Cashel, Caherconnell townland, Co. Clare

Preliminary Archaeological Excavation Report for 2022 season

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by

Michelle Comber

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Caherconnell Archaeology Field School

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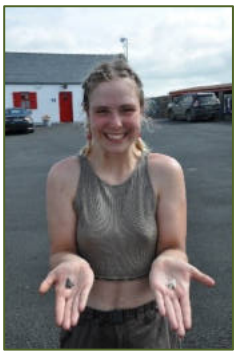

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Introduction

This report documents the preliminary results of the 2022 season of archaeological excavation at a cashel in Caherconnell townland, Co. Clare (ITM 523553/699437, SMR CL009-030008) (Figs 1 and 2). This excavation is part of the Caherconnell Archaeology Project, a multi-season research study directed by the author. Survey work is supported by excavation undertaken by the Caherconnell Archaeology Field School, of which the author is archaeological director. Support has also been received from the Heritage Council of Ireland and the Royal Irish Academy. With the overarching goal of excavating a variety of different elements of the cluster of activity located in Caherconnell townland, and exploring their relationship to one another, excavations completed to date include 08E0535 a collection of features located in a natural sinkhole (licence held by Graham Hull), 10E0119 a sub-square cashel (final report submitted), and 10E0087 Caherconnell Cashel itself (excavation completed 2019, post-excavation analyses nearing completion). Excavation of a couple of nearby features with archaeological potential was also undertaken this summer, by assistant project director, Dr Noel McCarthy (Licence 22E0226).

Fig. 1 22E0386 (circled), with preserved enclosures and field walls to west and east.

Location

The 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 Poulnabrone to the north, and Poulawack to the south). This cashel is one of four drystone enclosures in the townland of that name (two of which have already been excavated as part of this project: 10E0119 and 10E0087) and is located to the immediate west of the R480 road that links Leamaneh and Ballyvaughan, a natural routeway through the Burren uplands.

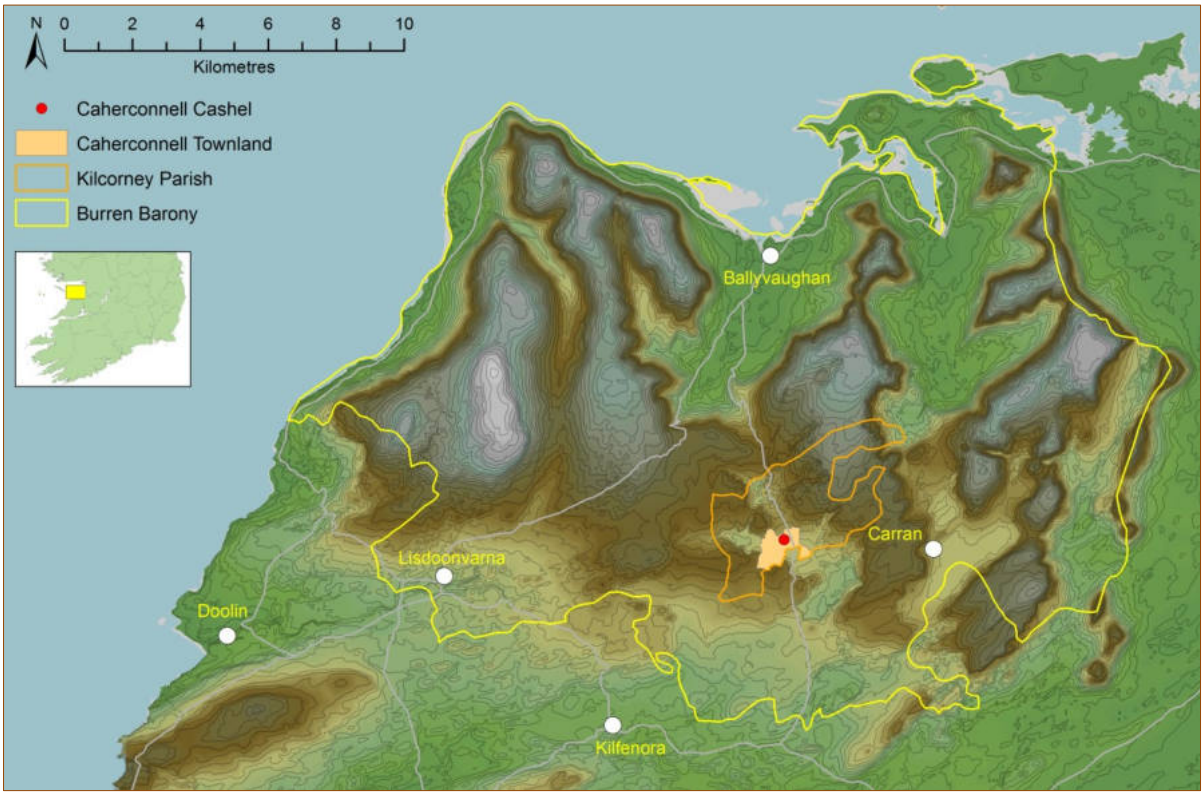


Fig. 2 Location of Caherconnell.

The Cashel (Fig. 3)

The excavated site comprises a sub-circular drystone cashel located between the main cashel at Caherconnell (10E0087) and the sub-square cashel/enclosure (10E0119). The cashel is now defined by a partially collapsed and overgrown drystone wall. Prior to excavation, the lower courses of the external wall face are visible around much of the circumference, especially on the west, south and east. An average of four horizontal courses are visible – large slabs of limestone in rough courses. The original entrance is infilled but identifiable on the southeast side. Other, more recent, gaps are located in the south and east walls. The inner face of the wall is much more difficult to identify without excavation as the internal ground level is raised above the external, probably burying the lower courses of the inner face in most places. It is, however, occasionally visible.

The interior is uneven, with higher ground in the northwest/north, dropping to the southeast. Partly grassed-over stone is evident across the interior. A small number of features are visible in the interior (see below), most of which probably post-date the cashel. The north wall of the cashel is now incorporated into a modern field boundary. This averages six courses high and

one wide, roughly 0.55m wide and 1.3m high. Traces of the wider cashel wall are occasionally visible beneath this. Much of the stone from the cashel wall has clearly been removed and 'recycled', for use either in later enclosures or field walls. There is much tumbled stone visible along the outside of the cashel wall on the west, south and east.

The cashel has an internal diameter of 25.14m E-W, 30.89m N-S, and an external diameter of 33.32m E-W, 34.94m N-S. The enclosing wall measured up to 2.5m thick originally, and has a maximum (pre-excavation) surviving height of 1m.

Fig. 3 'Middle' cashel, with excavated doline to northeast.

Internal Features (visible pre-excavation)

Feature A comprises a **s**mall sub-rectangular enclosure built partly on top of the cashel wall, up against the inside of the external face on the west side of the cashel. The feature walls are composed of medium and large stones set transversely, some now at an angle. There is a 1.5m-wide gap on the north side, between the feature wall and the cashel external wall facing. The enclosure measures 1.5m – 2m E-W, 2m N-S internally, with a wall 0.75m thick and 0.45m high.

Feature B is a small, roughly D-shaped enclosure built on top of the cashel wall to the south. Appears similar to clearance of surface field stone but has a curved edge suggesting a structure. No clear building technique is visible, the stones appear to be piled haphazardly. It measures 2.5m E-W, 2.5m N-S internally, and its wall is 0.65m thick and 0.42m high.

Feature C comprises a short 8m-length of drystone wall running north-south. It consists of a partly grassed-over wall of transverse slabs set on edge, now leaning at a 40–45-degree angle. It is 1m thick and stands to a maximum height of 0.7m.

Feature D is found in the southeast quadrant of the interior. This area is lower than the rest of the interior and is slightly more sheltered. In this lower area, oriented almost exactly due east, are two small vertical slabs, 0.5m apart. These are parallel to one another, with their long axes running towards the cashel wall which is only a short distance away. They may form an entrance, perhaps for some internal feature that is otherwise no longer visible. The slabs measure 0.65m wide, 0.42m high, and 0.15m thick. [These fell within the area excavated in 2022 and are described below as C.05]

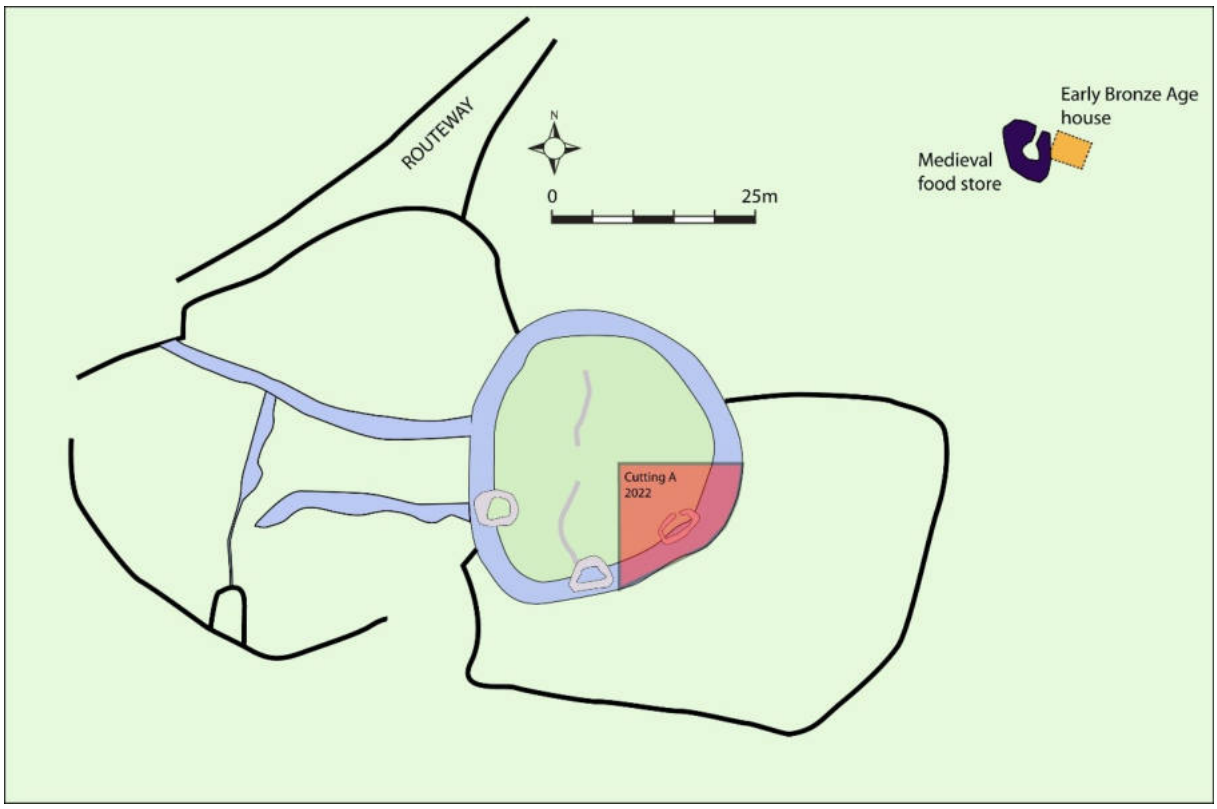


Fig. 4 'Middle' cashel, with adjacent features.

Adjoining the cashel on its west side are two, clearly non-modern, **walls** running east-west and roughly parallel to one another (Fig. 4). A third stretch of wall runs north-south joining the two at their west end and creating a long rectangular enclosure. Both of the east-west walls are of drystone construction, double-faced with rubble cores. There is now a gap between the northern example and the cashel wall, but there are traces that they were once joined – a raised ridge with some partly visible stone connects the two. The wall faces are formed of large limestone

blocks laid horizontally. Up to five courses survive intact in places. The core of the wall is composed of a tumble of medium and large stones. The cashel-like construction suggests it might be contemporary with the cashel (1.6m original width, 1m maximum surviving height). The southern wall is located approximately 6m from its northern counterpart. It does curve southwards for a short distance at its west end. The wall survives best at its east end where it runs into tumble from the cashel. Here, the wall comprises two faces of large slabs set on edge along the long axis of the wall. There are traces of grassed-over stones between these faces, however most of the wall appears robbed-out (2.1m original width, 0.65m height at east end). The short closing wall at the west end is of differing construction, comprising transverse vertical stones. Insubstantial in form (0.73m wide, 0.4m high), it apparently continues beyond the wall of this field.

Two small irregular **fields** appear like wings on the west and east sides of the cashel (Fig. 4). The aforementioned walls are located within the western field. It is an area defined by a heavily overgrown drystone wall. The wall displays a variety of construction techniques, some clearly more modern than others. The base of the wall is wider than its top, and is grassed-over. The visible top of the wall mostly comprises transverse stones and slabs at an angle. The north-western stretch of wall borders a 2.5m-wide track. A 3m–4m-wide gap in the wall on the southeast is bordered by wide stretches of wall, possibly due to the piling here of material taken away to create the gap in the wall. The wall base averages 1.1m wide and 0.25m high, reaching up to 2m wide on the southeast. The more modern top of the wall is 0.3m–0.55m wide and 0.75m–1m high.

The north and east lengths of wall defining the eastern field appear early modern for the most part, i.e. a single course wide and 1m to 1.2m high. Its lower courses, however, comprise some very large blocks and slabs, perhaps reflecting an earlier wall, or robbing of stone from the cashel. The south wall is currently completely overgrown and runs along the top of a break-of-slope, with the ground falling away to the south. The wall measures 0.35m–0.5m wide and 1m–1.2m high.

Adjacent features in Caherconnell townland

A number of non-modern features can be seen in the immediate vicinity of the cashel. To the northeast are three excavated sites. These include a small, partially grassed-over cairn of large stones. Before excavation, this measured approximately 3m in diameter and 1m in height. Excavation in 2022 (22E0226) identified this as a well-built platform of stone. Its function remains unclear, and date awaits the results of radiocarbon dating. Next to this, and covered by the same excavation licence, was a small sinkhole or doline. This produced a single feature – a small pit hearth of unknown date.

The 2008/9 focus of test excavation (08E0535) was a larger **doline** (Fig. 5), a natural sink-hole, located approximately 20m southeast of Caherconnell Cashel (10E0087). 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 hundreds 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 a 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.

The current cashel (22E0386) 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 the main cluster of three cashels are two possible boulder burials and miscellaneous other features. The northernmost of the three cashels is Caherconnell cashel itself, the middle cashel is the subject of this report, and the southernmost is a sub-square enclosure.

Caherconnell cashel (Fig. 7) is the largest of the four drystone enclosures in the townland (Comber 2010–19, Comber and Hull 2010). The cashel is circular with a diameter of 42m, defined by drystone walls standing 3m in basal width and over 3m in height (though higher originally). Its entrance, like that of most ringforts, faces east. The cashel lies at approximately 130m above Ordnance Datum, on the northern slopes of the shallow, but fertile, Kilcorney valley. This location provided the settlement with a commanding view of the surrounding landscape, and easy control of the adjacent routeways. Its agricultural needs were well met by the surrounding pasturelands and fertile valleys, while it's imposing morphology and connection with the past (ancestral burials and activity at the sub-square enclosure) contributed to the statement it made on the landscape.

Excavation has uncovered several phases of activity within Caherconnell cashel, the two earliest of which pre-date the construction of the enclosure (possibly linked to the early use of the sub-square site). Evidence of Phase 1: Early Medieval Pre-cashel Activity 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. Phase 2: Early Medieval pre-cashel Activity is represented by a rock-cut fire-pit. Bone from the pit was radiocarbon-dated to the second half of the 7th century AD. Phase 3: Cashel-Construction followed in the late 10th century,

coinciding with two written references to a high-status figure/figures called ‘Conghal’ (Caherconnell = the cashel of Conall or Conghal) – one an annal entry recording the death of the lord of Corcomruad (Annals of the Four Masters M987.7, O’Donovan 1848-51), the other a brother of the early imposed king Maelsechnaill in an Uí Tairdelbaig/Dal Cais genealogy (Gibson 2012, 289). The former records Conghal as the son of imposed Corcomruad king, Anruadan (died 936), the latter as his cousin. Whether or not the entries refer to two different individuals is uncertain but, either way, a member of the ruling family is possibly indicated in the placename. The cashel wall was built directly on the limestone bedrock, except where some shallow grykes were filled with small stones – to level off the surface. Interestingly, the cashel builders did not remove the earlier burial mound, or build around it, rather they deliberately incorporated it into their new settlement by constructing the cashel wall over the top of it.

Fig. 7 Caherconnell cashel during excavation in 2016.

Phase 4: Early occupation was marked by the accumulation of a definite occupation layer in the late 10th century. Some charcoal, slag, a considerable quantity of animal bone, and a variety of artefacts were recovered from it. This occupation layer accumulated around the remains of a metalworking area, a cereal-drying kiln, and a central sub-circular house, c.10m in diameter. The start of the next phase of occupation in the late 10th/early 11th century, Phase 5: Middle occupation, was marked by the deliberate laying of a slab surface. This, lower, slab surface was originally relatively well constructed from irregularly shaped limestone slabs, measuring up to 0.8m in maximum dimension. In places of high bedrock, the slabs often run up to it, forming a

level surface with the bedrock. Elsewhere they seal the earlier occupation material – always resulting in the formation of a level surface. Several features were associated with this slab-surface – a sub-rectangular house with stone-lined hearth replaced the earlier circular house, an ancillary rectangular structure, occupation deposits, post-holes, and a path. The general occupation layer contained frequent small animal-bone fragments (some burned), charcoal, carbonised hazelnut shell, small pieces of metalworking slag and a range of artefacts.

Phase 6: Late occupation (dated 11th – 14th century) commenced with the laying of a second slab surface on top of the Phase 5 occupation layer. This, too, consisted of local limestone slabs, but appears rougher in construction than its predecessor. It did not extend over the earlier house wall or its interior, suggesting that the straight-walled house was still in use when the slab surface and associated features were constructed. A third rectangular structure was added during this phase. Built up around all of these was an occupation layer, rich in animal bone. It also contained slag and many finds, including bronze dress pins, iron nails, crucible sherds, and bone comb fragments.

The latest human occupation of the cashel, Phase 7 Final occupation, was marked by the reconstruction of the cashel entrance, construction of a rectangular house inside the north wall of the cashel (and demolition of the earlier house), and a drystone wall dividing the cashel interior in two, in the 15th/16th century. The occupation material that accumulated during this phase contained charcoal, slag, some artefacts (including two English coins and a German jetton from inside the house), and much animal bone. Outside the house remains, this material was greatly disturbed by the later heavy use of the cashel as an animal enclosure, causing much of the layer to be churned up with overlying modern material. The latest radiocarbon date stretches into the start of the 17th century, coinciding with the aforementioned historically documented changes of ownership.

Artefacts are plentiful from most phases (Fig. 8). They include fragments of rotary querns, whetstones, fragments of lignite bracelets and finger rings, spindle whorls, inscribed stones, chert and flint lithics, composite bone combs, sewing needles, dress-pins, beads, gaming pieces, a variety of tools, iron nails, ringed-pins, knives/blades, points including arrowheads, miscellaneous tools, items of horse harness, door hinges, rings, a barrel-padlock key, hooks, bronze stick-pins, a decorated stud, buckles, a silver finger ring, a small strip of decorated gold, five coins and a jetton, clay mould fragments and crucible sherds, small pieces of lead including shot, glass beads and bracelet fragments, and quartz and amber beads.

These artefacts reflect something of the activities that took place within the cashel, and the status of its occupants. An assemblage of slag, the whetstones, mould and crucible sherds reflect both ironworking and non-ferrous metalworking within the cashel. It is possible, if not probable, that many of the metal artefacts recovered during excavation were manufactured at Caherconnell. The range of miscellaneous metal and bone tools were undoubtedly employed in a number of craft activities taking place within the enclosure. Woodworking is suggested by the presence of iron nails, possible drawknives/small saws, punch-like implements and other tools. Many, if not all, of the stone objects were probably made locally. The plentiful supply of

raw material, a few partially-worked fragments, and a range of finished items suggest that bone- and antler-working occurred at Caherconnell. The bone and stone spindle-whorls, a probable weaving sword, and the sewing needles reflect textile production/clothes manufacture, while the quern fragments indicate the processing of grain.

Fig. 8 Selection of artefacts from Caherconnell cashel..

Less 'domestic', high-status activities are represented by armour-piercing arrowheads, a bronze harp-peg, and gaming pieces. Trade/the use of the adjacent routeways is evident in the presence of coins, bronze, silver, gold, glass and amber at the site. The local environment also provided occasional fish and shellfish, hazelnuts, possibly iron and lead ores, hazel, ash, birch and yew wood, and supported the growing of free-threshing wheat, barley and oats, and the grazing of cattle, sheep, pigs and red deer.

The three-season excavation (2010–2012) of the **sub-square cashel** was funded by the Royal Irish Academy, directed by the author, and staffed by students and graduates of NUI, Galway (Fig. 9). The site is a sub-square drystone, cashel-like, enclosure approximately 100m south of the main cashel of Caherconnell (though not visible from it). The walls of the enclosure are of limestone, 2.75m wide originally.

Most of the interior was excavated, with the exception of long narrow stretches covered by stone tumbled from the enclosure walls. Features uncovered in the interior included three sub-circular structures, a number of walls sub-dividing the space between the structures, and the enclosure entrance. The entrance comprised an entrance passage flanked by the drystone walls of the enclosure, with its surface roughly paved. Associated deposits were rich in animal bone

and many artefacts were also recovered. The artefacts included bronze, bone and iron dress pins, iron knives, a socketed and pronged tool, nails and rivets, buckles, stone and glass beads, fragment of a rotary quernstone, a stone spindle-whorl, whetstones, lignite bracelet fragments, a few pot sherds, flint and chert tools and waste, a stone axe and fragment of a second, and a small assemblage of metalworking slag etc.

C14 dates and recovered artefacts indicate that the enclosure was used during the Early Medieval period (7th to 9th century AD), though the material culture contains a prehistoric element. Reasons for its non-circular shape, relatively large size and south-facing entrance are being explored. It seems likely that people came to this site/place to avail of a specific service. It had to be visually different from its circular neighbours so that travellers could identify it easily.

Fig. 9 Sub-square cashel and adjacent cashel (subject of this report).

Research framework

This excavation in Caherconnell townland is 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 (now retired from NUI, Galway) is currently completing 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 Cahermacnaghten 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.

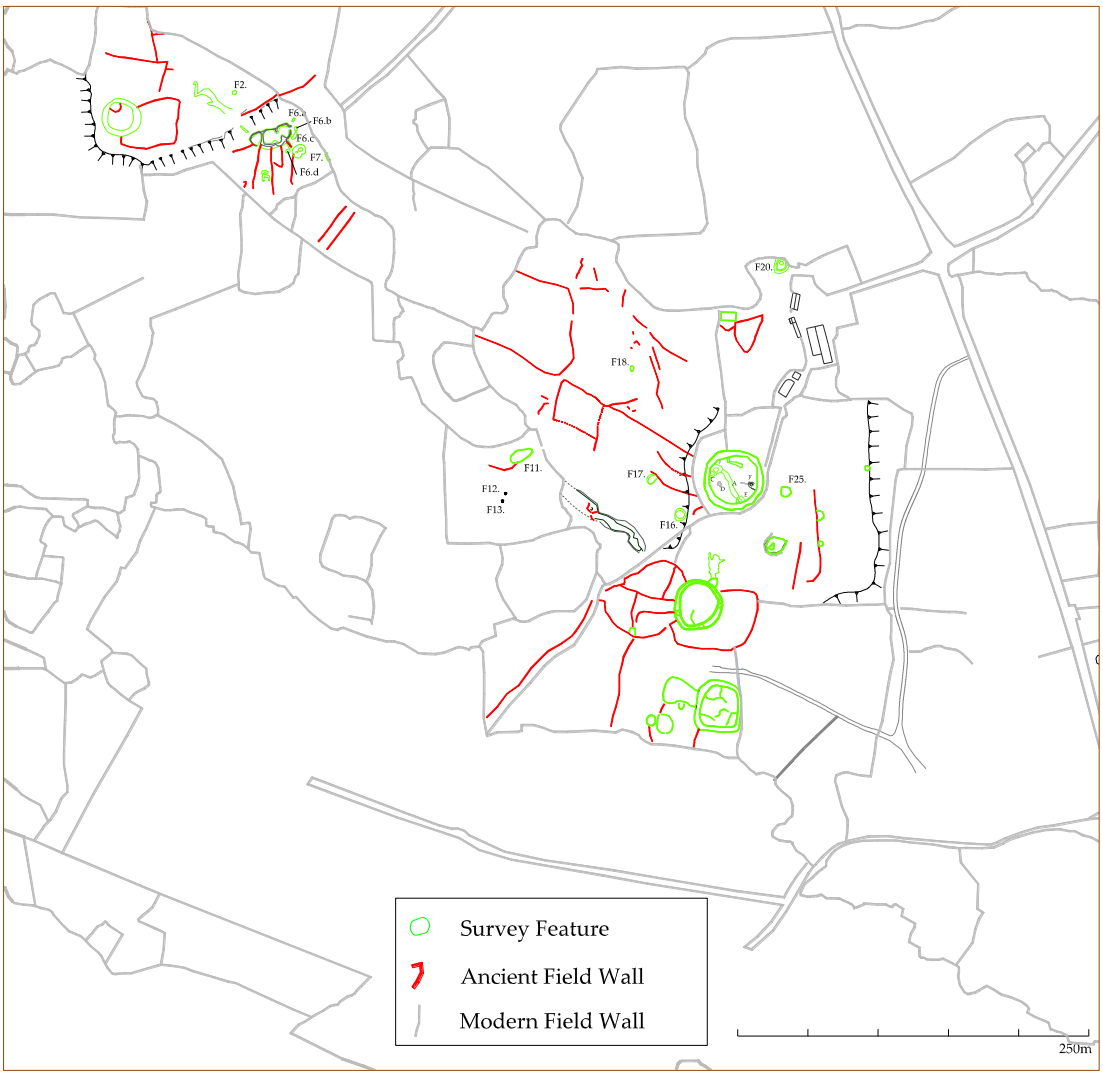


Fig. 10 Survey of Caherconnell townland.

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. 10) 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), and full-scale research excavation funded by the Royal Irish Academy (10E119, see summary above)

and the Caherconnell Archaeological Field School (10E0087, see summary above; 22E0386 the subject of this report, and this summer's excavations by Noel McCarthy 22E0226).

Excavation aims and methodology

The 2022 excavation aims to extend the area of investigation within the townland, adding to the growing picture of Early Medieval/medieval life for a native/Gaelic family living outside the regions directly impacted by Viking/Anglo-Norman activity. The 2022 primary target (Cutting A) is a cutting comprising the south-eastern quadrant of the cashel interior (Fig. 11). It was designed to explore the cashel entrance and identify any surviving features in this area. The chance of recovering undisturbed evidence from early occupation layers of the cashel was thought strongest here, due to a possible greater depth of stratigraphy trapped within a dip in the underlying limestone bedrock. This part of the interior, being directly inside the entrance, might also have seen more activity than other parts of the enclosure. Originally measuring 12m north-south and 9m east-west, the cutting was extended a further 3m to the west/into the cashel interior.

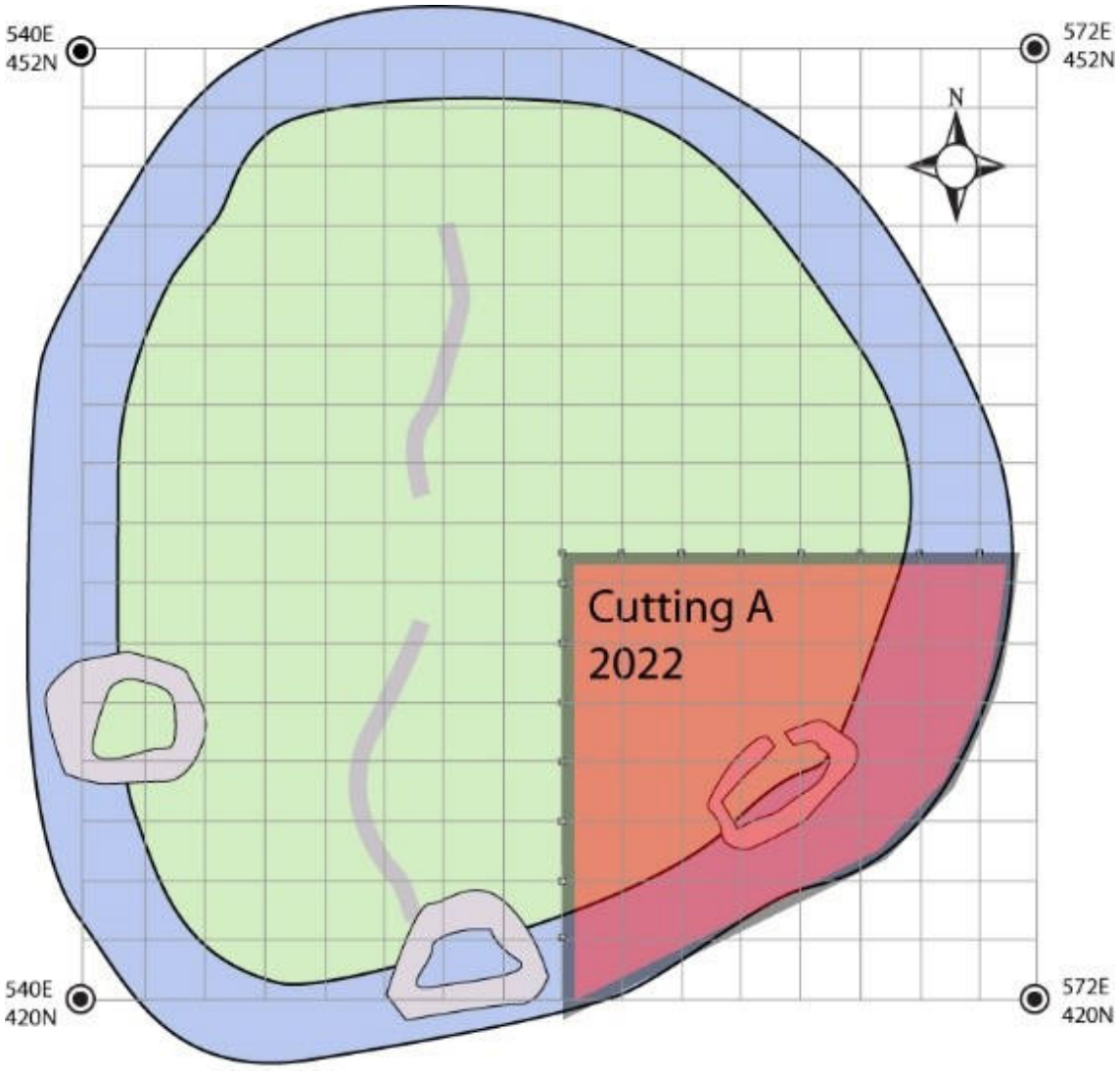


Fig. 11 Excavation grid and location of Cutting A.

This programme of excavation 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 revealed 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 (and with emerging prehistoric links). The only way to ensure ongoing funding and consistent high quality for such a significant undertaking was the establishment of an international field school. These excavations have identified the archaeology of the native Irish in the medieval period, a period largely dominated by Anglo-Norman archaeology. In addition, they have revealed much of the native way of life in a changing world.

Following submission of a method statement and licence application in Spring 2022, a licence to excavate was granted to the author by the National Monuments Service of the Department of Housing, Local Government, and Heritage, in consultation with the National Museum of Ireland. The licence number is 22E0386, and the detection licence number is 22R0196.

The 2022 excavation (Cutting A – Fig. 11) was focused on a hand-dug open-area cutting targeting the south-eastern part of the cashel interior. The roughly quadrant-shaped cutting covered approximately 100–120m^2, the exact area depending on the curvature of the cashel wall. It measured a maximum of 12m north-south by a maximum of 12m east-west (including the 3m-wide westerly extension). 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* (2022), the NMI *Advice Notes for Excavators* (2010), and the NMI *Standards for the Care and Treatment of Archaeological Objects from Excavations* (2022).

Fieldwork took place over four weeks in June and July 2022. The excavations were directed by Michelle Comber, assisted by Noel McCarthy (licence eligible), and supervised by Pat Cronin. The excavation teams were composed of NUI, Galway postgraduate students and students from the Caherconnell field school (Fig. 13 etc.). Archaeologically significant contexts (e.g. occupation layers) were wet-sieved on site to recover small artefacts and ecofacts (principally small bone fragments, Fig. 12). A small 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 (under licence 22R196) to check the spoil. This exercise revealed very little, demonstrating the effectiveness of on-site supervision and sieving.

Fig. 12 Wet-sieving in the field next to the cashel.

Fig. 13 Some of the 2022 team (below pictured with NUI Galway president).

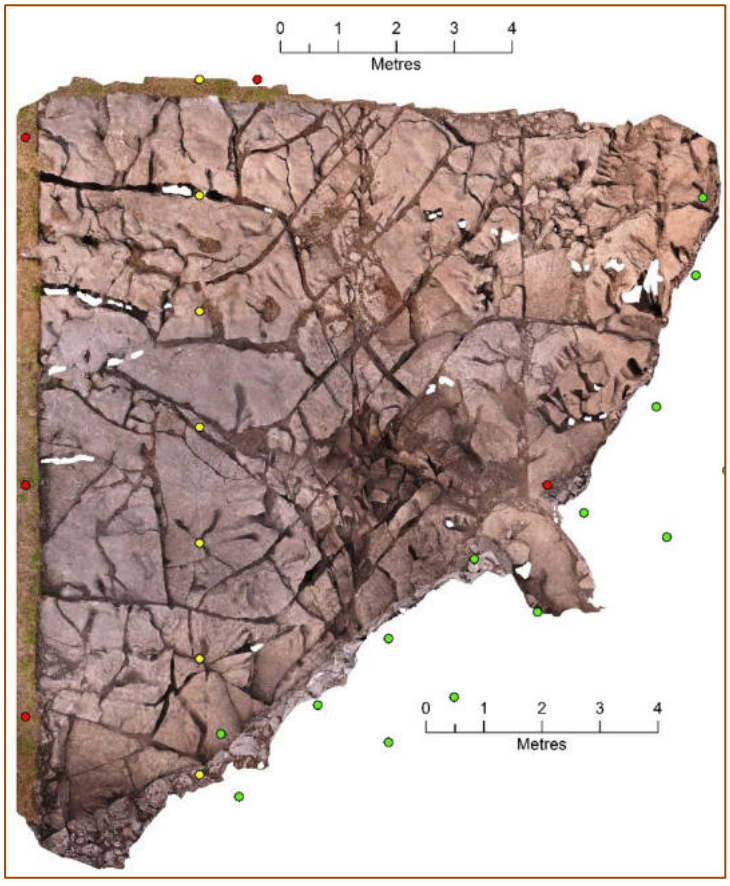
Artefact strategy

All artefacts from the current season were retained. These have been numbered and recorded in accordance with current National Museum of Ireland guidelines. Cataloguing (in publishable form and using the NMI artefact database) is underway. All finds will be treated, stored and conserved in accordance with the NMI *Standards for the Care and Treatment of Archaeological Objects from Excavations* (2022). 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.

Excavation results

Thirty-two context numbers were allocated in 2022. These include numbers for the cashel wall (01), cashel entrance (09), cashel tumble (04, 06, 16), the sod and topsoil (02, 03), and the bedrock (00).

Three main archaeological phases have been identified. These are described below in stratigraphic/chronological order. It can be stated with a high degree of confidence that these phases date to the prehistoric (probably Early Bronze Age), early medieval (possibly 7th/8th century AD), and post-medieval/early modern periods. It is envisaged that further relative dating (artefact typology) and absolute dating (radiocarbon) will facilitate refinement of this stratigraphic sequence.



The limestone bedrock (00) was heavily karstified and uneven (Fig. 14), falling away towards the south and southeast. Its level dropped an average of 0.5m from its highest point in the northwest of the cutting. It had a largely smooth surface, presumably having been exposed to the elements for considerable periods of time over the course of many eras. The surface of the bedrock displayed several solution holes, some of which could conceivably have been used to support posts. The majority of grykes ran northwest-southeast, with a couple of north-south seams, some reaching a depth of 0.5m and upper width of 0.1m – 0.24m.

Fig. 14 Bedrock in Cutting A.

A distinct dip or hollow (31) occurred immediately west/northwest of the cashel entrance, measuring 2.95m east-west, 2.7m north-south, and a maximum of 0.61m deep at its centre (Fig. 15). The discovery of prehistoric artefacts in the upper fills of some grykes suggests that these were open or near the surface at that time, while the excavation of Early Medieval features and objects reflects the use of the higher bedrock as a surface during those centuries. Excavation of an archaeological layer preserved beneath stones tumbled from the cashel wall revealed the partial remains of an old-ground layer that existed in the Early Bronze Age, and the continued use of this layer in Early Medieval times – at least where it survived to the south and southeast, levelling off the surface with the higher bedrock to the north/northwest.

Fig. 15 Bedrock 'hollow' (31).

Phase 1: Prehistoric (Figs. 15–17)

Evidence of this phase comprised a concentration of prehistoric material culture contained within the lower levels of the general archaeological layer (14) that was preserved beneath the band of stones tumbled from the cashel wall. The lower levels of this layer were labelled (14A), being largely the same as the upper layer but with the addition of prehistoric artefacts and slightly more fragments of burnt/heat-fractured sandstone. Very compact, it contained frequent small and medium stones (0.05m to 0.15m maximum dimension) in a mid-brown silty clay matrix. Approximately 5% of the stone inclusions were sandstone, the rest limestone. Occasional charcoal flecking occurred alongside frequent lithic finds – mostly chert, the finished artefacts dominated by scrapers (144 scrapers and 17 crude scrapers), a small quantity of flint, highly degraded pot sherds, some broken stone-axe fragments, a rubbing stone, and hammer stones (likely used in the knapping process). The lithic assemblage also included plentiful evidence of knapping (over 1500 debitage and core fragments) and three very fine barbed-and-tanged arrowheads (one of flint, two of chert). The greatest concentration of this material occurred in the bedrock 'hollow' (31) just inside the later cashel entrance. The hollow

appears to have been deliberately formed by extracting fractured limestone clints surrounding a long north-south gryke/seam. A similar, but undug, section of fractured clints occurs 1.5m to the north along the same gryke. The prehistoric material probably extends beneath the cashel wall just to the south of its entrance. A heat-fractured large stone can be seen in section beneath this part of the cashel wall (Fig. 16). Future seasons of excavation may section the cashel wall at this point and/or investigate if the prehistoric material extends/survives beyond the cashel to the southeast.

Fig. 16 Heat-fractured stone beneath cashel wall.

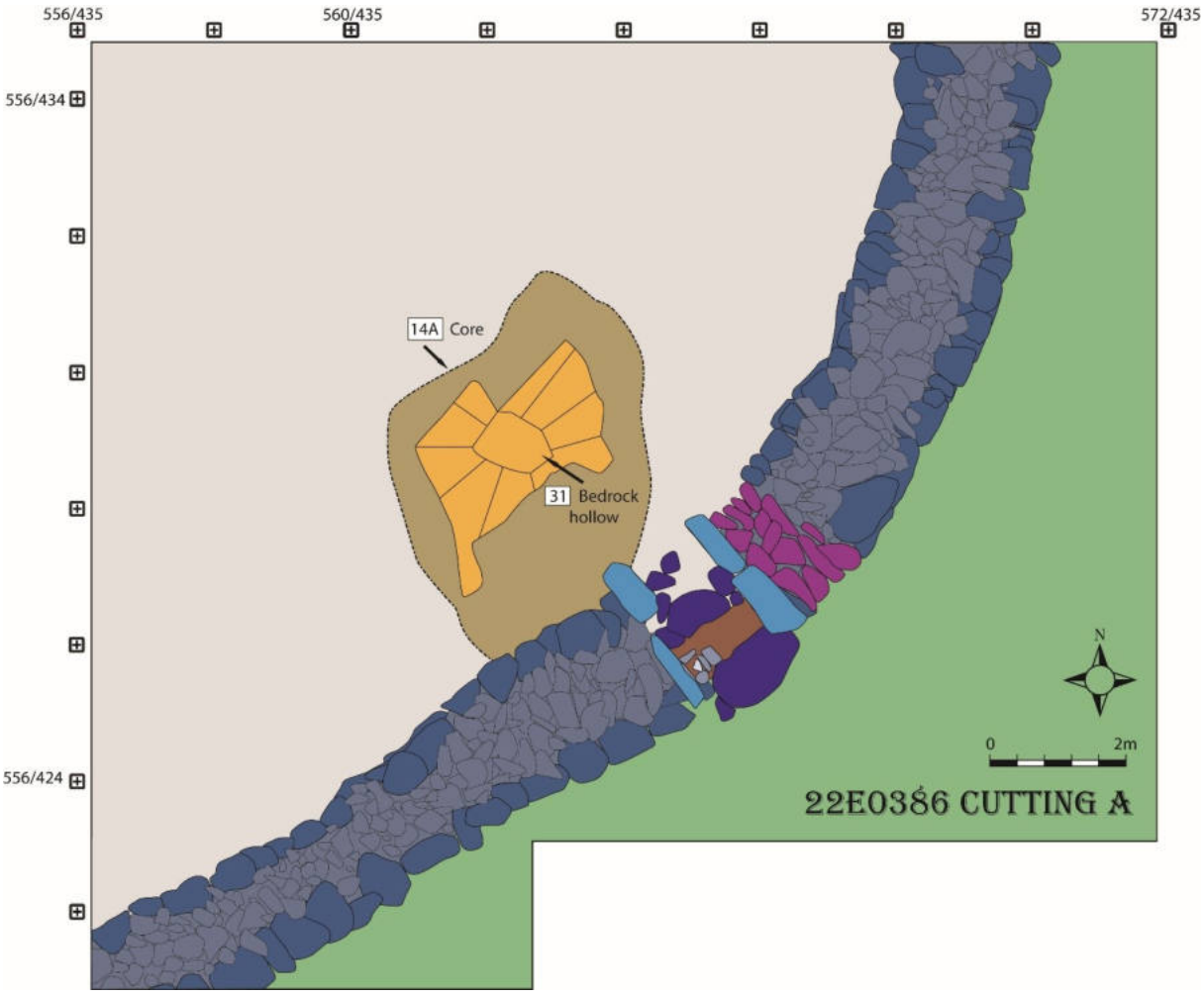


Fig. 17 Location of concentrated prehistoric evidence.

Phase 2: Early Medieval

This phase is represented by the cashel wall (01), cashel entrance (09), activity layer (14), a probable path (13), slabs (12), stone clusters (21, 22, 23), and post-setting (19/20) though the date/phase of the latter is a little uncertain.

Fig. 18 A. Top of cashel wall; B. Inner face; C. Outer face; D. Outer line of cashel wall..

In Cutting A, the cashel wall (01) comprises a double-faced drystone wall (25, 26) with rubble core (27), with a maximum width of 2.2m and surviving height of 1.2m/six horizontal courses (Fig. 18). Not perfectly curved, two rather straight sections meet at a slight angle approximately 2m north of the entrance. The length of wall south of the entrance is also a little straighter/angled than perfectly curved. The inner face of the cashel wall (25) comprises large limestone slabs (up to 0.9m long and 0.22m thick) laid in rough horizontal courses. Some of these slabs overlap while others are placed in line with each other. The inner face survives to a maximum height of 0.84m. The outer face of the cashel wall (26) is constructed of even larger limestone slabs (up to 1.4m long and 0.28m thick) with some smaller stones (0.3m long and 0.16m thick) filling the gaps between them. The uppermost courses consist of slightly smaller slabs, up to 0.8m in length. The maximum surviving height of 1.24m, compared to the 0.84m height of the inner face, reflects the sloping and uneven bedrock and patches of layer (14A) beneath the cashel wall. The rubble core of the wall (27) comprises a relatively loose jumble of irregular limestone pieces, ranging from 0.23m to 0.66m in maximum dimension, with frequent voids between. It fills the gap between the inner and outer faces, a space ranging from 1m to 1.32m in width depending on the size of the adjacent facing slabs.

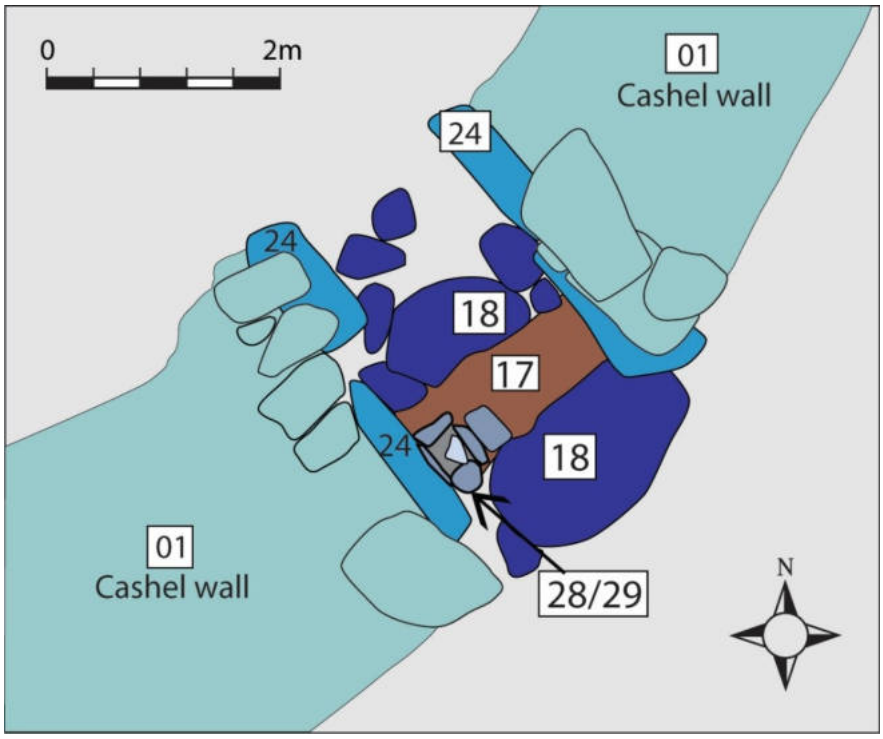


Fig. 19 Plan of entrance features.

The cashel wall is broken on the southeast by the enclosure entrance (09) (Fig. 19). This comprised a 1.4m-wide gap through the wall (2.18m thick at this point), the sides of the passage lined by four large slabs/stones, two on either side. Three of these were very large slabs of limestone placed vertically along the axis of the entrance (24) (Fig. 20), the fourth being a large boulder of equally impressive proportion but placed horizontally. The two vertical slabs lining the south side of the entrance measure 1.2m by 0.8m by 0.1m and 1m by 0.6m by 0.3m (width by height by thickness). The vertical slab on the north side measures 1.05m by 0.89m by 0.23m, with the entrance side of the horizontal stone measuring 1m by 0.35m by 0.48m (width by height by thickness/depth). Smaller horizontal coursing surrounded all four.

The floor of the entrance passage originally comprised some high bedrock on the inner side and some large horizontal slabs (18), with a slot (17) between them, running across the width of the entrance on the outer side (Fig. 20). A post-setting (28/29) occurred in the southern edge of the slot, against the base of one of the vertical slabs. An activity layer, (15), was found on top of the bedrock, slabs, and slot – the equivalent of (14) in the interior.

One very large slab spanned most of the width of the entrance along its outer edge, protruding beyond the line of the cashel wall and with its north-western corner underlying the large horizontal stone of the entrance passage. This slab measures 1.48m by 0.79m, 0.21m thick. Lying parallel to its western edge, and a distance of 0.55m from it (i.e. towards the centre of the entrance passage), a series of broken horizontal slabs spanned the full width of the entrance passage – 1.4m. Laid edge-to-edge, they averaged 0.1m thick and had a maximum, unbroken, 'depth' of 0.66m. The parallel-sided slot (1.4m north-south, 0.55m east-west, 0.12m deep) between these and the large outer slab contained fill (17). This comprised a moderately compact dark-brown clayey silt with orange flecks and frequent small-stone inclusions (0.02m to 0.08m

maximum dimension). Located at its southern end was post-setting (28/29) (Fig. 20). Four vertical limestone pieces originally defined a square setting (29) for a post, though one of the four was broken. A fifth formed a solid, relatively flat, base within the setting. Another, much bigger, vertical stone acted as a support stone against the stone on the north side of the setting. Internally, the setting measured 0.2m by 0.2m, and 0.19m deep, and contained fill (28). This was a very loose deposit of mid-brown silty clay containing the broken pieces of the original south stone of the setting (up to 0.12m maximum dimension). Together, these constitute a stone-floored passage with a wooden gate pivoting on a post erected just inside the outer edge of the entrance. A horizontal timber/frame may also have sat in the adjacent slot.

Fig. 20 A. Entrance slot and surface slabs; B. Post-setting for gatepost; C. Vertical slab north side of entrance; D. Vertical slabs lining south side of entrance..

Use-related material (15) then accumulated on the top of the entrance surface. Quite compact, probably due to later trampling and eventual stone collapse from the adjacent cashel wall, this comprised a mix of medium-sized flat limestone pieces (up to 0.43m maximum dimension) and smaller stones (0.05m to 0.15m maximum dimension), all in a mid-brown silty clay matrix. It contained some animal-bone fragments, a piece of metalworking slag, and a small perforated and worked bone, possibly a handle.

Layer (14), which survived in hollows in the areas of high bedrock and in a band beneath later protective tumble from the cashel wall, constitutes the surface the cashel-builders/occupants walked upon. Judging by the presence of (14A) and its contents, its origin appears to be prehistoric, with the later cashel-related activity slightly altering its upper level. Occasional prehistoric lithics did occur in (14), but most of the material culture from the layer appears Early

Medieval in date, e.g. fragments of a lignite bracelet, tanged iron knives, and fragments of a hair comb. Animal bone fragments were frequent, as were small and medium stones (0.05m to 0.15m maximum dimension), 98% limestone, 2% sandstone. The mid-brown silty clay matrix also contained some small charcoal pieces.

Associated with this activity layer was a row of nine large limestone slabs and stones (12) running along the inner base of the cashel wall, 1.9m south of the cashel entrance (Fig. 21). The row measured 3.64m long and 0.66m wide. Of varying shape and size (from 0.36m to 0.94m maximum dimension), the stones formed an almost level surface – perhaps a path or stable work surface in an area where the slope of the underlying bedrock may have caused some subsidence of material underfoot.

Fig. 21 Row of slabs (left); entrance path (right)..

A more definite path (13) ran between the high bedrock towards the centre of the cashel and the enclosure entrance (Fig. 21). Here, a rough line of approximately 12 (some broken) small and medium limestone slabs were laid flat to provide a surface level with the adjacent bedrock on its north side. Irregular in shape, the stones were relatively well laid, and were one or two courses wide. The ‘path; covered a length of 4.17m roughly northwest-southeast, averaging 0.9m in width. The individual slabs averaged 0.4m in maximum dimension, the largest reaching 0.7m.

Embedded within (14) and, in places, inserted down into (14A), three groups or clusters of large stones were recorded (Fig. 22). The northernmost group (21) comprised six stones, all

limestone, set in a rough line running east-west for a length of 1.78m (0.5m wide). The stones range in size from 0.3m to 0.7m maximum dimension. Slight coursing amongst smaller stones at one end. The middle group (22) consisted of five irregular limestone slabs and stones in a sub-linear pattern measuring 1.8m in length (0.3m to 0.7m wide) and oriented roughly southwest-northeast. The stones range in size from 0.38m to 0.7m maximum dimension. One of the stones overlaps another, but that is the only hint of coursing. The southern group (23) is composed of six large stones in an irregular cluster measuring 1.17m north-south and 1.05m east-west. The stones range in size from 0.36m to 0.71m maximum dimension. Three of the stones overlap at one point. It is uncertain if any or all of these groups represent structural remains (a rectangular structure?) or are the result of later disturbance/tumble from the cashel wall.

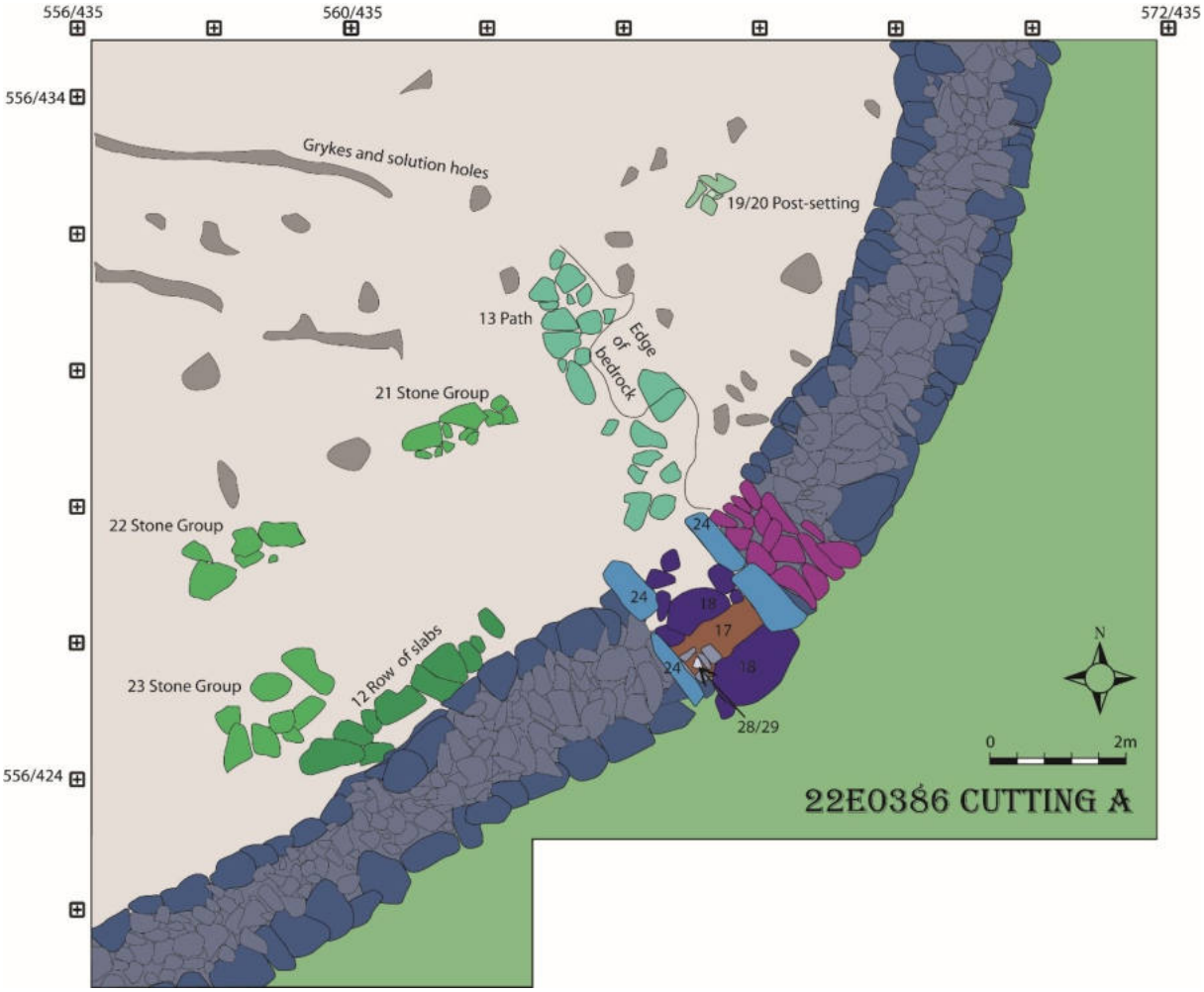


Fig. 22 Plan of Early Medieval/cashel-era features.

The final feature of note is a post-setting (19/20) found in the north-eastern part of the cutting (Fig. 23). The setting (20) comprised a small arrangement of stones – four side stones (two vertical, two angled) and a base stone – set into a pocket of (14A) material caught in the top of a gryke in the bedrock. The top of the stones was also visible within the upper levels of (14). The setting measured 0.15m by 0.17m internally at the base and 0.21m by 0.21m at the top, and was 0.15m deep. Its fill (19) was a loosely compacted mid-brown sandy silt with regular pebble

inclusions (limestone, 0.01m to 0.03m maximum dimension). A small, apparently isolated post-setting, but in an area containing bedrock solution holes that could also have been used to support posts. Its similarity to the post setting in the cashel entrance suggests an Early Medieval date, but a prehistoric link cannot be definitively ruled out.

Fig. 23 Post-setting (19/20).

Phase 3: Later Early Medieval/Medieval/Early Modern

At some point after the primary use of the cashel, stones tumbled, or were knocked, from the remnants of the cashel wall. These fell within the cashel (04), outside the cashel (16), and in the cashel entrance (06).

Before excavation, the cashel entrance was blocked by a loose jumble of limestone slabs and blocks (06). The stones averaged 0.5m in maximum dimension, with the largest slab reaching 1.07m. They sat directly on layer (15), suggesting that little time had passed between the activity represented by (15) and the filling of the entrance. It is uncertain if that filling was accidental tumble or deliberate blocking, or a mixture of both. Either way, it appears to have occurred before a sod layer could develop on top of (15). The early collapse of a wall roofing the entrance passage might explain the filling of the entrance, or perhaps a deliberate blocking so that the cashel could be used as an animal pen immediately after the cashel went out of primary use.

In a loose jumble against the outer face of the cashel wall, the external tumble (16) consisted mostly of medium and large limestone slabs and stones, measuring 0.3m to 1.1m in maximum dimension (Fig. 24). It occurred in a band averaging 1.5m wide (2.05m maximum), and up to

0.88m high. The stones fell largely on exposed bedrock, with occasional small pockets of (14A) material in the tops of grykes. There was no later layer (14) outside the cashel, confirming its link to activity within the cashel.

Fig. 24 Outer tumble (left); Inner tumble (right).

The internal tumble comprised an irregular band of limestone pieces extending up to 1.8m into the cashel interior (Fig. 24). A loose jumble with frequent voids, it had an average height of 0.45m, with individual stones ranging from 0.1m to 0.55m in maximum dimension. The first stones to fall/be knocked fell onto, and partially into, the then ground surface. This dark-brown moderately compact silt (08), averaging 0.2m thick, had the appearance of a humic layer that formed over the top of layer (14), suggesting some gap between the primary use of the cashel as represented by (14) and the collapse/interference with the stones of the cashel wall (Fig. 25). It seems, therefore, that the entrance was blocked before (08) developed and before the inner tumble occurred.

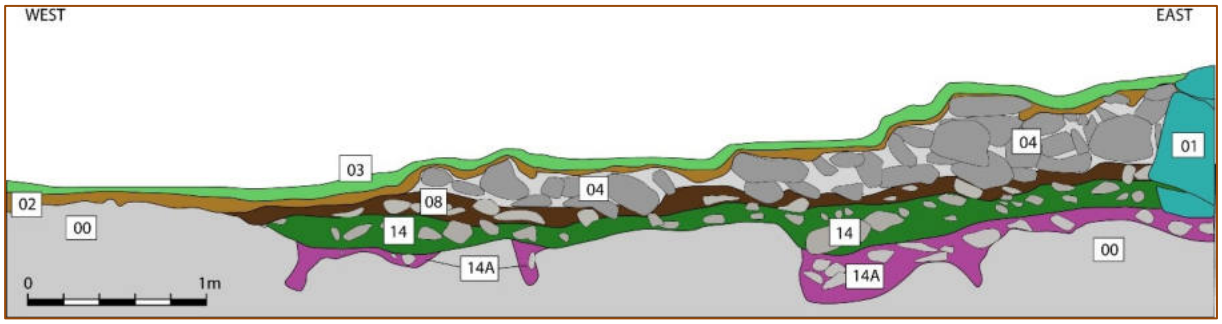


Fig. 25 South-facing section, Cutting A.

The number of stones present in the tumble contexts does not account for the entirety of the original cashel wall, presuming a wall height of at least 2m and a continuation upwards of the surviving average width of 2m. The missing stones, then, have been removed for use elsewhere at some point.

It is possible that the upper courses of the cashel wall, comprised of smaller more transportable stone, were removed to build the larger Caherconnell cashel (10E0087) located just 40-50m to the north, in the late 10th century. However, such smaller stone may also have been 'recycled' into nearby field walls of medieval, post-medieval, and/or early modern date. Modern respect

for the cashels has prevented the removal of any stones by current or recent generations of landowners.

The larger lower stones of the cashel wall would have been more difficult to move and, left *in situ*, formed an enclosure that could still be used as an animal pen. That such a function did manifest is evident in a filled gap in the wall and the remains of several small huts or animal enclosures later built against, and partially into, the cashel wall.

Located approximately 0.6m north of the original cashel entrance, the horizontal coursing of the inner and outer face of the cashel wall is broken by, externally, four vertical slabs placed transversely in the outer face and, internally, by a corresponding section of smaller irregularly placed stones in the inner face (30) (Fig. 26). These, and the intervening rubble, represent the fill of a rough gap (0.76m wide internally and 0.82m wide externally) broken through the cashel wall after the original cashel entrance had been filled, and before the inner and outer tumble built up against it.

Fig. 26 Inner face of cashel wall north of entrance; filled gap (30) marked.

One small, late, animal pen was excavated within Cutting A (Figs. 27, 28). This structure sat upon the surface of (08) and utilised the infilled cashel entrance and stones of the inner tumble in its construction, therefore post-dating all of these. Prior to excavation, the most visible element of this structure was a pair of vertical slabs set parallel to each other, 0.46m apart (05). Both limestone, their long axes were oriented northwest-southeast. The slabs were sub-rectangular in shape, the northern one measuring 0.45m high (above ground), 0.68m wide, and 0.12m thick. The somewhat smaller southern slab measured 0.35m high (above ground), 0.41m wide, and 0.12m thick. Excavation revealed these as part of a poorly preserved low stone wall, marking an entrance into the interior of a small rectangular structure created against the inner face of the cashel wall and the then-blocked cashel entrance. The remains of the rough and irregularly constructed wall (10) comprised a discontinuous line of stone representing its basal course. Re-using stones tumbled from the cashel wall, it survived to a maximum height of 0.42m (two courses) on its north side. The rectangular enclosure measured 2m wide and 3.1m long externally. An irregular surface (11) of stone (0.15m average maximum dimension) pressed into the underlying layer (08) provided an internal floor.

Fig. 27 Outline of late animal pen.

The stratigraphic evidence suggests the following sequence of events. Shortly after the cashel went out of primary use its entrance was filled with stone (06), possibly a deliberate act in order to use the cashel as an animal enclosure. Organic material begins accumulating in the interior (08). Perhaps around the same time, the facing stones of the upper reaches of the cashel wall were robbed out for use elsewhere, leaving the smaller stones of the rubble core vulnerable to gradual slippage. The enclosure was probably still being used to house animals – with organic matter accumulating in the interior (08). A late 10th century date is possible for this, especially if the facing stones were taken to be used in the construction of the adjacent Caherconnell cashel (10E0087).

At a point where layer (08) had built up to cover the bottom course of the inner face of the cashel wall, a gap (30) was broken through the cashel wall, just north of the original (and now closed) cashel entrance. This has the appearance of an entrance that was opened and closed relatively regularly by removing and replacing some large vertical and angled stones. This was, and still is, a relatively common practice to facilitate the movement of animals in the region. This may have occurred towards the end of the Early Medieval period or later.

Sometime after this, the upper levels of the rubble core, no longer retained by facing stones, eventually collapsed/were knocked both into the interior of the enclosure (04) and along its outer perimeter (16). These stones covered/accumulated against the intact faces of the cashel wall, landed on/in the underlying layer (08) internally, built up against the entrance fill (06), and blocked use of the closable gap (30). This might suggest that the enclosure stopped being used as an animal corral at this point. This may have occurred in the early 17th century when the O'Loughlin occupants of the adjacent large cashel of Caherconnell ceded ownership of the territory to the O'Briens or when the O'Briens were replaced by the Comyns, transplanted

Catholic farmers from Limerick. Both events probably marked a change in local farming practice.

At a later date, some of the tumbled stones were rearranged to create a small rectangular structure against the inner edge of the earlier cashel wall, possibly an animal pen or shelter. This was the highest feature stratigraphically and, therefore, the most recent event in the sequence. The construction of such small animal-management related features in cashels in the Burren was relatively common in the 19th/early 20th centuries.

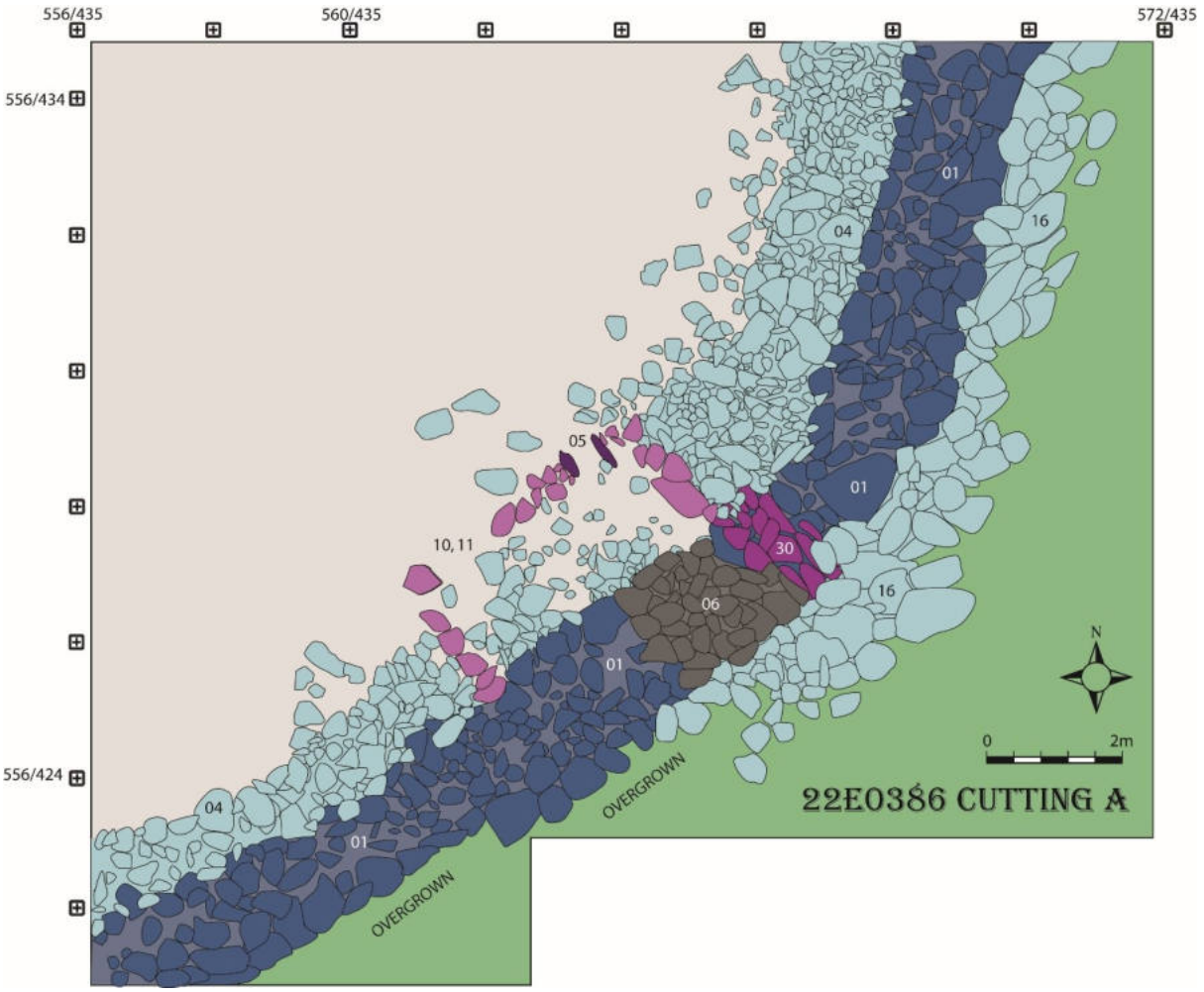


Fig. 28 Plan of late features.

Backfilling

The cutting was backfilled and re-sodded, bringing the surface back level with the surrounding grassy interior of the enclosure. As this site may eventually be included in the visitor experience at Caherconnell, it is desirable to leave certain features visible. Therefore, most of the tumbled stones from the cashel wall (04), (06), (16) were not replaced, leaving the inner and outer faces of the wall – and the cashel entrance – more visible (Fig. 29). With the permission of the landowner, the excess stone now resides in the uneven small field abutting the eastern wall of the cashel, mere metres from the cashel wall. The quantity of this stone was reduced due to

extra stone being required to backfill the cutting – after reduction of available soil for backfilling resulting from on-site wet-sieving of approximately 90% of the archaeological layers (14A, 14, 08).

Fig. 29 Cutting A back-filled.

Finds (Figs. 30 – 53 etc.)

A list of finds is given as Appendix 3. The detailed catalogue of 2022 artefacts has commenced, but is not yet completed. Over 400 find numbers were assigned (with 74 of those each representing a collection of 20 debitage pieces – as advised by the NMI), each attributed to either the prehistoric or early medieval phase identified above. Items of stone, clay, bone, iron, bronze, and lignite were discovered.

Stone artefacts included hundreds of prehistoric lithics, mostly made of chert. The assemblage of finished artefacts was dominated by scrapers (161), including some very well-made standard scrapers, crude scrapers, and a number of very small scrapers (possibly used in groups inset into a haft or handle) (Figs. 30, 31). The finest lithic artefacts comprise three barbed-and-tanged arrowheads, one of white-coloured flint, the others of a much darker chert (Fig. 32). The lithic assemblage also included blade fragments (Fig. 33), retouched pieces, core fragments (Fig. 34), flakes and other debitage, and some worked flint (1480 pieces of debitage) (Fig. 35). Coarse stone items included additional prehistoric objects, e.g. hammerstones probably used in the knapping process (Fig. 36), fragments of flaked stone axes (Fig. 37), and a rubbing stone probably used with a saddle quern (Fig. 38). Whetstones (both pin/point- and blade-sharpeners) (Fig. 39), a possible cresset lamp (Figs. 40, 41), a small flake of shale with three incised lines (Fig. 42), half of a finely-made small white bead (Fig. 43), and fragments of polished stone and lignite rings/bracelets (Fig. 44) were recovered from the Early Medieval level.

Animal bone was used in the manufacture of a number of Early Medieval objects (Fig. 45), including a hollow handle (with circular rivet holes), a fragment of a shorter, but similar, object, a long pin or needle with perforated head, a small decorated sub-square fitting, and fragments of a single-piece hair comb decorated with perforated dot-in-circle motifs.

The iron remains vary in form and degree of preservation. They include four tanged single-sided knives (Fig. 46), three nails (Fig. 47), six pieces probably from belts/belt-buckles (Fig. 48), two possible pins (Fig. 49), a needle fragment (Fig. 50), a strap fitting (Fig. 50), and a small number of miscellaneous shafts and fragments (Fig. 51).

A small number of bronze/copper-alloy items were recovered (Fig. 52), the finest of which is a small triangular fitting decorated with an incised interlace triangle. A small projection to the rear suggests it once decorated a belt or other organic material. Three other fragments of bronze comprised a rectangular-sectioned shaft broken at both ends, a fragment of a ring possibly from a ringed pin, and a small boss with a shallow hollow on its surface and the stumps of three flat strip projections at its base.

The only other material represented in the artefact assemblage was clay – fired clay or ceramic. In this case, five small sherds of prehistoric pottery (two of which comprise two adjoining pieces) were recovered (Fig. 53). All five are heavily degraded with little remaining of their original surfaces. They are coarse with regular small grit inclusions, and range from cream to orange in colour.

Fig. 30 Selection of chert scrapers.

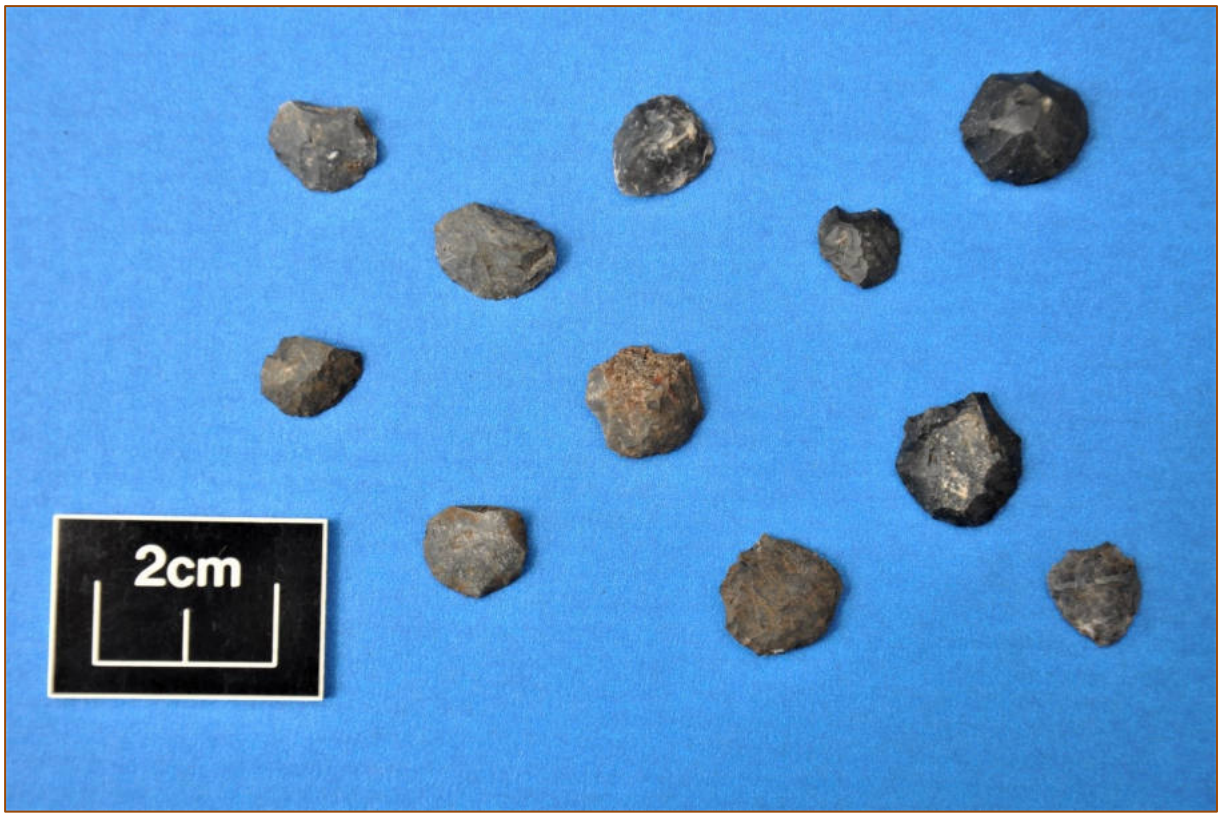


Fig. 31 Selection of 'mini' scrapers (parts of composite tools?).

Fig. 32 Flint (left) and chert barbed-and-tanged arrowheads.

Fig. 33 Selection of chert blade fragments.

Fig. 34 Selection of chert core fragments.

Fig. 35 Selection of worked flint.

Fig. 36. Sandstone hammerstones.

Fig. 37. Fragments of shale/mudstone axeheads.

Fig. 38. Rubbing stone, for use with saddle quern.

Fig. 39 Whetstones; blade and point sharpeners.

Fig. 40 Cresset lamp/mortar, from above.

Fig. 41 Cresset lamp/mortar.

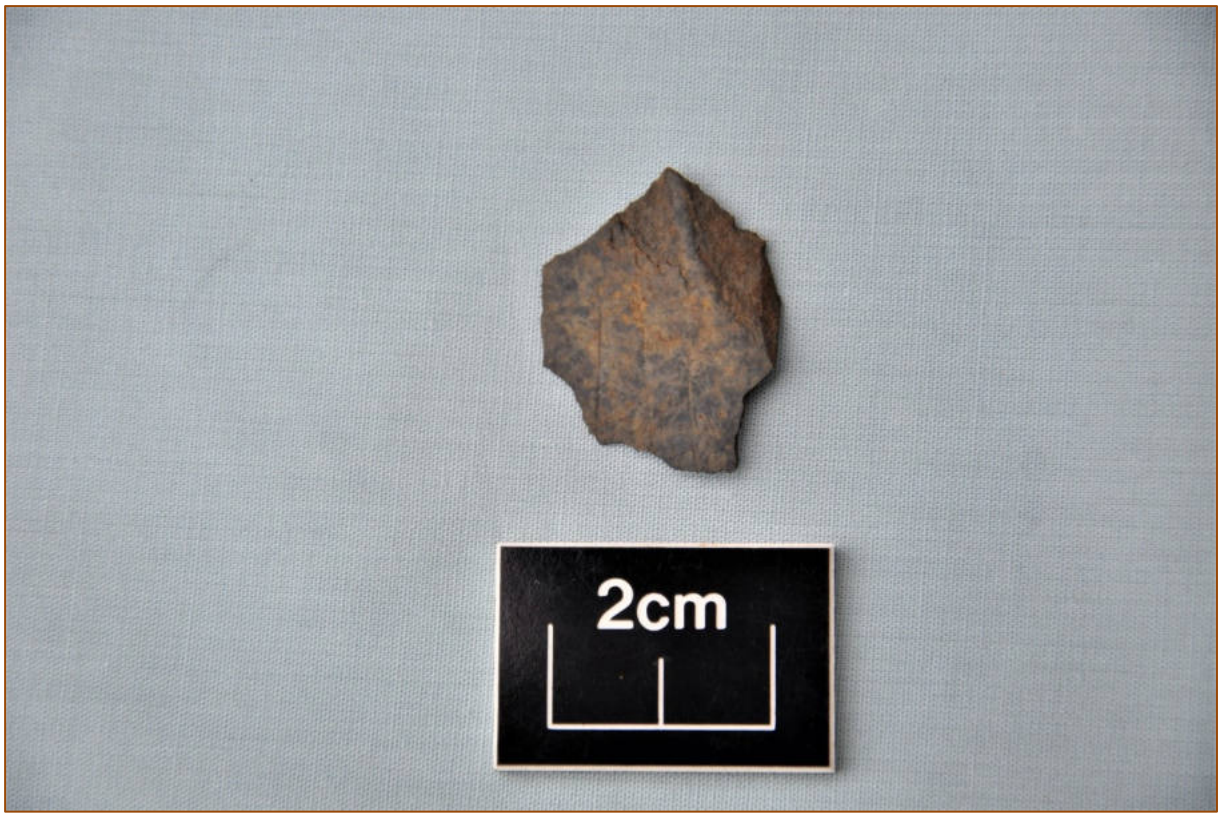


Fig. 42 Incised shale/mudstone flake.

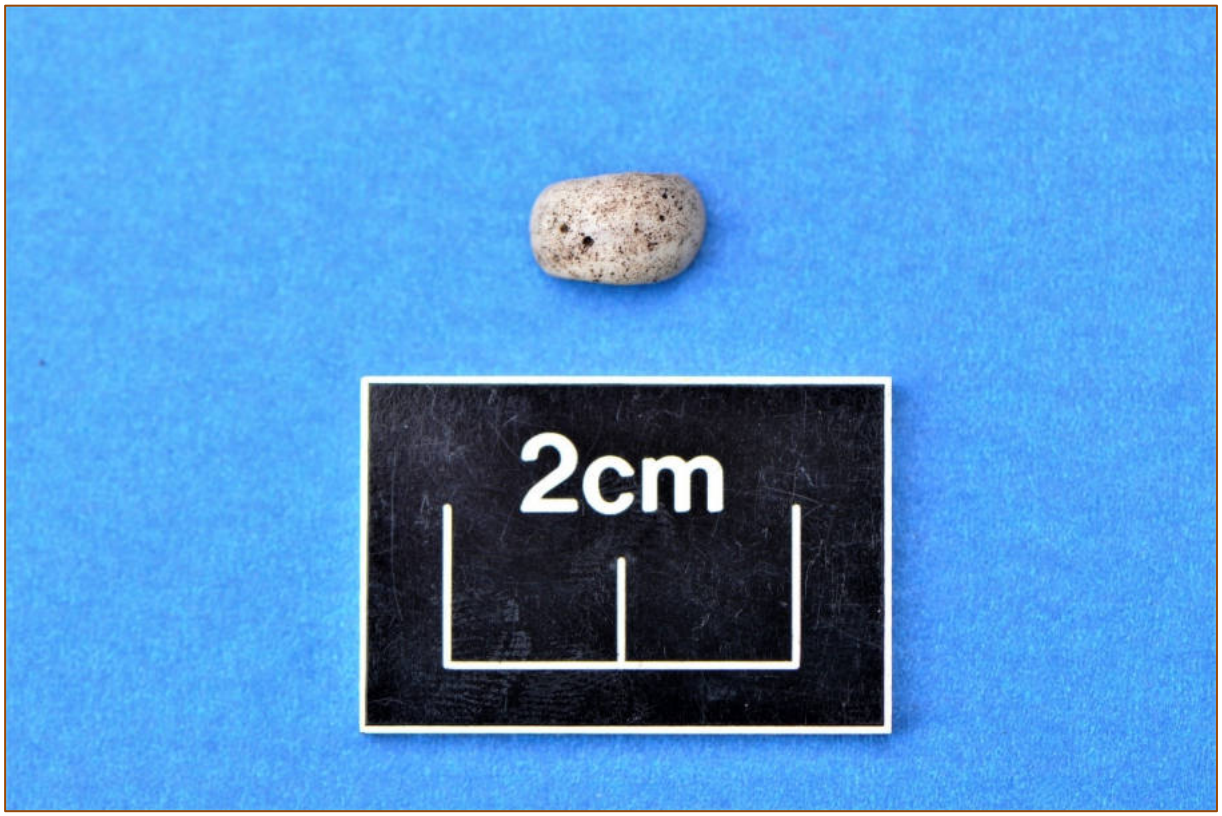


Fig. 43 Half of a stone (?) bead.

Fig. 44 Fragments of worked stone: shale and lignite.

Fig. 45 Bone artefacts.

Fig. 46 Iron knives.

Fig. 47 Iron nails.

Fig. 48. Iron buckle parts.

Fig. 49. Iron pins (probable).

Fig. 50 Iron artefacts, including needle fragment (top left).

Fig. 51 Miscellaneous iron artefacts/fragments.

Fig. 52 Bronze/copper-alloy artefacts/fragments.

Fig. 53 Prehistoric pottery sherds.

These artefacts reflect something of the activities that took place on site, both within and prior to the construction of the cashel, and the status of the people associated with both phases.

The prehistoric lithic assemblage clearly reflects *in situ* knapping of both chert and flint. While chert is readily available in the local limestone geology, some effort appears to have been made to acquire better quality chert alongside the rougher version. A small quantity of white flint was also acquired, perhaps from beach cobbles along the Clare shore. The finished artefacts reflect very fine knapping skill, alongside some everyday workmanship. The discovery of debitage including core fragments, flakes, and tiny chips in a concentrated area reflects the work of one or more knappers at this location. Both chert and flint are represented in the debitage, confirming the working of both materials not just the acquisition of finished implements. The presence of the other prehistoric artefacts strongly suggests the location of domestic activity in the immediate vicinity and not just an isolated knapping location (Fig. 54).

Fig. 54 Selection of prehistoric artefacts.

An assemblage of ironworking **slag** weighing 612g (Fig. 55), three fragments of siderite nodules (Fig. 56), and the whetstones reflect metalworking in or near the cashel. It is possible, if not probable, that the iron artefacts recovered during excavation were manufactured at Caherconnell. No definite evidence of on-site non-ferrous metalworking was identified (however, specialist analysis of the slag is required to confirm this).

Fig. 55 Selection of slag fragments.

Fig. 56 Fragments of siderite nodules.

Woodworking is hinted at by the presence of iron nails. The whetstones and cresset lamp were probably made locally, though there is not much direct proof of this other than the availability of the raw material used. The fragment of partially worked shale ring probably also represents local stone-working. The plentiful supply of raw material makes on-site bone-working very plausible, though no off-cuts or unfinished items have yet been identified. The iron needle fragment, and possibly the large bone pin (though it is rather long), may reflect the manufacture/repair of clothes and other fabrics.

Higher-status objects generally include items of personal ornament, such as the bead, and artefacts made of non-local materials where either the raw materials or the finished objects were acquired from outside the area. The bronze objects and lignite-bracelet fragments fall into this category, most likely representing contact/trade with the outside world.

Samples (Appendix 4)

Bulk soil samples were taken from just two deposits, both post-setting fills. Other archaeological contexts were wet-sieved on site and showed no signs of botanical preservation etc. Only one small collection of charcoal was recovered (by hand and sieving) from layer (14) and is retained for species identification (Fig. 57). Two complete limpet shells and two small shell fragments were found (Fig. 58), all from the Early Medieval phase. 612g of metallurgical slag (twenty-two individual samples), three siderite-nodule pieces, and seven samples of animal bone were excavated. The latter included a decent sized assemblage from layer (14) and some samples identified for radiocarbon dating. With future seasons of excavation envisaged at the site, specialist analysis of these assemblages will be undertaken once all work is concluded.

Fig. 57 Charcoal from context (14).

Fig. 58 Marine shell.

Discussion

Phasing

Thus far, Phase 1 is represented by the spread of prehistoric material in layer (14A). No structural remains or other features were definitely associated with prehistoric activity, although the bedrock hollow and heat-fractured stone beneath the cashel wall may constitute such evidence. Future seasons of excavation will investigate this further.

Fig. 59 Surface of context (14).

Phase 2 comprises the drystone enclosure and stratigraphically associated layers and features. The enclosure appears to be an Early Medieval cashel, complete with double-faced wall and south-eastern entrance. An entrance path, some possible levelling inside the cashel wall, three groups of large stones, and possibly a post-setting represent the Phase 2 features in Cutting A. Material culture from this phase occurred in layer (14) (Fig. 59).

Phase 3 was represented by evidence of post-primary use of the enclosure, primarily for animal management purposes and as a source of building stone, for the adjacent late 10th-century Caherconnell cashel and/or surrounding field walls of unknown/varied date. Initially, it appears that the entire enclosure was intact enough to act as a corral/small field while, at a later stage, tumbled stones formed ramps over the remaining cashel wall and smaller pens/structures were built within the enclosure, adjoining/re-using the general spread of cashel-wall material.

Chronology

A tentative chronology, based on stratigraphy and artefact typology, is proposed for the various phases identified above

The Phase 1 artefacts are consistent with an Early Bronze Age date, especially the three barbed-and-tanged arrowheads. This represents activity contemporary with the Early Bronze Age house found in 2008/9 in the doline located just 20m to the northeast of the cashel. It is entirely possible that other Early Bronze Age houses and related features remain to be discovered in this area.

The Phase 2 enclosure is a fairly typical Early Medieval cashel – a double-faced drystone wall with south-eastern entrance enclosing a roughly circular area, and located midway between two other Early Medieval cashels; a sub-square one dating 7th to 9th century AD and the large Caherconnell cashel built in the late 10th century. The 'middle' cashel is not as impressive in appearance as the latter, but is still a little larger than the typical Burren cashel of 20-25m diameter. The artefact finds contemporary with the cashel are consistent with the Early Medieval period, e.g. lignite bracelet fragments and tanged iron knives. More obvious evidence is provided by the interlaced triangular knot on the small bronze fitting, and the two small fragments of hair comb (Fig. 60). The latter, bearing decoration on both sides and on the same fragment as the teeth stumps, are either part of a single-edged single-piece Class A comb (Dunlevy 1988, 351-3) or part of the protruding endplate of a composite Class B or Class C comb (ibid. 353-8). Class A combs (5th to 10th century AD in Ireland), however, rarely have gradated teeth or decoration on both faces like the 22E0386 fragments, while the dot-and-circle motifs are very common in classes B and C and these do feature gradated teeth and decoration that extends onto the endplates. Class B dates from the 3rd to the early 10th century in Ireland (ibid. 356), and Class C from the 6th to the 8th century AD (ibid. 357-8). All options suggest a date prior to the construction of the larger Caherconnell cashel in the late 10th century.

Fig. 60 Bronze fitting (left); comb fragments (right).

The date/s of post-primary use remain uncertain. The earliest suggested possibility relates to the late 10th-century construction of Caherconnell cashel and the likely 'robbing' of suitable building stone from the earlier cashel. The initial use of the cashel as an animal enclosure might also begin at this time. When the wall tumble eventually made the site unsuitable as a single large corral is unknown, likewise when some of the tumbled material was re-organised into small structures probably related to animal management. The latter, however, may well relate to 19th/early-20th century activity, with similar features seen at many cashels in the Burren.

This working chronology can be tied to the emerging picture of activity in this area. The probable link with the Early Bronze Age house in the doline has already been highlighted. Early Bronze Age burial activity is known from the nearby Poulawack cairn to the south, with Middle Bronze Age evidence recorded at Poulnabrone portal tomb to the north, and a mid- to late-Bronze Age date suggested for two boulder burials recently identified in Caherconnell townland. A barrow, also recently identified in the townland, may date to the Late Bronze Age or Iron Age.

A pre-10th century AD date for the cashel would probably see a chronological overlap with the adjacent sub-square cashel to the south (10E119), raising interesting questions about their relationship. Further excavation (and radiocarbon dating) at 22E0386 may well shed more light on this. If the cashel walls were partially robbed to build the late 10th-century Caherconnell cashel, a lack of sentimental connection might be surmised. The construction of the large cashel by a newcomer to the area (as seems likely given the evidence associated with that site; the Dal Cais tightening their grip on territory amidst a strengthening Viking threat – see 10E0087 excavation reports) could well explain such a practical (non-familial?) relationship with the older enclosure.

The change in animal-management use, from a single large enclosure to host of several small structures, could relate to the end of O'Loughlin occupation of the adjacent Caherconnell cashel at the start of the 17th century and/or later Comyn or Davoren activity (Caherconnell was granted to the Comyns in the mid-17th century, with the O'/Davorens marrying in within a century).

Conclusion

Cutting A of this, the 'middle', cashel in Caherconnell townland has revealed the form of the enclosure wall and entrance and also the use of high bedrock as an activity surface contemporary with the use of the cashel. This, of course, presents difficulties in identifying structural features contemporary with cashel use - natural grykes and solution hollows could well have been used to support structural posts etc. without leaving any definitive evidence of such use. The lack of accumulated activity-related deposits on top of this high bedrock further complicates matters, and may be due to a mix of deliberate cleaning of the bedrock surface during use and post-use exposure to the elements without the protection of high cashel walls or overlying structures. Therefore, Early Medieval evidence is mostly confined to material preserved beneath fallen or laid stones, trapped in the top of some grykes, and surviving in dips and hollows in the underlying bedrock and/or on top of pockets of the older prehistoric layer.

Nonetheless, a path connecting the centre of the site to its entrance, a possible line of levelling slabs, groups of potential structural stones, and a post-setting were all identified. The three groups of large stones may represent all that remains of a stone-walled structure in Cutting A. The entrance path links the entrance to the centre of the enclosure and it is worth noting that the three other quadrants of the interior are all higher and flatter than Cutting A, possibly making them more suitable locations for domestic houses. That domestic activity took place within the cashel is also suggested by the decent assemblage of animal-bone fragments spread throughout layer (14), a small sample of charcoal pieces, a few marine shells of edible species, lumps of metalworking slag, and the artefact assemblage. The inclusion of ornamental items, such as the lignite bracelet, bead fragment, and decorated bronze fragments and fitting, confirms a slightly above-average status for the site (not to mention contact with the outside world), despite the relatively modest survival of features and evidence in Cutting A. Future seasons of excavation may enhance this understanding.

The prehistoric evidence reflects *in situ* knapping of both chert and flint and, while the former is relatively easy to obtain in the limestone landscape of the Burren, the latter may have required more effort to acquire and may have been more valuable as a result. The quantity of lithics, such as scrapers, produced and left behind suggests a relatively sizeable settlement in the vicinity – perhaps more than the known Early Bronze Age house in the doline accounts for. The quality of some of the knapping marks the presence of a very skilled stone-worker, someone whose work may have been in high demand and led to a certain elevated status in the area.

The 2022 excavation has, therefore, revealed much about this specific site and also added significant information to our knowledge of this multi-period landscape. Some additional post-excavation and future-season work is required to confirm and enhance these findings.

Further work

Artefacts in need of conservation are few, but will be x-rayed, cleaned and conserved by a recognised conservator (Susannah Kelly UCD).

The artefact catalogue and NMI database will be completed, and all artefacts physically numbered and packaged to museum standards for eventual transfer to the NMI.

Samples (all animal bone) for radiocarbon dating have been selected from the following contexts and will be submitted to Queen's University Belfast for AMS radiocarbon dating.

Context 18, beneath horizontal slabs of cashel entrance [sample 36]
Context 14A, associated with prehistoric lithics [sample 37]

It is envisaged that future seasons of excavation will see more radiocarbon dating of samples from this site. For now, the above samples are chosen to interrogate both the Early Medieval and Early Bronze Age phases.

This preliminary excavation report will, in due course, be posted on the Caherconnell Archaeological Field School website (www.caherconnell.com/archaeology) alongside the reports of previous excavations undertaken by the School.

A summary of the findings of the excavation is being submitted/uploaded to *Excavations 2022*.

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Dr Michelle Comber, MA
Caherconnell Archaeological Field School
August 2022

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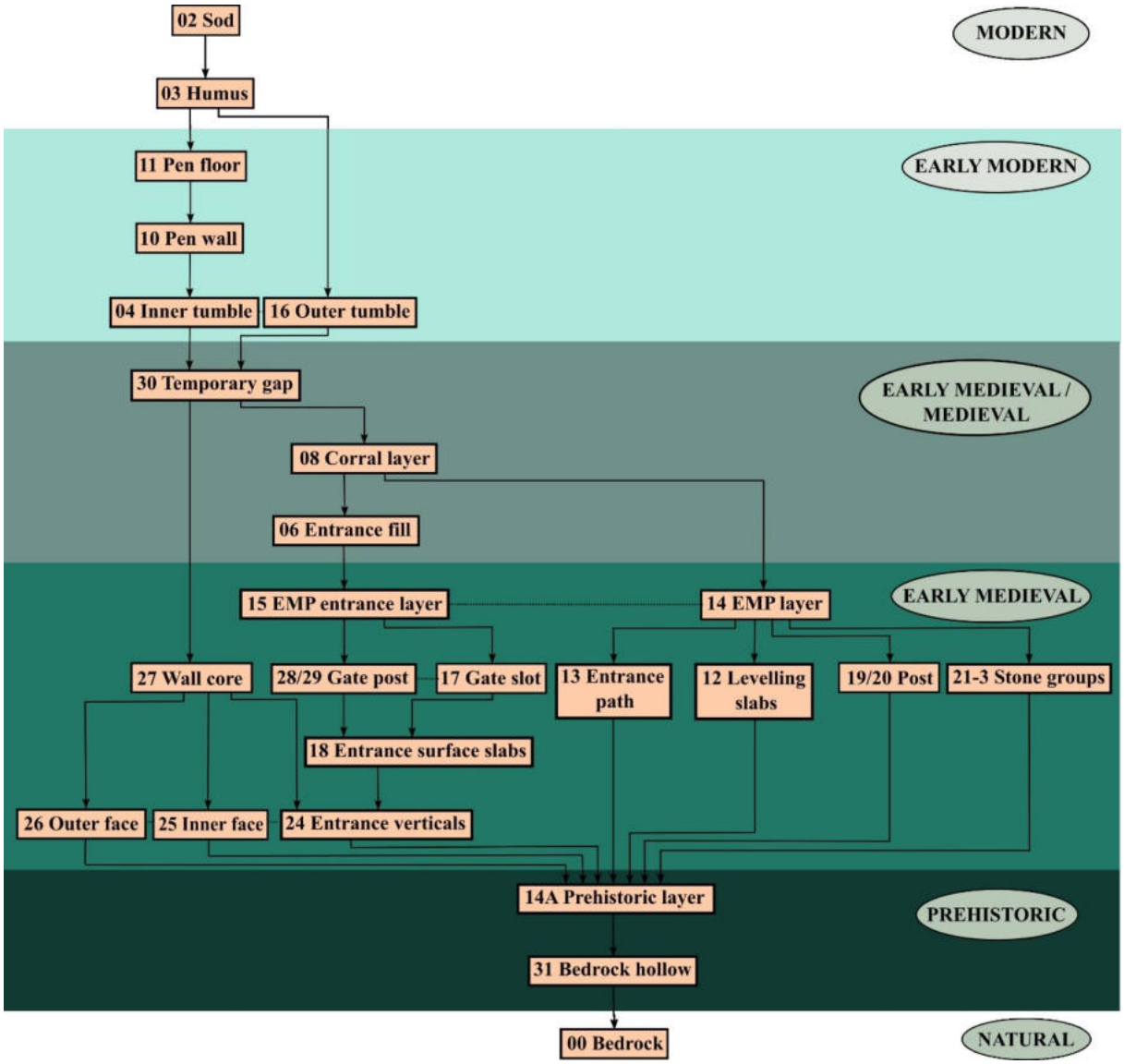
Appendix 1: List of Contexts

No.	Description	Cutting	Grid square	Sample	Date
0	Bedrock	A	556-566 / 422-434	-	21/6/22
1	Cashel wall	A	556-566 / 422-434	-	21/6/22
2	Sod	A	556-566 / 422-434	-	21/6/22
3	Humus	A	556-566 / 422-434	-	21/6/22
4	Inner tumble from cashel wall	A	556-566 / 422-434	-	21/6/22
5	Pair of upright slabs	A	562 / 428	-	21/6/22
6	Stone fill in cashel entrance	A	564 / 424-426	-	21/6/22
7	Patchy brown humic silt	A	556-566 / 422-434	-	22/6/22
8	Dark-brown organic silt	A	556-566 / 422-434	1-5, 7	27/6/22
9	Cashel entrance	A	564 / 424-426	-	27/6/22
10	Wall line of late structure	A	562-564 / 426-428	-	28/6/22
11	Floor surface of late structure	A	562-564 / 426-428	-	28/6/22
12	Row of level slabs	A	560-562 / 424-426	-	28/6/22
13	Entrance path	A	562-564 / 428-430	-	29/6/22
14	Early Medieval occupation layer	A	556-566 / 422-434	Multiple	29/6/22
14A	Lower level of (14); prehistoric	A	556-568 / 420-434	37	13/7/22
15	Early Medieval layer in cashel entrance	A	564 / 424-426	19, 22	1/7/22
16	Outer tumble from cashel wall	A	556-566 / 422-434	-	4/7/22
17	Gate slot in cashel entrance	A	564 / 424-426	-	7/7/22
18	Horizontal slabs in cashel entrance	A	564 / 424-426	-	7/7/22
19	Fill of post-setting (20)	A	564 / 432	26	11/7/22
20	Post-setting	A	564 / 432	-	11/7/22
21	Stone group (north)	A	560-562 / 430	-	12/7/22
22	Stone group (middle)	A	556-558 / 426	-	12/7/22
23	Stone group (south)	A	558 / 424	-	12/7/22
24	Vertical slabs lining entrance passage	A	564 / 424-426	-	12/7/22
25	Inner face of cashel wall	A	556-566 / 422-434	-	12/7/22
26	Outer face of cashel wall	A	556-568 / 420-434	-	12/7/22
27	Rubble core of cashel wall	A	556-568 / 420-434	-	12/7/22
28	Fill of post-setting (29) in cashel entrance	A	564 / 424	34	13/7/22
29	Post-setting for gate in cashel entrance	A	564 / 424	-	13/7/22
30	Infilled temporary gap in cashel wall	A	564-566 / 426-428	-	13/7/22
31	Hollow in bedrock	A	560-562 / 426-428	-	13/7/22

Appendix 2: Harris Matrix
Cutting A



Appendix 3: List of Artefacts

No.	Description	Cutting	Easting	Northing	Context	Date
1	Iron knife	A	560.74	432.18	07	22/6/22
2	Iron point	A	563.65	425.65	07	23/6/22
3	Iron knife	A	563.52	428.60	08	27/6/22
4	Chert core fragment	A	563.97	428.00	08	28/6/22
5	Whetstone fragment	A	559.59	423.96	08	28/6/22
6	Bone handle (sheep tibia)	A	566.39	429.95	08	28/6/22
7	Chert core fragment	A	563.05	426.85	08	28/6/22
8	Iron shaft	A	563.55	427.79	08	28/6/22
9	Iron nail	A	Sieve	Sieve	08	29/6/22
10	Flint	A	Sieve	Sieve	08	29/6/22
11	Chert flake	A	567.78	434.45	14	29/6/22
12	Hammerstone	A	654.95	433.74	14	29/6/22
13	Iron buckle pin?	A	564.86	426.68	14	29/6/22
14	Mudstone ring fragment	A	563.67	427.59	14	29/6/22
15	Lignite bracelet fragment	A	564.98	429.30	14	29/6/22
16	Iron buckle pin?	A	Sieve	Sieve	14	30/6/22
17	Shale ring fragment	A	566.94	431.50	14	30/6/22
18	Iron knife	A	559.35	423.30	14	30/6/22
19	Flint blade fragment	A	562.93	427.77	14	30/6/22
20	Iron pinhead/loop	A	561.77	425.82	14	30/6/22
21	Lignite bracelet fragment	A	565.82	431.25	14	30/6/22
22	Chert bipolar core	A	561.20	426.09	14A	1/7/22
23	Chert scraper	A	563.16	427.93	14A	1/7/22
24	Chert scraper	A	563.63	427.16	14A	1/7/22
25	Chert blade	A	563.55	426.25	14A	1/7/22
26	Chert core fragment	A	563.67	427.47	14A	4/7/22
27	Chert core fragment	A	563.43	427.52	14A	4/7/22
28	Iron shaft	A	Sieve	Sieve	14	4/7/22
29	Chert utilised piece	A	563.58	428.35	14A	4/7/22
30	Chert flake	A	Sieve	Sieve	14A	4/7/22
31	Chert flake	A	561.57	425.55	14A	5/7/22
32	Chert scraper	A	561.50	425.50	14A	5/7/22
33	Chert scraper	A	561.37	432.04	14A	5/7/22
34	Chert flake	A	562.31	431.71	14A	5/7/22
35	Bone comb fragments (2 pieces)	A	562.31	432.36	14	5/7/22
36	Iron nail	A	560.30	425.73	14	5/7/22
37	Bone handle?	A	565.09	427.42	15	5/7/22
38	Whetstone fragment	A	570.92	430.22	16	5/7/22

39	Chert scraper	A	563.91	429.19	14	5/7/22
40	Bone pin (4 pieces)	A	563.18	429.08	14	5/7/22
41	Decorated bone fitting	A	563.37	428.80	14	5/7/22
42	Chert scraper	A	Sieve	Sieve	14A	6/7/22
43	Chert scraper	A	Sieve	Sieve	14A	6/7/22
44	Chert scraper	A	Sieve	Sieve	14A	6/7/22
45	Chert blade fragment	A	Sieve	Sieve	14A	6/7/22
46	Chert blade fragment	A	Sieve	Sieve	14A	6/7/22
47	Chert core fragment	A	Sieve	Sieve	14A	6/7/22
48	Chert core fragment	A	Sieve	Sieve	14A	6/7/22
49	Chert core fragment	A	Sieve	Sieve	14A	6/7/22
50	Chert core fragment	A	Sieve	Sieve	14A	6/7/22
51	Chert flake	A	Sieve	Sieve	14A	6/7/22
52	Chert flake	A	Sieve	Sieve	14A	6/7/22
53	Chert flake	A	Sieve	Sieve	14A	6/7/22
54	Chert flake	A	Sieve	Sieve	14A	6/7/22
55	Lignite bracelet fragment	A	562.42	429.80	14	6/7/22
56	Chert retouched piece	A	562.45	429.83	14A	6/7/22
57	Chert scraper	A	560.48	425.46	14A	7/722
58	Chert flake	A	560.51	425.45	14A	7/7/22
59	Chert scraper	A	Sieve	Sieve	14A	7/7/22
60	Chert bifacial form	A	561.19	426.76	14A	7/7/22
61	Iron hook?	A	Sieve	Sieve	14	7/7/22
62	Chert core fragment	A	562.44	426.47	14A	7/7/22
63	Chert blade	A	561.65	425.38	14A	7/7/22
64	Chert blade	A	561.53	425.57	14A	7/7/22
65	Chert scraper	A	561.40	425.64	14A	7/7/22
66	Chert scraper	A	564.08	428.03	14A	7/7/22
67	Chert scraper	A	562.28	427.65	14A	7/7/22
68	Chert blade fragment	A	561.82	425.71	14A	7/7/22
69	Chert mini-scraper fragment	A	561.82	425.75	14A	7/7/22
70	Chert blade fragment	A	565.58	434.33	14A	7/7/22
71	Iron pin	A	561.84	429.64	14	7/7/22
72	Chert scraper	A	561.83	425.90	14A	7/7/22
73	Chert flake	A	567.06	432.00	14A	7/7/22
74	Iron needle?	A	Sieve	Sieve	14	7/7/22
75	Chert scraper	A	Sieve	Sieve	14A	7/7/22
76	Chert scraper	A	560.23	424.81	14A	8/7/22
77	Chert scraper	A	564.97	431.32	14A	8/7/22
78	Chert scraper	A	561.92	427.72	14A	8/7/22
79	Chert flake	A	557.66	423.70	14A	8/7/22

80	Chert scraper	A	567.01	429.09	14A	8/7/22
81	Chert scraper	A	559.98	425.05	14A	8/7/22
82	Chert scraper	A	560.38	424.64	14A	8/7/22
83	Chert core fragment	A	566.12	426.66	On 00	8/7/22
84	Chert crude scraper	A	566.17	426.58	On 00	8/7/22
85	Chert scraper	A	561.56	426.74	14A	8/7/22
86	Chert flake	A	565.31	429.30	14A	8/7/22
87	Chert scraper	A	561.32	427.31	14A	8/7/22
88	Chert mini scraper	A	563.37	426.78	14A	8/7/22
89	Chert crude scraper	A	562.74	426.16	14A	8/7/22
90	Chert scraper	A	566.18	430.05	14A	8/7/22
91	Chert bifacial flake	A	565.92	430.14	14A	8/7/22
92	Iron strap fitting	A	561.89	430.75	14	8/7/22
93	Half a bead	A	562.03	430.91	14	8/7/22
94	Chert flake	A	561.64	430.30	14A	8/7/22
95	Chert scraper	A	562.45	426.86	14A	11/7/22
96	Chert scraper	A	562.21	427.10	14A	11/7/22
97	Chert flake	A	561.76	426.75	14A	11/7/22
98	Chert flake	A	563.21	427.12	14A	11/7/22
99	Chert scraper	A	556.78	428.17	14A	11/7/22
100	Bronze fitting	A	561.23	428.29	14	11/7/22
101	Chert scraper	A	561.64	430.30	14A	11/7/22
102	Chert scraper	A	561.64	430.30	14A	11/7/22
103	Chert utilised piece	A	561.64	430.30	14A	11/7/22
104	Chert bashed lump	A	561.64	430.30	14A	11/7/22
105	Chert flake	A	561.64	430.30	14A	11/7/22
106	Chert flake	A	562.38	426.88	14A	11/7/22
107	Chert scraper blank	A	561.64	430.30	14A	11/7/22
108	Chert scraper blank	A	561.64	430.30	14A	11/7/22
109	Chert flake	A	561.64	430.30	14A	11/7/22
110	Chert flake	A	561.64	430.30	14A	11/7/22
111	Chert flake	A	561.64	430.30	14A	11/7/22
112	Chert flake	A	561.64	430.30	14A	11/7/22
113	Chert flake	A	561.64	430.30	14A	11/7/22
114	Chert flake	A	561.64	430.30	14A	11/7/22
115	Chert flake	A	561.64	430.30	14A	11/7/22
116	Chert flake	A	561.64	430.30	14A	11/7/22
117	Chert flake	A	561.64	430.30	14A	11/7/22
118	Chert core fragment	A	561.56	427.12	14A	11/7/22
119	Chert scraper	A	561.90	427.04	14A	11/7/22
120	Chert flake	A	561.42	426.90	14A	11/7/22

121	Chert crude scraper	A	561.45	426.90	14A	11/7/22
122	Chert scraper	A	561.66	427.62	14A	11/7/22
123	Flint	A	Sieve	Sieve	14A	11/7/22
124	Chert scraper	A	565.28	429.09	14A	11/7/22
125	Chert core fragment	A	565.02	429.44	14A	11/7/22
126	Chert scraper	A	Sieve	Sieve	14A	11/7/22
127	Chert scraper	A	562.18	428.58	14A	11/7/22
128	Whetstone	A	558.17	422.98	14	11/7/22
129	Chert scraper	A	562.63	427.46	14A	11/7/22
130	Chert crude scraper	A	562.61	427.95	14A	11/7/22
131	Flint	A	Sieve	Sieve	14A	11/7/22
132	Chert scraper	A	Sieve	Sieve	14A	12/7/22
133	Chert scraper	A	Sieve	Sieve	14A	12/7/22
134	Chert core fragment	A	565.32	428.98	14A	12/7/22
135	Chert scraper	A	565.41	429.08	14A	12/7/22
136	Iron buckle pin?	A	558.78	423.51	14	12/7/22
137	Iron strip	A	561.30	429.46	14	12/7/22
138	Iron buckle pin?	A	561.24	429.64	14	12/7/22
139	Cresset lamp?	A	561.02	428.73	14	12/7/22
140	Chert core fragment	A	561.20	433.60	14A	12/7/22
141	Chert crude scraper	A	561.43	433.56	14A	12/7/22
142	Chert flake	A	563.87	431.70	14A	12/7/22
143	Chert crude scraper	A	564.06	428.27	14A	12/7/22
144	Chert scraper	A	564.53	427.96	14A	12/7/22
145	Chert core fragment	A	564.42	428.60	14A	12/7/22
146	Chert platform flake	A	561.72	429.85	14A	12/7/22
147	Iron nail	A	565.04	425.55	17	12/7/22
148	Flint scraper	A	558.90	431.48	14A	12/7/22
149	Bronze rod	A	560.77	429.30	14	12/7/22
150	Iron object	A	Sieve	Sieve	14	12/7/22
151	Flint	A	Sieve	Sieve	14A	12/7/22
152	Chert crude scraper	A	563.11	430.10	14A	12/7/22
153	Chert scraper	A	Sieve	Sieve	14A	12/7/22
154	Chert scraper	A	Sieve	Sieve	14A	12/7/22
155	Lignite bracelet fragment	A	556.96	422.39	14	12/7/22
156	Lined shale fragment	A	562.81	426.35	14	12/7/22
157	Flint scraper	A	563.18	430.69	14A	13/7/22
158	Whetstone	A	557.86	427.49	14	13/7/22
159	Hammerstone	A	562.57	426.70	14A	13/7/22
160	Hammerstone	A	561.92	427.28	14A	13/7/22
161	Bead fragment?	A	562.59	426.11	14	13/7/22

162	Iron belt fitting	A	558.77	427.42	14	13/7/22
163	Chert scraper	A	561.86	429.66	14A	13/7/22
164	Chert scraper	A	561.33	429.45	14A	13/7/22
165	Chert scraper	A	562.65	426.78	14A	13/7/22
166	Chert scraper	A	561.15	426.88	14A	13/7/22
167	Chert scraper	A	561.49	429.23	14A	13/7/22
168	Chert crude scraper	A	562.67	426.62	14A	13/7/22
169	Chert core	A	558.71	427.57	14A	13/7/22
170	Iron knife	A	560.85	429.23	14	13/7/22
171	Chert scraper	A	558.08	425.24	14A	13/7/22
172	Chert scraper	A	561.92	426.90	14A	13/7/22
173	Chert crude scraper	A	562.68	431.34	14A	13/7/22
174	Chert crude scraper	A	562.60	431.15	14A	13/7/22
175	Chert core	A	558.34	427.16	14A	13/7/22
176	Stone-axe fragment	A	563.24	431.01	14A	13/7/22
177	Rubbing stone	A	560.90	426.47	14A	13/7/22
178	Pot sherd	A	561.70	426.66	14A	13/7/22
179	Chert scraper	A	561.02	432.43	14A	13/7/22
180	Chert retouched piece	A	561.91	427.14	14A	13/7/22
181	Bronze ring fragment	A	559.13	428.36	14	13/7/22
182	Chert scraper	A	561.73	427.55	14A	13/7/22
183	Chert crude scraper	A	561.91	427.58	14A	13/7/22
184	Chert flake/blade	A	561.38	427.18	14A	13/7/22
185	Chert large blade	A	561.32	426.24	14A	13/7/22
186	Chert scraper	A	561.32	426.38	14A	13/7/22
187	Stone-axe fragment	A	563.73	427.29	14A	13/7/22
188	Chert scraper	A	561.59	427.20	14A	13/7/22
189	Chert scraper	A	561.28	427.35	14A	13/7/22
190	Chert scraper	A	561.10	430.17	14A	13/7/22
191	Lignite bracelet fragment	A	561.70	429.82	14	13/7/22
192	Chert scraper	A	561.24	430.37	14A	13/7/22
193	Chert scraper	A	561.43	429.83	14A	13/7/22
194	Chert scraper	A	561.28	430.76	14A	13/7/22
195	Iron object	A	560.94	428.77	14	13/7/22
196	Iron loop?	A	563.08	429.01	14	13/7/22
197	Chert scraper	A	561.30	428.68	14A	13/7/22
198	Bronze boss	A	Sieve	Sieve	14	13/7/22
199	Chert scraper	A	562.44	428.21	14A	13/7/22
200	Flint barbed-and-tanged arrowhead	A	562.46	430.05	14A	13/7/22
201	Chert scraper	A	562.49	428.15	14A	13/7/22
202	Chert scraper	A	562.21	428.35	14A	13/7/22

203	Chert scraper	A	561.52	429.31	14A	13/7/22
204	Chert scraper	A	562.57	427.20	14A	13/7/22
205	Chert scraper	A	562.41	427.18	14A	13/7/22
206	Chert barbed-and-tanged arrowhead	A	562.52	430.10	14A	14/7/22
207	Iron 'ball'?	A	556.79	423.81	14	14/7/22
208	Flint	A	562.26	429.86	14A	14/7/22
209	Chert crude scraper	A	560.91	428.55	14A	14/7/22
210	Chert scraper	A	557.29	422.61	14A	14/7/22
211	Chert scraper	A	560.84	428.61	14A	14/7/22
212	Chert scraper	A	558.50	424.63	14A	14/7/22
213	Worked stone/whetstone	A	558.27	422.70	14	14/7/22
214	Chert scraper	A	562.75	429.88	14A	14/7/22
215	Chert barbed-and-tanged arrowhead	A	561.00	428.79	14A	14/7/22
216	Chert scraper	A	560.95	428.49	14A	14/7/22
217	Chert scraper	A	561.60	428.46	14A	14/7/22
218	Chert scraper	A	563.12	429.85	14A	14/7/22
219	Chert scraper	A	561.38	428.40	14A	14/7/22
220	Chert retouched piece	A	562.65	428.47	14A	14/7/22
221	Chert scraper	A	561.28	428.36	14A	14/7/22
222	Chert scraper	A	561.09	428.42	14A	14/7/22
223	Chert scraper	A	562.90	428.57	14A	14/7/22
224	Stone-axe fragment	A	563.53	428.74	14A	14/7/22
225	Chert scraper	A	561.27	426.65	14A	14/7/22
226	Chert scraper	A	560.46	428.58	14A	14/7/22
227	Chert scraper	A	562.79	429.53	14A	14/7/22
228	Chert scraper	A	563.28	428.17	14A	14/7/22
229	Flint	A	562.73	428.25	14A	14/7/22
230	Stone-axe fragment	A	562.76	429.19	14A	14/7/22
231	Flint	A	Sieve	Sieve	14A	14/7/22
232	Chert scraper	A	561.60	428.42	14A	14/7/22
233	Chert scraper	A	562.95	428.96	14A	14/7/22
234	Flint retouched piece	A	563.44	428.00	14A	14/7/22
235	Chert core	A	562.47	428.65	14A	14/7/22
236	Chert scraper	A	562.07	428.50	14A	14/7/22
237	Chert scraper	A	560.90	427.55	14A	14/7/22
238	Chert scraper	A	562.21	428.48	14A	14/7/22
239	Chert scraper	A	562.27	428.82	14A	14/7/22
240	Chert scraper	A	562.17	431.53	14A	14/7/22
241	Chert scraper	A	562.52	428.28	14A	14/7/22
242	Chert scraper	A	562.32	431.42	14A	14/7/22
243	Chert scraper	A	562.46	428.38	14A	14/7/22

244	Adjoining pot sherds	A	561.33	426.01	14A	14/7/22
245	Pot sherd	A	561.52	426.14	14A	14/7/22
246	Pot sherd	A	561.76	426.51	14A	14/7/22
247	Pot sherd	A	561.63	426.49	14A	14/7/22
248	Debitage: core fragments (20)	A	562.78	427.94	14A	14/7/22
249	Debitage: core fragments (20)	A	563.78	428.71	14A	14/7/22
250	Debitage: core fragments (20)	A	563.36	428.87	14A	14/7/22
251	Debitage: core fragments (20)	A	563.54	428.76	14A	14/7/22
252	Debitage: core fragments (20)	A	563.41	426.96	14A	14/7/22
253	Debitage (20)	A	561.61	426.35	14A	14/7/22
254	Debitage (20)	A	562.57	427.92	14A	14/7/22
255	Debitage (20)	A	563.07	429.36	14A	14/7/22
256	Debitage (20)	A	563.44	428.82	14A	14/7/22
257	Debitage (20)	A	563.30	429.28	14A	14/7/22
258	Debitage (20)	A	562.41	428.92	14A	14/7/22
259	Debitage (20)	A	563.36	429.37	14A	14/7/22
260	Debitage (20)	A	561.67	428.52	14A	14/7/22
261	Debitage (20)	A	563.41	429.05	14A	14/7/22
262	Debitage (20)	A	563.77	428.32	14A	14/7/22
263	Debitage (20)	A	562.52	429.16	14A	14/7/22
264	Debitage (20)	A	563.56	428.22	14A	14/7/22
265	Debitage (20)	A	562.76	429.25	14A	14/7/22
266	Debitage (20)	A	563.83	428.33	14A	14/7/22
267	Debitage (20)	A	562.44	429.11	14A	14/7/22
268	Debitage (20)	A	563.67	428.93	14A	14/7/22
269	Debitage (20)	A	563.92	428.46	14A	14/7/22
270	Debitage (20)	A	564.34	428.21	14A	14/7/22
271	Debitage (20)	A	562.91	427.77	14A	14/7/22
272	Debitage (20)	A	562.03	428.88	14A	14/7/22
273	Debitage (20)	A	562.61	428.25	14A	14/7/22
274	Debitage (20)	A	563.19	428.31	14A	14/7/22
275	Chert core	A	561.53	426.31	14A	14/7/22
276	Chert core	A	562.55	429.17	14A	14/7/22
277	Chert core	A	562.52	429.32	14A	14/7/22
278	Chert core	A	563.02	429.15	14A	14/7/22
279	Chert core	A	563.16	429.41	14A	14/7/22
280	Chert core	A	562.11	428.62	14A	14/7/22
281	Chert core	A	563.21	429.18	14A	14/7/22
282	Chert core	A	562.81	429.36	14A	14/7/22
283	Chert core	A	562.87	429.24	14A	14/7/22
284	Chert core	A	562.52	428.41	14A	14/7/22

285	Chert core	A	563.60	429.27	14A	14/7/22
286	Debitage: core fragments (20)	A	562.20	428.10	14A	14/7/22
287	Debitage: core fragments (20)	A	562.59	429.41	14A	14/7/22
288	Debitage: core fragments (20)	A	562.57	428.59	14A	14/7/22
289	Debitage: core fragments (20)	A	562.53	426.56	14A	14/7/22
290	Debitage: core fragments (20)	A	562.89	429.60	14A	14/7/22
291	Debitage: core fragments (20)	A	562.74	429.30	14A	14/7/22
292	Debitage: core fragments (20)	A	563.11	428.04	14A	14/7/22
293	Debitage: core fragments (20)	A	563.14	429.08	14A	14/7/22
294	Debitage: core fragments (20)	A	563.36	426.92	14A	14/7/22
295	Debitage: flakes (20)	A	562.36	428.71	14A	14/7/22
296	Debitage: flakes (20)	A	563.10	429.21	14A	14/7/22
297	Chert core	A	562.41	426.48	14A	14/7/22
298	Chert core	A	562.12	427.30	14A	14/7/22
299	Chert core	A	562.52	427.56	14A	14/7/22
300	Chert core	A	563.44	429.13	14A	14/7/22
301	Chert core	A	561.72	428.93	14A	14/7/22
302	Debitage (20)	A	562.49	426.50	14A	14/7/22
303	Debitage (20)	A	562.45	427.88	14A	14/7/22
304	Debitage (20)	A	561.79	428.81	14A	14/7/22
305	Debitage (20)	A	563.25	427.76	14A	14/7/22
306	Debitage (20)	A	563.49	426.58	14A	14/7/22
307	Debitage: core fragments (20)	A	562.72	426.71	14A	14/7/22
308	Debitage: core fragments (20)	A	561.93	427.73	14A	14/7/22
309	Debitage: core fragments (20)	A	561.44	428.71	14A	14/7/22
310	Debitage: core fragments (20)	A	561.51	428.52	14A	14/7/22
311	Debitage: core fragments (20)	A	561.25	428.54	14A	14/7/22
312	Debitage: flakes (20)	A	562.63	429.09	14A	14/7/22
313	Debitage (20)	A	562.79	426.77	14A	14/7/22
314	Debitage (20)	A	561.53	427.43	14A	14/7/22
315	Debitage (20)	A	561.94	427.59	14A	14/7/22
316	Debitage (20)	A	561.97	427.96	14A	14/7/22
317	Debitage (20)	A	561.50	428.12	14A	14/7/22
318	Debitage (20)	A	561.59	428.61	14A	14/7/22
319	Debitage (20)	A	562.91	428.43	14A	14/7/22
320	Debitage (20)	A	561.29	428.32	14A	14/7/22
321	Debitage (20)	A	561.36	428.88	14A	14/7/22
322	Debitage (20)	A	562.90	429.57	14A	14/7/22
323	Debitage (20)	A	563.49	429.15	14A	14/7/22
324	Debitage (20)	A	561.10	428.55	14A	14/7/22
325	Debitage (20)	A	562.86	426.85	14A	14/7/22

326	Debitage (20)	A	562.04	427.92	14A	14/7/22
327	Debitage: flakes (20)	A	563.25	426.77	14A	14/7/22
328	Debitage: flakes (20)	A	563.29	428.92	14A	14/7/22
329	Debitage (20)	A	563.31	426.41	14A	14/7/22
330	Debitage (20)	A	561.88	429.36	14A	14/7/22
331	Debitage (20)	A	563.53	429.42	14A	14/7/22
332	Debitage (20)	A	562.97	429.27	14A	14/7/22
333	Debitage (20)	A	561.19	428.06	14A	14/7/22
334	Debitage (20)	A	563.31	428.17	14A	14/7/22
335	Debitage (20)	A	562.83	428.97	14A	14/7/22
336	Debitage (20)	A	563.56	429.19	14A	14/7/22
337	Debitage (20)	A	562.60	429.57	14A	14/7/22
338	Chert scraper	A	561.91	426.73	14A	14/7/22
339	Chert scraper	A	562.12	426.33	14A	14/7/22
340	Chert scraper	A	562.18	426.39	14A	14/7/22
341	Chert scraper	A	562.33	426.45	14A	14/7/22
342	Chert scraper	A	562.83	426.79	14A	14/7/22
343	Chert crude scraper	A	562.55	426.59	14A	14/7/22
344	Chert crude scraper	A	562.90	426.86	14A	14/7/22
345	Chert crude scraper	A	561.78	427.39	14A	14/7/22
346	Chert crude scraper	A	561.91	427.54	14A	14/7/22
347	Chert crude scraper	A	563.26	426.65	14A	14/7/22
348	Flint scraper	A	563.60	427.38	14A	14/7/22
349	Flint scraper	A	563.62	427.42	14A	14/7/22
350	Flint scraper	A	563.63	427.45	14A	14/7/22
351	Flint scraper	A	563.66	427.41	14A	14/7/22
352	Flint scraper	A	563.72	427.42	14A	14/7/22
353	Chert scraper	A	562.95	426.42	14A	14/7/22
354	Chert scraper	A	561.34	427.76	14A	14/7/22
355	Chert scraper	A	561.36	427.41	14A	14/7/22
356	Chert scraper	A	562.56	426.64	14A	14/7/22
357	Chert scraper	A	561.66	427.26	14A	14/7/22
358	Chert scraper	A	561.72	427.34	14A	14/7/22
359	Chert scraper	A	561.85	427.04	14A	14/7/22
360	Chert scraper	A	561.90	427.12	14A	14/7/22
361	Chert scraper	A	562.36	427.07	14A	14/7/22
362	Chert scraper	A	562.10	427.57	14A	14/7/22
363	Chert scraper	A	562.32	427.81	14A	14/7/22
364	Chert scraper	A	562.49	427.71	14A	14/7/22
365	Chert scraper	A	562.95	428.11	14A	14/7/22
366	Chert scraper	A	563.32	426.88	14A	14/7/22

367	Chert scraper	A	562.77	428.38	14A	14/7/22
368	Chert scraper	A	563.63	428.25	14A	14/7/22
369	Chert scraper	A	561.90	428.21	14A	14/7/22
370	Chert scraper	A	561.96	428.56	14A	14/7/22
371	Chert scraper	A	562.98	429.12	14A	14/7/22
372	Chert scraper	A	561.23	428.93	14A	14/7/22
373	Chert scraper	A	563.25	429.26	14A	14/7/22
374	Chert scraper	A	562.95	429.34	14A	14/7/22
375	Chert scraper	A	561.63	428.43	14A	14/7/22
376	Chert scraper	A	562.22	428.23	14A	14/7/22
377	Chert scraper	A	562.50	429.06	14A	14/7/22
378	Chert scraper	A	563.40	426.38	14A	14/7/22
379	Chert scraper	A	562.52	427.18	14A	14/7/22
380	Chert scraper	A	562.17	427.57	14A	14/7/22
381	Chert scraper	A	563.10	426.35	14A	14/7/22
382	Chert scraper	A	563.14	426.63	14A	14/7/22
383	Chert scraper	A	563.15	426.71	14A	14/7/22
384	Chert scraper	A	561.73	429.21	14A	14/7/22
385	Chert scraper	A	563.26	428.96	14A	14/7/22
386	Chert scraper	A	563.39	429.44	14A	14/7/22
387	Chert scraper	A	563.35	428.55	14A	14/7/22
388	Chert scraper	A	563.37	429.24	14A	14/7/22
389	Chert scraper	A	564.26	428.42	14A	14/7/22
390	Chert scraper	A	561.12	428.10	14A	14/7/22
391	Chert scraper	A	563.94	428.73	14A	14/7/22
392	Chert scraper	A	562.69	429.21	14A	14/7/22
393	Chert scraper	A	561.49	427.81	14A	14/7/22
394	Chert core	A	561.41	427.52	14A	14/7/22
395	Chert core	A	563.17	426.40	14A	14/7/22
396	Chert core	A	563.25	429.33	14A	14/7/22
397	Chert core	A	563.21	426,74	14A	14/7/22
398	Chert core	A	563.08	428.52	14A	14/7/22
399	Chert scraper blank	A	561.52	427.92	14A	14/7/22
400	Flint	A	563.69	427.46	14A	14/7/22
401	Flint	A	563.74	427.47	14A	14/7/22
402	Flint	A	563.68	427.40	14A	14/7/22
403	Flint	A	563.59	427.49	14A	14/7/22
404	Flint	A	563.62	427.45	14A	14/7/22
405	Flint	A	563.57	427.48	14A	14/7/22
406	Flint	A	563.64	427.39	14A	14/7/22
407	Chert retouched piece	A	562.68	426.67	14A	14/7/22

408	Chert retouched piece	A	562.86	427.61	14A	14/7/22
409	Chert retouched piece	A	562.49	427.21	14A	14/7/22
410	Chert retouched piece	A	563.17	426.92	14A	14/7/22
411	Chert retouched piece	A	563.05	428.46	14A	14/7/22
412	Chert retouched piece	A	563.70	428.31	14A	14/7/22
413	Chert retouched piece	A	563.28	429.40	14A	14/7/22
414	Chert retouched piece	A	561.06	428.41	14A	14/7/22
415	Chert retouched piece	A	562.66	429.17	14A	14/7/22
416	Chert retouched piece	A	563.54	429.51	14A	14/7/22
417	Chert retouched piece	A	562.56	429.42	14A	14/7/22
418	Chert retouched piece	A	562.43	428.16	14A	14/7/22

Appendix 4: List of Samples

Sample no.	Description	Cutting	Easting	Northing	Context	Date
1	Slag	A	564.13	427.78	08	27/06/22
2	Animal bone	A	558-566	422-434	08	27/06/22
3	Slag	A	559.87	425.34	08	28/06/22
4	Slag	A	565.31	428.72	08	28/06/22
5	Animal bone - Sieve	A	558-566	422-434	08	29/06/22
6	Animal bone	A	558-566	422-434	14	29/06/22
7	Slag	A	Sieve	Sieve	08	29/06/22
8	Animal bone - Sieve	A	556-566	422-434	14	30/06/22
9	Slag	A	Sieve	Sieve	14	30/06/22
10	Slag	A	566.68	432.52	14	30/06/22
11	Slag	A	564.70	428.09	14	30/06/22
12	Limpet (from entrance)	A	565.02	427.35	14	30/06/22
13	Charcoal	A	556-566	422-434	14	01/07/22
14	Slag (2 pieces)	A	563.52	434.71	14	04/07/22
15	Slag	A	562.00	431.01	14	04/07/22
16	Slag	A	561.86	431.03	14	04/07/22
17	Slag	A	565.13	431.02	14	05/07/22
18	Slag	A	560.85	425.76	14	05/07/22
19	Slag	A	564.86	427.35	15	06/07/22
20	Siderite nodule fragment	A	562.25	428.71	14	06/07/22
21	Slag	A	563.54	427.86	14	06/07/22
22	Animal bone	A	564-566	430	15	07/07/22
23	Slag	A	562.04	429.73	14	07/07/22
24	Slag	A	562.08	430.69	14	08/07/22
25	Limpet shell	A	569.15	430.58	On 00	08/07/22
26	Bulk sample (post fill)	A	564	432	19	11/07/22
27	Siderite nodule fragment	A	526.25	427.12	14	11/07/22
28	Slag	A	558.47	423.70	14	11/07/22
29	Slag	A	557.06	426.77	14	11/07/22
30	Slag	A	561.38	429.48	14	12/07/22
31	Shell	A	564.20	428.26	14	12/07/22
32	Slag	A	Sieve	Sieve	14	12/07/22
33	Slag	A	561.73	429.24	14	13/07/22
34	Bulk sample (post fill)	A	564	424	28	13/07/22
35	Slag	A	560.82	429.10	14	13/07/22
36	Bone for C14 (entrance)	A	565.06	426.46	Under 18	14/07/22
37	Bone for C14 (lithics)	A	564.01	427.82	14A	14/07/22
39	Siderite nodule fragment	A	563.82	429.00	14	14/07/22

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