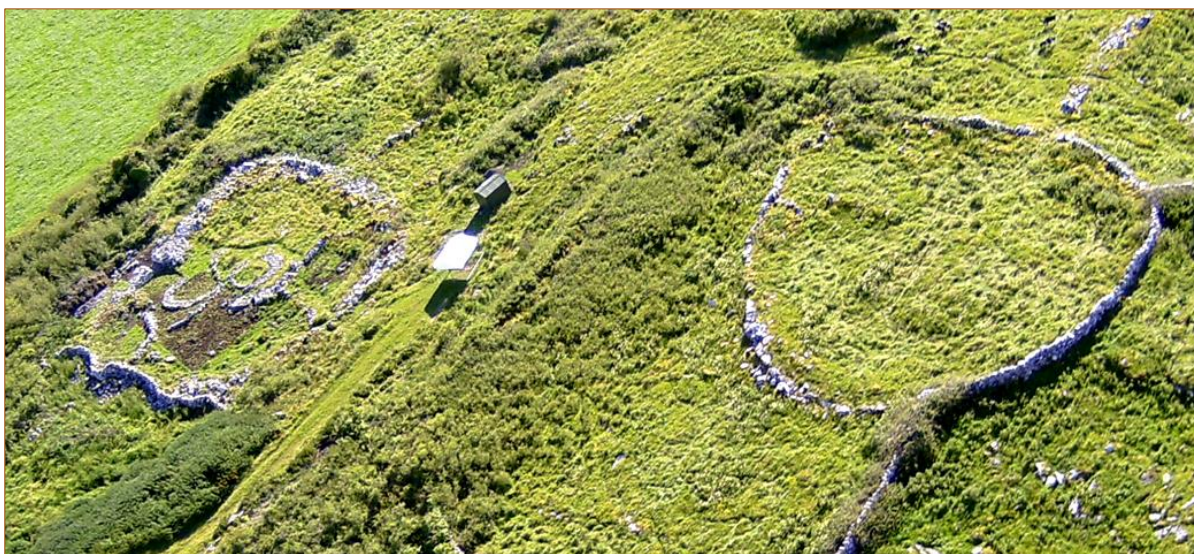


Fig. 7 Circular and square enclosures south of Caherconnell cashel.

The sub-square enclosure was the focus of a Royal Irish Academy-funded research excavation, directed by the author (10E119). Excavation occurred during the summers of 2010, 2011, and 2012, the final report since submitted (it is hoped that the excavation results will be published in a volume with the results of the 10E0087 excavation). Three definite structures, lengths of yard wall, and the original entrance were all investigated. Finds included quantities of animal bone, hazelnut and sea shells, metalworking slag, chert and flint lithics, stone axes, iron tools, bronze dress-pins, glass beads, bone artefacts, stone tools, quernstone fragments etc. Initial radiocarbon dates have provided a 7th to 9th-century AD date for much of the activity, with 10th-century dumping around its entrance. Questions remain over the site's shape, size, entrance orientation and prehistoric artefact assemblage, with answers suggesting a specific social role for this site.

Research framework

The excavation at Caherconnell was designed to reveal information on the site itself, to integrate the monument into a wider study of the archaeological landscape currently being undertaken by the author and colleagues in the Department of Archaeology, NUI, Galway, and to provide students with hands-on training in archaeological excavation.

The study of archaeological landscapes is becoming increasingly popular in Ireland and elsewhere. Recent work by Billy O'Brien, Liam Hickey and Nick Hogan on the Beara peninsula, Co. Cork, has revealed the potential of such work in an Irish context (O'Brien 2009). The Beara studies (at the Barrees Valley, Cloontreem and Ardgroom) mapped extensive archaeological landscapes that survived in the valleys and along the lower slopes of an upland region. These surveys, and some excavation at Barrees, revealed much about past human activity in these areas, and suggested what the landscape may have looked like in other areas where such remains have not been preserved. The Burren, with its extensive preserved remains, should, at the very least, provide similar information for the west of Ireland.

Some landscape survey has been undertaken in the Burren. The first attempt at landscape mapping was completed by Blair Gibson as part of his doctoral thesis studying the chiefdom of *Tulach Commain* and the archaeological remains in the area of Cahercommaun, to the southeast of Caherconnell. Gibson's survey, however, was not an electronic one and did not record the same density or detail of surviving remains (Gibson 1990). A more recent digital survey in the area was carried out by Carleton Jones of NUI Galway, at Roughan Hill to the southeast. This work had a prehistoric focus, but did incorporate archaeological remains of all periods in its survey (pers. comm.). Initial excavations by Jones are now being continued by Ros O Maolduin. Christine Grant, with the aid of the Burren Beo Volunteer Trust, is currently mapping remains in the townland of Kilcorney, to the southwest of Caherconnell.

Elizabeth Fitzpatrick of NUI, Galway has recently commenced a study of the later medieval estates, residences and schools of the Gaelic professional classes, including those of the Burren. One of the main foci of her work is the Cahermacnaghten estate of the O'Davorens, a minor gentry family who were keepers of legal manuscripts and teachers of law in the

lordship of Burren. In addition to mapping the archaeological remains in the area, the project has undertaken three seasons of excavation in the vicinity of Caherconnell in a search for chronological and functional evidence (funded by the Royal Irish Academy). Excavation targeted a well-preserved stone building called *Cabhail Tighe Breac* (that may have served as a medieval school building), a possible outhouse structure, and a small possible dwelling house (pers. comm.).

Also relevant to this excavation at Caherconnell, is the survey work of the author; a study of the cashels and associated remains in a study area extending south from Caherconnell as far as Kilfenora, east to Carran and Cahercommaun, and southeast to Leamaneh. This project, *Ringforts and the Settlement Landscape of the Burren in the First Millennium AD*, commenced in 2005 and was funded by the Heritage Council of Ireland. It marked the start of a study of the settlement landscape of the first millennium AD in a chosen study area within the Burren, Co. Clare. The area in question incorporated the shifting political boundaries of *Corcomruad* territory. The first year saw the analysis of data from all relevant monuments within the study area, numbering approximately three hundred extant sites (mostly cashels, raths, enclosures and ecclesiastical remains). This analysis revealed that many of these settlements were deliberately sited to best exploit the most fertile farmland in the area, a not uncommon tendency in this period (Comber 2005). It also suggested, however, that some settlement may have been strategically positioned with regard to communication strategies and territorial politics. Caherconnell is one such site, positioned as it is at one end of a major north-south pass through the Burren mountains (still used today by the two modern roads, the N67 and R480).

More recent work has seen the detailed digital survey and mapping of a preserved archaeological landscape located between the large cashel of Ballykinvarga to the south of Caherconnell, and Leamaneh castle to the southeast (Comber 2006). Extensive field systems and enclosures were recorded in this area, with the area of study expanded through the examination of vertical aerial photographs. Elements from various periods of the past were identified, reflecting the continued use of this zone throughout prehistory, the Early Medieval period, and the medieval periods. These included at least ten different forms of field wall, individual fields, small enclosures, larger settlement enclosures, tracks and roads, cairns, tombs and castle remains. Most of the extant material, however, *appears* to date from the Early Medieval period.

The next, logical step in this study was the acquisition of scientific dating evidence from as many parts of this landscape as possible, from cashels, small enclosures, ancient field walls etc. When the opportunity to excavate at Caherconnell arose, a third phase of survey was undertaken in advance of excavation (Comber 2008). This mapped, in 2d (Fig. 8) and 3d, multi-period archaeological remains in the townland of Caherconnell, including three circular cashels, a sub-square enclosure, field walls, a barrow, boulder burials, house sites etc. These features are now the focus of the Caherconnell Archaeological Project, a project that involved test excavation undertaken by volunteer archaeologists (07E0820 and 08E0535, see summary above), full-scale research excavation funded by the Royal Irish Academy (10E119, see

summary above) and the Caherconnell Archaeological Field School (10E087, subject of this report and previous reports on 2010-17 excavations).

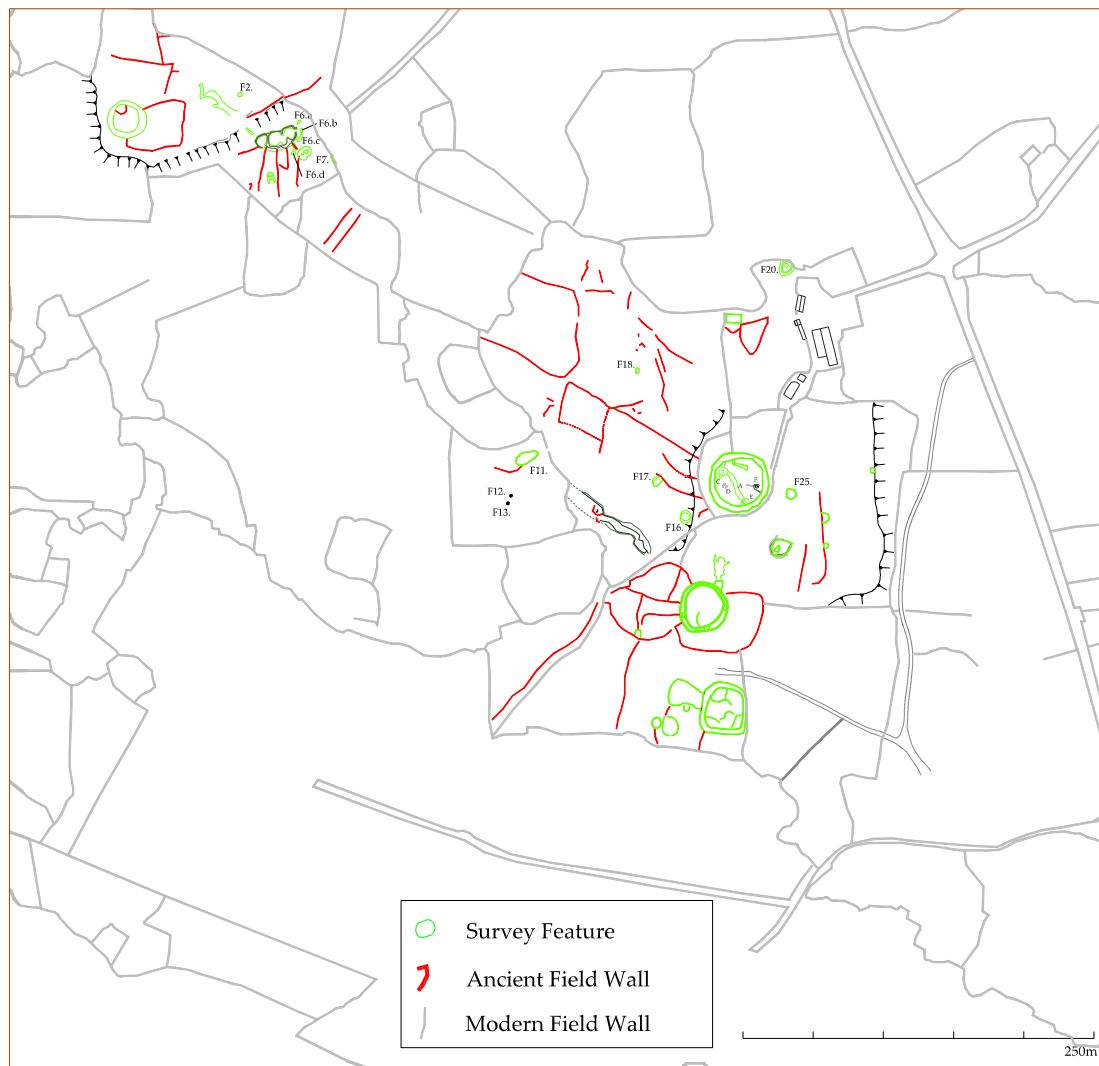


Fig. 8 Survey of Caherconnell townland.

Excavation aims and methodology

The 2010 to 2018 excavation seasons are part of a programme of excavation that is intended to examine as much of the cashel interior as possible. This programme is being funded by the Caherconnell Archaeological Field School, led by a team of highly-qualified professional archaeologists (directed by the author), and accredited by NUI, Galway. The field school was established in response to the potential demonstrated by the initial test excavation in 2007. This demonstrated the wealth of preserved archaeological material and its importance for the study of continuous native Gaelic settlement throughout the Early Medieval and Medieval periods. The only way to ensure ongoing funding and consistent high quality for such a significant undertaking was the establishment of an international field school. It is hoped that these excavations will help identify the archaeology of the native Irish in the medieval period, a period largely dominated by Anglo-Norman archaeology. They should, in addition, reveal much of the native way of life in a changing world.

Following submission of a method statement and licence application, a licence to excavate was granted to Graham Hull by the National Monuments Service of the Department of the Environment, Heritage and Local Government, in consultation with the National Museum of Ireland in 2010. The licence was transferred to Michelle Comber in 2012 and extended for 2013, 2014, 2015, 2016, 2017 and 2018. The licence number is 10E0087.

The 2010 (Cutting A) and 2011 (Cutting B) excavations were focused on the cashel entrance and the internal area to the immediate southwest (Fig. 4). The entrance was targeted first, to facilitate the removal of wooden steps that provided recent visitor access to the cashel interior (the site having its own visitor centre). This improved access for the excavation team and less mobile visitors to the site. The 2012 excavation (Cutting C) was situated immediately south, and adjacent to, cutting B from 2011. It measured 7m by 5m (maximum), being defined by the cashel wall on two ‘sides’. Grassed-over possible structural remains were visible in this area prior to excavation. The eastern end of the wall dividing the cashel interior did not run cleanly up to the cashel wall. Rather, roughly 5m from the cashel wall there was a gap followed by the apparent splitting of the wall into two raised ‘banks’ with a sunken area between (see Figs. 4 and 9). It was uncertain which, if either, of these might represent a continuation of the dividing wall. The hollow between them measured roughly 4m by 1.5m, and up to 0.5m deep. It contained partially grassed-over large stones and slabs, some of which were in a horizontal position with voids visible beneath them – all caused by a relatively modern animal burial. Writing at the end of the nineteenth century, Westropp (1899, 375) described this area:

The garth is divided by a long wall running north-west and south-east; at its northern end are two house sites, one 30 feet long, and at its southern an enclosed hollow, possibly a hut or souterrain.

It was impossible to determine, prior to the excavation of Cutting C, whether or not this part of the site represented a souterrain or some other feature.



Fig. 9 Cutting C before excavation.

Excavation in 2013 comprised a cutting (Cutting D) measuring 14m by 8m (with a 5m by 3m extension on the northeast and a 1m-wide extension along the north, Cuttings D1 and D2, respectively) located immediately west of Cutting A from 2010 (the entrance cutting). It was designed to target the continuation of the slab pathway (context 10) first identified in 2010, the path running between the entrance and centre of the enclosure, and a flat open area to the north with no features visible above the modern ground surface. Several pathways, post-holes and other features were uncovered.

Cutting E was excavated in 2014, located closer to the centre of the cashel, immediately west of Cutting D from 2013. It measured 10m x 12m. It uncovered the continuation of the slab pathway leading to/from the entrance, the continuation of path Context 66, a length of the wall dividing the cashel interior in two, and two structures – an early circular one, and a later rectangular example.

2015's Cutting F targeted the house first investigated in 2007, situated just inside the north wall of the cashel. It confirmed and extended the 2007 findings, and located the footprint of the return wall of the rectangular house identified in 2014. The 15th/16th-century house was sub-rectangular in plan with opposed doorways in the long side walls. It had an internal subdivision at its east end, a central hearth, a lime-mortar floor, and a stone-built oven. Its eastern end was clearly rebuilt at some point during the use of the house, being of different, more stable, construction, and overlying part of the original floor that, elsewhere, abutted the house wall. The compressed pre-15th century layers beneath the house contained the remains of a metalworking furnace or hearth, represented by crushed pieces of fired clay, slag fragments, small crucible and mould sherds.

Cutting G in 2016 was located next to cuttings E and B from 2014 and 2011, just south of the centre of the cashel. Features uncovered included part of the original circular house of the cashel (continued from Cutting E to the north), a contemporary metal workshop area complete with furnace base and rock-cur hearth, a slightly later ancillary structure with internal hearth and pit, and a continuation of the late wall (15th/16th century) that divides the cashel interior.

2017 saw the excavation of Cutting H (16m x 10m maximum), a cutting located immediately west of cuttings E and G, and its extension Cutting H1 (5.5m x 6.5m maximum) that completed the excavation of the space between Cutting H, Cutting F, and the cashel wall (Fig. 4). These targeted a stone-walled structure built up against the cashel wall in this area (Structure B above), and explored its relationship with earlier, contemporary and later features. The chance of recovering evidence from the earlier occupation layers of the cashel was strong here, due to an apparent depth of stratigraphy trapped beneath stone tumbled from the cashel wall. This part of the interior, due to its sheltered nature, might also have seen early activity. The western wall of the rectangular house uncovered in Cuttings E and F also fell within this cutting.

Cutting I was excavated in 2018, situated between Cutting G and the cashel wall to the southwest, completing excavation of most of the cashel interior. It measured 13m in length,

with a maximum width of 7m, depending on the curve of the cashel wall. The southern end of 2016's small annexe-like structure fell within this area. Prior to excavation, however, other than collapsed stone from the cashel wall and the possible remains of an internal ledge at one point along that wall, no other features were visible in this part of the cashel. The area is quite sheltered from the prevailing weather, so well suited to various human activities.

Tumble, topsoil and archaeological features and deposits within the cuttings were hand-excavated sequentially. The excavation concluded at the surface of the underlying bedrock. A full written, drawn and photographic record was made in accordance with the Caherconnell Archaeological Field School Excavation Guidelines (2017) and the NMI Advice Notes for Excavators (2010).



Fig. 10 Some of the 2018 team.

Fieldwork took place over three months in June, July and August 2018. The excavations were directed by Michelle Comber, assisted by Noel McCarthy (licence eligible), and supervised by Pat Cronin. The excavation teams were composed of students from the field school (Fig. 10 etc.) – Susan Frank, Sara Best, Jenny Sacher, Owen Brady, Josh Cullen, Zack Johnson, Loganne Gross, Mary Murphy, Milena Robles-Wong, Kass Mattingly, Becky Kropp, Maddy Decker, Sarah Barr, Katherine Perdue, Philip Eriksson, Julia Ercolano, Patricia Kincaid; Roisin Nic Cnaimhin from UCC, and Burren Beo Conservation Volunteers and NUI, Galway diploma graduates – Marie O’Donoghue, Ronan O’Brien, Cormac Fahy, Deirdre Feely, Wendy Smith, Kay Heverin, Sean Duggan, Brendan and Mary Arrigan.

Archaeologically significant contexts (feature fills, occupation layers etc.) were wet-sieved or dry-sieved (depending on drought conditions) on site to recover small artefacts and ecofacts (principally small bone fragments, Fig. 11). A number of bulk samples were also taken for more controlled processing during post-excavation work. Due to the training nature of the field school, a metal detector was also employed to check the spoil. This exercise revealed very little, demonstrating the effectiveness of on-site supervision and sieving.



Fig. 11 Wet-sieving in the field next to the cashel (above), and dry-sieving during the drought (below).

Artefact strategy

All artefacts from the current season were retained. These have been numbered and recorded in accordance with current National Museum of Ireland guidelines. All artefacts (excluding those from this season, though work is underway) have now been fully catalogued (in publishable form, and using the NMI artefact database). All finds will be treated, stored and conserved in accordance with *Advice Notes for Excavators* (NMI 2010). Post-fieldwork conservation services are provided by a recognised IPCRA conservator (Susannah Kelly, UCD). The artefacts will be temporarily stored in NUI, Galway and the Caherconnell Archaeological Field School, and will be deposited with the National Museum of Ireland in due course.



Fig. 12 BurrenBeo volunteer learning to draw artefacts.

In addition, an artefact project was launched in 2015 to train local BurrenBeo Conservation Volunteers in the methods of artefact recording (Fig. 12). It is hoped that these volunteers will assist with future artefact processing.

Excavation results

Twenty new context numbers were allocated in 2018, bringing the total number of contexts recorded thus far to 266. These include numbers for the cashel (01), cashel tumble (02, 05, 06, 22, 24), the sod and topsoil (03, 04), and the bedrock (00).

A total of eight archaeological phases have been identified to date, six of which were clearly evident in 2018. These are described below in stratigraphic/chronological order. It can be stated with a high degree of confidence that these phases date to the early-medieval, medieval and post-medieval periods. It is hoped that further relative dating (artefact typology) and absolute dating (radiocarbon) will facilitate refinement of this stratigraphic sequence.

Within Cutting I, the limestone bedrock (00) was karstified and was characterised by frequent shallow grykes or fissures orientated approximately north-south and averaging 0.04m in width (though one or two widened to 0.15m in places). The grykes averaged 0.05m in depth, reaching 0.12m in a few places. Occasional 0.01m-wide calcite veins occurred, particularly in the west end of the cutting. The surface of the bedrock was relatively flat and level across most of the cutting (Fig. 13), though did step down slightly just inside the eastern section of the cutting (a drop of no more than 0.1m). Bedrock in the extreme north-western corner was smoother than elsewhere, having been at least partially exposed by early-modern/modern clearance activity in this area (and stretching into adjacent areas of cuttings G and H).



Fig. 13 Bedrock in Cutting I. Scales 2m.

Phase 1: Early Medieval Pre-cashel Activity

Evidence of this phase was uncovered in Cutting D1 in 2013. It comprised a low burial mound covering two cists containing the remains of two infants and an elderly woman, all dating from the late 6th / early 7th century AD (Fig. 14). No features of this date were identified in Cutting I.

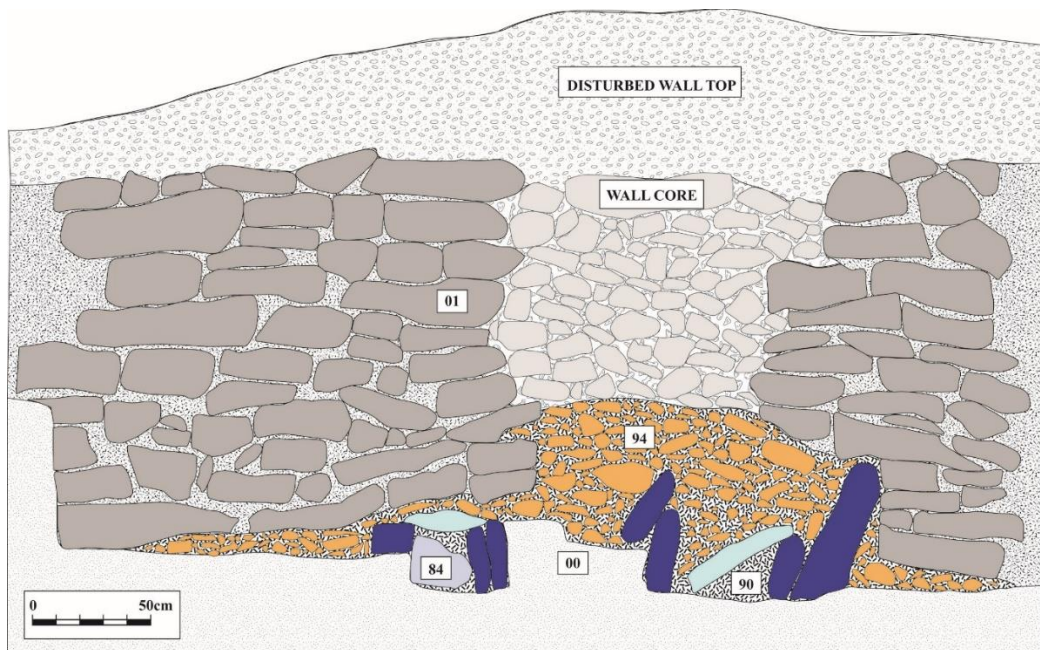


Fig. 14 Section of burial mound and cashel-wall elevation.

Phase 2: Early Medieval pre-cashel Activity

So far, this phase is represented by a rock-cut fire-pit excavated in 2011 (Cutting B). Bone from the pit was radiocarbon-dated to the second half of the 7th century AD. No features of this date were identified in Cutting I.

Phase 3: Levelling and Construction

Cuttings A – C, F, H/H1, and I showed that the cashel wall (01) was built directly on the limestone bedrock (00) in most places. The only deviation from this occurred along the top of a small number of shallow grykes that appear to have had small stones used to fill them (56/37) – before the cashel wall was built over their tops. In Cutting D1 the cashel was built partly on bedrock and partly up over the top of the Phase 1 burial mound. Immediately over the bedrock in the eastern end of Cutting I, and running beneath the cashel wall, was a very compact deposit (37) of small stones (0.02–0.7m maximum dimension) in a white to grey silty sand matrix. This deposit was used as a levelling material in the eastern part of the cutting where the bedrock dropped slightly, to create a flat, level surface upon which the cashel wall was partially built. It had a maximum thickness of 0.1m.

In the relevant cuttings, the inner face of the cashel wall showed two distinct styles of construction. The bottom metre comprised relatively thin slabs of limestone laid in fairly regular horizontal courses, a well-built wall with few gaps between the slabs. This bottom metre was mostly below the modern ground surface and, therefore, somewhat protected. Above this the stones are generally shorter and thicker, with only the occasional large slab used. There are also more gaps between the stones. The different nature of the upper stones may relate to the difficulties encountered in raising large slabs as the height of the wall increased, and the gaps between stones are perhaps due to exposure to early modern human and animal activity.

Fig. 15 Extra 'skin' added to internal face of cashel wall.



In Cuttings F and I, a 0.2m – 0.35m-wide ledge originally ran along the inner face of the cashel wall, approximately 1.5m above ground level. Part of its length was masked by early-modern rebuilding of the wall in Cutting F, where the rebuilt upper section of the wall sat flush with the inner face of the lower portion of the wall – effectively ‘filling’ the ledge for a length of approximately 5m. This was also identified in Cutting I. At roughly 2m below the current top of the wall, this ledge did not provide a view out over the wall. No trace of an upper ledge was identified. The function of the existing ledge may have been related to the construction of the wall. The ‘filling’/concealing of the ledge in Cutting I may have occurred during a phase of use when the ledge was no longer required, but occupation continued within the cashel. The added skin (Fig. 15) is

well built, merging almost seamlessly with the lower, existing inner face of the cashel wall. Although not definite, this alteration in Cutting I may have occurred in the 15th/16th century when this part of the cashel interior was used to house animals. Early modern/modern alterations to the cashel wall are much more casual in construction, with stones roughly thrown/shoved into place, often at irregular angles. The cashel wall defined the southern edges of Cutting I. Uneven along its top, this stretch of wall survived to a maximum height of 3.25m within Cutting I.

Phase 4: Early occupation (Fig. 17)

Overlying the levelling layer (37) or bedrock (00) was a definite occupation layer (36). This deposit (up to 0.30m thick in places) was a grey-brown, compact silty clay with frequent small to medium stones (0.01-0.08m maximum dimension). Regular charcoal, some charred hazelnut shell and marine-shell fragments, slag, a considerable quantity of animal bone, and a variety of artefacts were recovered from this deposit. The richness of the later in this cutting relates to the presence here of a midden (262), and protection offered by later features including the slab surface (33), structure (180), wall (247), and tumble (22). This occupation layer occurred across the cutting, averaging 0.20m thick. It thinned towards the extreme northwest corner of the cutting, where it had been disturbed/removed by modern clearance.



Fig. 16 Part of the midden (262), showing animal bone and lighter coloured ashy material. Scale 0.3m.

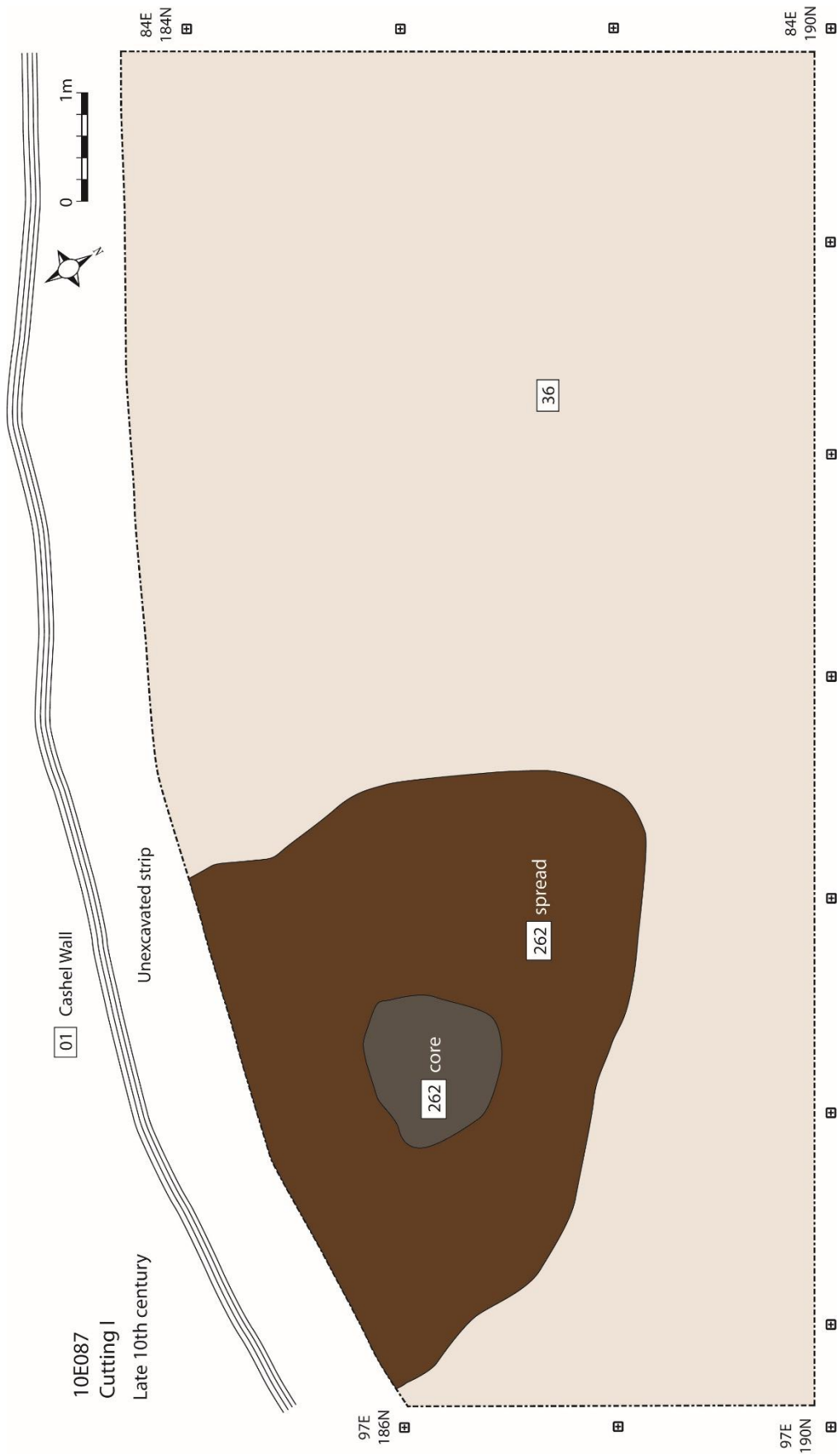


Fig. 17 Select contexts from Phase 4: Early occupation in Cutting I.

In Cutting I, early activity was represented only (excluding material culture) by this general layer, and a refuse midden (262) located in the southeast of the cutting. This midden (Fig. 16) comprised a sub-circular core area consisting of moderately compact, charcoal-rich, dark-grey clayey-silt with lenses of cream-coloured ash and moderate stone inclusions (0.07 – 0.12m maximum dimension). The bone-rich midden material extended beyond this core area of 1.2m north-south by 1.3m east-west, to cover an area of at least 5.25m east-west by 4m north-south. This may be the original extent of the midden, or may be partially the result of spreading due to the placement of very large (33) slabs to bury this material and provide a stable surface in the 11th century (see below). The concentration of material lessened as the midden thinned from 0.17m at its core, to 0.07m at its edges. Coprolite occurred throughout, with a specific concentration on the western edge of the midden. A furnace/smithing-hearth bottom was also recovered from the midden. The large quantity of big fragments/intact animal bone and variety of tools found in this part of the cashel interior might suggest that activities such as butchery, bone-working, and leather-working occurred here, likely in an outdoor setting, with some shelter provided by the adjacent cashel wall. The proximity of the iron-working area in Cutting G supports the idea of a craft/industrial zone in this part of the cashel.

Phase 5: Middle occupation (Fig. 19)

The start of the next phase of occupation is marked by the deliberate laying of a slab surface across parts of the cutting. This, lower, slab surface (33) was originally relatively well constructed from irregularly shaped limestone slabs, measuring up to 1.2m in maximum dimension (Fig. 18). Later subsidence of organic material beneath it, and pressure from heavy stone-laden contexts above caused the shifting of some of the slabs from their original flat, level positions. In places of high bedrock, the slabs often run up to it, forming a level surface with the bedrock. The slabs survived best in the eastern part of Cutting I, where all layers were protected by later tumble from the cashel wall. Here, three large slabs (1.2m x 0.8m, 0.35m thick), and about a dozen medium-sized slabs (0.35m – 0.5m maximum dimension) were relatively well laid and tightly fitted together. They covered an area 2.3m north-south and 4m east-west, and probably ran right up to the cashel wall. This cannot be confirmed, however, as an undug strip was left along the base of the cashel wall to avoid destabilising its



inner face. The well-constructed nature of (33) in this area was probably due to the presence of the underlying midden (262). The slabs did not extend under the contemporary structure (180).

Fig. 18 Well-preserved section of (33) slab surface.



Fig. 19 Select contexts from Phase 5: Middle occupation in Cutting I.

Several features were associated with this slab-surface level, being constructed on top of (33) or on top of (36) where no slabs were present.

In the southeast corner of Cutting I (Fig. 20), a fire-pit dates to this phase of activity. A cut was made down through the (33) slabs, and a fire lit within the depression. The ‘pit’ (256) was defined by a variety of stone elements and cut edges of underlying (36) occupation material. Slabs of (33) formed the west, north and east sides, and four closely set smaller stones (0.2m – 0.25m maximum dimension) the south. The pit was sub-rectangular in shape, with irregular sides and base, and measured 0.90m north-south by 0.86m east-west, and 0.24m deep. The fire remains were contained within, and overflowing the top. The upper levels comprised a deposit of rich charcoal, with regular burnt hazelnut shells, some bone and sea-shell fragments (255). Within the pit it measured 0.60m north-south, and 0.65m east-west, with the overflowing spread reaching 0.85m north-south and 0.70m east-west. It survived to a maximum thickness of 0.10m. This charcoal covered a deposit of cream-coloured ash (259) that measured 0.58m north-south by 0.44m east-west, with a maximum thickness of 0.19m. This irregular, dome-shaped, deposit of mottled ash comprised lenses representing a minimum of five separate firings. Compact, dry and fine, it contained fragments of sea-shell and burnt bone on its surface.

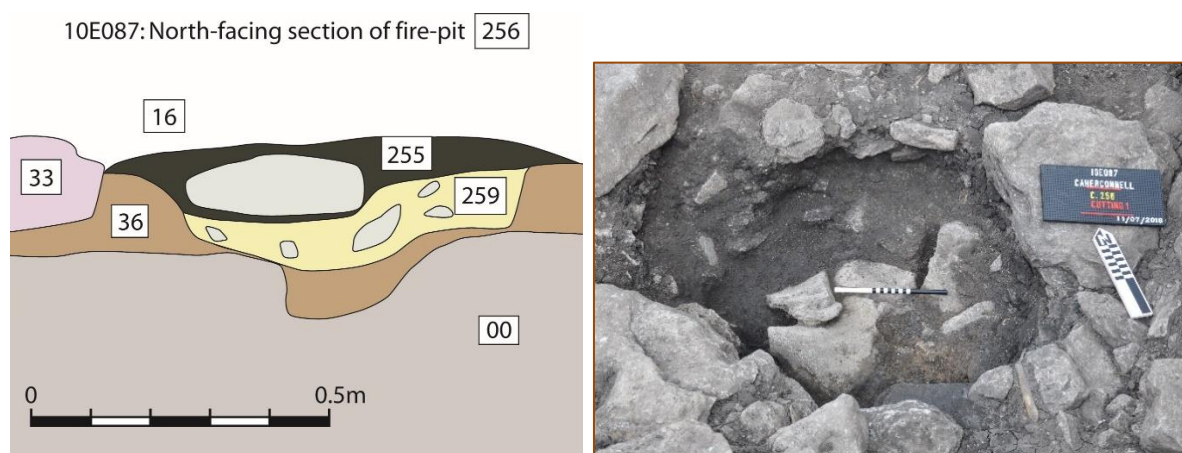


Fig. 20 North-facing section of fire-pit (left); pit after excavation, Scale 0.3m (right).

The largest feature from this phase was the remaining section of structure (180) (Fig. 21), first identified and excavated in Cutting G in 2016. This proved much larger than initially suspected, forming a rectangular structure measuring 4.33m north-south and 6.3m east-west (externally) within Cutting I (approximately 6.3m by 6.3m overall). The southern end wall of the structure was best preserved, having been protected by overlying cashel-wall tumble (22). Here the base of the wall was constructed of large stones and slabs laid horizontally in a straight line, set on a foundation layer of compacted stone beneath (265). These limestone pieces measured 0.05m – 0.12m in maximum dimension, and were set into a roughly cut/formed foundation trench (266) in the underlying (36) and (262), with approximately 0.10m of these remaining *in situ* between the base of the foundation material and the underlying bedrock. This 0.15m-deep foundation occurred beneath the south gable and southeast corner (6.3m long, 1.1m wide), to provide a stable building surface above the soft

earlier midden material. The slabs of the south gable measured 0.83m in maximum dimension, with only the bottom two courses surviving *in situ*. Slightly rounded external corners connected with the remains of the long side walls of the structure. The south-eastern corner was best preserved, with up to four courses surviving along its external face; 1.18m wide and 0.38m high. Unfortunately, the east and west side walls were not protected by cashel-wall tumble, and were located in an area that saw heavy use by cattle in modern times. As a result, little of these walls survives undisturbed. Rather than a line of *in situ* slabs or stones, a wider spread of stone is all that marks the original line of the side walls. The surviving, disturbed, slabs of the side walls average 0.20m – 0.30m in maximum dimension. The less-disturbed east wall was built directly on 0.25m of (36)/(262). A definite doorway was not identified, though this likely lay at the north end of the structure, near the entrance to the contemporary main house (100). This end of the structure either lies beneath the 15th/16th-century cross-wall (48), or was destroyed during the building of this wall.



Fig. 21 Structure (180) from north. Scales 2m.

Two features occurred inside the structure in Cutting I (Fig. 22). A post-setting (260) was located 0.60m north of the south gable wall, just off-centre. A sub-rectangular setting of limestone, two horizontally laid stones formed its base (0.27m x 0.19m internally), a vertical slab its south side (0.31m high, 0.45m wide, 0.14m thick), the straight edge of a medium-sized stone its east side (0.34m x 0.25m, 0.09m high), and two small stones mark its west side (0.13m x 0.11m x 0.05m, and 0.15m x 0.09m x 0.08m). This setting probably supported the base of an upright timber, possibly a roof support, or an element of internal furniture. Approximately 0.50m west of this setting occurred a linear stone deposit (261), running east-west for 1.66m (0.63m wide), up to the internal face of the (180) structure wall. It consisted of

well-set small and medium stones (up to 0.20m maximum dimension), three courses wide, and up to two courses high. Set on top of the underlying (36), it may have formed the base for an item of furniture.



Fig. 22 Post-setting (260), and linear feature (261).

Within structure (180), the primary occupation material (187) survives as a thin layer atop the compacted and trampled surface of the underlying occupation material (mostly (36), with some (262) inside the east wall and southeast corner). This was a mid-brown silty clay, with frequent small-stone inclusions, occasionally heat-shattered, (0.02m – 0.10m maximum dimension) and very frequent smashed animal bone fragments, 2 – 5% of which were burned. Finds included a couple of iron knives, quern fragments, a sewing needle, and an intact iron sickle. All of this, in conjunction with the hearth found in the north end of the structure in Cutting G, all suggests use of the building as a multi-purpose domestic structure.

Outside structure (180), covering the slab surface (33) and the early occupation layer (36) was an occupation layer (16), up to 0.15m thick. This mid- to dark-brown silty clay occurred everywhere except within the (180) structure, where (187) was its equivalent. It contained regular charcoal inclusions, hazelnut shells, and rare marine-shell fragments, frequent stones (0.05–0.20m maximum dimension) and animal bone, and a small number of finds.

Phase 6: Late occupation (Fig. 24)

Sometime after this a second slab surface (28) (Fig. 23) was laid down on top of occupation layer (16). This, too, consisted of local limestone slabs (0.45m average maximum dimension, up to 0.9m, and 0.1m thick), but it appeared rougher in construction than its predecessor, and only survived in patches within Cutting I – mostly along the south side and east end, where



protected by later cashel-wall tumble (22), and outside of structure (180) suggesting its continued use (supporting evidence found in Cutting G in 2016). Originally relatively level, most of the slabs were moved slightly by the same later tumble. They were completely absent from the disturbed northern and north-western part of the cutting.

Fig. 23 Slab surface (28). Scale 1m.

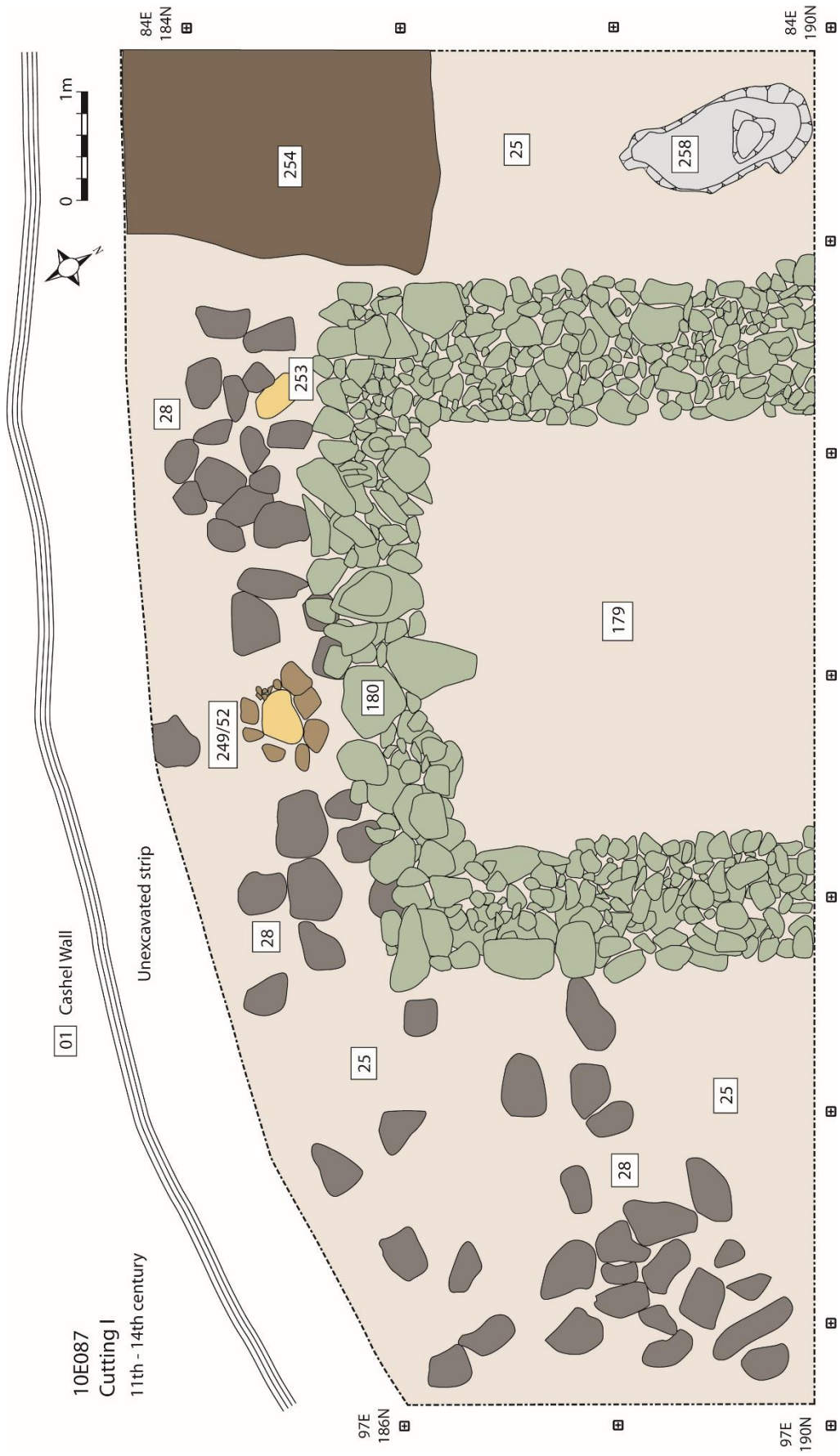


Fig. 24 Select contexts from Phase 6: Late occupation in Cutting I.

Two outdoor fires were located atop the (28) slabs in the southern part of the cutting. A small oval deposit of charcoal and ash (253) represented the remains of a small fire located immediately south of structure (180) (which appears to have continued in use during this phase). This material was not contained within a formal setting, but covered an area of 0.5m northwest-southeast and 0.36m northeast-southwest, with a maximum thickness of 0.06m. The second fire was a more substantial affair (Fig. 25), located over 2m east of (253). Five horizontal limestone slabs (0.31m – 0.59m maximum dimension) and up to nine smaller stones (0.08m – 0.20m maximum dimension) formed an irregularly-shaped setting (252) for this hearth. More stones/slabs formed the base, however these – and some of the edging stones – were shattered by the heat of the fire, so their original number or form cannot be determined. All were of limestone, and covered an area measuring roughly 1.26m north-south and 0.8m east-west. Contained within the setting was a deposit of burnt material (249), irregular in shape, and comprising a mix of charcoal and pale-orange ash, 0.06m thick. It covered an area of 0.32m north-south and 0.47m east-west.



Fig. 25 Hearth (249)/(252), with heat-shattered stone visible around edge. Scale 0.3m.

Structure (180) appears to have continued in use during this phase, with a large pit dug into its northern end (pit 186/193, Cutting G), and a secondary use layer spread across its interior. This layer (179) was first identified in Cutting G, but patches of it also survived within Cutting I. It comprised a mid-brown silty clay with frequent stones (0.05m – 0.12m maximum dimension), often surviving under areas of collapsed stone that protected it from modern cattle activity. Finds included a silver long-cross penny of c.1300AD.

Half of a silver long-cross penny of c.1250AD was found at the base of a fill of a rock-cut pit (Fig. 26) in the extreme northwest of the cutting, suggesting it dates to this phase of activity. The sub-oval shaped cut (258), 1.70m north-south by 0.73m east-west at top, had almost straight sides and a slightly sloping base, 0.29m -0.58m deep. It contained a compact fill (257) of dark-brown silt with frequent small limestone pieces (0.03m – 0.10m maximum dimension), regular animal-bone fragments, and occasional charcoal. The purpose of the pit is uncertain, though may have functioned as a simple refuse pit, or something associated with everyday life in the cashel.



Fig. 26 Rock-cut pit (258).

Built up atop the slabs, or earlier contexts where the slabs were absent, was an occupation layer (25), continuing the stratigraphic sequence identified in previous cuttings. This layer comprised a moderately to strongly compact stone (up to 0.15m maximum dimension) and gravel deposit in a brown silty matrix, rich in animal bone, though less gravelly when protected by later stone tumble, or when mixed with overlying (23) occupation material by modern disturbance. It contained slag, charcoal, and marine shell, and reached a maximum thickness of 0.08m.

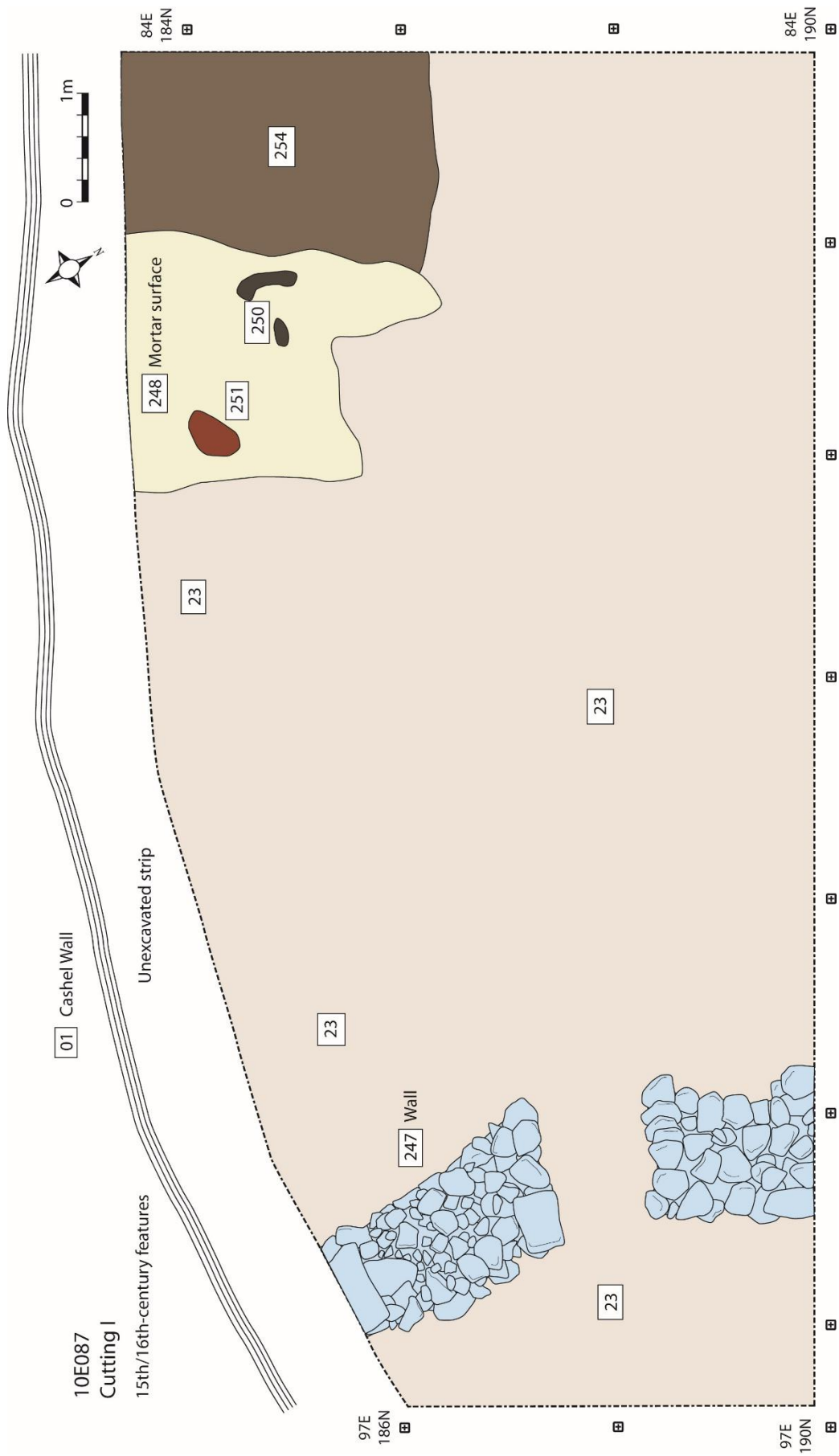


Fig. 27 Select contexts from Phase 7: Final occupation in Cutting I.

Phase 7 Final occupation (Fig. 27)

The final human occupation of the cashel is marked by the reconstruction of the cashel entrance (2010 Cutting A), construction of a rectangular house (120) (trial excavation 2007, and 2015 Cutting F), and a drystone wall (Cuttings C, E, G, and H) dividing the cashel interior in two. It is also possible that it was during this phase that a second skin was added to part of the internal face of the cashel wall (01). Collapse of stones from the upper reaches of the wall in Cutting I revealed the addition of a second internal skin, just one course wide, on top of the original internal ledge identified elsewhere in the cashel, effectively masking this feature. Presumably this was done in parts of the cashel where, and when, access to the wall top was no longer required or desired. Patches of modern repair or rebuild are readily identifiable, comprising areas where stones have been roughly and loosely placed back on/in the wall, usually at irregular angles. This second skin, however, is well built of horizontal courses, very similar to the original inner face. Access to the wall top would probably not have been required in the area of Cutting I in the 15th/16th-century when animals were housed south of cross-wall (48), and contained by wall (247) (see below) to the east. This might have been the time when the second skin was added (though it may also have occurred earlier for some other reason).

Not visible above ground prior to excavation, a 4.2m-length of drystone wall (247) was uncovered in Cutting I (Fig. 28). This ran from the eastern end of cross-wall (48), at a roughly right angle, to the inner face of the cashel wall (01). Only the bottom couple of courses survived, comprising two rows of large stones or horizontal slabs (up to 0.45m maximum dimension) forming inner and outer faces, with some smaller stones (0.10m – 0.20m maximum dimension) between. The slabs occasionally partially overlap. A single large slab, 0.80m wide spans the width of the wall at its south end, atop roughly four courses of stone, though it is uncertain if this was originally part of the wall. If it was, then the height of the wall at this point was 0.46m, elsewhere it survives to approximately 0.3m. An entrance gap



was located 2m south of the cross-wall (48). It measured 0.85m in width, with angled or overlapping stones marking its edges – similar to the basal course of the cross-wall (48). Built at the same level as the cross-wall, the two walls are not keyed into one another, suggesting that wall (247) might be a little later in date.

Fig. 28 Wall (247).

At the same level as wall (247), but in the western part of the cutting, an area of deliberately laid, cream-coloured, lime-mortar flooring (248) was discovered (Fig. 29). This formed a relatively level and compact surface of irregular shape, but with an almost straight western side. It measured 2.42m north-south (running into section on south side, and probably destroyed by later disturbance on its north side), 1.71m east-west, and had a maximum thickness of 0.08m. Identical to the floor laid inside the 15th/16th-century house (120) in Cutting F, this surface appears to have been laid to provide a clean and stable work area. Little evidence of structural remains was discovered, however later activity might be responsible for much of this. There was one small, intense patch of charcoal (250) within (248), but this is more likely to represent wood burnt during the manufacture of the lime mortar rather than any part of a burnt timber structure. Irregular in shape, it measured 0.50m north-south, 0.08m – 0.15m east-west, and just 0.02m thick. A slight hollow in the surface of the (248) lime-mortar contained a sub-circular deposit of burnt material (251). A brown silty clay, it was rich in charcoal (some pieces up to 0.01m maximum dimension), and also included some small burned stones (0.03m – 0.07m maximum dimension). It appears to be a small accumulation of charcoal-rich occupation material on the surface of (248).



Fig. 29 Lime-mortar surface (248). Scales 1m and 2m.

Between the straight western side of (248) and the western section of Cutting I, lay a deposit of dark-brown silty clay (254) containing regular small stones (0.05m – 0.15m maximum dimension). This material appears to have been deposited from the 15th/16th-century level, replacing the underlying (25) occupation layer to a maximum depth of 0.08m. It is similar in form to the overlying general 15th/16th-century occupation layer (23), but too wide to be the fill of a foundation trench along the west side of the mortar floor (248). There is a distinct cut

or edge to the mortar, and underlying cut through occupation layers (25) and (16), and slab surface (33), with the deposit petering out to the north where modern disturbance occurred, and running into the cutting section to the west and south. Beneath (254) the deposit lightened in colour to a mid-brown clayey silt, and became quite compact (264). A small number of stones (0.15m – 0.20m maximum dimension) were scattered throughout, and it also contained some broken animal bone and charcoal. It also measured an average of 0.08m thick. It is possible that this material represents all that survives of a disturbed foundation trench for a structural element associated with the mortar floor (248), or digging that occurred down through the 15th/16th-century surface for some purpose now masked by the later/early modern disturbance in the area.

An occupation layer built up on top of these features and the earlier habitation material (25). This new occupation layer (23) comprised mid- to dark-brown stony (0.07m average maximum dimension), silty clay scattered across the cutting, thickest where protected by overlying cashel-wall tumble (22). Still present elsewhere within the cutting, it was often disturbed by modern use of the cashel as a livestock pen. A moderately compact humic material, it averaged 0.15m thick.

Phase 8 Post human-occupation

The final layers present in the cashel represent structural collapse, deliberate digging, demolition and/or accidental knocking, all related to the use of the site as a stock enclosure right up into the 20th century.

The bedrock pit (258) was, at first glance, similar in form to two other rock-cut pits in immediately adjacent parts of cuttings H and G. The current landowner recalls the practice of levering up slabs of bedrock to form water troughs for animals. In addition, the similar feature in Cutting G contained a fragment of a 19th/20th-century iron pot. The depth of (258), its non-humic fill, and finds of bone, charcoal, iron implement, and silver coin, however, mark it as decidedly different to the other pits. There is no reason, though, why it might not also have functioned as a water/liquid container, especially if lined with leather.

All of this activity coincided with, or was followed by, animal and/or weather-induced collapse of stones from the cashel wall (01). Tumble from the cashel wall (22) was particularly heavy in a 3m-wide stretch along its base in Cutting I, and extending across the entire width of the cutting at its east end (Fig. 30). The upper stones were loosely tumbled, but the deposit became more compact with depth – as might be expected from the weight of the overlying stones. The stones and slabs ranged in maximum dimension from 0.15m to 0.35m, with approximately 25% being larger and measuring up to 0.8m in maximum dimension. The larger slabs that originally faced the interior of the cashel wall lay at the base of the tumble, with the slightly smaller stones from the core found above them. Voids were frequent, and the deposit measured up to 0.58m thick in places.



Fig. 30 Stone tumbled from the cashel wall (22) in Cutting I.

All were overlain by humus (04) and sod/moss (03) that was up to 0.25m thick in places, reflecting the churning, exposing, and manuring of the upper levels of the interior during early modern and modern use as a stock enclosure.

Backfilling (Fig. 31)

The entire cutting was backfilled and re-sodded, bringing the surface back level with the rest of the cashel interior. As this site is the focus of a visitor centre, an attempt is made to leave certain features visible or marked on the surface – this was discussed with Ann Lynch of the National Monuments Service during a site visit in 2015. In Cutting I, the tumbled stones from the cashel wall (22) were not replaced, leaving the inner face of the wall more visible. The line of structure wall (180) was marked on the surface of the backfill with flat limestone slabs. Explanation of this will be added to the 2019 version of the visitor booklet, to aid visitor understanding of the site and its phases of activity.



Fig. 31 Pre-excavation (top), post-excavation with walls of structure (180) marked by slabs on surface (bottom).

Finds (Figs. 32 - 51 etc.)

A list of finds is given as Appendix 3, the detailed catalogue of 2018 artefacts commenced, but not yet completed. 186 artefacts were recovered, each attributed to one of the phases identified above. Items of stone, clay, bone, iron, bronze, silver, and glass were discovered.



Fig. 32 Quern fragments, from up to 7 different stones.



Fig. 33 Whetstones.



Fig. 34 Rubbing/polishing stones.



Fig. 35 Hammer stones.



Fig. 36 Faceted bead.



Fig. 37 Flint leaf-shaped arrowhead, and chert scraper.



Fig. 38 In situ bone comb.



Fig. 39 Bone-comb fragments.



Fig. 40 Bone pins and points.



Fig. 41 Antler tine/handle.



Fig. 42 Iron nails.



Fig. 43 Iron knives (including shears blade on left).



Fig. 44 Iron awls/points.



Fig. 45 Iron fittings, possibly from scabbards.



Fig. 46 Iron suspension hook.



Fig. 47 Bronze, and silver, stick pins.

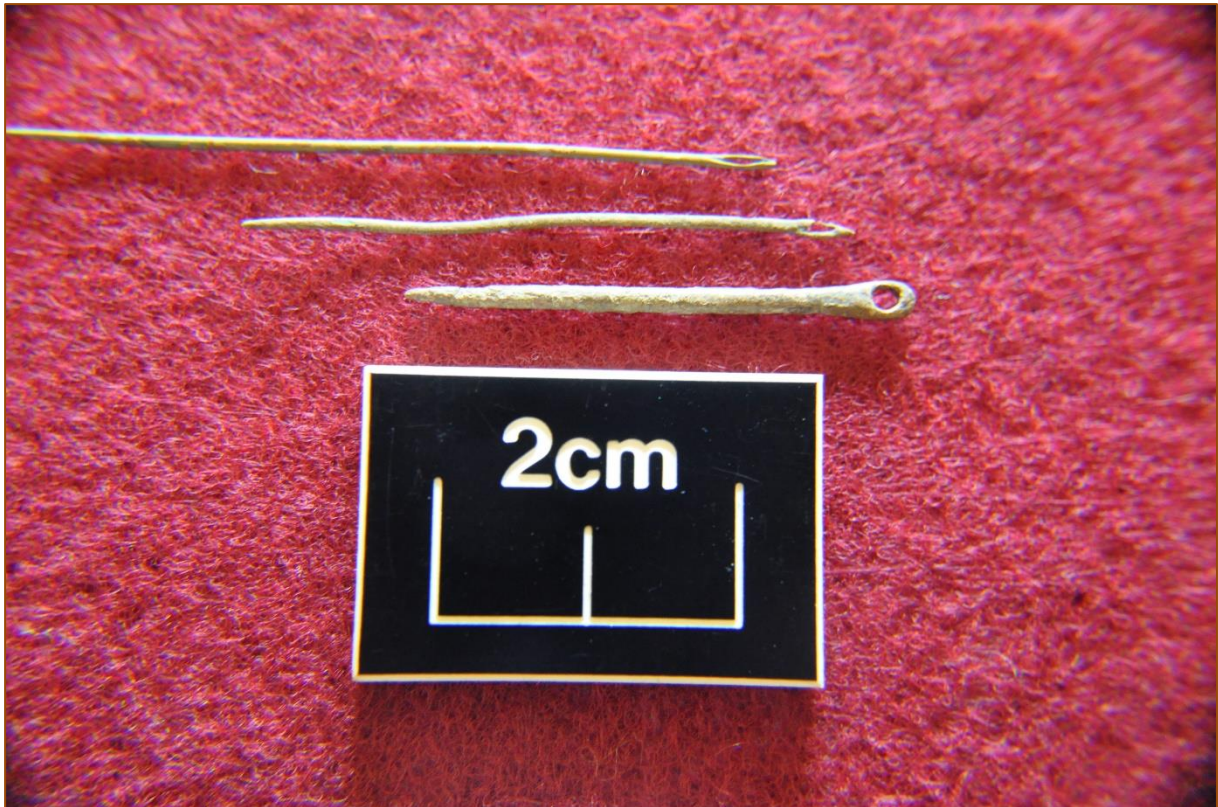


Fig. 48 Bronze sewing needles.

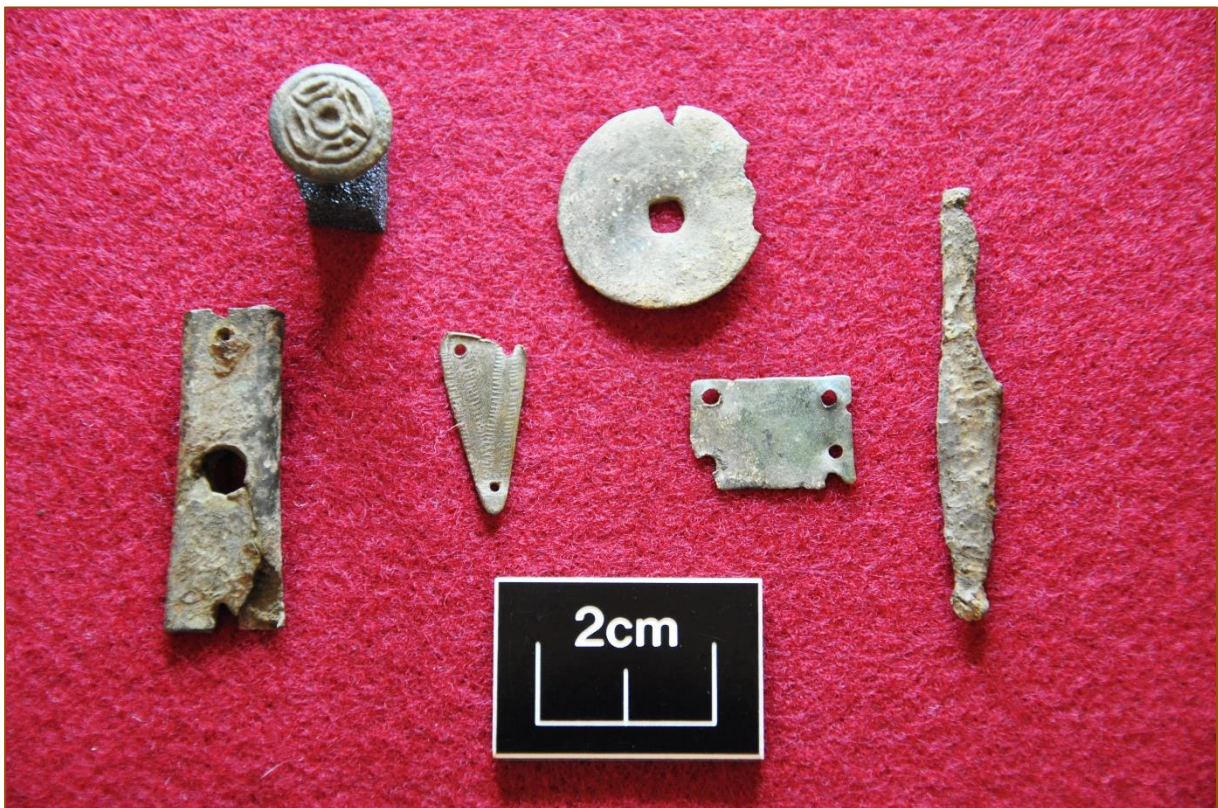


Fig. 49 Miscellaneous bronze items, including decorated stud and button? (top), strap fittings (bottom), and chape (right).

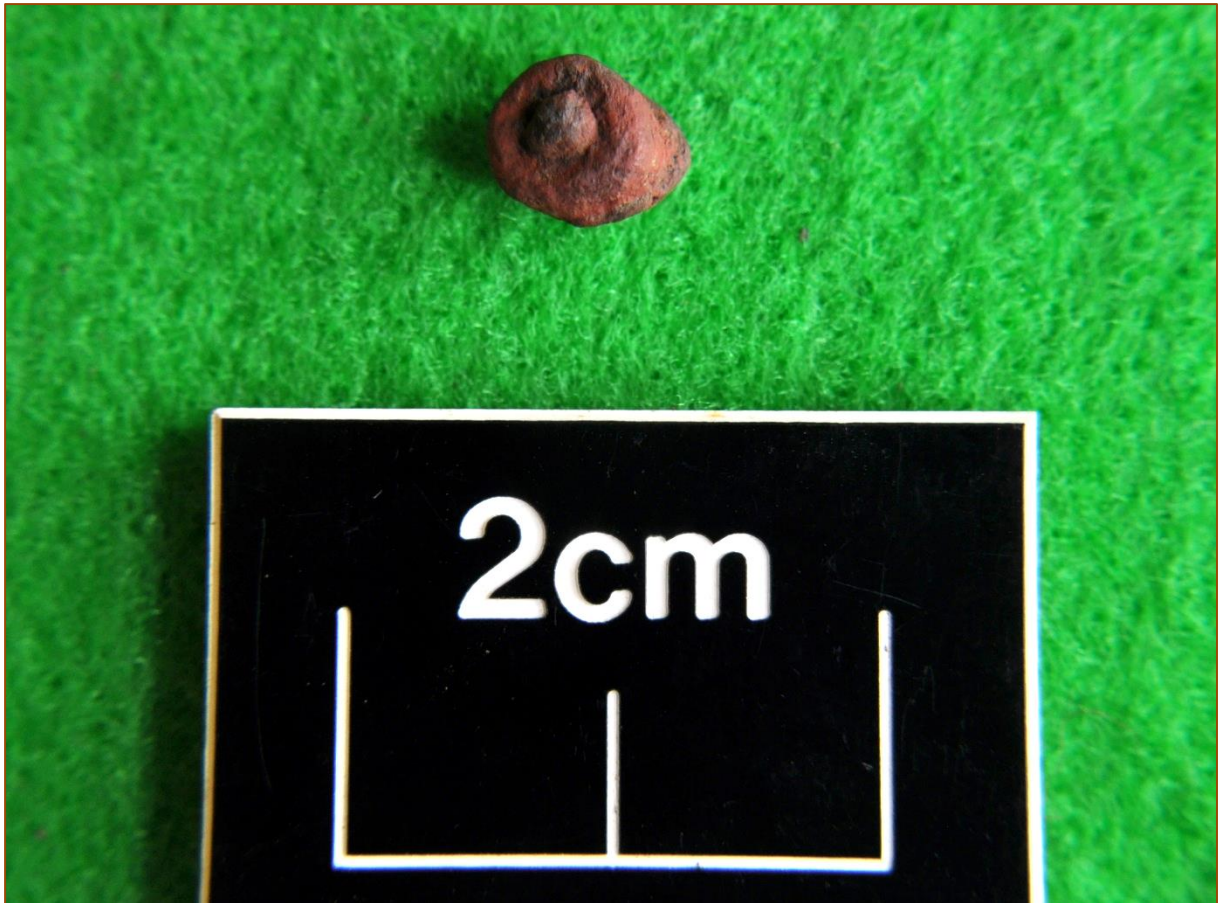


Fig. 50 Red bead with length of iron inside.



Fig. 51 Adjoining sherds of bulbous/rounded glass bottle.

Stone artefacts include 10 fragments of rotary querns (Fig. 32), four of which probably belong to the one decorated stone, 12 whetstones (Fig. 33), 8 rubbing/polishing or food-preparation stones (Fig. 34), 2 hammer-stones (Fig. 35), a fragment of a faceted jet bead (Fig. 36), 7 chert lithics including a scraper (Fig. 37), 7 flint lithics including three-quarters of a leaf-shaped arrowhead (Fig. 37), and a flint strike-a-light. Bone was used in the manufacture of several composite bone combs, two of which were found almost complete though broken into many pieces (Figs. 38 and 39), miscellaneous points and dress-pins (Fig. 40) (one of which might have been used as a stylus), a disc bead, a sewing needle, and spindle-whorl. Evidence of on-site bone-working comprised two comb roughouts, and a sawn antler tine probably used as a handle (Fig. 41). The iron remains vary in form and degree of preservation. They include 8 nails and tacks (Fig. 42), 1 shaft, 1 possible ringed-pin, 4 miscellaneous objects/tools, 11 knives/blades (Fig. 43), 2 drawknives, a socketed barbed arrowhead and a smaller possible bodkin-type arrowhead, a sewing needle fragment, part of a buckle frame, a horseshoe fragment, a sickle, 5 points (Fig. 44), 4 socketed curved blades, 3 oval fittings (Fig. 45), a suspension hook and link (Fig. 46), and a socketed and pronged tool. Bronze items include 2 decorated stick-pins and a plain shaft (Fig. 47), a small plate, 3 sewing needles (Fig. 48), a decorated stud, small triangular lace-end, a more robust strap-end/fitting, a slender chape, and a thin button/perforated disc (Fig. 49). Other materials represented include 3 clay crucible fragments, 1 mould fragment, 2 fragments of clay pipe, a small red bead with the remains of an iron rod within (Fig. 50), two sherds of a late medieval glass bottle (Fig. 51), two 13th/14th-century silver coins and a silver dress-pin.

These artefacts reflect something of the activities that took place within the cashel, and the status of its occupants. An assemblage of slag weighing 2463g, a small collection of iron pieces possibly representing stock for ironworking, the whetstones, mould fragment, and crucible sherds (Fig. 52) reflect metalworking in the vicinity of the east end of Cutting I. This is supported by the excavation of an iron-working area several metres away in Cutting G in 2016. It is possible, if not probable, that the metal artefacts recovered during excavation were manufactured at Caherconnell. The small triangular lace/strap-end and the head of the silver dress-pin bear very similar decoration, suggesting that they were made by the same person or workshop. The small red bead with length of iron rod still within might suggest on-site bead making. The range of miscellaneous metal and bone tools were undoubtedly employed in a number of craft activities taking place within the enclosure.



Fig. 52 Collection of iron fragments, crucible sherds and mould fragment.



Fig. 53 Evidence of on-site bone-working: bone bead, two comb roughouts; iron pronged tool (possibly also used in leather-working).

Woodworking is suggested by the presence of iron nails and other tools. Many, if not all, of the stone objects were probably made locally, though (with the exception of possible lithic debitage) there is no definite proof of this. The plentiful supply of raw material, a few partially-worked fragments (from 2011, 2016, 2017 and 2018), and a range of tools and finished items (combs, pins, spindle-whorls, beads, gaming-pieces, points and needles) suggest that bone-working occurred at Caherconnell (Fig. 53). In addition, a deliberately sawn/cut section of deer antler (comprising two tines) was uncovered in cutting E, and a possible handle in Cutting I. The bone and stone spindle-whorls from cuttings B, D, E, F, G and I, the probable weaving sword from Cutting B, the bone points/awls and the sewing needles from Cuttings C, D, F, G, H and I, the stone needle punch from Cutting G, the drawknives from Cutting I, and the plentiful raw material reflect textile and leather-working (Figs. 54 and 55), while the quern fragments, sickle, smaller curved blades (Fig. 56), and charred grains reflect food harvesting and processing.

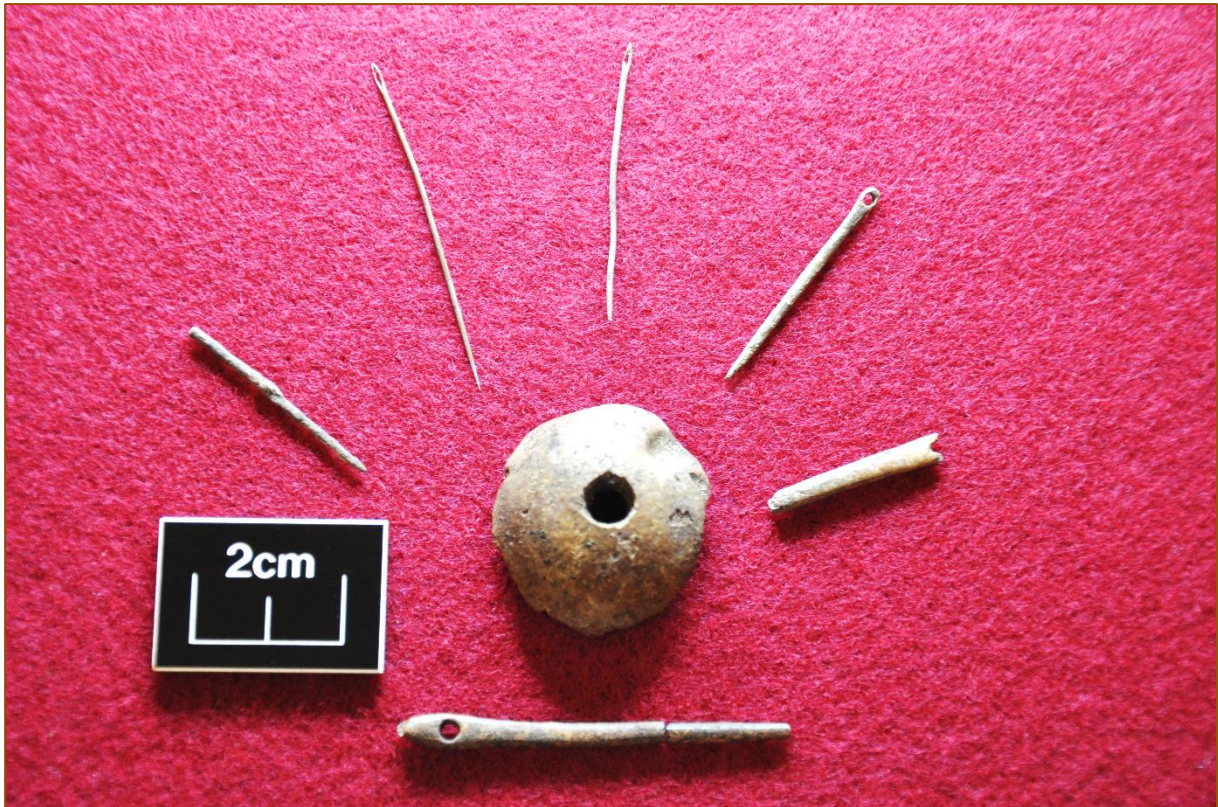


Fig. 54 Evidence of on-site textile production: iron, bronze and bone needles, bone spindle-whorl.



Fig. 55 Drawknives.



Fig. 56 Sickle and smaller curved blades.

Less 'domestic', high-status activities are represented by bodkin/armour-piercing arrowheads from Cuttings D, E, H and I (Fig. 61), the barbed arrowheads from Cuttings F and I (Fig. 57), the harp-pegs from Cuttings A and H (and perhaps the shaft/peg from Cutting E), the gaming piece from Cutting D1 and fragment of another possible gaming piece from Cutting E, and the slate pencil from Cutting G. Trade is evident in the presence of coins, bronze, silver, glass and amber at the site, and possibly in the representation of a ship on the whetstone discovered in 2014. The red, white and blue glass bead from 2016 clearly represents trade, having originated in Venice in the late 15th or 16th century, as does the 10th-century Baltic amber bead. The clear melon bead discovered in 2017 may also have Scandinavian origins.



Fig. 57 Iron arrowhead.

Samples (Appendix 4)

Bulk soil samples were taken from nine deposits, including a midden, pit and hearth fills. These will be 100% sieved and floated for charred plant remains and wet sieved for small artefacts and ecofacts. A small collection (six samples) of charred seeds/grains and hazelnut-shell fragments was recovered during excavation.



Fig. 58 Samples of charcoal and coprolite.

Five small samples of marine shells, twenty-one (mostly large) samples of animal bone, four



samples of coprolite, and nine samples of charcoal were recovered (Fig. 58). 898g of metallurgical slag (approximately seventeen individual samples) and a hearth/furnace bottom weighing 1565g were recovered in 2018 (Fig. 59). The slag, animal bone and shell will be examined as single (large) assemblages at the conclusion of the cashel excavations. Charcoal samples are retained for species identification.

Fig. 59 Metalworking slag.

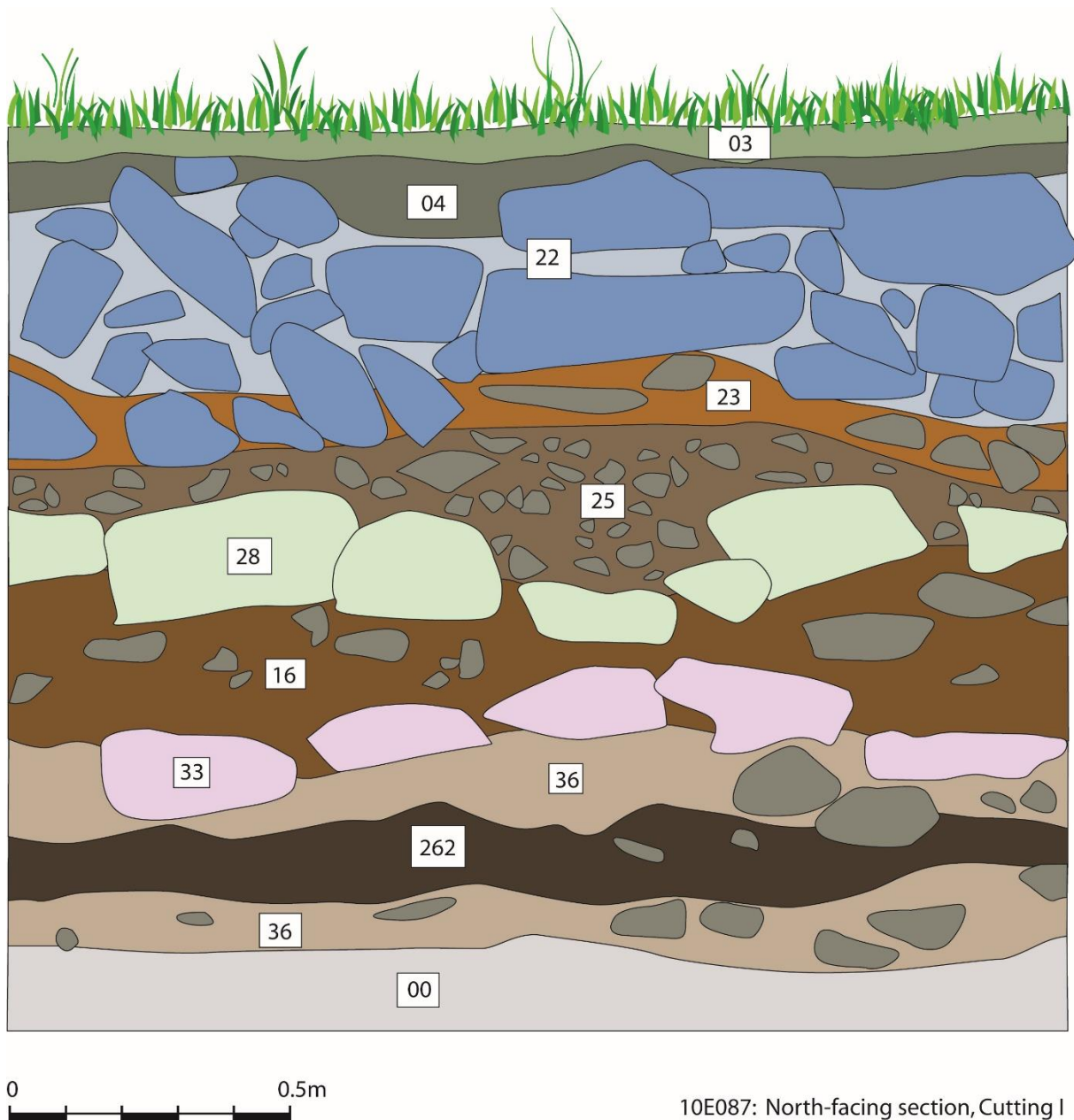


Fig. 60 Length of north-facing section, Cutting I, showing sequence of general cashel-occupation layers.

Discussion

Phasing (see section drawing Fig. 60)

Thus far, Phase 1 is represented only in Cutting D1 (2013), by the pre-cashel burial mound, the cists within it, and the human remains preserved inside the cists. No grave goods were recovered. Radiocarbon dating places these burials in the late 6th to early 7th century AD.

Phase 2 dates to the second half of the 7th century so there is only a slight chance of an overlap between phases 1 and 2. It comprises the remains of a fire-pit found in Cutting B. No Phase 2 features were identified in 2018.

Phase 3 levelling and construction was represented in Cutting I by the deposition of levelling material (37) in places before the construction of the cashel wall (01). The slightly uneven limestone bedrock necessitated this action.

Phase 4 activity, the earliest occupation phase, is marked by the construction and use of the 10m-diameter central circular house (115), a smithy in Cutting G, non-ferrous metalworking in Cutting F/H1, and a large midden in Cutting I. Definite Phase 4 artefacts in 2018, derived from context (36) etc., include iron knives, nails, points, ring, shaft, drawknife, curved blades, a socketed and pronged tool (used for bone and/or leather-working), oval fittings, buckle fragment, a collection of pieces possibly representing iron stock for metalworking, and suspension hook and link, bronze dress pin, small plate, probable button/perforated thin disc, decorated stud, triangular lace/strap-end, strap-end/fitting, sewing needles and slender chape, stone whetstones, rubbing/polishing stones (Fig. 61), flint strike-a-light, and chert and flint lithics, bone dress pins (including one possible stylus, Fig. 61), bead, comb fragments, comb roughout, sewing needle and spindle whorl, crucible sherds, clay-mould fragment, and a small red glass bead with a length of iron rod still within.



Fig. 61 Fine polishing stone, bone pin/stylus.

Features from Phase 5, the middle occupation, include the remnants of the slab surface (33), fire pit (255/256/259), and structure (180), all covered/surrounded by occupation layers (16) and (187). The slab surface, where surviving, appears to have been used to create a more level living surface inside the cashel, levelling off areas of high bedrock, especially to the east where it covered the soft earlier midden material. Artefacts from the occupation layers include quern fragments, a hammerstone, chert and flint lithics, a bone-comb roughout, a bone point and comb fragments, iron knives, a drawknife, a curved blade and a sickle, the shaft of a bronze pin, a complete bronze pin, a bronze strap-end/fitting, and a silver stick pin (Fig. 62).



Fig. 62 Head of silver pin.

Phase 6 activity includes laying of slabs (28) in parts of the cutting. The slab surface suggests a yard surface that had become muddy and required covering/stabilising in places. Also relevant are the continued house of structure (180), rock-cut pit (257/258), the hearth (249/252), and fire remains (253). Finds from Phase 6, the late occupation – occupation layer (25)/(179) – include whetstones and quern fragments, bone-comb fragments, iron nail, shaft and oval fitting, and two silver coins of the 13th/14th century AD (Fig. 63).



Fig. 63 Silver long-cross coins: c.1300AD (left), c.1250AD (right).

The final occupation, Phase 7, is represented by the construction and use of the wall crossing the interior of the cashel (48), and the wall (247) linking it to the cashel wall. Also occurring at this time was the mortared surface, and whatever activity or structure that might have been associated with it – including the digging down through underlying layers in the southwest corner of Cutting I. The occupation material from this phase (23 and 254) contained a quern fragment, hammerstone and polishing stone, an iron nail and horseshoe (Fig. 64), sherds of a glass bottle, an antler handle, and a fragment of a faceted black bead (possibly from a rosary).



Fig. 64 Iron horseshoe fragment.

Phase 8 is marked by the collapse of stone from the upper reaches of the cashel wall (22), and the clearance that occurred in the western end of Cutting I (and adjacent parts of cuttings G and H) to provide building stone for structure (195) in Cutting H. This phase marks a change in cashel use, from human habitation to animal enclosure. Finds from post human-occupation Phase 8 layers include large whetstones, a quern fragment, and two fragments of a clay pipe. (Fig. 65).



Fig. 65 Fragments of clay pipe.

10E087 C14 dates

Phase 1

6th/7th century AD

- c.(92) from 2013, Cutting D1 – Adult female
UBA-24260 cal AD 541-645 (2 sigma, 1.000)
c.(86) from 2013, Cutting D1 – Infant
UBA-24261 cal AD 535-649 (2 sigma, 0.972)

Phase 2

7th century AD

- c.(42) from 2011, Cutting B – lower fill of fire-pit
UBA-18915 cal AD 641-689 (2 sigma, 0.986)
c.(37) from 2015, Cutting F – under cashel wall
UBA-30797 cal AD 666-778 (2 sigma, 0.901)

Phases 3/4

10th/11th century AD

- c.(65) from 2007, trial cutting – deposit on bedrock
UBA-8564 cal AD 967-1046 (2 sigma, 0.903)
c.(37) from 2012, Cutting C – levelling/occupation layer
UBA-24259 cal AD 950-1053 (2 sigma, 0.761)
c.(115) from 2014, Cutting E – hazelnut immediately beneath circular-house wall
UBA-27545 cal AD 971-1047 (2 sigma, 0.914)
c.(144) from 2015, Cutting F – lowest fill of rock-cut pit
UBA-30795 cal AD 798-972 (2 sigma, 0.915)
c.(171) from 2016, Cutting G – metalworking hearth
UBA-33277 cal AD 876-1015 (2 sigma, 0.994)
c.(225) from 2017, Cutting H – small circular structure
UBA-36020 cal AD 941-1017 (2 sigma, 0.749)
c.(245) from 2017, Cutting H1 – gryke/drain
UBA-36023 cal AD 864-992 (2 sigma, 0.971)

Phase 5

10th/11th century AD

- c.(16) from 2011, Cutting B – occupation layer
UBA-18914 cal AD 981-1045 (2 sigma, 0.939)
c.(102) from 2015, Cutting E – immediately beneath rectangular-house wall
UBA-27544 cal AD 983-1049 (2 sigma, 0.820)

Phase 6

11th – 14th century AD

- c.(55) from 2007, trial cutting – pre-house occupation layer
UBA-9068 cal AD 1044-1099 (2 sigma, 0.452) and 1147-1210 (2 sigma, 0.401)
c.(18) from 2010, Cutting A – under Phase 6 entrance slabs
UBA-18913 cal AD 1285-1326 (2 sigma, 0.419) and 1344-1395 (2 sigma, 0.581)
c.(25) from 2011, Cutting B – occupation layer
UBA-18916 cal AD 1075-1155 (2 sigma, 0.673)
c.(190) from 2016, Cutting G – hearth in annexe
UBA-33278 cal AD 1063-1154 (2 sigma, 0.676)
c.(25) from 2016, Cutting G – occupation layer
UBA-32902 cal AD 1150-1225 (2 sigma, 0.869)
c.(222) from 2017, Cutting H – burnt spread
UBA-36019 cal AD 1147-1224 (2 sigma, 0.770)

Phase 7

15th – 17th century AD

- c.(57) from 2007, trial cutting – structure A occupation
UBA-8562 cal AD 1442-1525 (2 sigma, 0.653) and 1556-1632 (2 sigma, 0.347)

Table 1. Radiocarbon dates from the cashel

(after Reimer, P.J. et al. 2009 Radiocarbon 51, 1111-1150 and Reimer, P.J. et al. 2013 Radiocarbon 55, no.4).

Chronology

With a growing number of radiocarbon dates obtained so far, a tentative chronology is proposed for the various phases identified above (Table 1). Future radiocarbon dates will, no doubt, help refine this scheme. Phase 1, late 6th/early 7th century AD, probably represents the earliest evidence so far excavated though, stratigraphically, it is constructed on bedrock, similar to the fire-pits from Phase 2 (Cutting B) and Phase 4 (Cutting G). Phase 2, represented by the fire-pit excavated in 2011, has produced a radiocarbon date in the 7th century AD. This feature is cut into bedrock and pre-dates the construction of the cashel by several hundred years. The square enclosure located 100m south of the main cashel was in use between the 7th and 9th century AD (10E119), its occupants possibly responsible for this early activity. A 7th/8th century date from an animal-bone fragment recovered from beneath the cashel wall in 2015 may also reflect such activity.

Phases 3 and 4 saw the construction and initial use of the cashel, with a date of the 10th/11th century now suggested by four radiocarbon dates, and possibly a fifth whose range extends well into the 10th century (from the base of the rock-cut pit excavated in 2015). The finds do not disagree with this date, and the identification of two Congals in the records of the late 10th century support it (see below). The middle occupation of Phase 5 was also radiocarbon dated to the 10th/11th century, while the late occupation of Phase 6 produced radiocarbon dates of 11th to 14th century, and two silver coins of 13th/14th-century AD date. No gaps in use have been identified during excavation, with no sod layers or buried ground surfaces present in the stratigraphy. In addition, continuity of use is reflected in the close positioning of outdoor hearths inside the northwest wall of the cashel through phases 4, 5 and 6 (as excavated in Cutting H1, 2017).

The final occupation layers of Phase 7 have yet to be radiocarbon dated in cuttings A–I. However, the dressed entrance stones, jetton and coins from 2015, and Venetian bead from 2016, all suggest a 15th/16th-century date for this phase, making it roughly contemporary with the 2007 radiocarbon dates for Structure A. All of this suggests a relatively tight sequence for phases 3 through 7, from the late 10th to the late 16th/early 17th century AD, with no obvious gaps yet visible in the dating evidence (or stratigraphy).

Phase 8 post-dates all of these, dating from the 17th century to modern times. Radiocarbon dates have not been obtained for these upper layers, though a late 17th-century coin was recovered in 2017.

This working chronology can be tied to known historical/political events in the area. A 10th/11th-century date might suggest construction of the cashel by a branch of the Dál Cais (Uí Thoirdelbaig) who were asserting control over the native Corcomruad at that time. Two ‘Congals’ (*Cathair Congal* possibly = Caherconnell) are present in the historical records from this time – one recorded as lord of the native Corcomruad ruling family, the other a brother of one of the imposed Dál Cais kings (though these may actually be the same person). Surviving medieval documents indicate that Caherconnell was held by descendants of Uí Thoirdelbaig, the O’Loughlins, right up to the start of the 17th century (1607). It was then briefly held by the

O'Briens, before being taken from them by the English in 1641 and given to the Comyns, 'transplanted papists' from Limerick (Comber and Hull 2010, 135–7). The end of O'Loughlin (most likely) or O'Brien ownership probably marked the start of Phase 8, the movement away from human occupation of the cashel.

Conclusion

Excavations to date clearly demonstrate the significance of this site, and its potential to provide much-needed information on native settlement in medieval Ireland. The recovered evidence points to continuity of native tradition – the incorporation of ancestral burials into the settlement, the deliberate use of a centuries-old native settlement form, the continuation of long-established processes such as metalworking, textile-production and grain processing, and the use of traditional artefact types such as the bone comb, bronze pin, and rotary quern. The curious lack of pottery thus far from the cashel excavations reinforces this idea of native tradition. That this may have been a deliberate choice might be implied by evidence that the occupants did have access to non-traditional/'intrusive' items, such as the lead shot found in the cashel in 2010 and 2017, the German jetton and the English coins (13th, 14th and 16th century) found in the doline outside the cashel in 2008, and within the 15th/16th-century house in 2015 and inside the rock-cut pit and structure (180) in 2018, and the Venetian bead found in 2016. Other items of Anglo-Norman/English/Continental origin could surely have found their way to the cashel if desired by its occupants. If the pottery absence is upheld in the final excavations next season, then it would appear that the O'Loughlins of Caherconnell made a deliberate effort to assert their native tradition in the face of increasing political pressure from beyond their territory.

Further work

Artefacts in need of conservation will be x-rayed, cleaned and conserved by a recognised conservator (Susannah Kelly UCD). This process has already commenced, with all metal artefacts excavated to the start of 2018 having been x-rayed and examined by the conservator. With the exception of the nails and a few miscellaneous pieces, all have been conserved, and some of the unconserved pieces have been deemed unworthy of conservation by Susannah Kelly.

The slag and related material will be examined by an archaeometallurgist (possibly Dr. Gerry McDonnell who has examined the material from the square enclosure 10E119) at the end of excavation at the site. The animal bone and marine shells will be washed and sent to a zooarchaeologist for reporting (Dr. Emily Murray, QUB completed the analysis of the material from the square enclosure 10E119 / Dr. Fiona Beglane, Sligo IT examined some of the material being excavated on site in 2016, and a postgraduate student at UCC will commence study of the animal-bone assemblage in 2018/19) at the end of excavation at the site. The flint and chert artefacts will also be catalogued and reported (by Dr. Killian Driscoll who has examined the material from the square enclosure 10E119) at the end of excavation at the site.

Samples (all animal bone, except one possible hazelnut sample from (255)) for radiocarbon dating will be selected from the following contexts and submitted to Queen's University Belfast for AMS radiocarbon dating.

Context 25, immediately beneath lime-mortar surface (248) [sample 715]

Context 16, immediately on top of slab (33) [sample 728]

Context 255, upper hearth material [sample 742/bone or 734/hazelnut shell]

Context 259, lower, ashy, hearth material [sample 744]

Context 257, base of rock-cut pit (258) [sample 762]

A final archaeological report, suitable for editing for publication, will be produced at the conclusion of the cashel excavation. Interim reports/articles will be published, and public talks delivered, during the life-span of the project. Annual excavation reports are available online via the Caherconnell Archaeological Field School website (www.caherconnell.com).

A summary of the findings of the excavation is being submitted/uploaded to *Excavations 2018*.

Dr Michelle Comber, MA
Caherconnell Archaeological Field School
August 2018

References

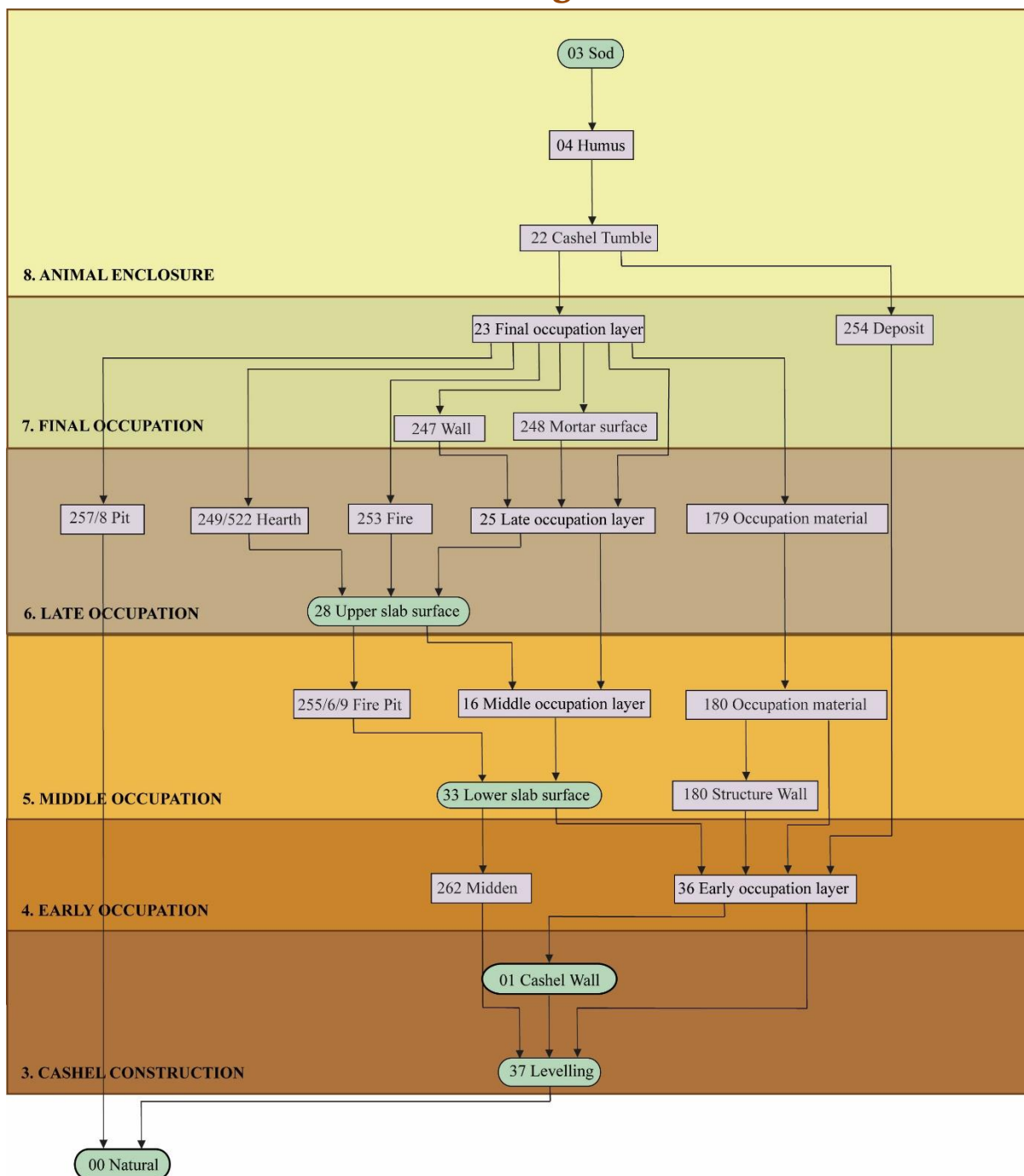
- Comber, M, (ed.), 1999 *Archaeology of the Burren, T.J. Westropp. Prehistoric Forts and Dolmens in North Clare*. Ennis, Clasp Press
- Comber, M. 2005, 2006, 2008 *Ringforts and the settlement landscape of the Burren in the first millennium AD*. 3 volumes. Reports submitted to the Heritage Council of Ireland.
- Comber, M. 2011 ‘Caherconnell, Co. Clare – a cashel of continuous use?’ *The Other Clare* 35, 20–5.
- Comber, M. 2011 ‘Archaeological excavations at Caherconnell.’ *Burren Insight* 3, 25–6.
- Comber, M. and Hull, G. 2010 ‘Excavations at Caherconnell, Burren, Co. Clare. Implications for cashel chronology and Gaelic settlement.’ *Proceedings of the Royal Irish Academy*, 110C, 133–71.
- DAHGI, 1999a, *Framework and Principles for the Protection of the Archaeological Heritage*, Department of Arts, Heritage, Gaeltacht and the Islands, Govt. of Ireland, Stationary Office, Dublin
- DAHGI, 1999b, *Policy and Guidelines on Archaeological Excavation*, Department of Arts, Heritage, Gaeltacht and the Islands, Govt. of Ireland, Stationary Office, Dublin
- Gibson, B, 1990, *Tulach Commáin: A View of an Irish Chiefdom*. UCLA, unpublished PhD thesis. UMI Dissertation Services
- Hencken, H. O' N, 1938, ‘Cahercommaun, a stone fort in County Clare’, *Journal of the Royal Society of Antiquarians of Ireland* 68, 1-82. Dublin
- Hull, G. 2011 ‘A Bronze Age house on the Burren.’ *Archaeology Ireland* 25 no. 3, 11–13.
- Hull, G. and Comber, M. 2008 ‘Caherconnell, Co. Clare, and cashel chronology.’ *Archaeology Ireland* 22, no. 4, 30–33.
- National Museum of Ireland, 2010, Advice Notes for Excavators, unpublished guidelines, National Museum of Ireland, Dublin
- O’Brien, W. 2009 *Local Worlds. Early Settlement Landscapes and Upland Farming in South-west Ireland*. Cork, Collins Press.
- Westropp, T.J. 1899 ‘Prehistoric remains in the Burren, Co. Clare.’ *Journal of the Royal Society of Antiquaries* 9, no. 4, 367–84.

Appendix 1: List of Cutting I Contexts

No.	Description	Cutting	Grid square	Sample	Date assigned
0	Bedrock	ALL	ALL	-	2010
3	Sod	ALL	ALL	41, 75	2010
4	Humus	ALL	ALL	Multiple	2010
16	Occupation layer, 11 th century	ALL	ALL	Multiple	2010
22	Stones tumbled from cashel wall	Multiple	Multiple	-	2010
23	Stony occupation material, 15 th /16 th century	ALL	ALL	Multiple	2011
25	Gravelly occupation layer, 11 th – 14 th century	ALL	ALL	Multiple	2011
28	Upper slab surface	ALL	ALL	36	2011
33	Lower slab surface	ALL	ALL	-	2011
36	Occupation layer, 10 th century	ALL	ALL	Multiple	2011
37	Levelling material, 10 th century	ALL	Multiple	Multiple	2011
48	Wall across cashel interior	C, E, G	Multiple	-	2012
179	Secondary material inside structure 180	G, I	86-90/186-88	733	2016
180	Wall of structure	G, I	86-90/186-88	-	2016
187	Primary material inside structure 180	G, I	86-90/186-88	718-9, 732	2016
247	North-south wall from 48 to 01	I	94/184-188	-	5/6/18
248	Lime-mortar surface	I	86/184	710	6/6/18
249	Burnt material in hearth 252	I	90/184	717	11/6/18
250	Charcoal within 248	I	86/184	721	12/6/18
251	Charcoal-rich deposit on 248	I	86/184	720	12/6/18
252	Stone setting of hearth 249	I	90/184	-	12/6/18
253	Burnt material from <i>in situ</i> fire	I	86/184	724	14/6/18
254	Dark-brown silty deposit	I	84/184	726	18/6/18
255	Charcoal fill of fire-pit	I	94-96/186	731	21/6/18
256	Setting/cut of fire-pit	I	94-96/186	-	21/6/18
257	Fill of bedrock pit, NW corner	I	84/188	756-7, 761-2	22/6/18
258	Cut of bedrock pit, NW corner	I	84/188	-	22/6/18
259	Ash in fire-pit 256	I	94-96/186	737, 744-5	9/7/18
260	Post setting inside 180	I	88/186	-	12/7/18
261	Linear feature inside 180	I	88/186	-	12/7/18
262	Midden	I	92-94/184-6	763-6, 770, 773, 778	20/7/18

263	Cut through 33, SW corner	I	84/184	-	20/7/18
264	Deposit within 263, mix of 254 and 36	I	84/184	767-8	20/7/18
265	Foundation for wall 180 south gable		86-90/186	-	31/7/18
266	Foundation trench for 265		86-90/186	-	31/7/18

Appendix 2: Harris Matrix Cutting I



Appendix 3: List of Cutting I Artefacts

No.	Description	Cutting	Easting	Northing	Context	Date
1455	Quern fragment	I	93.02	189.43	23	28/5/18
1456	Whetstone	I	88.21	184.01	22	1/6/18
1457	Whetstone	I	88.30	184.72	22	1/6/18
1458	Whetstone	I	88.07	185.22	22	1/6/18
1459	Glass sherd	I	91.92	186.34	23	1/6/18
1460	Glass sherd	I	91.52	184.19	23	1/6/18
1461	Iron object	I	90.09	184.04	23	1/6/18
1462	Hammerstone fragment	I	85.20	184.19	23	4/6/18
1463	Quern fragment	I	90.48	186.22	25	4/6/18
1464	Oval iron fitting	I	91.62	185.95	25	5/6/18
1465	Polishing stone	I	96.53	186.84	23	5/6/18
1466	Iron nail	I	93.44	188.01	23	6/6/18
1467	Horseshoe	I	95.26	187.40	23	6/6/18
1468	Antler handle	I	94.48	186.01	23	6/6/18
1469	Flint	I	85.91	184.20	23	6/6/18
1470	Comb fragment	I	86.36	186.90	25	7/6/18
1471	Blade fragment	I	88.47	184.82	25	7/6/18
1472	Iron wedge/tool	I	95.93	189.57	25	7/6/18
1473	Comb fragment	I	88.73	185.64	25	7/6/18
1474	Comb fragment	I	96.04	188.72	25	7/6/18
1475	Comb fragment	I	96.12	188.63	25	7/6/18
1476	Comb fragment	I	96.33	188.59	25	7/6/18
1477	Comb fragments	I	96.30	188.61	25	8/6/18
1478	Whetstone	I	86.69	189.71	25	8/6/18
1479	Knife	I	88.51	183.55	16	11/6/18
1480	Bronze-pin shaft	I	96.54	189.10	16	11/6/18
1481	Iron tack	I	87.98	189.45	187	11/6/18
1482	Quern fragment	I	92.16	85.46	16	12/6/18
1483	Bone-pin shaft	I	91.91	189.70	16	15/6/18
1484	Bead fragment (jet?)	I	85.47	185.79	254	15/6/18
1485	Bronze strap end	I	93.39	188.69	16	15/6/18
1486	Iron knife	G	Bone-washing	Bone-washing	36	18/6/18
1487	Chert	I	Sieve	Sieve	16	18/6/18
1488	Bronze pin	I	94.72	185.75	16	19/6/18
1489	Bone-comb roughout	I	91.59	184.14	16	19/6/18
1490	Comb fragment	I	91.23	184.30	16	19/6/18
1491	Chert	I	Sieve	Sieve	16	19/6/18

1492	Comb fragment	I	86.82	184.17	16	19/6/18
1493	Bone point	I	86.25	185.12	16	19/6/18
1494	Chert	I	85.27	184.60	16	20/6/18
1495	Knife	I	93.52	189.50	16	20/6/18
1496	Quern fragment	I	85.65	187.18	22	20/6/18
1497	Iron blade	I	84.64	186.17	16	20/6/18
1498	Comb fragment	I	86.46	184.28	16	21/6/18
1499	Drawknife	I	86.08	184.97	16	21/6/18
1500	Silver pin	I	93.10	188.18	16	20/6/18
1501	Quern fragment	I	87.76	189.25	187	21/6/18
1502	Flint	I	86.20	185.61	16	21/6/18
1503	Curved blade/billhook	I	90.77	187.05	187	22/6/18
1504	Comb fragment	E	Bone-washing	Bone-washing	36	9/7/18
1505	Knife	I	89.33	189.10	187	9/7/18
1506	Bronze plate	I	85.63	184.97	36	9/7/18
1507	Needle point	I	90.87	186.74	187	9/7/18
1508	Quern fragment	I	91.08	186.38	187	9/7/18
1509	Bone bead	I	85.55	185.10	36	9/7/18
1510	Iron sickle	I	90.34	188.96	187	9/7/18
1511	Iron tool	I	90.39	189.05	187	9/7/18
1512	Clay-pipe stem	I	Sieve	Sieve	22	9/7/18
1513	Rubbing stone	I	90.62	189.70	187	10/7/18
1514	Nail	I	91.07	189.05	187	10/7/18
1515	Clay-pipe bowl	I	89.57	186.65	22	10/7/18
1516	Nail	I	86.49	185.64	36	11/7/18
1517	Silver coin, c.1300	I	90.90	188.21	179	11/7/18
1518	Rubbing stone	I	93.20	188.92	36	11/7/18
1519	Iron hooked tool	I	93.94	188.78	36	11/7/18
1520	Nail	I	90.60	188.27	179	11/7/18
1521	Chert	I	91.90	188.44	187	11/7/18
1522	Comb fragment	I	Sieve	Sieve	187	11/7/18
1523	Comb fragment	I	Sieve	Sieve	187	11/7/18
1524	Comb fragment	I	Sieve	Sieve	187	11/7/18
1525	Bronze stud	I	84.90	186.88	36	12/7/18
1526	Crucible sherd	I	94.10	189.17	36	12/7/18
1527	Chert	I	90.90	187.93	187	12/7/18
1528	Knife	I	92.21	185.66	36	13/7/18
1529	Hammerstone	I	88.52	187.08	261	13/7/18
1530	Comb fragment	D1	Sieve	Sieve	16	13/7/18
1531	Comb fragment	I	Sieve	Sieve	36	13/7/18
1532	Bronze strap end	I	Sieve	Sieve	36	13/7/18

1533	Iron blade fragment	I	88.22	187.26	36	16/7/18
1534	Comb fragment	I	93.04	188.49	36	16/7/18
1535	Iron socketed arrowhead	I	92.91	188.69	36	16/7/18
1536	Whetstone	I	93.32	188.47	36	16/7/18
1537	Bronze needle	I	95.83	184.08	36	16/7/18
1538	Comb fragment	I	85.70	189.45	16	16/7/18
1539	Bone pin	I	92.77	187.70	36	16/7/18
1540	Comb fragment	I	Sieve	Sieve	36	16/7/18
1541	Bone-pin shaft	I	93.60	188.21	36	16/7/18
1542	Knife	I	93.48	188.27	36	16/7/18
1543	Comb fragment	I	Sieve	Sieve	36	16/7/18
1544	Mould fragment?	I	Sieve	Sieve	36	17/7/18
1545	Comb fragment	I	Sieve	Sieve	36	17/7/18
1546	Comb fragment	I	Sieve	Sieve	36	17/7/18
1547	Whetstone	I	96.34	186.84	36	17/7/18
1548	Iron shaft/object	I	84.97	189.03	257	17/7/18
1549	Comb fragment	I	93.96	189.30	36	17/7/18
1550	Burnishing stone/marble?	I	94.33	188.15	36	17/7/18
1551	Crucible sherd	I	88.58	187.80	36	17/7/18
1552	Comb fragment	I	87.76	189.18	36	17/7/18
1553	Oval iron fitting	I	87.59	184.33	36	17/7/18
1554	Comb fragment	I	Sieve	Sieve	36	17/7/18
1555	Comb fragment	I	Sieve	Sieve	36	17/7/18
1556	Comb fragment	I	Sieve	Sieve	36	17/7/18
1557	Comb fragment	I	Sieve	Sieve	36	17/7/18
1558	Comb fragment	I	Sieve	Sieve	36	17/7/18
1559	Oval iron fitting	I	93.10	186.79	36	18/7/18
1560	Comb fragment	I	91.24	187.30	36	18/7/18
1561	Comb fragment	I	88.25	189.17	36	18/7/18
1562	Bone point	I	93.94	186.09	36	18/7/18
1563	Chert	I	87.99	184.86	36	18/7/18
1564	Iron point/arrowhead	I	88.67	184.68	36	18/7/18
1565	Whetstone	I	90.70	188.95	36	18/7/18
1566	Iron fragment	I	Sieve	Sieve	36	18/7/18
1567	Worked bone	I	Sieve	Sieve	36	18/7/18
1568	Iron buckle	I	90.70	188.99	36	19/7/18
1569	Socketed and pronged tool	I	95.10	186.18	36	19/7/18
1570	Comb fragment	I	95.12	186.93	36	19/7/18
1571	Nail	I	90.02	189.07	36	19/7/18
1572	Whetstone	I	94.96	187.19	36	19/7/18

1573	Comb fragment	I	Sieve	Sieve	36	19/7/18
1574	Flint arrowhead	I	85.83	189.07	36	20/7/18
1575	Comb fragment	I	85.36	187.17	36	20/7/18
1576	Flint chip	I	89.94	184.87	36	20/7/18
1577	Stone 'cone'	I	92.03	185.31	36	20/7/18
1578	Wire fragment	I	92.90	187.54	36	20/7/18
1579	Nail	I	90.23	189.26	36	20/7/18
1580	Silver coin (half)	I	85.48	188.63	257	20/7/18
1581	Worked bone	I	92.84	188.07	36	20/7/18
1582	Comb fragment	F	Sieve	Sieve	25	23/7/18
1583	Comb fragment	I	Sieve	Sieve	36	23/7/18
1584	Comb roughout	I	Sieve	Sieve	36	23/7/18
1585	Flint	I	Sieve	Sieve	36	23/7/18
1586	Curved blade/billhook	I	85.11	184.90	264	23/7/18
1587	Comb fragment	H	Sieve	Sieve	36	24/7/18
1588	Comb fragment	F	Sieve	Sieve	25	24/7/18
1589	Flint strike-a-light	I	93.89	187.98	36	24/7/18
1590	Comb fragment	I	93.79	188.20	36	24/7/18
1591	Comb fragment	I	91.85	189.46	36	24/7/18
1592	Comb fragment	I	90.74	188.96	36	24/7/18
1593	Bone needle	I	90.74	188.70	36	24/7/18
1594	Flint	I	90.81	188.96	36	24/7/18
1595	Flint	I	91.40	184.57	36	24/7/18
1596	Bone pin	I	85.02	184.09	36	24/7/18
1597	Comb fragment	F	Sieve	Sieve	36	25/7/18
1598	Comb fragment	E	Sieve	Sieve	101	25/7/18
1599	Iron object fragment	I	93.97	186.78	262	25/7/18
1600	Bone pin/stylus	I	92.69	188.51	262	25/7/18
1601	Iron pieces	I	91.59	189.51	36	25/7/18
1602	Nail	I	91.63	189.38	36	25/7/18
1603	Comb	I	91.86	189.03	36	25/7/18
1604	Bronze needle	I	91.90	189.01	36	25/7/18
1605	Iron point	I	93.49	186.74	262	25/7/18
1606	Rubbing stone	I	89.67	189.66	36	25/7/18
1607	Nail	I	Sieve	Sieve	36	25/7/18
1608	Rubbing stone	I	94.55	189.80	262	26/7/18
1609	Rubbing stone	I	94.37	186.89	262	26/7/18
1610	Iron point	I	92.56	185.90	262	26/7/18
1611	Comb fragment	I	92.08	188.68	36	26/7/18
1612	Comb fragments	I	92.09	188.56	36	26/7/18
1613	Iron point	I	92.79	186.13	262	26/7/18

1614	Comb fragment	G	Sieve	Sieve	36	27/7/18
1615	Comb fragments	I	91.40	188.90	36	27/7/18
1616	Comb fragment	I	87.88	188.90	36	27/7/18
1617	Bronze needle	I	89.84	188.11	36	27/7/18
1618	Whetstone	I	93.99	187.68	36	27/7/18
1619	Comb fragment	I	88.51	187.90	36	27/7/18
1620	Knife	I	90.10	187.87	36	27/7/18
1621	Bronze chape	I	93.39	186.50	262	27/7/18
1622	Bone point	I	88.54	188.14	36	27/7/18
1623	Chert scraper	I	92.78	186.50	36	27/7/18
1624	Bronze pin	I	87.20	186.72	36	30/7/18
1625	Comb fragment	I	92.00	188.27	36	30/7/18
1626	Whetstone	I	91.62	188.17	36	30/7/18
1627	Curved blade/billhook	I	92.18	188.45	36	30/7/18
1628	Whetstone	I	89.40	187.25	36	30/7/18
1629	Bone spindle whorl	I	92.35	187.87	36	30/7/18
1630	Iron suspension hook and link	I	91.52	187.59	36	30/7/18
1631	Polishing stone	I	93.02	186.70	36	30/7/18
1632	Comb fragment	I	Sieve	Sieve	36	30/7/18
1633	Crucible sherd	I	Sieve	Sieve	36	30/7/18
1634	Bone-pin fragment	I	89.86	187.55	36	30/7/18
1635	Quern fragment	I	96.75	188.13	16	31/7/18
1636	Polishing stone	I	92.25	187.83	36	31/7/18
1637	Comb	I	92.11	187.70	36	31/7/18
1638	Iron point/pin	I	92.33	187.85	36	31/7/18
1639	Whetstone	I	92.17	187.15	36	31/7/18
1640	Quern fragment	I	92.52	186.94	180	31/7/18
1641	Knife	I	88.85	185.49	36	31/7/18
1642	Iron point	I	90.27	186.08	36	31/7/18
1643	Bronze disc/button	I	89.87	186.61	187	31/7/18
1644	Drawknife	I	91.76	186.81	36	31/7/18
1645	Knife	I	89.08	185.34	36	31/7/18
1646	Quern fragment	I	91.36	186.57	25	1/8/18
1647	Iron ring	I	87.62	186.34	36	1/8/18
1648	Iron nail/loop	I	89.31	184.96	36	1/8/18
1649	Red bead	I	Sieve	Sieve	36	1/8/18

Appendix 4: List of Cutting I Samples

Sample no.	Description	Cutting	Easting	Northing	Context	Date
702	Slag?	I	92.48	187.02	22	29/05/18
703	Slag	I	84.74	188.87	25	31/05/18
704	Animal bone	I	84-96	182-186	23	01/06/18
705	Slag	I	85.95	186.02	25	05/06/18
706	Animal bone	I	84-96	184-188	25	06/06/18
707	Animal bone	I	84-96	184-188	25	07/06/18
708	Charcoal	I	84-96	184-188	25	07/06/18
709	Shell	I	84-96	184-188	25	07/06/18
710	Soil - bulk sample	I	86	184	248	08/06/18
711	Animal bone	I	84-96	184-188	16	08/06/18
712	Animal bone	I	84-96	184-188	16	08/06/18
713	Charcoal	I	84-96	184-188	16	11/06/18
714	Hazelnut	I	84-96	184-188	16	11/06/18
715	Animal bone	I	86.44	185.38	16?	11/06/18
716	Shell	I	84-96	184-188	16	11/06/18
717	Soil - bulk sample	I	90	184	249	11/06/18
718	Slag	I	89.58	189.69	187	11/06/18
719	Animal bone	I	86-90	186-188	187	12/06/18
720	Soil - bulk sample	I	86	184	251	12/06/18
721	Charcoal - bulk sample	I	86	184	250	12/06/18
722	Animal bone	I	84-96	184-188	36	14/06/18
723	Hazelnut	I	84-96	184-188	36	14/06/18
724	Soil - bulk sample	I	86	184	253	14/06/18
725	Coprolite	I	84-96	184-188	16	14/06/18
726	Animal bone	I	84	184	254	18/06/18
727	Metallurgical	I	Sieve	Sieve	16	18/06/18
728	Animal bone	I	94.71	185.77	16?	19/06/18
729	Grains etc.	I	88-90	184	16	19/06/18
730	Slag	G	Bone-washing	Bone-washing	36	20/06/18
731	Soil - bulk sample	I	94-96	186	255	21/06/18
732	Slag	I	88.30	189.16	187	21/06/18
733	Animal bone	I	86-90	186-188	179	22/06/18
734	Hazelnut	I	94-96	186	255	22/06/18
735	Charcoal	I	86-90	186-188	187	22/06/18
736	Coprolite	E	Bone-washing	Bone-washing	36	04/07/18
737	Soil - bulk sample	I	94-96	186	259	09/07/18
738	Animal bone	I	86-90	186-188	187	09/07/18
739	Animal bone	I	84-96	184-188	36	09/07/18

740	Charcoal	I	84-96	184-188	36	09/07/18
741	Animal bone	I	94-96	186	255	09/07/18
742	Animal bone	I	-	-	255	09/07/18
743	Charcoal	I	94-96	186	255	09/07/18
744	Animal bone	I	94-96	186	259	09/07/18
745	Charcoal	I	94-96	186	259	09/07/18
746	Seashell	I	94-96	186	255	09/07/18
747	Hazelnut	I	86-90	186-188	187	09/07/18
748	Coprolite	I	84-96	184-188	36	10/07/18
749	Slag	I	92.54	189.12	36	11/07/18
750	Slag	I	91.28	187.50	36	11/07/18
751	Seashell	I	94-96	186	259	11/07/18
752	Slag	H	Sieve	Sieve	25H	13/07/18
753	Seashell	I	84-96	184-188	36	16/07/18
754	Seed/pip/bone?	I	Sieve	Sieve	36	17/07/18
755	Animal bone	I	84-96	184-188	37	17/07/18
756	Animal bone	I	84	188	257	17/07/18
757	Charcoal	I	84	188	257	17/07/18
758	Slag	I	Sieve	Sieve	36	18/07/18
759	Slag	I	93.03	187.62	36	19/07/18
760	Slag	I	85.88	188.90	36	19/07/18
761	Soil - bulk sample	I	84	188	257	20/07/18
762	Animal bone	I	85.07	189.05	257	23/07/18
763	Animal bone	I	92	184-186	262	23/07/18
764	Charcoal	I	92	184-186	262	23/07/18
765	Hazelnut	I	92	184-186	262	23/07/18
766	Soil - bulk sample	I	92	184-186	262	23/07/18
767	Animal bone	I	84	184	264	23/07/18
768	Charcoal	I	84	184	264	23/07/18
769	Slag	H	Sieve	Sieve	36	24/07/18
770	Coprolite	I	92	184-186	262	24/07/18
771	Slag	I	90.11	188.34	36	25/07/18
772	Slag	I	Sieve	Sieve	36	26/07/18
773	Furnace/hearth bottom	I	93.47	185.64	262	26/07/18
774	Slag	H	Sieve	Sieve	36	27/07/18
775	Slag	G	Sieve	Sieve	181	27/07/18
776	Slag	I	91.30	188.95	36	27/07/18
777	Slag	I	92.16	188.98	36	27/07/18
778	Coprolite concentration	I	88	184	36/262	30/07/18
779	Slag	I	91.78	187.38	36	31/07/18
780	Slag	I	89.26	185.64	36	31/07/18
781	Slag	I	86.70	184.31	36	31/07/18

Caherconnell Archaeology Field School 2018



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