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Cahermore Stone Fort, Co. Clare: Survey and Excavation

MARTIN FITZPATRICK

Ballydavid South, Athenry, Co Galway

This report describes the survey, excavation and consolidation of the entranceway to the stone fort at Cahermore in the Burren, Co. Clare. In the later medieval period a well-fortified gatehouse was constructed on the probable site of the original entrance which indicates that the fort was occupied over a lengthy time period. The animal bone recovered provides interesting information on the diet of its medieval occupants.

Introduction

This project was undertaken in advance of the repair and consolidation of the entrance gateway of the stone fort as part of a programme to make the monument more accessible and safer to the general public. The project, which was funded by Dúchas, The Heritage Service, was carried out in three stages. An initial archaeological survey of the interior of the monument was undertaken by Martin Fitzpatrick and Kieron Goucher in the summer of 1995. The subsequent removal of dense scrub surrounding the site allowed for a survey of the external walls and features in 1998-9. The archaeological excavation of the gatehouse (Licence No. 99E0506) was undertaken over a three-week period in June 1999. The excavation was necessary as the entranceway was partly blocked with rubble and the stone lintel, which once spanned the doorway, had fallen across the entrance passage. The replacement of the lintel and the consolidation of the entranceway were undertaken by staff of Dúchas in Spring/Summer 2001.

Cahermore Stone Fort (Recorded Monument CL005-09402) is located in the townland of Ballyallaban, some five kilometres south of Ballyvaughan in north County Clare (Fig. 1). It is sited on the east shoulder of an NE-SW running valley with excellent views of Ballyvaughan and Galway Bay to the North. The Ailwee caves are to the east and the Corkscrew Hill to the south-west of the site. Cahermore is marked on the first edition and subsequent editions of the Ordnance Survey maps. The earliest published account of the site was by Westropp (1901, 283) who visited the site in 1895 and published a plan, view and description (Fig. 3). Westropp estimated the number of forts in the barony of the Burren to be 306 (1902, 417) however Robinson marked 450 surviving examples on his map of the area (1977). Whatever the true figure the density of monuments in the barony and in particular in the area of Cahermore is noteworthy (Fig. 1).

The Monument of Cahermore

The archaeological complex at Cahermore consists of a stone fort comprising of two concentric walls with evidence of stone structures in the interior. Radial walls run between the inner and outer enclosing walls in the N, through the W to the S (Fig. 2). A stone fort lies immediately east of Cahermore, while aerial photographs indicate another enclosure on the opposite side of the existing roadway (Plate 1). However, due to the extensive growth in this area, it was not possible to locate this possible site.

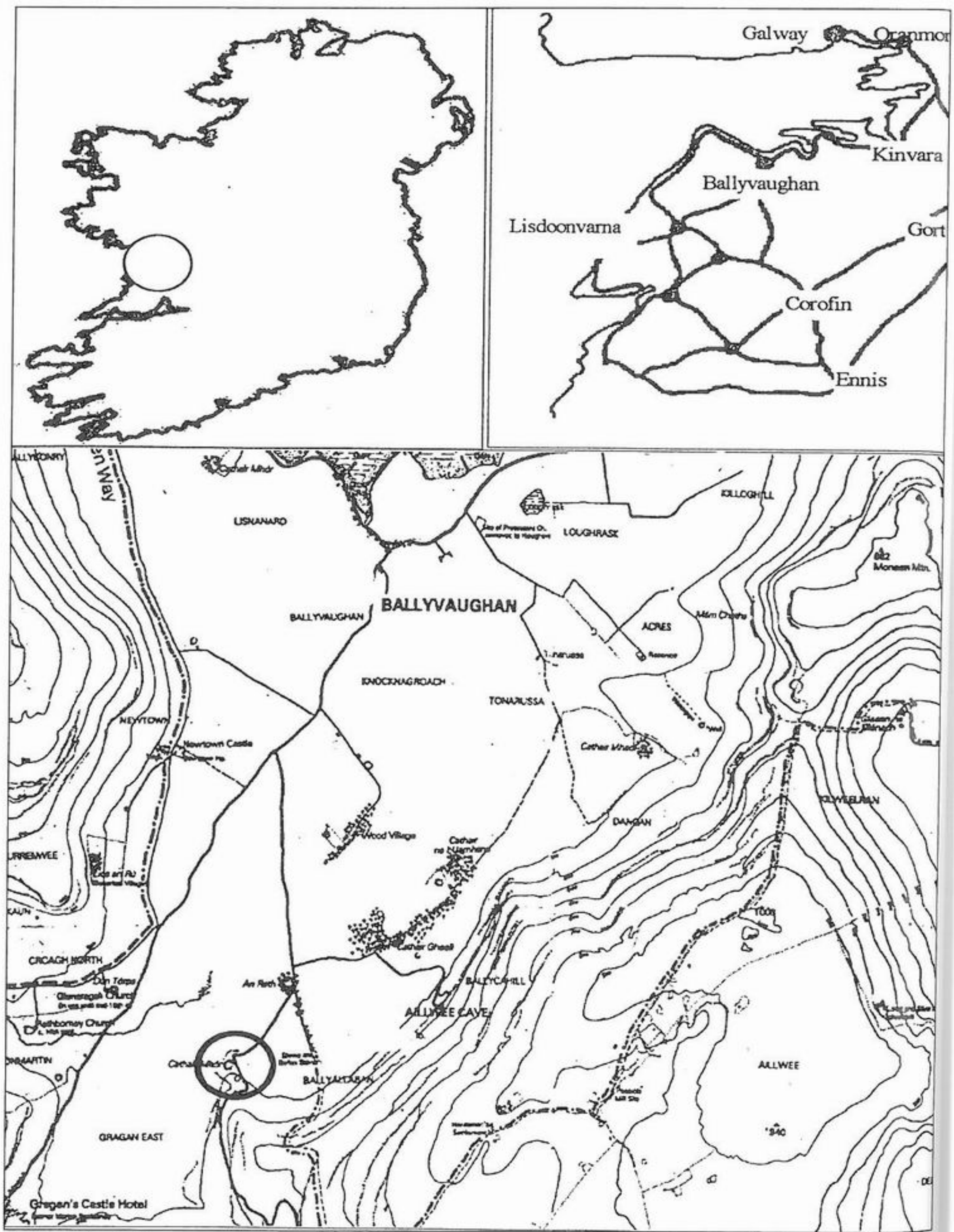

Fig. 1 Location of Cahermore

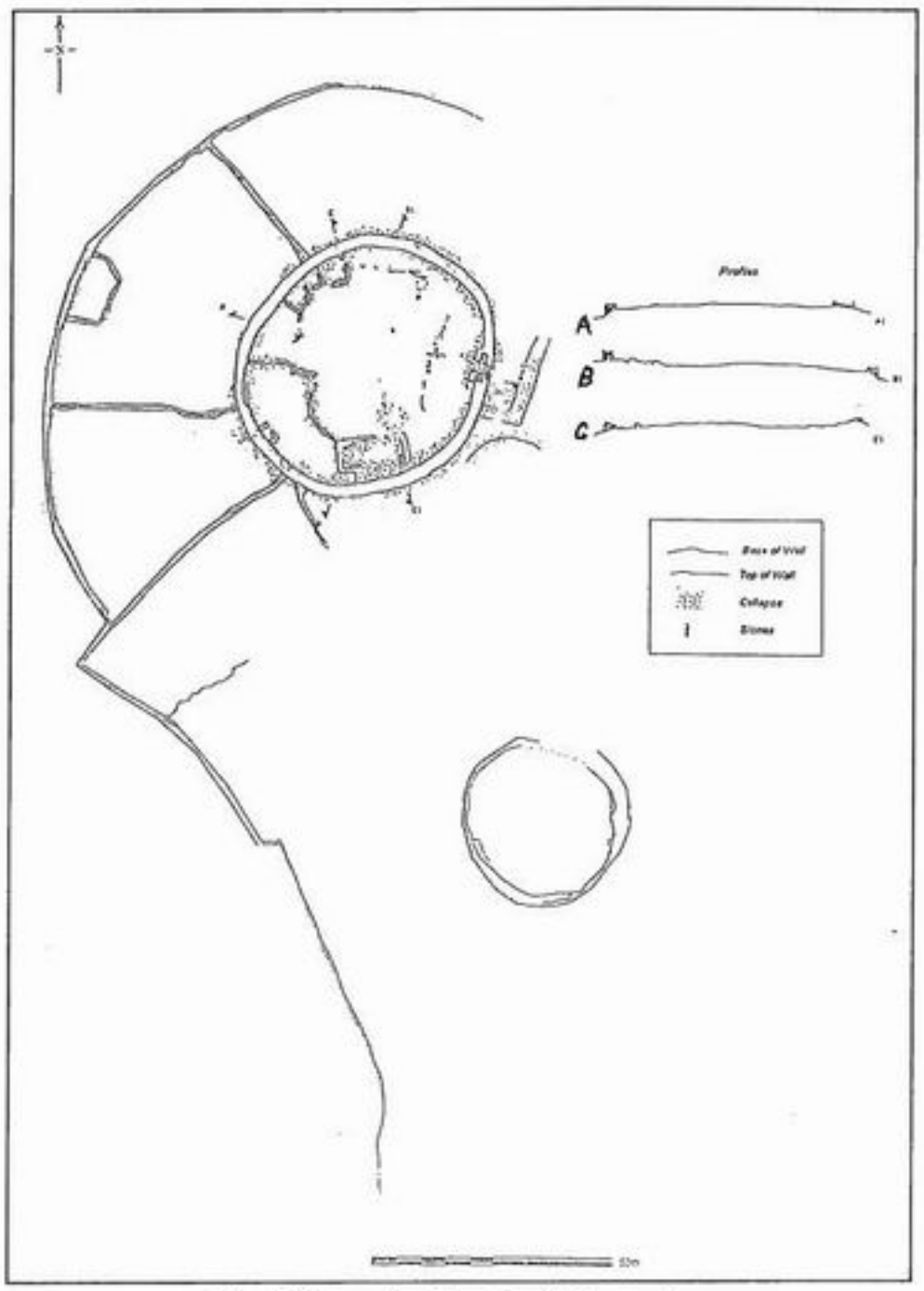

Fig. 2 Plan of archaeological complex

Outer Enclosure

The outer wall of Cahemore fort only survives from the N, through the W to the S but may originally have enclosed the inner enclosure. As one progresses from the W to the S, the outer wall is replaced by a more flimsy constructed field wall, which kinks on two occasions as it runs to the roadway. The outer wall, which survives to a maximum height of 2.3m and is c. 0.95m-1.2m wide, is constructed of both large (0.8-1m) and small (0.3-0.4m) uncut limestone blocks which are roughly coursed throughout. The wall is constructed of both an inner and outer face, with a rubble fill in between. In a number of places the outer wall is interrupted by a narrow, dry-stone field wall (Fig. 2). These areas may indicate where the original wall had collapsed and was later replaced by a field wall.

The remains of four radial walls link the outer and inner walls of the fort (Fig. 2). These walls sub-divided the land between the inner enclosure and the outer wall which may have functioned as cattle enclosures or corrals. The majority of these walls are in a collapsed state and overgrown. Built against the interior of the outer wall of the fort in the NW, there are the remains of a D-Shaped enclosure. Measuring 13.5m x 7.5m this feature is delimited by single stones standing upright and forming an enclosure. The stones average 0.5-0.7m in height and a narrow gap, 0.7m wide, in the N may indicate an original entranceway.

The removal of vegetation immediately outside the gatehouse at Cahermore exposed a platform area defined by a rock-cut fosse or ditch (Fig. 2). This feature, which had more recently been back-filled with rubble, consists of a stone faced cut which runs roughly N-S for a distance of 18.3m and on the

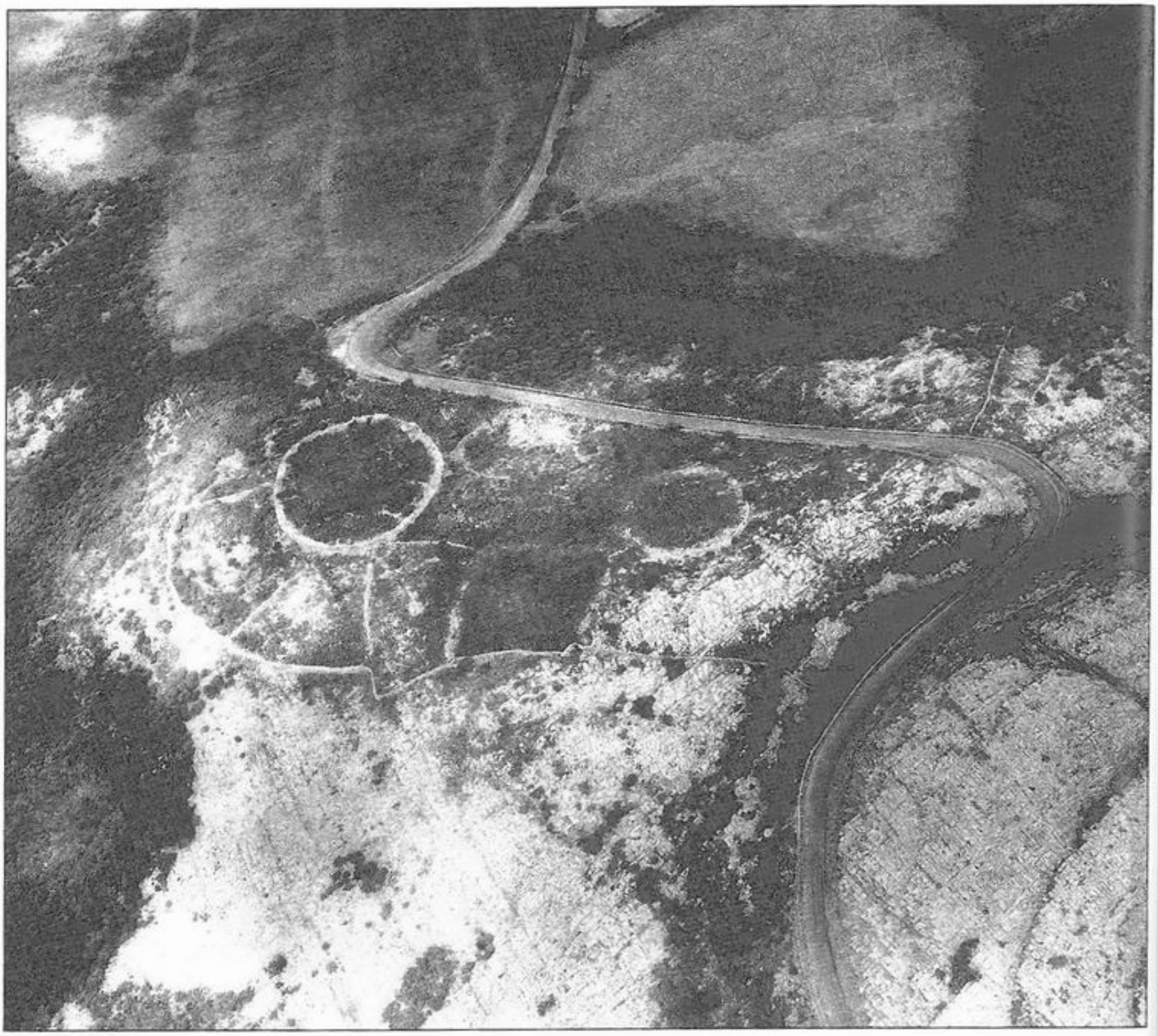

Plate 1 Aerial view of Cahermore (BDM-65, St. Joseph Collection, Cambridge University).

south side it runs E-W for c. 8.5m. No return was visible on the N side. The ditch is c. 2.8m wide, however because of the rubble fill its depth could not be determined. A narrow opening 1.3m wide and c. 0.3m high is visible in the E face of this feature and may represent a passage or souterrain opening. Immediately S of this platform the remains of a curved wall survive. The wall which is constructed of rounded, uncut, limestone measures 14m in length, 1.2m in height and 0.4m in width. While the location of the feature corresponds to the circular stone feature indicated in the aerial photograph (Plate 1), its construction is more akin to that of field walls in the area than a fort structure.

South of this curved wall a narrow opening, 0.3m deep, spanned by a stone lintel 0.8m wide may indicate the location of a passage or souterrain. The area surrounding the opening is strewn with stone while to the E the ground rises slightly. Further S, in an area of dense vegetation, a semi-circular walled area was uncovered in the course of fieldwalking. Constructed of large limestone blocks (average 1m x 0.6m x 0.2m) this wall forms an arc 10.5m in length and survives to a maximum height of 1.13m.

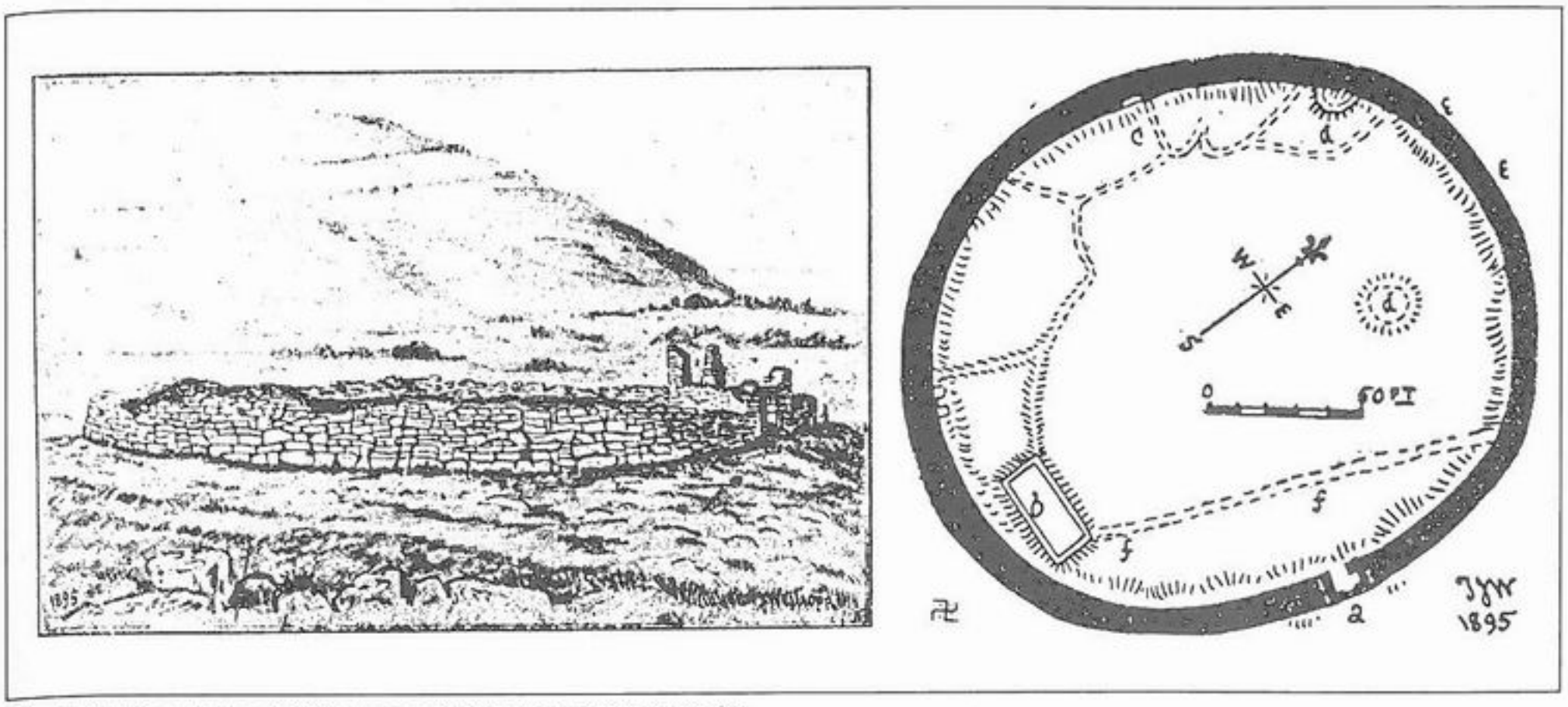

Fig. 3 Sketch and plan of Cahermore after Westropp (1901 282-283)

Inner Enclosure

The inner enclosing wall of Cahermore fort is well preserved throughout. The wall survives best in the W and NW, where its outer face is c. 3m in height. Elsewhere this wall is c. 2m in height and averages 2.3m wide. Like the fort's outer wall, its construction consists of an outer and inner face with a rubble fill in between. Both faces are constructed of large, fairly well coursed, uncut, limestone blocks with the largest stones at the base of the wall. Some of these basal stones measure over 1m in length and are 0.4m wide. The inner face survives to a height of c. 1.5-2m except in the SE where it is only 0.2-0.3m high. A plinth or projecting base occurs in the outer face in the NW. It consists of a projecting course of stones at the very base of the wall which was first noticed by Westropp (1901, 283). Partial collapse of the outer face has occurred in the N and the inner face in numerous sections, but in no case has the wall of the fort been breached. Extensive rubble lies at the base of the walls, both inside and out, except in the W. The wall here may survive to its original height. Possible terracing survives in the S and SW, whether this was an original feature or the work of later occupants of the fort is uncertain.

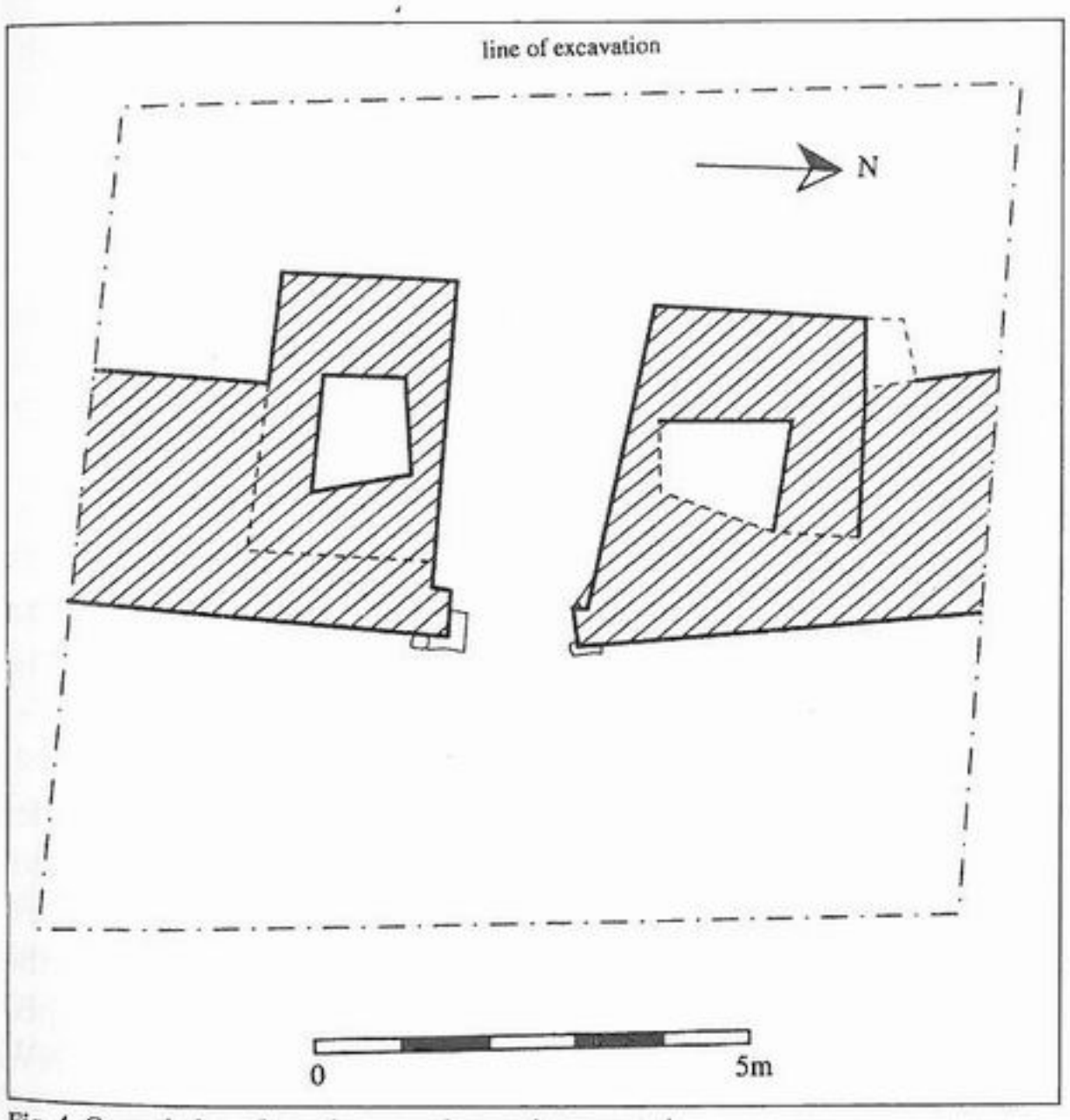

Fig. 4 Ground plan of gate-house and treench excavated

The interior of the fort is circular in shape and measures 51.4m NE-SW by 45.8m NW-SE and covers an area

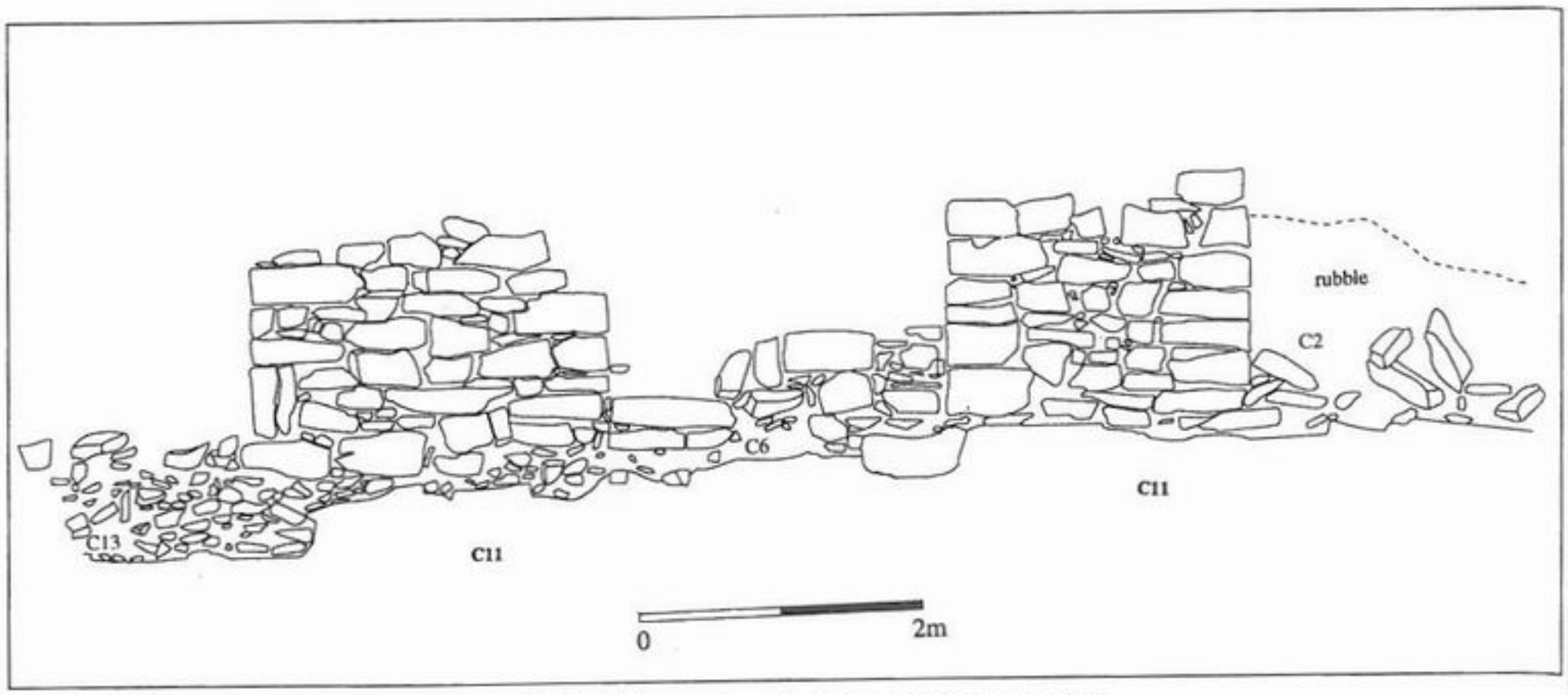

Fig. 5 West facing section of gate-house during excavation

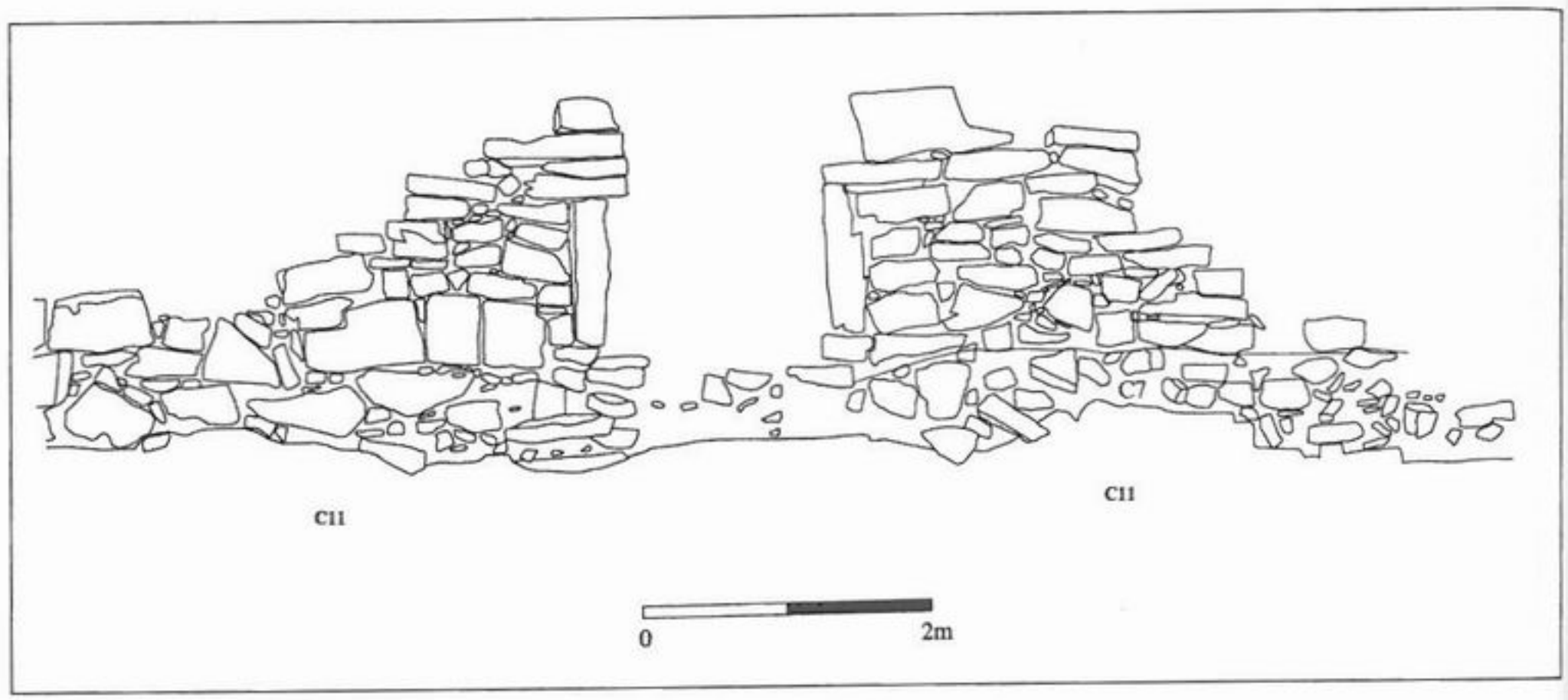

Fig. 6 East facing section during excavation

of 1892.289 metres square. The ground surface slopes down in all directions from the centre. The internal structures are in poor condition but enough survives to record their original formation. The most prominent structure is the very poorly preserved remains of a sub-rectangular building in the S. With its long axis running E-W this building measures 14m in length and is 6.8m wide (Fig. 2). It is constructed of roughly coursed, large and small, uncut limestone blocks and there is a basal batter on the NW and SW corners. The surviving quoin stones are rounded externally but are not dressed. Entrance to this structure is likely to have been in the NE however no trace of any doorway survives. The interior is strewn with rubble and the only surviving feature is a small chamber constructed in the SE corner. Measuring 1m N-S and 0.6m E-W this chamber is capped by two large irregular shaped limestone slabs. The poorly preserved remains of a low wall runs from this structure in both the NW and in the S. Both of these wall features form an enclosure with an entrance 0.5m wide, in the N.

Plate 2 Gatehouse area before excavation.

There is a small, single-chambered stone structure built against the inner wall of the fort in the SW area. With its long axis running NW-SE this building measures 2.8m by 1.6m internally. Its walls, constructed of roughly coursed limestone of various sizes, are 0.4 - 0.5m wide and have an inner and outer face. The NW and SE walls survive to a height of 1.5m while the NE wall only survives to c. 0.2m. A gap 0.6m wide in the NE wall may be the original entrance. In the NW of the interior there are a number of poorly constructed drystone walls built against the inner wall of the fort. The walls, which form two sub-rectangular enclosures, are constructed of large and small, uncut, limestone laid both vertically and horizontally. One of these structures measures 9.2m x 4.2m and has a 1m wide gap in the E which may have facilitated an entrance. The other enclosure measures 5.4m x 5.2m and has a 1.25m wide gap in the NE and a 1.5m gap in the S. The walls, in both cases measure 0.8-1m in height and are c. 0.4m wide These segments of walling may once have functioned as animal enclosures but their flimsy construction suggests they were not structures of any substance.

In the S section of the fort there is a circular shaped mound of rubble, with a diameter of 0.3m, which may represent the remains of a structure. In the N of the site there are a number of grass-covered stones defining an area c. 3m NE-SW by 2m NW-SE. All of the stones are lying horizontally except for one in the N, which is standing vertically. This stone, 0.8m high and 0.3-0.4m wide, is set into the ground. Westropp's plan of the site (Fig. 3) shows this as a circular area and he suggests it may be the foundations of a circular hut (1901, 282). During the excavations of summer 1999, the vegetation in

this area was cleared back and a detailed survey revealed no clear indications for any hut site.

To the SE of the inner enclosure a second stone fort survives (Fig. 2). This is located on an elevated position above the main fort and is surrounded by thick vegetation in the N, E and W. However in the S outcropping bedrock with the characteristic grikes, forms a relatively level surface. The fort is sub-circular shaped in plan and measures externally 37.5m N-S and 35.1m E-W. It is in poor condition throughout with only the outer face of the wall's lower course surviving in the E and W. In the N only a grassed over bank indicates the location of the enclosing wall but in the S the wall, although very depleted, does survive to a height of c. 2.2m. While only the external face survives it shows the wall to be constructed of well coursed, large, uncut, limestone blocks. The nature and size of the stones utilised suggest that this was once a formidable stone structure. No entranceway is visible in this fort. The interior of the structure slopes downwards from S to N but apart from the occasional large boulder, there are no internal features apparent.

The Excavation

The archaeological excavations at Cahermore involved the manual excavation of a single cutting measuring 11m x 10m, incorporating the gatehouse and its immediate environs (Fig. 4). Prior to excavation entrance to the interior of the fort was in the E where a gap 1.6m wide gave access to the rectangular gatehouse. This structure, constructed of well-coursed limestone with mortar throughout, survived to a height of 1.3-1.5m. A lintel, which once spanned the doorway, had fallen and lay across the entranceway. The interior of the gatehouse and the area immediately surrounding it were filled with rubble up to 1m in depth (Plate 2).

Plate 3 Gatehouse after topsoil removal.

Plate 4 Bedrock at exterior of entrance.

Archaeological Description

Four artefacts, three coins and a fragment of a rotary quern, were recovered in the course of the excavations. Two of the coins, an Irish halfpenny dated to 1932 and an American half-dollar dated to 1965 were recovered during the removal of rubble from the entrance passageway. The third coin, dating to the seventeenth century was found in a crevice in the bedrock immediately east of the entrance. The rotary quern fragment was recovered from below the rubble and on top of bedrock in the south of the trench. Animal bone fragments and shellfish remains were found from various layers, especially context 10. A sample from a scallop shell deposit directly below the gatehouse indicated that this structure was constructed post 642BP (UB-4592). This date can be calibrated (at two sigma) to approximately 1308 AD.

Removal of topsoil (C1) and rubble (C2) revealed the extent and shape of the gatehouse (Plate 3). The rubble was particularly concentrated in the entrance passage, where it was some 1m in depth, and immediately surrounding the gatehouse. When cleared of rubble the gatehouse was found to consist of a rectangular structure with a splayed entrance passage and a small chamber on either side of this passage (Fig. 4).

A light brown coloured topsoil (Context 1) of loose texture covered most of the trench. This topsoil averaged 0.2m in depth but was 0.3-0.4m deep at the N end of the trench. The topsoil was deepest (0.6m), where it dipped into the grikes of the limestone bedrock. In the NE of the trench and to a lesser

Plate 5 Entrance passage

extent in the SE and SW this context had abundant root material as a result of vegetation on the site prior to desodding. Context 2 consisted of both large and small limestone blocks which had formed part of the gate-house building but had subsequently collapsed. This context was most concentrated in the entrance passage and the area surrounding the gatehouse on the exterior. The stones ranged in size from 0.3 x 0.2 x 0.1m to 1m x 0.4 x 0.3m. Underlying C1 and C2 in both the exterior and interior of the gatehouse was bedrock (C11), which at the exterior (east side) of the entrance was 0.5m below the level of the interior. This meant that on entering the fort one had to step up to the entrance passage, while once entrance was gained, the ground was relatively level throughout (Plates 4/5). Underlying rubble (C2) in the entrance passage was a loose, brown coloured, silty clay (C4), which was 0.1-0.2m in depth. Immediately W of C4, and found below C1 and C2, was a wall feature (C6) which formed a blocking wall at the W end of the passageway. This wall was constructed of roughly coursed, uncut, limestone with occasional mortar throughout.

Below C2 and C4 in the passageway was a very thin, 400mm deep, sandy layer (C3) which was particularly concentrated in the W of the passage. Underlying C3 was a surface of stone and clay (C5), which formed the floor level of the passageway. In the W end of the passage bedrock was utilised as the floor, but as the bedrock level was lower in the E, it was necessary to utilise small stones and sandy clay to build up the floor (Plate 5). A spud stone, found immediately inside the doorway at this level, confirms that this was the original floor level of the entrance passage of the gate-house.

The removal of rubble (C2) from the interior of the gatehouse revealed a single small chamber on either side of the entrance passage (Fig. 4). On the S side a dressed limestone block, 0.93m x 0.26m, marks the threshold to a small rectangular chamber. The threshold stone is 0.63m above ground level and on its W side there is a small rectangular spud stone (0.08m x 0.07m x 0.03m) which would have supported a doorway. The chamber measures 1.4m x 1m and is presently 1.2m high however photographs taken of the site in the 1950's indicate that this chamber was originally much higher. It is constructed of large and small uncut limestone with mortar throughout. A line of mortar at the base of the wall in the E and S indicates the original level of the chamber floor. However this floor had been removed/destroyed. On the opposite, N, side of the entrance passage there is a similar rectangular chamber. While no threshold stone survives, access is 0.56m above the level of the passage floor. It leads to an irregular shaped chamber constructed of uncut limestone blocks with mortar throughout. The wall survives best in the N and W where it is 1.07m high and photographic records from the 1950's indicate it was gabled, however this is likely to have been a later feature. The floor level, as in the chamber opposite, had been dug through for a depth of 0.9m.

On the exterior of the gate-house, (E side), the removal of topsoil (C1) revealed bedrock which sloped downwards from S to N. This difference in the level of the bedrock is very noticeable in the NW (Plate 4). On the interior, or west side of the gate-house, bedrock (C11) was found to lie directly below the topsoil (C1). On this side of the building, like on the east side, the bedrock sloped downwards from S to N. While the exterior wall of the gatehouse ran flush with the wall of the fort, in the interior the gate-house projected eastward beyond the fort wall (Fig. 4). This projection of the gatehouse wall meant that

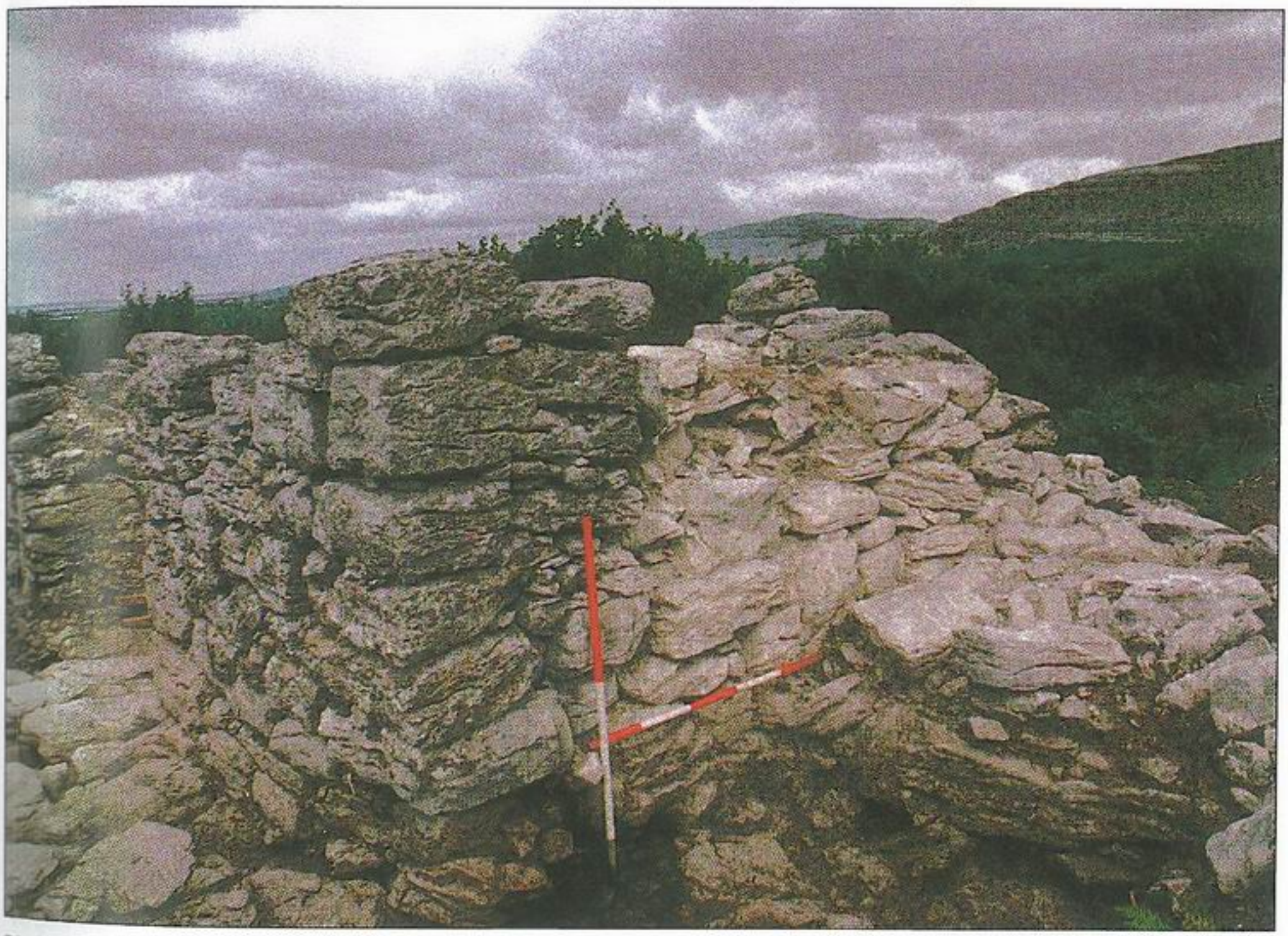

Plate 6 Gatehouse build on top of existing cashel wall.

in the NW, where the bedrock level was low, a foundation was required to support the structure. This foundation (C10) consisted of small stones with frequent oyster shell and animal bone inclusions. This layer, which was 0.4-0.45m in depth, was partially removed to reveal the inner-facing wall of the fort. A considerable quantity of collapse had to be cleared to establish the relationship between the gatehouse and the existing wall of the fort. The removal of this rubble (C2) showed that the original wall of the fort was lowered and the gatehouse structure was built on top of the existing cashel wall (Plate 6).

Discussion

Stone forts are generally regarded as the equivalent in stone of earthen ringforts, the most numerous and widely distributed ancient monument in Ireland which are usually ascribed to the early historic period. The subdivision of ringforts into earthen forts and cashels, rests primarily on the type of building material used rather than on any functional distinction. In the Burren region of County Clare the availability of stone is reflected in the high number of cashels in the region. While often dated to the Iron Age these monuments had a long period of usage and were most likely constructed and re-occupied in the medieval and post medieval periods.

The fort complex at Ballyallaban is most interesting in that a number of stone forts are found in close proximity to one another. The accompanying aerial photograph indicates four sub-circular enclosures in the area, however survey work on the ground failed to locate one and found another to be of very flimsy construction. It appears however that the fort of Cahermore (Cathair Mór), as the name implies, was the dominant structure with evidence for internal structures and dividing walls as well as an outer

Plate 7 Lintel reinstated.

Table 1: Representation of species

	HORSE	CATTLE	S/G*	PIG	DEER	RABBIT	LM*	MM*	UNID*	TOTAL
C 2 – rubble layers associated with gatehouse										
Exterior	63	78	35	9	-	-	182	45	35	447
Interior	13	50	12	4	-	-	54	23	17	173
Passageway	-	61	29	1	-	-	94	28	24	237
Chamber on north side	1	21	15	2	1	2	15	8	7	72
C 2a – base of rubble	-	8	4	16	-	-	6	6	-	40
C10 – foundation level of gatehouse	-	2	4	-	-	-	6	4	-	16
C11 – Bedrock underlying gatehouse	3	17	6	-	-	1	18	10	-	55
TOTAL	80	237	105	32	1	3	375	124	83	1040

S/G* Sheep/Goat LM* Large mammal MM* Medium mammal UNID* Unidentifiable

enclosing wall and radial walls. The main internal feature of the fort is a poorly preserved rectangular structure in the S. While little of this feature survives its general construction and the rounded quoin stones in the E and W suggest a possible late medieval date. Similar rounded quoins are found in tower houses in north Clare and south County Galway which are thought to be 16th century in date. Westropp noted that the foundations of possible late medieval buildings were also evident in the fort of Ballyallavan (1896, 150).

The excavation showed that the gatehouse structure was built on top of the existing cashel wall and indicated that the fort was occupied in the 14th/15th centuries. This factor is not specific to Cahermore as it is also evident in the fort of Cahercloggaun where the O' Laughlin family erected a tower house in the 15th century and used the cashel wall as a bawn wall. This procedure was also adopted at Ballyganner and Ballyshanny in Co. Clare and at Caherillian in south County Galway. While archaeological or historical information on the occupants of the sites is scant or non-existent, it is possible that the sites were occupied by descendants of the same family and that their modifications/ alterations reflect changes in the general economy, living standards and methods of waging attacks.

As the excavations at Cahermore were limited to the gatehouse a general analysis of the fort, its occupants and their economy is not possible, but an opportunity to examine a particular important structure associated with the fort was presented. The excavation showed that the existing gateway was a later addition to a pre-existing fort and is likely to occupy the site of the earlier entrance to the monument. Westropp's sketch (Fig. 3) indicates that the gatehouse was a two storey structure, however nothing of the first floor survives today. What is most evident from the surviving gatehouse structure is that security was a major consideration in its construction. This is evident from the stone cut ditch feature to the E, which provided an external barrier to the approach to the fort. The plan of the gatehouse itself, with its tapered passageway guarded by small chambers, also highlights the focus on security and has parallels with the plans of similar structures found guarding the entrances

to Tower houses. Similarly inside the doorway there is the remains of a large bar-slot socket, which would have allowed for the use of a sturdy block of wood to secure the door. The evidence suggests that the occupants of the site concentrated extensive efforts in ensuring the defensive aspects of their homestead.

The fortified entranceway is not unique to Cahermore. A similar gatehouse, which was a later addition to a pre-existing structure, commanded the entrance to Cathair Mhic Neachtain. Westropp records that the gateway into the fort at Cahereahoagh, three miles N of Corofin, was rebuilt in the 15th century with dressed stone and mortar retaining the old batter (1896, 367). Here too there was a tapered entranceway. At Langough nothing survives of the elaborate entrance described by Westropp (1913, 253). A cut stone entrance at Cashlaun Gar may also be medieval in date.

While the excavation at Cahermore was confined to the gatehouse the range of animal bone recovered represented the food waste of the medieval occupants of the site and allowed an opportunity to gauge the type of economy practised at the fort. Meat on the site came from the exploitation of domestic animals and the data reflected a farming economy that was primarily aimed at producing meat. Cattle horse and sheep were the main providers of meat while pig was a scarce commodity. The recovery of large quantities of butchered horse bone was particularly striking. The absence of fish bones was also significant although shell fish were exploited. Wild game and fowl were also represented but not in any great numbers.

There are no defining architectural features which exactly date the gatehouse however the recovery and subsequent radiocarbon dating from a scallop shell deposit below the foundations of the structure show that the gatehouse was constructed post 1308 AD. The gateway, as we have shown, was constructed on the existing fort and is likely to have been continually occupied over a long period of time. A 16th century occupation date for stone cashels is not unusual in this part of county Clare. Cathair Mhic Neachtain for instance formed the centre of the O'Davoren town at the end of the 16th century. It was the site of an important law school where the scholar Donal Mac Firbis studied the brehon laws under Donald O' Davoren. It is likely that Cahermore was similarly occupied into the late medieval period as testified by the recovery of a 17th century coin in the area of the entrance.

Consolidation of Entrance Gateway

Subsequent to the archaeological excavations the lintel which had spanned the entrance was reinserted in its original position by the staff of Dúchas, The Heritage Service (Plate 7). This position had been recorded from previous photographic records. In addition the gatehouse was consolidated to ensure its safety and that of visitors to the monument.

Animal Bone Report

Margaret McCarthy

Archaeological excavations at Cahermore in 1999 produced a small but significant sample of medieval rural animal bones. The two earliest samples came from bedrock levels in the area of the gatehouse. The remainder of the faunal material came from rubble layers that accumulated during the destruction of the gatehouse and the deposition of these bones has been placed by the excavation director to the medieval period.

The animal remains were hand collected and consisted entirely of mammal bone. There was no evidence for fish and bird bones, which may, in part, be due to the retrieval methods that were employed. The physical condition of the bone was generally good with the exception of the small sample from C11 which was noticeably weathered and eroded. Variable condition within the rubble

layers suggests that a certain degree of mixing had taken place and eroded brittle fragments were found together with dense well preserved bone. Many specimens were totally blackened as though they had been in contact with fire. This type of damage probably occurred while various joints of meat were being spit roasted over a large open fireplace. The extremely calcined nature of other fragments suggests that bones were occasionally cast into the fire and remained there for sufficient time to take on the white cracked appearance of heat shattered bone. There were two instances of gnawing, probably by dogs despite the absence of their bones in the faunal assemblage.

All fragments were identified to species, or as nearly as possible, using the modern comparative collections of mammals, birds and fish in the Department of Archaeology, University College, Cork. Data were recorded onto the Archaeological Services Unit's faunal sheets, which include categories for butchery, ageing, and sexing as well as species and element identification. Identifications were taken to species where possible while those fragments for which specific identification could not be made were classed in terms of size and morphological character. The material recorded as 'large mammal' in Table 1 for instance is likely to belong to cattle but was too small to eliminate the possibility of horse and red deer. The latter species have both been identified from the site. Similarly, specimens that in all probability were sheep but which may have also originated from goat, pig or large dog were recorded as 'medium mammal'. The separation of ovicaprid material relied on comparison with reference material and to the discussion in Boessneck (1969). There were no specific identifications of goat and those postcranial bones which allow for discrimination between the two species were all identified to sheep. Ageing data were determined using procedures outlined by Silver (1971) for longbones and Grant (1975) for mandibles. The relative proportion of the different species was assessed using the fragments total and the minimum number of individuals represented.

Analysis

The total faunal assemblage from Cahermore consisted of 1040 bones and 458 (44%) of these were positively identified to species. The bones were distributed evenly across the main rubble layers associated with the gatehouse and the various categories of unidentified material formed a comparatively large percentage of these samples. The high degree of ancient fragmentation may be an indicator of maximum utilisation of the carcasses but linked with the incidence of erosion on the bones could mean that some were crushed during the demolition of the gatehouse. The numbers of both identified and unidentified fragments by context and species is shown in Table 1 and the data is described together below. A context by context description was considered unnecessary given the small sample size and the similarity in context type for most areas of the excavation.

Identification of the bones revealed that the larger domestic animals formed the greater part of the assemblage. The predominant species was cattle, which accounted for 237 specimens and represented at least seven individuals. All parts of the skeleton were recognised including the main meat-bearing upper elements of the body and the lower extremities such as phalanges and metapodial bones. There were considerable more vertebrae than any other individual bone and upper limb bones and teeth were also particularly abundant. The presence of almost entire carcasses indicates that slaughtering and butchery were carried out within the fort. Over 60% of the bones had unfused epiphyses suggesting that most cattle were killed at their prime meat bearing stage and not, as is often noted on contemporary urban settlements, at an age to indicate that animals were primarily being exploited for their secondary products. The available epiphyseal fusion data showed that most mammals were c. 2.5-3 years of age. Two mandibles were complete enough to be aged and the wear stages indicated that both individuals were mature at death, probably more than four years. These may represent cows that were kept for breeding and the provision of milk. There was also evidence for calves with five bones being

recovered from the chamber to the north of the gatehouse. Cut marks on two of these bones indicated that the occupants sometimes consumed veal, perhaps on a special occasion such as a feastday. Cut and chop marks occurred on several cattle bones including tibia, femur and transversely on several vertebrae. Many of the skull fragments were split open presumably during the removal of the brains for consumption.

Sheep bones were present in small numbers in all features and the sample consisted mostly of prime meat-bearing elements. Their remains accounted for 30% of the identified assemblage and at least four individuals were represented based on scapula fragments. Most of the bones were so fragmentary that it was difficult to assess the ratio of sheep to goat but there were no definite goat bones in the diagnostic sample and it is assumed that the ovicaprid material came overwhelmingly from sheep. This follows a typical trend for other contemporary rural sites (McCormick, 1991). Urban assemblages tend to produce disproportionate amounts of horncores to other goat bones as these elements were imported specifically for craftworking. Almost all parts of the sheep skeleton were present although the bones of the head, including the loose teeth, appeared to be more common than those from other areas of the skeleton. As with cattle, a relatively large number of bones with unfused epiphyses were found and the emphasis again appeared to be on meat production. Lamb bones were also recovered, a vertebrae from a rubble layer outside the gatehouse and five limb fragments from the chamber to the north of the gatehouse. The sheep mandibles were not sufficiently well preserved to estimate the age of the animals from using tooth ware as a guide. There was little evidence of butchering on the sheep bones, a few ribs showed knife marks and one tibia had been chopped through the priximal midshaft area of the bone.

The remains of horse outnumbered those of pig contributing 17% to the identified assemblage with at least four individuals being present. In terms of body parts the horse sample was best represented by meat bearing elements such as tibiae, femora and humerii and the breakage pattern was consistent with these animals having been butchered and eaten. Superficial knife marks on some of the lower limb bones probable relate to skinning and filleting. The entire sample of horse bones was broken in antiquity and it was not possible therefore to assess the overall statute of the individual. Ageing data showed that most horse were slaughtered at a time when they had reached their optimum age for meat production i.e. between 20-35 months.

The highest frequency of cut marks occurred on cattle and horse bones though this is to be expected given their larger size and, therefore requiring more butchery to cut up into manageable pieces. The sequence of butchery on cattle and horse carcasses has been interpreted as follows. The skull was first severed from the trunk by chopping in a dorso-ventral direction through the atlas, axis and in some cases, through the cervical vertebrae. The skull was then completely smashed to facilitate the extraction of the brains. The mandible was severed from the skull by chopping through the ascending ramus and the mandibular hinge, while knife marks on the buccal side of the jaw may relate to tongue removal. Vertebrae were chopped medially and laterally and there was evidence that the vertebral column was divided up into portions suitable for a stew pot. Butchery marks associated with the disarticulation of the fore and hind limb were frequent. In the forelimb, marks were located on the proximal humerus where this element was separated from the scapula. Cut marks were also found on the radius and were associated with joint disarticulation. In the hindlimb, knife marks on the acetabulum and illium of the pelvis were associated with the removal of the femur from the hip. Finally, over 20 longbones were split longitudinally suggesting that marrow was regarded as a significant food item.

Pigs were the least well represented of the main livestock animals and their bones only occurred in any number in the chamber to the north of the gatehouse. Bones of the feet and ankles were scarce in all deposits. The pigs were small and from their longbone and third molar measurements were obviously domestic stock. In common with other medieval assemblages, the longbone fusion evidence indicated

that pigs were mostly slaughtered in the third year as this species has no other economic function other than the provision of meat. Just two bones showed signs of having been butchered, a tibia was chopped transversely and a skull fragment indicated that it was smashed open in order to extract the brains.

There was little evidence for the exploitation of wild game. Two species were identified although the small numbers involved indicate that hunting was not relied upon to supplement the meat diet at the fort. The proximal portion of the metacarpus from a red deer, Cervus elaphus, was found in deposits excavated from a chamber on the north side of the gatehouse. This bone was chopped axially in order to extract marrow and it provides the only evidence from the site that red deer was hunted, although clearly not to the extent that one might have expected for a high status site. Rabbit, 0ryctolagus cuniculus, was recovered from two contexts. The two bones from the rubble layer in the gatehouse may be intrusive. One came from a newborn individual that may represent a recent natural fatality. The bedrock level (C11) contained a caudal portion of a left mandible. Rabbits were introduced into Ireland by the Anglo-Normans in the 13th century as a new food source. They were initially subjected to considerable human manipulation in the form of warrening and encagement but had become part of Ireland's wild fauna by the 16th century. The recovery of a single bone from the earliest layer at the site indicates that rabbits were occasionally hunted and eaten by the occupants.

The only apparent exploitation of coastal resources was marine mollusca and large quantities of scallops and oysters found in various rubble deposits. The lack of fishing evidence is unusual given the coastal location of the site and the apparent importance of shellfish as a supplement to the local diet. It has to be considered that survival and retrieval factors may well have militated against the recovery of such small and relatively fragile elements.

Conclusions and Discussion

The animal bone collected during excavations at Cahermore represent the food waste of the medieval occupants of the site. If an estimate of the type of economy can validly be made from the quantity of material available, then it would seem that meat acquisition at the site relied almost exclusively on the exploitation of domestic animals. The assemblage was dominated by the remains of cattle, sheep and horse with considerably smaller quantities of pig. It is important to understand the husbandry system that produced the animals whose remains were found at the fort and this involves a consideration of the age of the animals at death. As some of the material has been dated to the 14th century, the importance of cattle and sheep as reflected in the archaeological record from sites of this date has parallels here. The ageing evidence from various excavated medieval urban sites suggests a local husbandry whose main aim was the production of wool, hides and horns as valuable trade items (McCarthy, 1988, 1997). The age profile of the livestock at Cahermore indicated that animals were slaughtered at a younger age than their counterparts living in the environs of major urban centres. The differences between this assemblage from Cahermore and contemporary urban sites are quite real and the data reflect a farming system that was primarily aimed at producing meat.

This is a small sample from which to reconstruct a diet or local animal husbandry practices in Clare during the medieval period. Assuming, however, that the figures do reflect the real situation, the suggestion is that cattle, horse and sheep were the main providers of meat at the site. Pig remains were extremely scarce and pork served as an occasional supplement to the diet. The low representation of pig bones may be linked to local environmental factors. As these animals are normally with woodland usage, their rarity at Cahermore may indicate the limited occurrence of woodland in the area. Horses, on the other hand, were regularly eaten at the site and their remains account for a large proportion of the food refuse assemblages. The absence of fish bones deserves mention given the proximity of the site to the shore and the fact that shellfish were significant items in the diet. Wild game and fowl might also

have been expected in greater numbers given the status of the site but a single red deer bone and three rabbit fragments represent the only non-domestic resources at the site. The excavator has interpreted this site as being of a higher status than the surrounding sites and it might have been expected that the faunal assemblage would have contained more exotic food items.

To conclude, the excavated animal bones from Cahermore have produced some interesting results despite the limited sample. The two striking features of the assemblage are the recovery of large quantities of butchered horse bone and, for a site located close to the coast, the absence of fish and seabird bones. The sample is clearly too small to provide a complete understanding of animal husbandry practices in this region during the late medieval period but it has provided some significant new information on medieval rural faunal assemblages.

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