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Excavations at Friar Street, Cashel: a story of urban settlement AD 1200–1800

By Edmond O'Donovan *et al.*

Abstract

An archaeological excavation on Friar Street in Cashel, Co. Tipperary, has uncovered evidence of habitation and settlement in the town from the thirteenth century through to the present day. Cashel is renowned for its association with the overkings of Munster and the famous ecclesiastic remains on the Rock. Its importance in the early Medieval Period led the Anglo-Normans to the site after their invasion in 1169. A motte, a church and graveyard and contemporary medieval earthworks located in Ballysheehan townland (O'Donovan and Duffy 2002) attest to contemporary early Anglo-Norman conquest and settlement in the fertile agricultural land surrounding the Rock of Cashel. This is augmented by the presence of many Anglo-Norman earthworks (moated sites) in the hinterland of Cashel, such as at Killistafford and Garraun. This rural settlement can be paralleled with the establishment of the modern town of Cashel, under Anglo-Norman patronage, beneath the southern edge of the Rock in the early thirteenth century.

The excavation uncovered activity associated with two periods: the Medieval Period (1300–1500), represented by the remains of an early timber house dating from c.1350, and the Post-Medieval Period (1550–1700), represented by the remains of a stone building. The survival of a sequence of archaeological deposits from the thirteenth century through to the present day is unusual, as the following and subsequent occupation should have disturbed and removed such deposits. This series of papers describes the history of the town of Cashel and the excavated remains and their significance. The excavation findings are augmented by a number of specialist reports on samples retrieved from the excavated remains.

The papers begin with an urban history focused on the town (Dr Ailbhe MacShamhráin), followed by a description and discussion of the archaeological sequence uncovered by the excavations at Friar Street (Edmond O'Donovan). This is followed up with a series of specialist reports on many details of the nature of the archaeological deposits uncovered at the site: pottery (Catherine Johnson and Clare McCutcheon), small finds (Catherine Johnson), animal bone (Andrea Cremin), macrofossils (Penny Johnston), Coleoptera (Eileen Reilly), wood and charcoal (Dr Ingelise Stuijts) and radiocarbon dating (Drs Gerry McCormac and Ingelise Stuijts).

Historical Background of Cashel, with Special Reference to the Town Area

Dr Ailbhe MacShamhráin

Urban Settlement in the Pre-Norman Period

Historical evidence for urban settlement at Cashel prior to the establishment of the chartered town in 1216 is slim. Indeed, there is little reflection in the record of ecclesiastical activity at

Cashel prior to 1101, when, on the occasion of the synod convened at that location, Muirchertach Ua Briain, Dál Cais king of Munster, made his magnanimous and much-discussed grant of the Rock to the Church.¹ Fedelmid mac Crimthainn (d. 847) and Cormac mac Cuilennáin (d. 908) were both cleric-kings, and both belonged to the dynasty of Éoganacht Caisil, but neither is expressly associated with a church at Cashel.² Archaeologists can point to the round tower as an indicator of earlier ecclesiastical settlement, and, in 1993, Hodgkinson reported several phases of burial and stone foundations below the cathedral wall – traces, it seems, of an earlier church.³ However, questions in relation to secular activity at, or adjacent to, the site remain.

Although, as Thomas remarks,⁴ there is little evidence that the Rock was ever used as a castle site, it must be borne in mind that it was traditionally a stronghold of the Éoganacht kings. The placename *caiseal*, from the Latin *castellum*, commemorates its former usage. More specifically, as noted in the annals, Cashel was one of several defensive positions fortified in 995 by Brian Bóruma.⁵ In the immediate post-invasion period, the Anglo-Normans did have a castle nearby; it was burned in 1195 by the Connacht king Cathal Crobderg Ua Conchobair on an incursion into Munster.⁶

Certainly, the record from the late eleventh century onwards preserves mention of secular involvement at the site. In 1093, Muirchertach Ua Briain received the submission of his rebellious brother Diarmait at Cashel; Ua Fáeláin, king of the Déisi, was slain there in 1118, while in 1194, Tadc Ua Briain was put to death there by the Anglo-Normans in violation of the laws of sanctuary.⁷ It is true that these events could all have taken place on the Rock, if not indeed within the church. The existence of a pre-thirteenth-century settlement adjacent to the Rock, however, is implied in exchanges between the archbishops of Cashel and King Henry III between 1218 and 1230, where references are made to the 'old vill,' as distinct from the new vill.⁸ While details are lacking, it seems likely that this was a small cluster-settlement located immediately to the east of the Rock, where the Dublin Road meets Ladyswell Street and Moor Lane.

The Foundation of the Town: Circumstances and Implications

The medieval town of Cashel, on the other hand, was a planned urban settlement very much in keeping with the other towns founded in east and central Munster in connection with the Anglo-Norman colonisation of the region. Having obtained a firm foothold in the Cork district as early as 1177, the colonists, amongst whom William de Burgh and Philip of Worcester were most prominent in the early stages, began to extend encastellation north of the Suir from 1185 onwards. The early 1190s saw the castles creep steadily northwards, with examples built at Bruis, Kilfeakle and yet another near Cashel. The victory gained by Domnall Mór Ua Briain, king of Thomond, at Thurles in 1192 has been interpreted as an attempt to stall the construction of a castle there.⁹ As already noted, Cathal Crobderg sacked the Cashel fortification in 1195 and Domnall Mór Mac Cárthaig, Éoganacht, king of Desmond, sacked Kilfeakle the following year. Some time prior to his death in 1206, the latter managed to raid through east County Cork and plunder the Anglo-Norman settlement at Lismore, but this effort achieved no lasting results.

In fact, the closing years of the twelfth century saw further extension of the Anglo-Norman conquest in the region. Following the death of Domnall Mór Ua Briain in 1194, the colonists were able to exploit rivalries between his sons. Circumstances thus helped them to encastellate the east and north of what would later be County Limerick and to gain control of Limerick town. In addition, it might be inferred from the record that the later efforts of Mac Cárthaig were becoming increasingly defensive.¹⁰ It seems clear, therefore, that by the opening of the thirteenth century, the Gaelic dynasties of Ua Briain and Mac Cárthaig had been displaced to the western

reaches of Munster, while political control of the east and centre of the province had effectively passed to the Anglo-Normans.

The foundation of Cashel town must surely be viewed against this background of political change and colonial expansion at regional level, an important manifestation of which was the establishment of towns such as those at Clonmel, Cahir and Thurles. However, it is important to bear in mind that Anglo-Norman colonisation, although relatively dense in the very south and southeast of what became County Tipperary, was markedly thinner towards the centre, much less at the northern and western fringes.¹¹ The displacement of the principal Gaelic dynasties from the area did not in all cases involve uprooting lesser nobility (the Dál Cais cadet line of Ua Cennétig – O’Kennedy – and that of Ua Duibidir – O’Dwyer – remained more or less *in situ*), much less the Gaelic Irish base population. Nor did these developments substantially affect the ecclesiastical, especially diocesan, possessions, which were extensive within the area.

The archbishops of Cashel, who in the immediate post-conquest period were Muirghes (Mathew) Ua hÉnna (d. 1206) and two kinsmen, each named Donnchad Ua Longargáin, held seven manors in demesne and had a number more leased out; they also held (if they had not founded) the town of Fethard.¹² Both were members of hereditary ecclesiastical families that traditionally represented Dál Cais interests. The position of these men and of their successors throughout the thirteenth and for most of the fourteenth centuries clearly demonstrates that there was no question of Gaelic Irish clergy merely being ‘tolerated’ within the archdiocese.¹³ Native clergy were sufficiently numerous in the area and retained enough control of the diocesan chapter to stall the anglicisation of the see for a considerable time.

The archbishops, for their part, certainly worked within the English political system when this was required or when it was expedient to do so; but they consistently obstructed efforts of the English administration to control the see or appoint clergy to benefices. On the death of Archbishop Muirghes in 1206, the dean and canons of Cashel (clearly a secular chapter) resisted attempts by King Henry III to introduce a nominee of his own and elected the first Donnchad Ua Longargáin (d. 1216). However, the second Ua Longargáin became involved in a protracted dispute with the English administration arising out of attempts by Henry of London, justiciar, archbishop of Dublin and papal legate, to erect a castle on archiepiscopal land at Cashel. Remonstrating loudly to Crown and Papacy, he placed Cashel under interdict in 1217 and betook himself to the Continent, where his protests apparently undermined English efforts to nominate bishops for other Munster dioceses and precipitated the dismissal of Archbishop Henry from his Papal Legateship – before English diplomatic pressure at Rome obliged him to lift his interdict in 1222, following which he resigned.¹⁴ His successors included Mairín (Marianus) Ua Briain (d. 1238), Dávid (d. 1254) son of Cellach Ua Gillapátraic and Dávid Mac Cearbaill (d. 1289).

It is important to note that the Cashel chapter was not exclusively Gaelic Irish; as early as 1230, there was, for instance, a chancellor of English origin and there were at least some English canons.¹⁵ Nonetheless, the Irish clergy contrived to retain the archbishopric for men of their nation into the fourteenth century. It was not until 1317, that the English crown succeeded in having one of its nominees elected to a vacancy in the see, and that was because the Irish party (as is clear from the annals) was divided and in fact elected both the archdeacon of Cashel and the suffragan bishop of Cork, Seoán Mac Cearbaill.¹⁶ The beneficiary of this division was the bishop of Ossory and chancellor of Ireland, Walter fitz John, whose cause was championed by King Edward II. Seoán Mac Cearbaill in fact succeeded Archbishop Walter in 1327 and, following a brief tenure of office by another Englishman, Walter le Rede, the see remained with the Irish for forty years before their hold was again interrupted. By the fourteenth century, however, the entire situation in relation to Cashel had changed dramatically, as will be discussed later.

Politico-Ecclesiastical Background: Cashel and the Two Nations

It might be expected that the development of the archbishopric along the lines outlined above had serious implications for the formation of Cashel as a town. Although only some of the occupants of the see, notably Donnchad Ua Longargáin II (1216-23) and Dávid Mac Cearbaill (1254-89), were openly hostile to the English crown, there seems to have been an ambition to preserve Irish interests in relation to the archiepiscopal office and to the chapter and the clergy of the archdiocese generally. Some such motives may well have underlain the foundation of the Cistercian and Dominican houses at Cashel, discussed below.

As to the town itself, the fact of its emergence against a background of Anglo-Norman colonisation has perhaps coloured our view of its origin and character. On the surface, similarities to other sites in the region in terms of layout and organisation have prompted consideration of Cashel as a typical Anglo-Norman urban settlement. According to O'Keeffe, it was an obvious location for a colony, with good agricultural land at the hub of cross-country routés; yet he acknowledges the absence of a river or of a castle, both of which are common features of most urban settlements of English origin.¹⁷ The principal recommendation for Cashel as a potential town site, it appears, was its ecclesiastical importance.

The town's foundation charter is unusual enough in that it was granted by an archbishop, but the prelate in question was a Gaelic Irishman, who, as already observed, was for most of his career at loggerheads with the English crown. Viewed in historical context, it seems unlikely that Donnchad Ua Longargáin would have been motivated to establish the town of Cashel by considerations of personal wealth and social standing alone.¹⁸ Doubtless he feared for the security of his archiepiscopal possessions, and the indications are that any such fears would have been fully justified; as already observed, the archbishop of Dublin, Henry of London, did attempt to erect a castle at Cashel.

Given the level of resistance to anglicisation within the archdiocese, it seems reasonable to view the adoption of a feudal town model by the Irish prelates as a realisation that their survival depended upon an ability to work within the English system. The archbishop of Cashel in respect of his temporal possessions became a tenant-in-chief of the English crown – the grand seigneur of an ecclesiastical lordship complete with manor court and appropriate officials.¹⁹ The charter of Archbishop Donnchad's successor, Mairín Ua Briain, provided for a provost, as head of urban government, and twelve burgesses or freemen of the borough.²⁰ The provost had responsibility to give judgement in relation to minor transgressions of the law, and in times of emergency could be accorded wider legal powers, including those of a coroner.²¹

The archbishop also appointed a reeve, or steward, with authority over all those who held tenements within the manor. While at least on occasion, the archbishop's reeve was of Anglo-Norman stock, the burgesses and townfolk certainly included at least a fair proportion of Gaelic Irishmen.²² Amongst the Irish families that held property in Cashel were those of Ua Spealáin (Spillane), Ua Ceallaig (O'Kelly), Mac Oitir (McCotter), Ua hÍfearnáin (Heffernan) and Úa Riain (Ryan).

Although King Henry III confirmed the new vill of Cashel to Archbishop Mairín Ua Briain in 1228,²³ it did not take the English administration long to appreciate the advantage of securing its interest in the new town. Perhaps by the 1230s, and certainly by the 1240s, when Dávid son of Cellach was archbishop, the court for the new county of Tipperary had been located at Cashel. The office of sheriff, with responsibility for maintaining the law within the county, was held by various families of English descent, including those of Hacket, Bret and Purcell. When Tipperary became a liberty of the earl of Ormond in 1329, the seneschal or law officer of the liberty did not

have authority over the 'crosslands,' or archiepiscopal manors, for which districts a separate law officer was appointed.²⁴

Another point worthy of notice is that when, in 1295, Sheriff Purcell was required to lead a posse against miscreants in the vicinity of Dundrum to the east of Cashel, he brought with him men of both the Irish and English nations. The assumption that his Irish supporters came from estates in the north of the county bordering with Éile seems unwarranted;²⁵ the men concerned came, in all probability, from Cashel, where the sheriff was based. The implication is that the population of Gaelic Irish within the town remained significant. Up to the sixteenth century, at least some Irish tenants remained in the town.

The Growth of the Town: Later Thirteenth Century

The flowering of Cashel as a town, as with other urban settlements in the region, took place in the later twelfth century. When King Henry III had confirmed the new vill to Archbishop Mairín, he granted him the right to hold an eight-day annual fair, which presumably promoted urban prosperity.²⁶ The location of the archbishop's formal residence in the town,²⁷ not to mention his court, doubtless also contributed to the town's status. Over time, several ecclesiastical foundations were made in or around the town. Aside from a protracted renewal of the cathedral, which resulted in an edifice of Anglo-Norman style, the earliest new religious houses included the Hospital of St Nicholas, established c.1230 as a lazaret house by Sir David Latimer, reeve of Archbishop Mairín Ua Briain, who licensed it.²⁸ The hospital was situated on the road to Cahir.

At a later date, a frankhouse of the Knights Hospitallers was established at Cashel. Around 1243, a Dominican priory was founded immediately in the northeast corner of the town by Archbishop Dávid, son of Cellach. Beyond the site of the priory, which included gardens and a cemetery, were a number of holdings with accompanying plots.²⁹ The English population, which had clearly become significant following the transfer of the county court to Cashel, included the Hacket family, which founded the Franciscan friary to the southeast of the town c.1265. Again, this foundation included extensive grounds, which backed on to town properties.³⁰

Seemingly, it was about this time that Robert d'Ufford, justiciar of Ireland, had a prison built in Cashel. In 1274, prior to departing for the Council of Lyons, Archbishop Dávid Mac Cearbaill requested its removal; again, in 1277, claiming that it was an old building that if repaired would be prejudicial to his church, he petitioned King Edward I to have it removed, apparently with success. The king granted the site and its edifices to Dávid to hold in frankalmoin, although controversy over the location of a prison in the town would arise again later.³¹

By the late thirteenth century, it appears that the parish church of St Nicholas was already in use, as the archbishop, in an almost uncharacteristic display of gratitude to the English crown, undertook to have daily divine service celebrated there for the benefit of King Edward.³² The same archbishop, around 1270 or shortly thereafter, founded the Cistercian Hore Abbey immediately to the west of Cashel. It was maintained that Dávid, who annexed his new foundation, the Hospital of St Nicholas, expelled the inmates from thence and appropriated to the Cistercian community an endowment that included a portion of the town's output of ale. If this were so, he established a chantry of three priests at the cathedral for the support of the hospital.³³ The end of the thirteenth century saw the medieval town of Cashel reach its full extent.

The Walling of the Town: Fourteenth Century

Leask has attributed the walling of Cashel to the English archbishop Walter fitz John, who held the see from 1317 to 1326. While his evidence for directly linking the project to Archbishop Walter is unclear, there are indications that initial construction took place in the

early to mid-fourteenth century. Thomas notes that Cashel may have been collecting murage, a toll for construction and maintenance of walls, as early as 1303, and certainly did receive a grant of murage for five years from 1319, apparently for the construction of a stone wall. Later, Cashel would be exempted from paying murage at Clonmel.³⁴

When completed, the walls, the ten surviving sections of which are described in detail by Tracey Collins, reached a perimeter length of 1,550 metres and enclosed an area of 15.5 hectares (some 30 acres); the walled enclosure corresponds to the townland of Cashel, as indicated on the 1843 O.S. map. There were five principal gates to the town and additional towers in the southeast and northwest corners.³⁵ Recently, archaeological evidence of a fosse has come to light in the southeast sector of the town.³⁶ From the historical record, it further emerges that there was suburban settlement outside the walls to the northeast. Presumably, this took the form of clusters of small houses.³⁷ In the Medieval Period, these suburbana had little protection.

Cashel had every reason to feel insecure from the early fourteenth century onwards. The Gaelic kings of Thomond were certainly making their presence felt in the north and west of the county. An Ua Briain was slain at Dún Eóchaille (Donohil, west of Dundrum), by Clanwilliam in 1313, and that dynasty was active around the same time in Uaithne and Araide (Baronies of Owney and Arra).³⁸ Empey's argument that local Gaelic resurgence often involved a reassertion of independence from local English lordship, rather than territorial reconquest as such, is persuasive. Besides, he indicates how the profit to the exchequer from County Tipperary dropped sharply in the early fourteenth century and how revenues from manors north of Thurles had fallen to about a quarter of their value by the 1330s.³⁹

The topographical poems of Ua hUidhrin, which date roughly to this period, chart the distribution of Gaelic noble families not only in the north of the county but in the west and southwest. Lineages of Dál Cairpre and Uí Chuanach origin, including Ua Duibidir and Mac Longacháin, had established themselves in the baronies of Kilnamanagh and Clanwilliam, occupying Crota Cliach or the Galtee Mountain area to the west and south of Cashel.⁴⁰ Nor did matters improve in the fifteenth century. Ecclesiastical relationships were far from good; Archbishop Rísdeárd Ua hÉidigheáin, who held the see from 1406 to 1440, was accused in parliament of discrimination against the English clergy of Cashel.⁴¹ More pointed was the crisis that took place in the reign of King Richard III (1483–85) that prompted an extension of the powers of the provost of Cashel. The impression is conveyed of the town as an island in which English-style social organisation struggled to survive in the face of a rising Gaelic tide.⁴²

The Economy of the Town

Historical evidence for economic activity within the town is fragmentary, but it does augment the picture obtainable from archaeology. In regard to primary agricultural production, it is clear that a range of activities, including tillage, stock raising and gardening, were practised on a considerable scale. There are numerous references to messuages, or holdings of land, especially those that included buildings, but it is extremely difficult to plot the locations of these in most cases, as the charters describe the situation of land holdings relative to other tenements, which in turn are not identified. Aside from the fact that the houses within the town had land attached to them (charters of 1425 and 1435 mention messuages in High Street, St John Street and Friar Street), there are references to gardens outside the walls (presumably for the production of vegetables), one of which is described as 'abutting on to the city wall on the west.'⁴³ It is clear from records of the monastic properties at dissolution that the Priory of St Dominic and the Franciscan friary both had substantial lands attached; in the case of the Franciscans, the friary site and its immediate gardens occupied 1½ acres, with eighteen messuages and a further sixteen acres attached.⁴⁴

As with gardening, stock raising and tillage can be inferred. Thomas points out that there were fields within the town walls in the northwest and southwest sectors;⁴⁵ there was also a green to the south of the walls, which was probably used for common grazing. The excavation produced a significant representation in the age-slaughter pattern for sheep, albeit in low quantities. Sheep farming was indeed a major activity among both Gaelic Irish and English colonists and, as O'Neill observes, was particularly practised by Cistercian monks.⁴⁶ There was a Cistercian community at Hore Abbey, just to the west of the town. It is unnecessary to suggest, however, that the monks had any monopoly on sheep rearing; it is perfectly reasonable that many local farmers and peasants raised sheep, even on a small scale.

The issue at stake here is that concentrations of bone suggest slaughtering, if not butchering. Aside from the obvious point that the Cistercians abstain from all meats, both the Irish and English farming communities engaged in sheep raising for reasons other than mutton, which appears to have formed a rather small part of their diet. The English kept sheep to manure cornfields, the Irish for milk (although it was valued less than the milk of goats, much less cows) and, most importantly, both communities raised sheep for wool. Of course, wool production involves shearing, which in Ireland was generally carried out in the summer. At this stage, the Irish traditionally culled their herds, and a proportion of summer mutton was consumed, presumably from older ewes.⁴⁷

The other activity that might be expected to yield sizeable deposits of bone relates to the more commercially minded English approach to wool production: the preparation of sheepskins. As it was customary to pack sheared wool and skins in bales of standard weight (for export – mainly to Flanders), and as accounts only report numbers of bales, it is generally not possible to estimate the output of wool as opposed to that of skins for any given production centre.⁴⁸ Aside from animal husbandry, it is clear that corn – certainly wheat – was grown, from references to the processing of grain. Finally, from a 1269 charter of the dean of Cashel, it appears that a wood called Dyreynclod (the first element *doire* indicating an oakwood) was in the vicinity of the town. This may have been a source for building materials, although it may be assumed that local woods of lighter timber yielded suitable firewood – essential for domestic and industrial activity alike.⁴⁹

The historical record also reflects industrial activity, but with more emphasis on food processing than manufacturing. A late reference (mid-seventeenth century) to a site near Hore Abbey named 'Windmill' points to the milling of flour; the denomination of land in question had been inherited by its owner, Derby Ryan of Cashel, 'by descent from his ancestors,' which suggests that the mill was of some antiquity.⁵⁰ Certainly, flour was milled in Cashel at an earlier date and bread was baked; the 1230 charter of Archbishop Mairín Ua Briain refers to a bakehouse.⁵¹

Brewing was another historically attested activity within the town; Archbishop Dávid (d. 1253), son of Cellach, made a grant to the Hospital of St Nicholas of two flagons of ale from every brewing made for sale within the town (presumably this meant the equivalent value thereof). There were apparently thirty-eight practising brewers.⁵² Manufacturing industry is less well attested; excavations have produced, from pre-Norman contexts at the Rock, fragments of combs that were almost certainly made locally and, from Main Street, quantities of pottery of Irish, if not local, manufacture.⁵³ A late annal record of a plundering raid carried out by the earl of Desmond in 1581 notes that amongst the booty taken was a quantity of clothing and apparel, which may point to cloth production in the town. The raiders also carried off some volume of metal, both copper and iron.⁵⁴ It is not clear whether this took the form of ingots or of manufactured items. In the latter case, the goods may represent trade, rather than manufacture.

Trade was clearly of prime importance to the town's economy. A royal grant to the archbishop

of an eight-day annual fair has already been mentioned. Presumably the 'shambles' mentioned in the 1230 charter of Archbishop Mairín was the centre of commercial activity, the predecessor of the modern market square.⁵⁵ The principal activity here was almost certainly the sale of agricultural produce such as corn and livestock, but it seems reasonable that other raw materials and at least some manufactured goods were traded in the town. Trade in wool and sheepskins could well have been significant. As already mentioned, the main outlet for Irish wool was export to Flanders, which presupposes a range of activities such as weighing, baling and carting.

The Early Modern Town: Dissolution and Development

The late medieval and early modern period saw little further growth in the extent of urban settlement at Cashel. As O'Keeffe notes, the fifteenth century and later saw ongoing building and repair work in the town. The tower-house known as Quirke's Castle was erected overlooking the marketplace around this time.⁵⁶ Prior to 1440, Archbishop Risteárd Ua hÉideagháin founded the college of vicars choral on the Rock, while around 1480, Archbishop John Cantwell rebuilt the Dominican priory after a disastrous fire.⁵⁷

The sixteenth and seventeenth centuries brought their share of change to Cashel. The Cistercian, Dominican and Franciscan foundations were all formally dissolved in 1540, which provided occasion for assessment of the extent of lands held by each. It seems that the Franciscans remained at the site of their friary for some years afterwards, until it became too dangerous for them to continue there. Later, in 1618, a house was provided for friars in the town.⁵⁸ Cashel did not go unscathed during these centuries, which witnessed warfare on a scale not experienced before in Ireland. The plundering raid by the earl of Desmond during his rebellion of 1581 has already been noted; it is unclear, however, how much damage was caused to the town on this occasion. More than sixty years later, in 1647, during the Confederate Wars, notwithstanding the prior construction of extramural fortifications at the east gate and at the southeast corner, the pro-parliament forces of Lord Inchiquin ruthlessly sacked Cashel. This time, it is reported, the town was extensively damaged by fire.⁵⁹

Presumably, extensive reconstruction was carried out in the second half of the seventeenth century; certainly, the record books of Cashel Corporation (city status had been granted by King James I) record ongoing repairs to the walls and gates in the 1670s and 1690s; the tower of the medieval church, which had somehow survived until 1677, was dismantled in that year because it had become dangerous.⁶⁰ Demolition and renewal along such lines continued through the eighteenth century. The old defences were gradually taken down, it being considered that there was 'not any occasion for walls or gates,' and the stone could be better employed in building work.⁶¹ The ruins of the Franciscan friary, part of which had collapsed in 1757, were pillaged for building materials in 1781 – apparently for the construction of private houses.⁶²

There was a significant degree of urban renewal around this time; a charter school was founded in 1751, and the Church of Ireland cathedral was commenced in 1783 on the site of the medieval church of St John – not to mention the construction of Georgian houses on John Street. The early nineteenth century saw the building of the Roman Catholic church and the convent of Presentation Sisters.⁶³ Nonetheless, as the mid-nineteenth century approached, Cashel was viewed by various commentators as rundown and decayed.⁶⁴ By this time, it appears that most of the ecclesiastical ruins in the town (as opposed to those on the Rock) had vanished. It is reported that traces of St Nicholas's Hospital remained until 1897, before that too was removed. Clearly, the consciousness that fosters the conservation of historical remains, much less that that prompts research and excavation, developed rather late in the day.

Archaeological Excavations

Edmond O'Donovan

Introduction

Friar Street is located within the medieval walled town of Cashel, Co. Tipperary. The street was first laid out in the Medieval Period and leads from the main street, where the market or shambles was located, to Friars Gate and onto Clonmel and Fethard. The street is known as Friar Street after the Franciscan Friary (*fd.* 1265) that was located adjacent to and outside Friars Gate (Figs. 1 and 2).

Archaeological excavations were carried out on the eastern side of Friar Street within the medieval town in advance of the construction of the new civic offices. The excavations were directed by the writer under licence to the National Museum of Ireland and Dúchas, the Heritage Service (Licence 95E0286), and took place in January and February of 1998. The licence to excavate

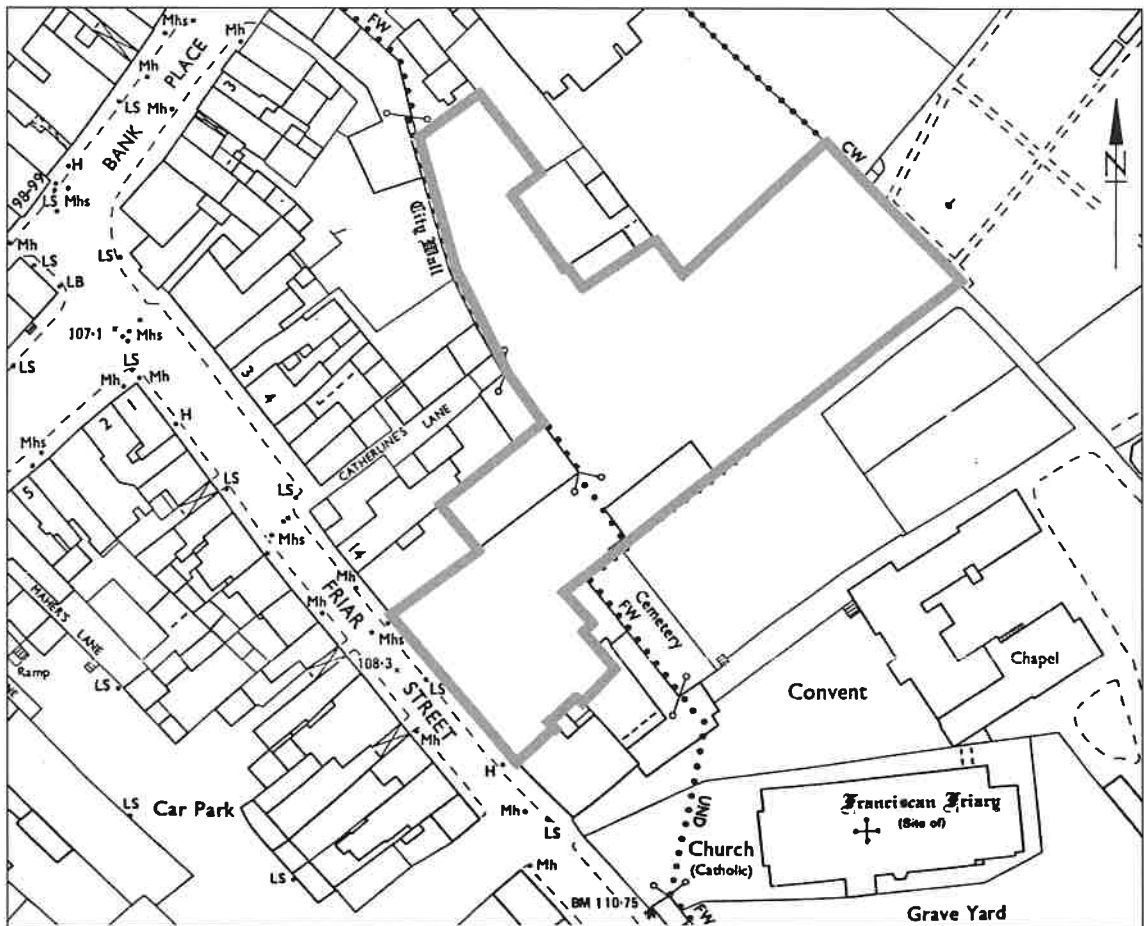


Fig. 1: Site location

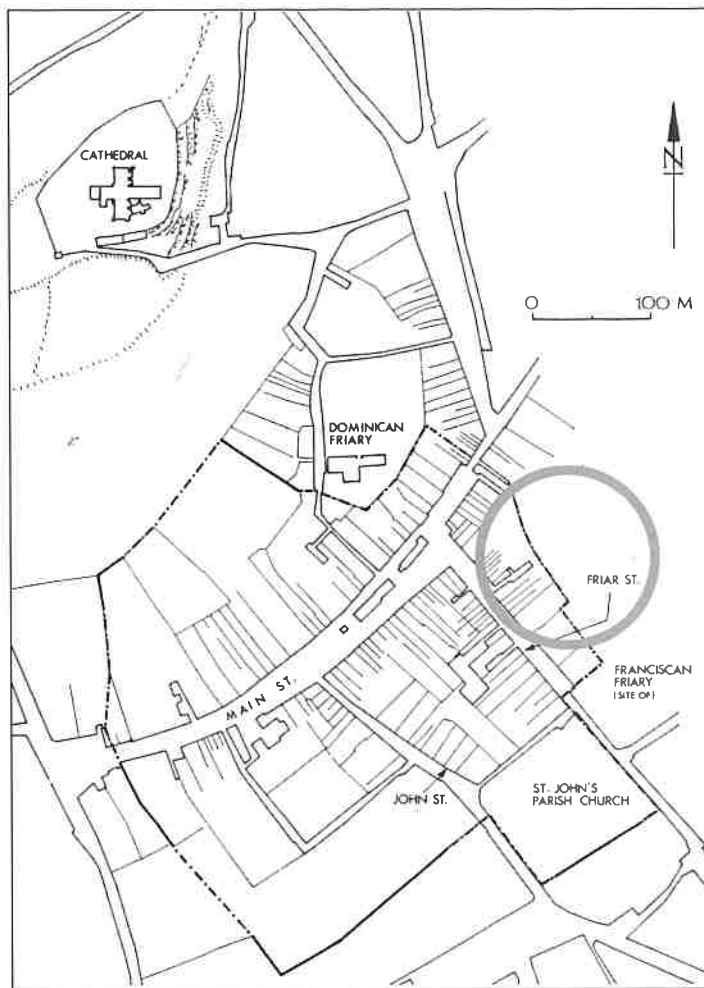


Fig. 2: Map of medieval Cashel, after Bradley, 1985

at the site was extended from the original test excavation licence issued in 1995 and 1997. The test excavation at the site (O'Donovan 1997) revealed a section of the town wall and ditch and the presence of archaeological deposits on Friar Street (Fig. 3).

All of the archaeological deposits recorded during the excavation either cut into or overlay deposits of natural boulder clay (F60). The boulder clay was compact and tan in colour and included a few small angular stones, predominantly of limestone origin. It formed a compact surface across the site. The general topography of Friar Street slopes gently from the southeast to the northwest. The archaeological deposits on site survived to the greatest extent in the northwest corner along the Friar Street frontage, where boulder clay dipped and archaeological accumulations of greater than 0.50m survived above the original ground level.

The excavations identified two main phases of archaeological activity. The first phase dated from the Medieval Period (AD 1200–1500) and was subdivided into four separate subphases, where evidence for street layout,

house construction, domestic occupation and property plot realignment was revealed. The second phase of activity dated from the early post-medieval period (AD 1550–1700), again subdivided into four separate subphases of occupation associated with the construction and use history of a stone building. The picture presented from the site reflects the growth and decline of one property plot in the town since its establishment in the early thirteenth century. The particular occupation sequence presented by the excavation illustrates the changes and trials experienced by the townsfolk of Cashel at one location. The sequence of settlement at the site is not representative of the town as a whole, but is indicative of the change that occurred in one location in the medieval town over the course of the past 800 years.

Cutting 1, the principal area excavated, measured 10.7m northwest–southeast and 8.1m northeast–southwest (Plate 1). It was located adjacent to the street front on the northeastern side of Friar Street (Fig. 3), between the foundations of the old convent building that fronted onto Friar Street prior to the redevelopment of the site for the construction of the Civic Offices.

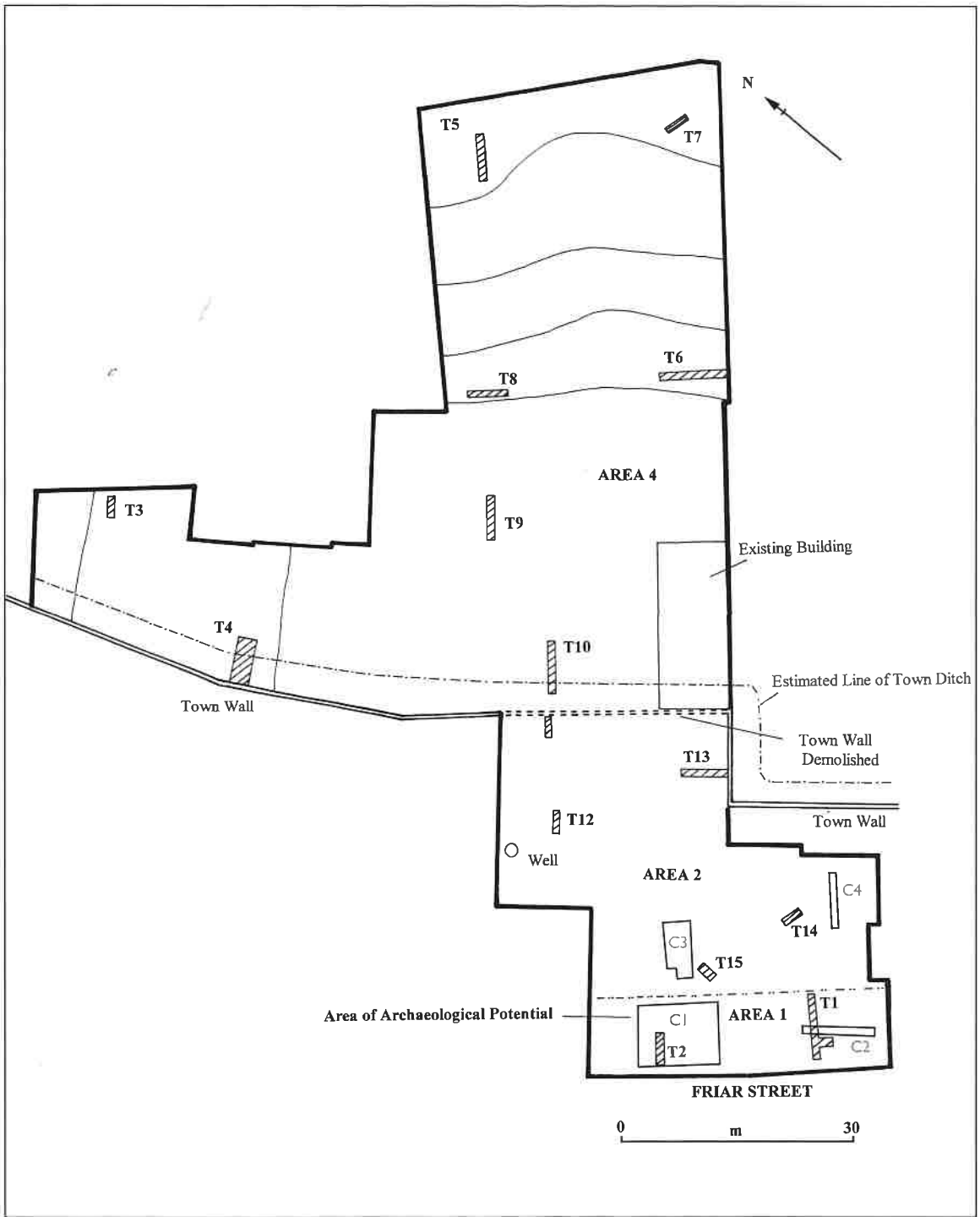


Fig. 3: Location of cuttings and text excavation trenches

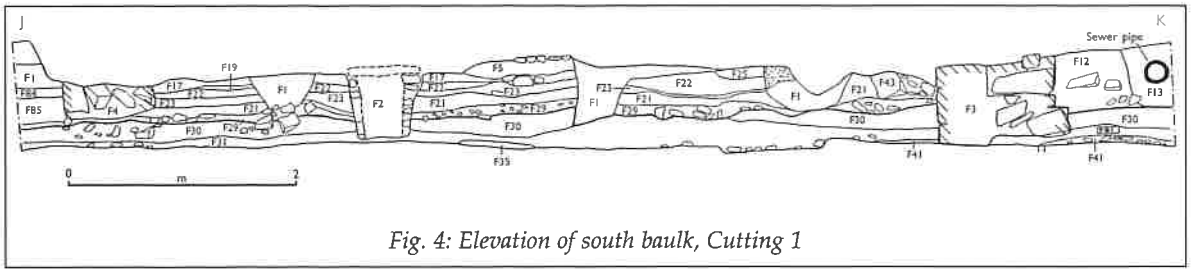


Fig. 4: Elevation of south baulk, Cutting 1

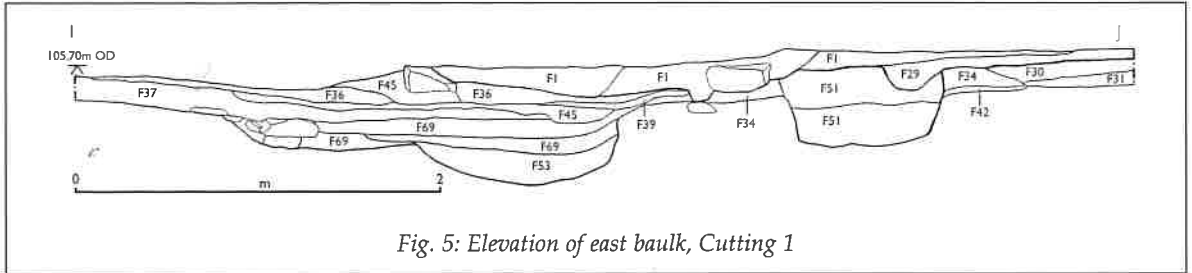


Fig. 5: Elevation of east baulk, Cutting 1

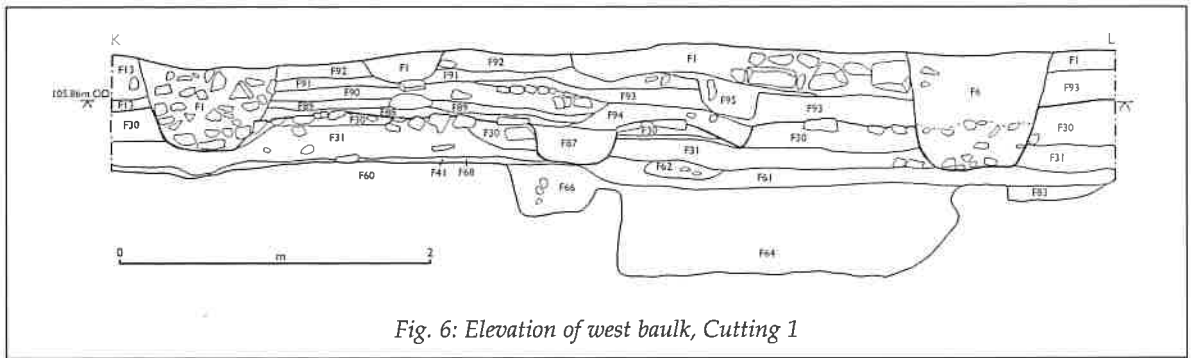


Fig. 6: Elevation of west baulk, Cutting 1

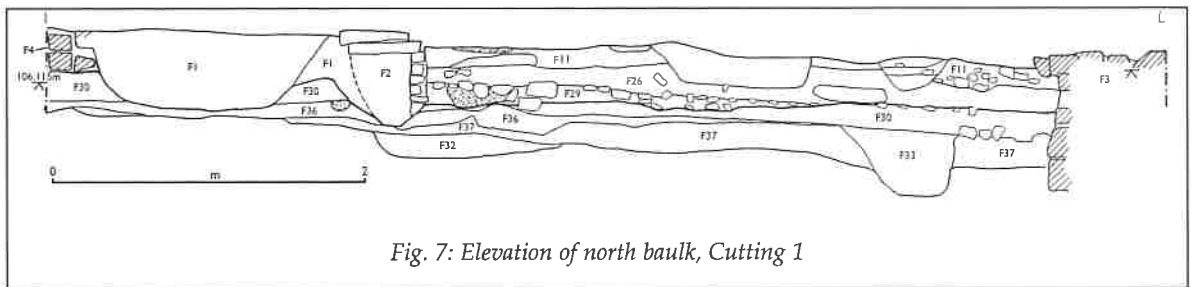


Fig. 7: Elevation of north baulk, Cutting 1

Cuttings 2, 3 and 4 were located to the southeast and southwest of Cutting 1 (Fig. 3). They were opened to assess the survival of archaeological deposits across the remainder of the site and demonstrated that the archaeological deposits survived in the northwestern corner of the site, adjacent to the medieval street, but were truncated to the southeast. Cutting 2, located to the southeast of Cutting 1, measured 9.7m northwest–southeast and 1m northeast–southwest. Cutting 3, excavated to the northeast of Cutting 1, measured 7.6m northeast–southwest and



Plate 1: View of cutting from the southwest, showing medieval house (F71) and post row (F58, F59) cut into boulder clay (F60)

3.6m northwest–southeast. Cutting 4 was excavated to the east of Cutting 1 and measured 7.1m northeast–southwest and 1m northwest–southeast.

The southwest, southeast, northwest and northeast baulk elevations are illustrated in Figs. 4–7, respectively.

Medieval Phase I: a Medieval Streetscape (Fig. 8)

Excavation

Isolated activity

Five post holes (F42:2–4, F49:30 and F66) and a number of stake holes were identified along the southwestern half of the principal cutting. These features were cut directly into the boulder clay (F60) and represented the earliest phase of archaeological activity on the site. No structures were associated with the post holes, which were sealed by two separate contemporary metallised surfaces (F42 and F68).

A shallow depression (F47) cut into the natural boulder clay (F60) represented the earliest archaeological activity in the centre of Cutting 1. The feature measured 3.50m north–south and 1.60m east–west, although its eastern edge was cut by a pit (F54). The depression was 0.34m deep at its northern end and 0.08m deep its southern end.

A linear trench (F69) was located in the southern corner of the cutting, extending into the south-eastern baulk, where it cut an earlier cesspit (F53). The trench (F69) measured 2.9m north-east–southwest and 0.3m northwest–southeast and was 0.25m deep. Two distinct fills were present

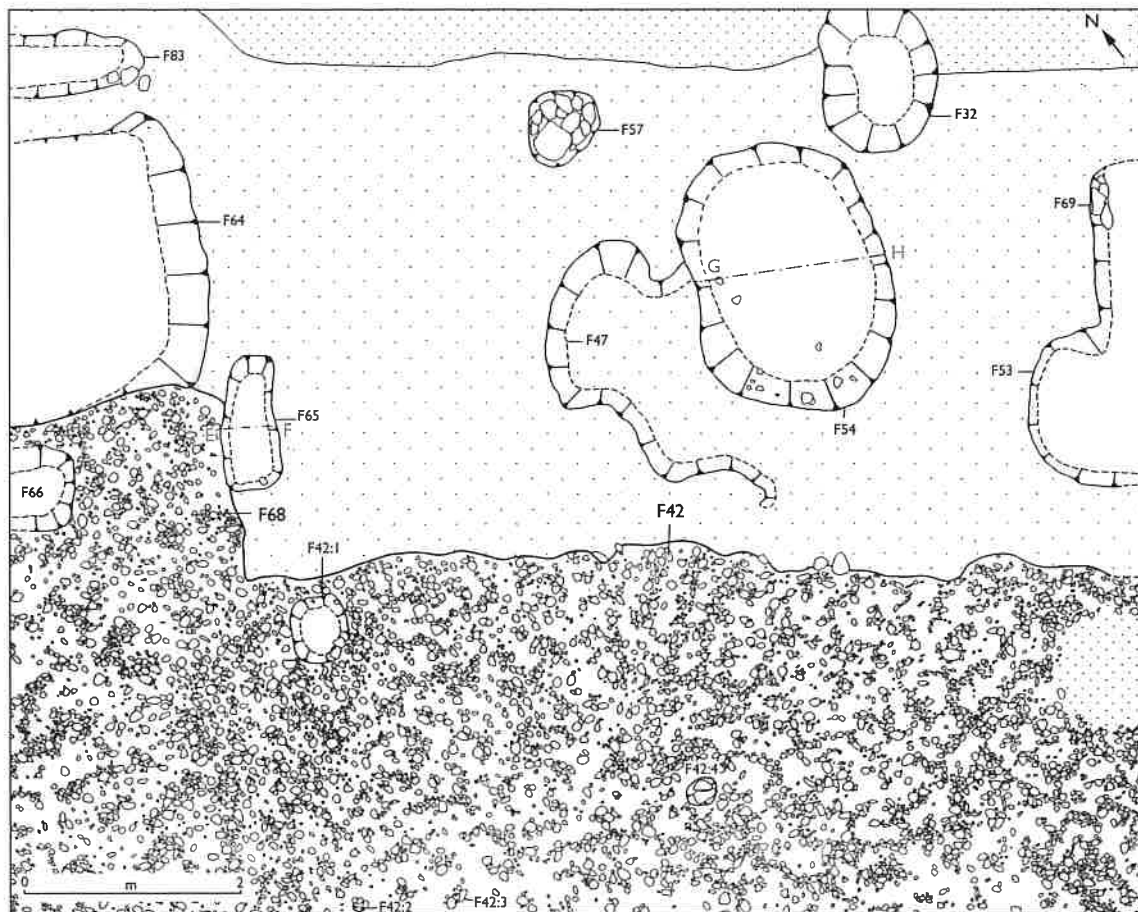


Fig. 8: Phase I, plan of medieval streetscape

in the feature. A layer of redeposited tan boulder clay (0.1m deep) filled the base of the trench. This was covered by a deposit of grey silty clay containing occasional charcoal flecks and small stones.

Medieval street

The metallised surfaces F42 and F68 were identified extending along the southwestern half of Cutting 1. The more southeasterly metallised surface (F42) was a compact concentration of tightly packed small stones (c. 10mm) bedded directly on the boulder clay (F60). This surface measured 8m northwest-southeast and 3.30m northeast-southwest, although it extended under the southwestern and southeastern baulks. The other metallised surface (F68) covered an area measuring 1.70m northwest-southeast and 4.90m northeast-southwest, although it extended under the southwestern and northwestern baulks. The metallising consisted of a compact concentration of tightly packed larger stones (c. 40mm) bedded directly on the boulder clay (F60).

Limel/mortar pit (F57)

A small lime/mortar pit (F57) was located at the northeastern edge of the cutting, cut into the natural boulder clay (F60). This pit was oval, with steep sides rounding into a flat bottom (Plate 2). It measured 0.65m north-south and 0.76m east-west and was 0.30m deep. A triangular

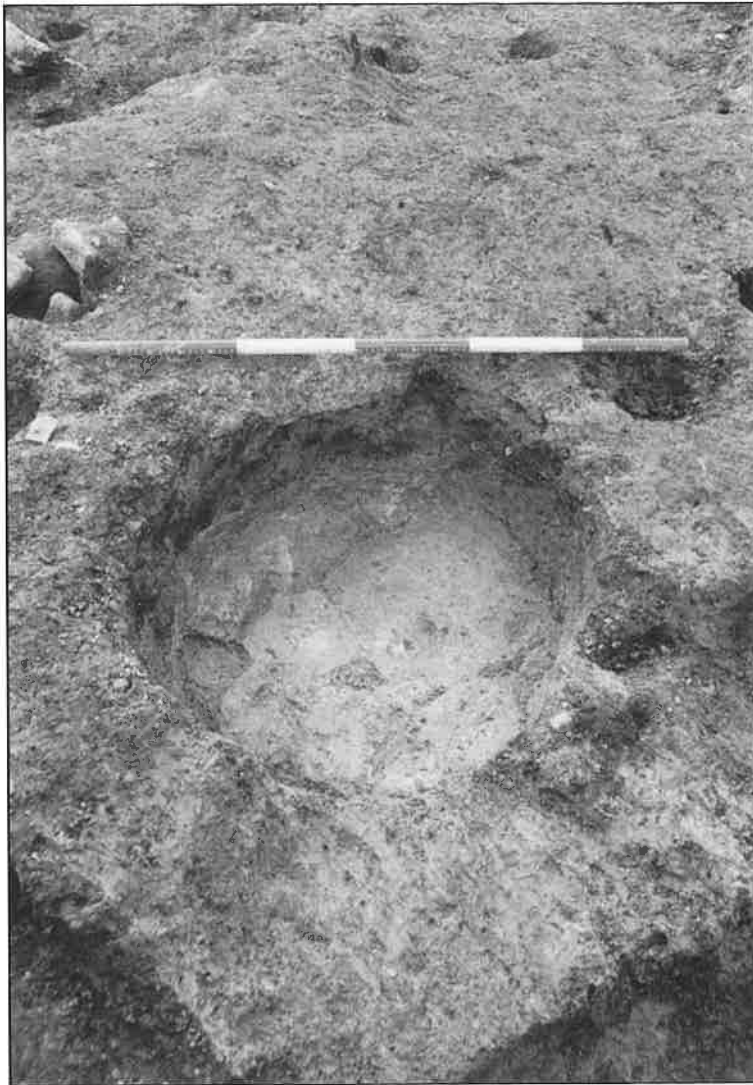


Plate 2: Medieval mortar pit F57

slaking pit was located on its northern side, where it fanned outwards from 0.32m to 0.70m wide. The slaking pit was shallow (0.17m), although its full extent was not evident, as it had been truncated. The base of the lime/mortar pit was lined with thin limestone flagging c. 20mm thick. The flags varied from 0.40m by 0.38m to 0.15m by 0.12m in diameter. A layer of crumbly greyish white mortar fill 0.08m deep covered the flagging.

The pits F32, F53, F54, F64 and F65

Five pits were located within the property plots adjacent and to the northeast of the medieval street front. All of the features were cut into the natural boulder clay (F60) and were as follows:

F32 was an oval pit measuring 1.03m north-south, 1.44m east-west and 0.15m deep. The pit was steep sided with a U-shaped shallow base. It was filled with dark brown organic clay.

F53 was an oval pit measuring 1.50m east-west, 0.78m north-south (half section, the pit extended into the south-

eastern baulk) and 0.48m deep. The pit was steep sided with a U-shaped shallow base. It was filled with dark grey and brown organic clay, flecked with pockets of yellow grey boulder clay, including occasional animal bones and small pieces of wood. The pit was sieved for macrofossil plant and microfaunal remains (Reilly and Johnston this volume).

F54 was an oval pit measuring 1.76m north-south, 2.58m east-west and 0.59m deep. The pit was steep sided with a U-shaped shallow base (Fig. 9). It was filled with dark brown organic clay. Wooden stakes (F52) had been driven into the pit after it had gone out of use. The organic conditions in the pit preserved the tips of the stakes *in situ*, and they were sampled for further analysis (Stuijts this volume).

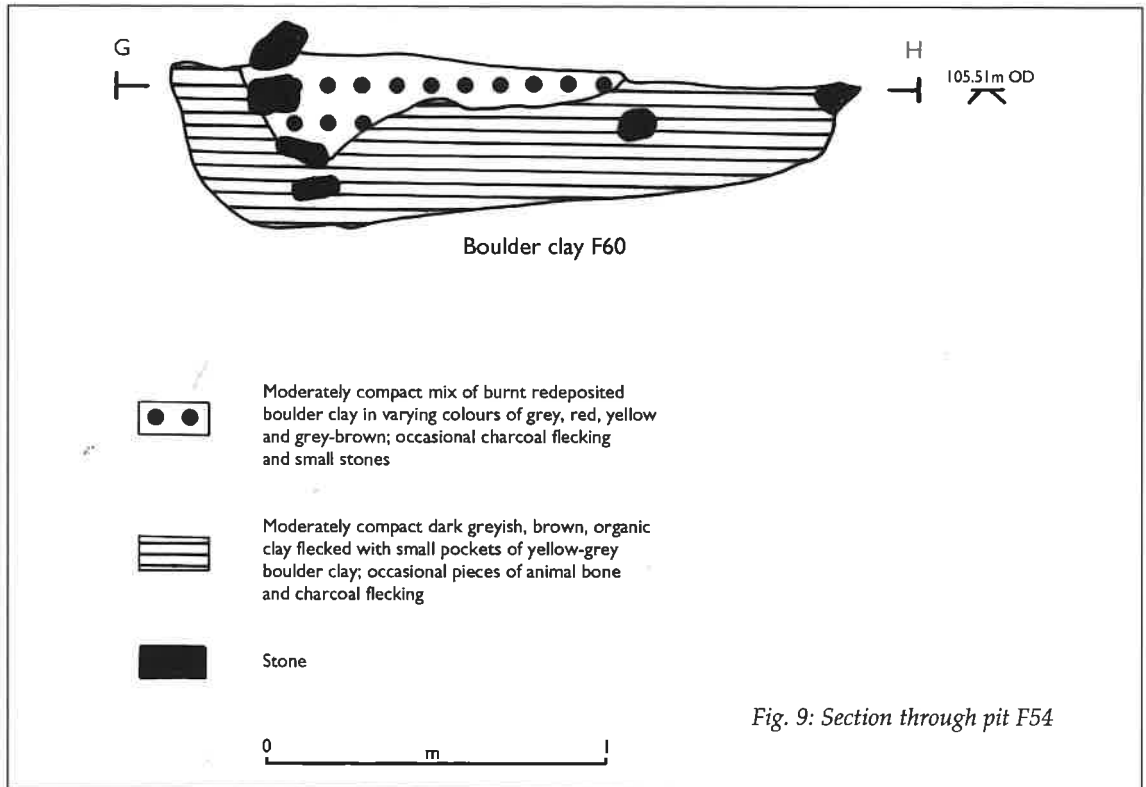


Fig. 9: Section through pit F54

F64 was a sub-rectangular pit measuring 2.62m east-west, 1.60m north-south (half-section, the pit extended into the southeastern baulk) and 0.89m deep. The pit was filled with a mixed deposit of sandy dark brown organic cess.

F65 was a sub-rectangular pit measuring 0.54m north-south, 1.24m east-west and 0.85m deep (Fig. 10). The pit was filled with grey/brown organic clay, containing occasional charcoal flecking and pockets of black silt.

Garden soil deposits in the pits F97, F98, F99, F100 and F101

Cutting 3 uncovered four shallow pits (F97, F98, F99 and F100) cut into the natural boulder clay (F60) beneath a thin deposit of 'garden soil' (F101). The pits were all located at the edge of the area excavated, and their full extent was not established by excavation. An estimation of the diameter of the features is postulated. F97 was an oval pit measuring about 0.7m in diameter and 0.11m deep. It was filled with mid-brown silty charcoal-flecked clay. F98

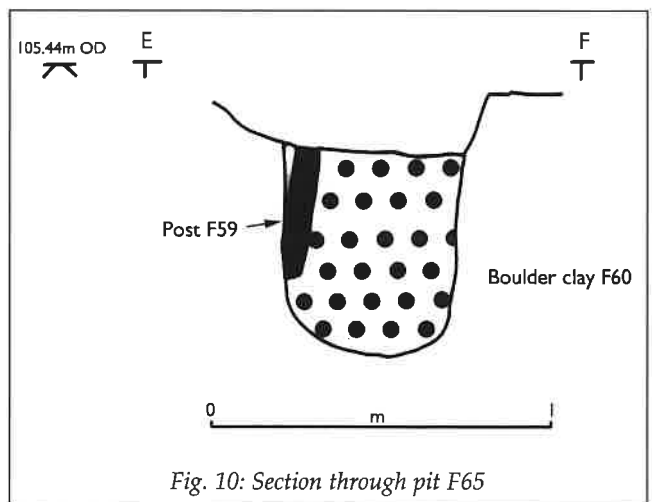


Fig. 10: Section through pit F65

was a sub-rectangular pit measuring about 1m in diameter and 0.12m deep. It was filled with brown silty clay flecked with charcoal and deposits of red/brown ash. F97 partially cut F98. F99 was a deposit of light grey brown sandy clay spread over the boulder clay. F100 was an oval pit measuring 1.6m in diameter. It was filled with dark brown charcoal-flecked silty clay. All the above features were sealed by a deposit of dark brown silty clay (F101, garden soil). The garden soil was about 0.5m deep and contained animal bone and traces of charcoal. Cutting 4 was located east of Cutting 1 and revealed a thin deposit of garden soil overlaying the boulder clay.

Linear trench (F103 and F104)

Cutting 2 was located to the southeast of Cutting 1 and revealed that later building activity had removed the original ground surface; however, two linear features were cut into the boulder clay (F60) at the southwestern end of the area excavated. These consisted of two U-shaped linear trenches (F104 and F103). F103 measured 0.71m in diameter and was 0.20m deep; its southwestern edge was truncated by F104. F104 was also 0.70m in diameter and was 0.39m deep. Both features were filled with a uniform brown friable silty clay. They may have functioned as early drains running perpendicular to the street.

Interpretation

The street layout

A clear line marking the boundary between the medieval street along the southwestern side of the cutting and the property (the medieval house, F71) developed adjacent to the street front on the northeastern side of the cutting, was evident at this level. The medieval street front was located 3.20m from the southwestern baulk and ran northwest-southeast through the cutting parallel and back from the current street front. It could be traced along the line of the existing buildings located further north along Friar Street, where the alignment of the medieval street has lasted down to the present day (Fig. 1). The medieval street consisted of metallated surfaces (F42 and F68) and was clearly distinguishable from the property plot (F71) on its northeastern side. The spaces defined by this boundary determined the activities carried out within the two distinct areas: street area and settlement area. This determined the types of deposits and archaeological accumulations encountered during the excavation. Accumulations of organic matter (F30, F31, F35 and F41) built up on the street outside the property lines running southeast-northwest along Friar Street. The insect remains identified from the organic deposits (F35) provide evidence for the conditions and environment on the street in the Medieval period (Reilly this volume). The dominant beetle species favoured a wild, damp and aquatic environment, but straw/thatch lovers and fowl decomposers were also present. The picture painted by the environmental evidence is a damp, puddle-ridden medieval street littered with domestic organic refuse and animal dung.

The pits and other early activity

The earliest archaeological features identified back from the street consisted of pits (F32, F53, F54, F64 and F65 in Cutting 1 and F97, F98, F99 and F100 in Cutting 3) and other isolated features, such as post holes. The function of the pits is uncertain and is likely to have varied from feature to feature and also to have changed through time. The pits may have been dug for the clay. The boulder clay (F60) on the site is likely to have been utilised as a resource for house building (clay floors and wall insulation) and also in the manufacture of 'Cashel-type ware' (Johnson and McCutcheon this volume). The analysis of the beetles (Reilly this volume) within the pit F53 sheds some light on the deposits within the feature. It must be borne in mind that the

conclusions are limited to the final fill of the feature and not necessarily associated with the primary or causal function. Pits on medieval sites (O'Donovan 2003, 140) have often been cleaned out and reused. The presence of large numbers of house fauna species in the pit F53 suggests that it was a domestic rubbish dump. Other species included eurytopic decomposers, which are common within rotting organic material. One species, *Mycetaea hirta*, indicated the presence of straw or house thatch in the fill; another wild group favoured wild, damp and aquatic environments, indicating that the pit was open to the elements. Finally, the presence of a small number of foul decomposers indicated the presence of cess, albeit in lower proportions to the majority of the pit fill. In conclusion, it would appear that the pits were located outdoors and were utilised for a range of functions such as a source for clay and as rubbish and cesspits, and they may have functioned in a similar manner to the modern compost heap.

The archaeological objects recovered from the cesspits date from the Medieval period and are Anglo-Norman in character. The objects fit into the material culture associated with and identified on medieval excavations in Dublin (Wallace 1994; Simpson 1995), Cork (Hurley 1997; Twohig 1997) and Waterford (Hurley *et al.* 1997). A small number of sherds of Ham Green B were recovered from these levels, dating the deposits to the late twelfth/early thirteenth century (Johnson and McCutcheon this volume). The small number of sherds of this early pot type is indicative of settlement in the vicinity of the site rather than an early date for the structures uncovered by the excavations. The majority of the pottery and other finds are more broadly datable and would fit into a thirteenth-century date range.

Cuttings 3 and 4 and Test Trenches 11–15 were located to the rear of the medieval occupation deposits, in the area running back from the street towards the town wall. Few structural remains (other than pits, such as F98 and F99) were identified; however, the test excavation did identify deposits of 'garden soil,' a light brown loose friable silty clay, in Cutting 2 (F101) and in Test Trenches 12, 14 and 15. These garden soil deposits are derived from the cultivation of the soil in the gardens occupying the rear plots off Friar Street. The soil is likely to have been cultivated and recultivated from the establishment of the town onward. Parallel deposits of this type of soil have been identified in other rural medieval towns such as Kilkenny, along New Building Lane (O'Donovan 1997, 59). Archaeological evidence for the products of these gardens was supplied through the peas and beans retrieved from the charcoal deposit F36 (Johnston this volume). Other vegetables and root crops may have been grown in these gardens in addition to the peas, beans and the cereals that were retrieved from above the house floor. The evidence from the rear of the site paints a picture of cultivated burgage plots stretching back from the street to the town wall, which enclosed an area of 15 acres – comparable to the area within the walls of Galway and Cork (Thomas 1992, 30). The archaeological evidence from the site supports the view that much of the land within the walls was clearly not just utilised for streets, buildings and religious houses; it also included a significant acreage that could be cultivated.

Medieval Phase II: a Medieval House (Fig. 11)

Excavation

The medieval house (F71)

Evidence for a medieval house (F71) was found in Cutting 1. The portion of house floor excavated covered an area 4.60m northeast–southwest by 5.80m northwest–southeast; the estimated dimensions of the structure are 4.60m northeast–southwest by 10m northwest–southeast.

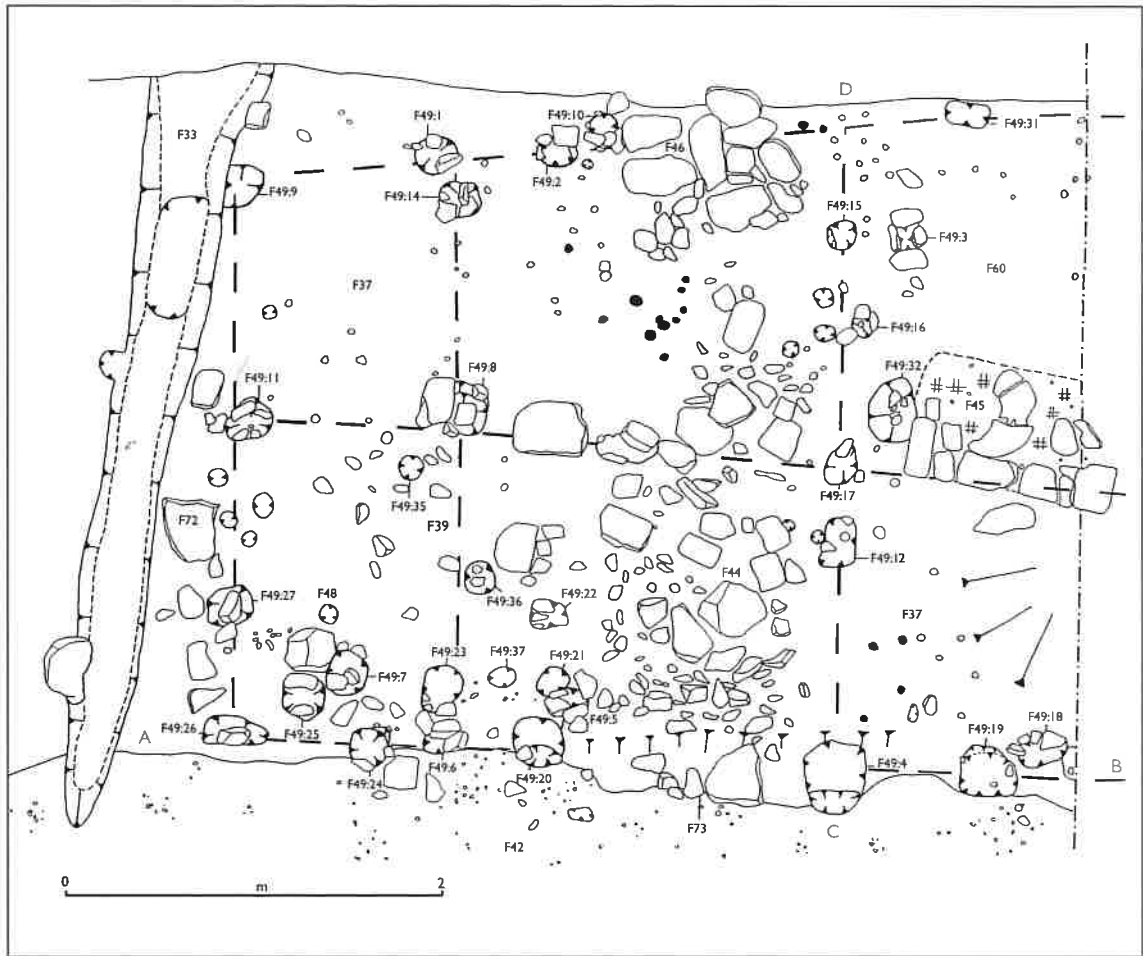


Fig. 11: Phase II, ground plan of the medieval building F71

The house was constructed above earlier medieval activity (F32, F47, F54, F53, F57 and F69). The floor and hearth survived *in situ*. Evidence for the layout of the house and roof was based on the alignment, size and number of stake and post holes identified in the cutting and the location of internal features, such as the hearth.

The house floor (F37, F44, F45 and F46)

A floor was laid to form an even surface (Plate 3). It was made up of layers of redeposited boulder clay (F37) and stone flagging (F44 and F46). The floor consisted of compact grey, red, tan and brown clay filling the hollows in the underlying uneven boulder clay (F60). The uppermost fills in the lime/mortar pit F57 and in the scarped surface F47 consisted of deposits of this clay (F37). The floor extended across the interior of the building, over an area measuring 6m northwest–southeast by 4m northeast–southwest. The clay deposit F37 was 0.23m deep along the northeastern side of the building but only 0.05m deep on the southwestern side, where patches of the natural boulder clay rose flush with the floor surface.

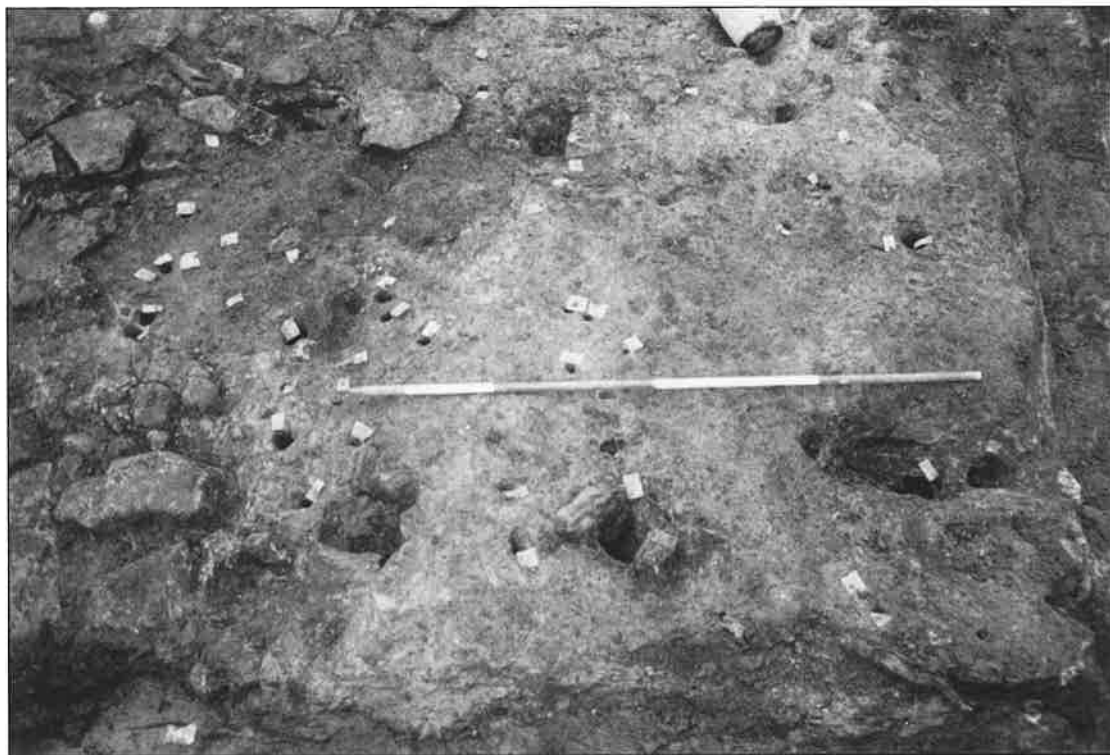


Plate 3: Features on the floor of the medieval house floor (F37), post holes (F49:1, 2, 9) and stake holes (F52)

Small stones (about 5–10mm) were packed into the clay surface, particularly in the northern corner of the building. A flagged path (F44 and F46) sealed and covered two earlier cesspits (F32 and F54). The path was 1.30m wide and led northeast–southwest through the building from the street-front entrance to the rear. The limestone flags were angular and flat, about 0.11m deep and 0.13–0.51m in diameter. A hearth (F45) was located centrally in the house to the southeast of the path (F44 and F46).

The post holes F49:1–35

The structure (roof and walls) of the medieval house was supported by timber posts. Only the tip of one of these posts survived *in situ* in a post hole (F49:10). The remainder of the posts survived as post holes (F49; see Table 1). The post holes were divided into two categories: structural posts and subsidiary posts. The majority of the post holes (F49:1–5, 7–15, 17–21, 23–27 and 31–33) fell into the first category and were, on average, 0.30m in diameter and 0.28m deep (Plate 3). The remaining post holes (F49:3, 6, 16, 34 and 35) were shallower (0.12m) and had a smaller diameter (0.20m). All of the posts were held in place by the insertion of packing stones tightly wedged between the edge of the post and the hole.

TABLE 1
Post Holes F49:1-35

Pit	Shape	Dimensions (m)			Description
		E-W	N-S	Depth	
F49:1	Circular	0.28	0.30	0.27	Lined with two large packing stones on the eastern and western sides.
F49:2	Oval	0.18	0.26	0.45	Lined with six packing stones surrounding all sides of the post pit.
F49:3	Rectangular	0.18	0.10	0.12	Lined with four packing stones set vertically around the post.
F49:4	Sub-rectangular	0.26	0.44	0.10	Eight edging stones set within the pit surrounded the post pit at the western end, which measured 0.18m east-west, 0.36m north-south and 0.40m deep.
F49:5	Angular	0.14	0.20	0.30	The post pit was lined with four edging stones, which surrounded the post.
F49:6	Oval	0.16	0.24	0.14	Lined with three flat-faced packing stones on the southern and eastern sides of the post pit.
F49:7	Circular	0.31	0.26	0.16	Two collapsed packing stones lined the base of the pit.
F49:8	Sub-rectangular	0.33	0.23	0.30	Lined with two packing stones at the eastern and western sides of the pit.
F49:9	Oval	0.26	0.30	0.29	Partially truncated on the northern side by a linear drainage (F33). No packing stones were present.
F49:10	Circular	0.20	0.20	0.34	Lined with six packing stones surrounding all edges of the post hole. The tip of the timber post was present <i>in situ</i> at the base of the pit. The post was preserved due to the depth at which it had been inserted into the boulder clay. The wood was made of the heart of a trunk with a diameter of 10-14 cm. The wood was reddish-brown in colour and filled with many iron incrustations, implying that it had been in contact with iron-rich water. There were no indications for pruning (presence of curl wood or traumatic tissue). The wood was fast grown, approx. 25 years, and made of Pomoideae type. This wood family includes crab apple, wild pear, rowan, service tree and hawthorn. The tip of the post was pointed into three shallow facets. The poor condition of the wood limited inspection of the woodworking.

F49:11	Linear	0.10	0.32	0.28	Lined with four packing stones on the eastern and western sides of the post hole. The pit may have supported two posts (c. 0.10m in diameter) or a single post (c. 0.20m by 0.10m).
F49:12	Sub-rectangular	0.33	0.20	0.28	Lined with four packing stones at the eastern and western side of the pit.
F49:13	Triangular	0.17	0.20	0.24	Lined with three packing stones and filled with grey clay
F49:14	Circular	0.29	0.29	0.13	Lined with four packing stones; those on the southern side collapsed into the centre of the feature.
F49:15	Circular	0.20	0.20	0.33	Lined with a single packing stone on the northern side.
F49:16	Oval	0.16	0.12	0.11	Lined with three packing stones.
F49:17	Oval	0.25	0.22	0.30	No packing stones were present.
F49:18	Oval	0.20	0.33	0.27	Lined with four packing stones on the eastern edge and with a single flagstone at the base.
F49:19	Sub-rectangular	0.35	0.38		The base of the pit graduated from 0.19m stepped to 0.27m deep at the western edge. No packing stones were present.
F49:20	Circular	0.35	0.35	0.20	A post pit measuring 0.15m east-west 0.28m north-south and 0.29m deep was evident at the western edge of the post hole. The post pit was lined with one packing stone.
F49:21	Oval	0.18	0.21	0.18	The base of the pit was lined with a flat pad stone. One packing stone was located on the western side of the post hole.
F49:23	Oval	0.26	0.34	0.26	The post hole was lined with six packing stones on its eastern and western sides.
F49:24	Sub-rectangular	0.26	0.22	0.26	The post hole was lined with a single packing stone, located on the pit's western side.
F49:25	Sub-rectangular	0.33	0.28	0.30	The post hole was lined with a single packing stone, located on its eastern and western sides.
F49:26	Linear	0.20	0.43	0.15	A large single stone was present at the base of the post hole in the post pit.
F49:27	Oval	0.25	0.33	0.15	A large single stone was present at the base of the post hole in the post pit.
F49:31	Sub-rectangular	0.18	0.30	0.21	No packing stones were present in the feature.

F49:32	Oval	0.43	0.31	0.18	Four small stones lined the base of the feature.
F49:33	Linear	0.16	0.40	0.26	The post hole was defined by two large post holes on the eastern and western sides of the feature.
F49:34	Round	0.21	0.21	0.09	Two small stones were present along the base of the feature.
F49:35	Round	0.17	0.17	0.16	No packing stones were present in the feature.

Stake holes F52

Eighty-eight stake holes and stakes were identified within the medieval building (Plate 3). The stakes and stake holes were driven into the clay floor (F37 and F39) and penetrated the boulder clay (F60). The stake holes measured 0.03-0.15m in diameter and were 0.19-0.34m deep. Many were located in clusters and, when roughly aligned, added further definition to the layout of the building. Four of the stake holes, located between post holes F49:11 and F49:27, may have been part of the building's northwestern (gable) wall. A group of stakes was inserted into the fill of an earlier cesspit (F54). The anaerobic conditions within the cesspit preserved eleven stakes, eight of which were in sufficient condition to allow the species and timber history to be analysed (Stuijts this volume).

Drainage trench/property boundary (F33)

A linear trench (F33) was present along the northwestern (gable) end of the house. The trench was dug after the house floor (F37) was constructed and was cut into the boulder clay (F60). The trench was oriented northeast-southwest and was 5.30m long. It tapered from its northeastern end, where it was 0.80m wide, to its southwestern end, where it narrowed to 0.25m in diameter, and it sloped from northwest to southeast. The trench varied in depth from 0.60m to 0.25m. It was filled with compact black/grey charcoal-flecked sandy clay, including occasional wood fragments. This fill was uniform along the trench and was sealed by dark brown sandy clay.

Interpretation

General house layout

A rectangular house was identified in the cutting. The house was post-built and was aligned with its long axis fronting onto the street, which runs northwest-southeast. The lines of three of the external house walls were identified; however, the southeastern limit of the building was not established, as it lay beyond the limit of excavation, and the northeastern edge of the building along its external wall was severely truncated by the insertion of a concrete foundation at the turn of the twentieth century. The excavated portion of the building measured 5.80m long (northwest-southeast) and 4.60m wide (northeast-southwest).

Walls

The southwestern (street-front) wall (F74) was built from fourteen posts (within post holes F49:4-7, 18-21, 23-26 and 35) aligned along the street front (F42). The density of post holes (F49:7, 21-23, 25 and 37) in the western corner of the building suggests repair to the external wall

or a possible extra load-bearing capacity to hold an additional structure such as a loft.

The northwestern (gable) wall (F75) was built from four posts (within post holes F49:9, 11, 26 and 27). Four substantial stakes located between F49:11 and F49:27 augmented the fabric of the wall. In addition, ancillary posts (F49:29 and 31) were located to the northwest of the gable end of the house. A line of flat stones (F72) lay adjacent to the external line of the wall. These stones may have formed the footing on which the fabric of the wall rested. A linear boundary/drainage trench (F33) was located 0.40m to the northwest and parallel to the northwestern house wall. The trench was filled with granular material that suggested the structure was water-filled; it may have acted as a drain.

The northeastern (rear) wall (F76) of the building was built from an alignment of posts (within post holes F49:1, 2, 9, 10, 14 and 31); however, this side of the building was truncated by later activity. A modern concrete foundation trench forming the northeastern boundary of the cutting truncated all the archaeological deposits through to the boulder clay (F60). The post holes that supplemented part of the northeastern wall may have been removed by the insertion of the concrete foundation.

Wall fabric

Evidence for the materials used in the construction of the wall did not survive, apart from occasional stake holes (F52), which were absent along sections of the external walls, such as around F49:1, 9 and 11, and which did not indicate the fabric of the walling. Neither was there any evidence for timber base plates similar to those identified in medieval buildings in major towns (Twohig 1997; Coughlan 2000; Hurley et al. 1997). The nature of the wall fabric, therefore, remains unresolved.

Internal features

The stakes within the building were 30–100mm in diameter. The street-front entrance (F73) into the house was located between two post holes (F49:4 and F49:20; door jam posts). A paved central aisle (F44 and F46), 1.30m wide, ran from the door northeast through the building to the rear of the house. The hearth (F45) was located in the centre of the southeastern end of the building, equidistant from the front and rear walls. Six post holes (F49:3, 12, 15, 16, 17, and 32) and ten stake holes were aligned northeast–southwest between the paved aisle and the hearth, forming an internal division (dividing wall) within the building adjacent to the fireside.

Roof supports

Four substantial post holes (F49:11, 8, 32 and 17) were located along the central northeast–southwest axis of the house. These posts were equidistant and parallel to both the northeastern and southwestern external walls, and they were aligned over the centrally placed hearth (F45). These post holes presumably held roof support posts that supported a ridge pole that ran the length of the building. Each central roof support post had an auxiliary roof support post in the southwestern and northeastern walls (F74 and F76, respectively). F49:11 was supported by auxiliary roof support posts corresponding to post holes F49:9 and F49:26. F49:8 was supported by auxiliary roof support posts corresponding to post holes F49:1 and F49:6, and so on. The simple ridge-pole roof would have supported purlins, rafters and tie beams supported from the alignment of posts (Figs. 12 and 13). The terms used to describe the house architecture are based on the glossary of terms within *The Viking Age Buildings of Dublin* (Wallace 1992).

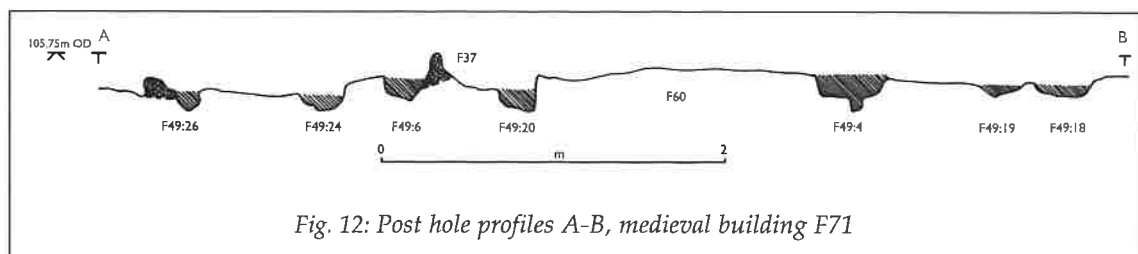


Fig. 12: Post hole profiles A-B, medieval building F71

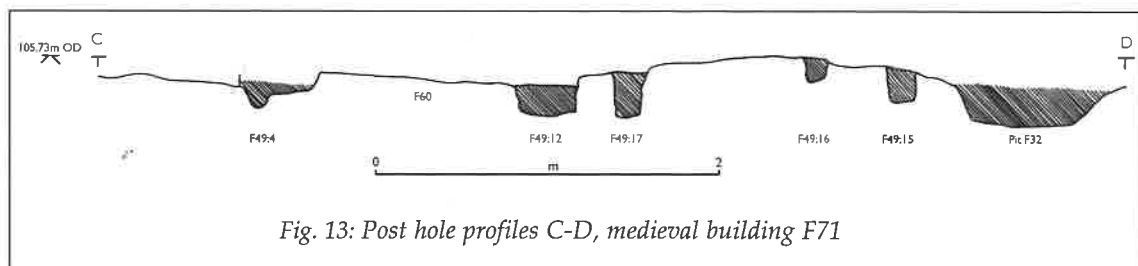


Fig. 13: Post hole profiles C-D, medieval building F71

Fragmentary remains of the roof (F36)

The roof of the house was reduced into a layer of charcoal (F36) when the house burnt down. Three species dominate the sample: *Corylus* (hazel), *Fraxinus* (ash) and *Quercus* (oak). The size and age of the ash and hazel rods suggest that the timber was cut in springtime from managed woods to be used as purlins, rafters, tie beams and ridge poles in the roof. The oak charcoal was made up of larger squared fragments; these are likely to be the remains of the roof support posts. The only post (F49:10) that survived *in situ* was hewn from *Pomoideae* (crab apple, wild pear, rowan, service tree or hawthorn), indicating that wild wood was also utilised. The variety of wood species utilised is evident from the other species represented in the sample from the charcoal layer (Stuijts this volume). A charter in 1269 refers to 'Dyreyncl,' or an oak wood, in the vicinity of the town (MacShamhráin this volume). It is therefore very likely that the woods in the vicinity of the town were the local source of timber for house building. The archaeological evidence indicates that the ash and hazel were from managed woodlands and that this system was in existence from at least the mid-fourteenth century.

Dating the house

A charcoal fragment derived from the house was submitted for radiocarbon dating. The date of the house was tied down broadly to the fourteenth century (two sigma standard deviation). This date indicates that the house was almost certainly constructed between 1280 and 1408 (McCormac and Stuijts this volume). The pottery recovered from the house levels (96% local) can also be dated to the fourteenth century on the basis of stylistic comparison.

The cultural associations of the house

Few clear comparisons with the Friar Street building can be found in the literature. The post-and-wattle Type 1 house (Wallace 1992) is recognised as being constructed principally in the Viking Age but also after the Anglo-Norman invasion of 1170 (Simpson 2000). Medieval post-and-wattle houses dating from the mid-eleventh century up the early thirteenth century have also been excavated in Waterford (Hurley et al. 1997). The sill-beam and stone-footed houses identified in Dublin (Coughlan 2000), Cork (Twohig 1997) and Waterford (Hurley et al. 1997) are

attributed to the changes associated with the Anglo-Norman conquest after 1170; however, a small number of sill-beam structures, including House PS3A/4A:L9 in Waterford, have been dated dendrochronologically to the mid-twelfth century prior to the Norman invasion. Evidence for internal supports within medieval sill-beam or stone-footed buildings is rare, with occasional exceptions, such as the sill-beam house uncovered at Back Lane, Dublin (Coughlan 2000, Structure H). Little comparison can be drawn between the sill-beam house types and the Friar Street house. The internal roof support posts present in the Cashel building find few parallels with either stone-footed or sill-beam structures, nor does the wall fabric. However, like the Friar Street house, a small number of the Waterford houses excavated by Hurley et al. (1997) (IN3:L10, a late-twelfth-century rectangular stone and timber house, and the Bakehouse Lane late-twelfth-century type 1 post-and-wattle buildings, such as BL3:L11) have entrances in the long axis of the structure, as opposed to the gable end, as was common in Viking Age houses (Wallace 1994); the Bakehouse Lane post-and-wattle houses demonstrate the closest parallels. The street orientation (long axis and entrance front and back facing onto the street) of the Friar Street house, and indeed the Bakehouse Lane buildings, finds easier comparison with the vernacular Irish house (McCullough & Mulvin 1989) than with other contemporary medieval houses. The availability in the future of further excavated examples may allow further speculation about the origin of the traditional Irish vernacular house.

Medieval Phase III: Settlement, Occupation and Decline

Excavation

The hearth (F45)

The hearth continued in use throughout the occupation of the building. This was indicated by three distinct phases in the hearth, characterised by the accumulation of layers of ash and rearrangements to the structure of the hearth. The basal deposits consisted of a circular spread of red ash, measuring 1.10m east-west, 1.30m north-south and 20–50mm deep. This deposit accumulated on the clay floor (F37). A fragment of a circular rotary quern stone (F44:1) was placed centrally within the hearth (Plate 4). This functioned as a hearthstone and measured 0.58m east-west by 0.37m north-south. The intense heat from the fire shattered the quern fragment into four smaller pieces. A single course of large stones was laid around the southwestern half of the hearth. The rectangular fireside, measuring 1.40m north-west-southeast and 0.56m northeast-southwest, was stratigraphically later than the quern in the centre of the hearth. This fireside was raised 0.10m above the house floor and was built over an earlier pit (F69).

Occupation surfaces F48 and F39

Clear layers of domestic refuse and occupation debris were largely absent from the northeastern side of the house. However, the primary floor surface (F37) was stained with ash and flecked with charcoal. An oval deposit of grey, charcoal-flecked ashy clay (F48), 1.40m in diameter, was present in the western corner of the house (F71). To the southeast of this, a deposit of mixed grey silty burnt clay (F39) formed the floor surface. This material was made up of compacted layers of ash, boulder clay (F60) and charcoal. The edge of this occupation surface (F39) was not clearly distinguishable from the surface F37; however, it partially sealed F37 and was 0.05–0.10m thick. Few inclusions, such as animal bone or finds, were retrieved from the house floor. Deposits of richly-coloured red burnt clay and fine charcoal-flecked ash were



Plate 4: Hearth (F45) with reused quern stone in medieval house

imbedded around the hearth (F45). These deposits accumulated over the life span of the building and did not represent a single episode of burning.

Post hole fills (F49)

The post holes F49:1–21, 23–27 and 31–35 were filled with various sticky grey/tan charcoal-flecked clays. These fills revealed the presence of packing stones encircling the post pit within the post holes. The packing stones remained in position in the majority of the excavated post holes; however, in four cases (F49:7, 14, 26 and 27), the packing stones collapsed into the post pit within the post hole. Only a single wooden post was retrieved from one of the post holes (F49:10).

Organic deposits (F31 and F41) above metallised surfaces F42 and F68

A deep deposit of organic clay (F42 and F68) had built up above the street surface. The organic deposits contained quantities of animal bone and medieval pottery and other finds. This accumulation of organic material was between 0.18m and 0.37m in depth and consisted of three distinct deposits of organic material (F30, F31 and F41). Further banding was evident within each of the deposits. F41, a deposit of light brown organic sandy clay with orange flecking, covered patches of the metallising F42 at its northwestern end. This 0.08m thick deposit covered an area 2.58m north–south by 3.56m east–west in the western corner of the cutting, where it sealed the metallising F68. It was itself sealed by a 0.05–0.31m deep dark brown organic layer (F31) covering an area 8.50m northwest–southeast by 2.06m northeast–southwest along the southwestern edge

of the cutting. This deposit abutted the lower courses of the collapsed stone wall F34 (Plate 5) and was sealed by a similar deposit (F30) consisting of organic material with grey linear banding.

The destruction of the house (F36)

A thick layer of loose, friable, black, burnt organic material (F36) covered the entire occupation surface of the house (F37, F48 and F39). This deposit was 10mm deep in the western corner of the house (F71) but thickened to a depth of 150mm in the southeastern corner. It consisted of many large charcoal fragments and black ashy silt. The material was very distinct from both the underlying and overlying deposits. A sample of the charcoal from the layer was analysed to establish the species, age and timber history of the wood from which the deposit derived, and a single charcoal fragment was submitted for high-precision radiocarbon dating. The radiocarbon



Plate 5: Medieval street-front stone wall, F36

analysis yielded a two sigma calendar date of AD 1280–1408 (McCormac and Stuijts this volume). The rod submitted for dating was twelve years old, cut in early spring, and was from an ash tree. The presence of bark on the rod implied that the house burnt soon after it was built, therefore decreasing any potential old-wood effect. The retrieval of the charcoal fragment from the clearly defined layer secured its context.

Interpretation

Occupation

The deposits surrounding the hearth (F45) were characterised by phases of repair and additions to the structure. No deep deposits of charcoal or ash accumulated around the hearth. The use of the house through time is indicated by evidence for repair to the southwestern side of the house floor, where F39 partially overlay F37, indicating that the floor was repaired during the life span of the structure.

The floor must have been cleaned out on a regular basis to allow for its continual use.

This is paralleled by the absence of occupation deposits above the house floor (F37/F39) and suggests that the house floor was kept clean internally. However, the accumulation of organic deposits along the street front, particularly the ashy organic F41, in which the orange flecking was interpreted as hearth rake out, suggests that refuse may have been dumped outside the house (F71) onto the street (F42). This view is supported by the findings of the report on the insect remains within the organic deposit F35 (Reilly this volume).

Destruction by fire

The terminal event in the medieval house was its destruction by fire. This was identified archaeologically as a single dense layer of black charcoal and ash (F36). The historical sources indicate that the town wall surrounding Cashel was constructed in the fourteenth century and corresponded to a period when the Irish were re-establishing themselves in the territory around the town (MacShamhráin this volume); however, no reference to the town being razed by fire exists. It is not possible to postulate archaeologically whether the destruction of the house occurred by accident or deliberately, but it clearly occurred as one calamitous event. Irrespective of the motive of the fire, the result for the occupants was the devastating destruction of the structure, including many of their possessions and food stores. The result archaeologically was the transformation of the structural remains of the house into a dense layer of charcoal (F36).

Medieval diet and economy

The macrofossil and animal bones analyses provide a rare view of the diet and economy of a fourteenth-century rural Irish town (Cremin and Johnston this volume). The results of the macrofossil analysis, together with the examination of the charcoal remains, confirm that much of the debris in F36 was from the collapsed roof and other structural timbers in the house. The sieving of the charcoal deposit F36 yielded cereals, legumes (peas and beans) and nuts. The association of harvested foodstuffs in the seed assemblage with the structural remains of the house presents an image of gathered foodstuffs hanging inside the house from a low thatched roof.

The scene is further enhanced with the findings of the animal bone analysis (Cremin this volume). Bantam hens were identified in the faunal assemblage, along with the common meat-yielding animals (cattle, sheep/goat and pig). The hens are likely to have lived adjacent to the property, associated with the plots running back to the walls of the town to the rear. Larger animals may have been reared on farms outside the walls. However, it is likely that the burgage plots running back from the town's streets almost certainly functioned as cultivated gardens with small livestock pens protected within the walls. The extent of small farming practises carried out within walled towns is suggested by the large size enclosed by some rural towns, such as New Ross, Co. Wexford, and Athenry, Co. Galway.

The age slaughter pattern of the sheep retrieved from the site sheds light on the wider economic life in the hinterland of Cashel and its farming practices. The relative old age of the sheep identified in the samples suggests that wool had been shorn from the animals for a number of seasons prior to their slaughter for consumption. This pattern is consistent with farming practices where wool production for clothing has greater importance and value than the immediate meat-yielding potential of the animals. The historical sources suggest that this practice may be associated with the farming economy of monasteries, such as the Cistercian house at Hore Abbey and other rural medieval farms in the vicinity of the town. MacShamhráin (this volume) notes that the Cistercian order had a tradition of sheep farming. The Abbey certainly possessed land around the town that was farmed. The abbey is recorded as holding

c. 600 acres at the dissolution of the monasteries in 1540 (Gwynn & Hadcock 1988). This evidence for trade in wool and sheepskins appears to have left its mark in the archaeological record in the form of the sheep bones retrieved from the deposits on the Friar Street site and may be a significant pointer to the availability of mutton, the natural by-product of that trade, in the town market.

Abandonment

The main phase of occupation in the areas excavated terminates after the destruction of the house by fire. The collapse of the packing stones within the post holes F49:7, 14, 26 and 27 suggests that some of the house timbers were deliberately removed from their post pits after the terminal event. A final medieval layer of organic material (F30) overlay the black charcoal and ash deposit F36. This may reflect a period when occasional dumping occurred on the abandoned site. The dumping and accumulation of the organic layer F30 is likely to be derived from settlement occupation in the immediate vicinity of the excavated area. The picture presented from the site reflects the growth and decline of one property plot and is unlikely to reflect the general settlement pattern throughout the town.

Medieval Phase IV: Settlement Decline and Property Boundary Realignment (Fig. 14)

Excavation

The stone wall F34

A stone wall (F34) was recorded above, and aligned along, the street-front wall of the medieval building (F71). The feature measured 7m long and 1.60m wide and survived to a height of 0.30m, tapered at the edge. The wall is thought to postdate the medieval building and to have been constructed after the medieval house was destroyed by fire (evidence from F36), although some of the masonry may have formed the wall fabric of the low house walls and survived the destruction of the house as a boundary between the street and the property plot. The wall was built from angular limestone fragments that measured between 0.28m and 0.17m in diameter. The stones were weathered. The larger-sized stones were set in a line along the central axis of the feature, with the looser and smaller stones interspersed within the upper organic accumulations (F29 and F30) on the northeastern and southwestern sides of the feature.

Timber post fences F58 and F59

Two parallel post rows were located in the western corner of Cutting 1 (Plate 6). F58 was located 1.20m from the northwestern baulk and 0.70m from F59, which lay to the southeast. The post rows were aligned northeast-southwest and were inserted through the metalled surfaces F42 and F68 into the underlying boulder clay (F60). The post row was 4.75m long and was made up of twenty-nine circular posts with a diameter of 0.08–0.16m and one triangular-sectioned plank measuring 0.16m long and 0.04m wide. The post pits were between 0.21m and 0.28m deep. The posts in F58 were staggered, suggesting the use of wattling along the feature. The post row F59 was linear and consisted of a single row. It survived for a length of 4.05m and was made up of thirteen circular posts with a diameter of 0.06–0.15m. The northeasternmost post in the row was cut into an earlier pit (F65). The post pits were between 0.20m and 0.22m deep. The northeastern ends of both features were truncated by later activity (F3). The organic deposits (F30, F31 and F41) above the post rows were also removed by later construction activity (F3).

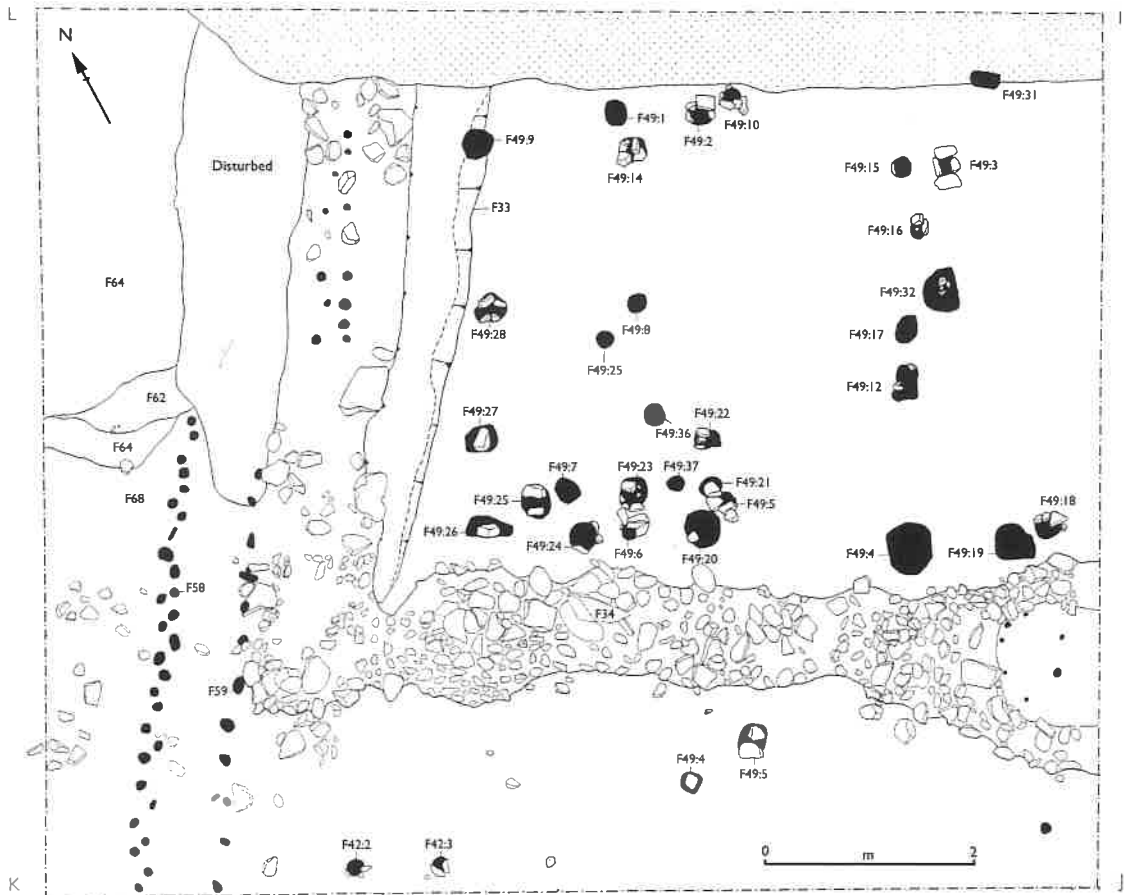


Fig. 14: Phase III/IV, property re-alignment

Organic accumulation F30

A layer of compact grey clay and brown organic material (F30) was deposited across the cutting. The layer entirely sealed F31, which covered an area along the southwestern edge of the cutting measuring 8.50m northwest–southeast and 2.65m northeast–southwest. It also overlay the lower courses of the collapsed stone wall F34 and covered the terminal deposits (F36) associated with the medieval house (F71) in the northeastern half of the cutting. The organic deposits incorporated the final collapse of the wall F34.

Drainage trench/property boundary (F33)

A linear drainage trench/property boundary (F33) was recut through the organic deposits F30 into the boulder clay (F60). The trench was oriented northeast–southwest, on the line of the trench identified adjacent to the medieval house, and measured 5.30m long. It tapered from its northeastern end, where it was 0.80m wide, to its southwestern end, where it narrowed to 0.25m; it sloped from northwest to southeast. The trench varied in depth from 0.60m to 0.25m. It was



Plate 6: Property realignment with post rows F58 and F59

The medieval occupation (Phases I, II and III) led to the accumulation of about 0.25m of archaeological deposits in the cutting. After these phases of activity, a uniform layer of organic material (F30) built up above the earlier archaeological deposits (F31, F41, F34, F36 F37, F39 and F45). This deposition of organic material represents a period of barren activity across the whole cutting, when little domestic settlement is evident. The site may have been a garden at this time.

A linear drainage trench (F33) cut through from the level of F30. This trench may have acted as a property boundary. The street front is defined by a low stone wall (F34) at this point that demarcates the junction between the street front and the property plot after the demise of the timber house (F71). The wall slowly collapsed with the accumulation of the debris on either side of it. The wall is thought to postdate the medieval building and to have been constructed after the medieval house was destroyed by fire (evidence from F36), although some of the masonry may have formed the wall fabric of the low house walls and survived the destruction of the

filled with a compact black/grey charcoal-flecked sandy clay, including occasional wood fragments. This fill was uniform along the trench and was sealed by a dark brown sandy clay to the level of the clay floor (F37).

Pit F51

A circular pit (F51) was located in the southeastern corner of the cutting. The feature cut through the collapsed remains of the stone house wall F34. The pit was steep sided with a flat bottom and measured 1.13m in diameter and 0.56m deep. The lowermost fill (0.30m deep) consisted of greyish brown clay mixed with boulder clay. The upper fill was similar, although it was heavily flecked with charcoal.

Interpretation

New property plot boundaries

The final phase of medieval activity on the site is characterised by the insertion of property plots (F58 and F59) along previous existing boundaries (F33) in tandem with the accumulation of organic debris (F30). The trench F33 was recut at this level along the alignment of the earlier trench at this location.

house as a boundary between the street and the property plot. This interpretation may explain the absence of a sill-beam or equivalent structure in the medieval building.

The two post rows F58 and F59 are further evidence for property demarcation. It was not possible to say stratigraphically whether F58 and F59 were contemporary, however, it is unlikely that two property boundaries would be constructed so close together and thus have been interpreted as the same boundary being rebuilt through time. The staggered double alignment of the posts in F58 suggests that the boundary was made by weaving hazel or willow brushwood rods through the upright posts. No wood from either structure survived. The southeastern post row (F59) is less complex and merely consists of a straight alignment of posts.

Persistence of the medieval streetscape to the present day

The medieval street front during Phases I, II and III was located 3.20m from the southwestern baulk. The two property boundaries (F58 and F59) extended southwestwards across the medieval street (F42 and F68) and are clear evidence for the reclamation and narrowing of the street. The advance of the new street front indicated by the insertion of either fence (F58 and F59), is likely to correspond to the present street front.

A continuity of property boundaries can be traced from the gable end of the medieval house (F71) to the drainage trench (F33) to the post-and-wattle boundary fences (F58 and F59) through to the gable wall (F3) of the post-medieval building described in the next section. The continuity of property plot location can be traced through time, even to the location of the convent building that fronted onto Friar Street, demolished in 1997, where the wall for the convent building was located above the early post-medieval wall (F3) uncovered in the excavation. The continuity of property plots from the Viking Age down to the present day is a feature that was first identified in excavations of medieval Dublin (Wallace 1994) and also in Waterford (Hurley et al. 1997, 149) and Cork (Hurley 1997, 4), where modern and seventeenth-century property plots were superimposed on the earlier Viking and medieval property divisions. The town of Cashel was founded in 1216, and, on the basis of the evidence from the sequence demonstrated above, it is very likely that property divisions originating in the thirteenth century survive to the present day. This was evident in the Dublin excavations, where Wallace (1994, 263) describes 'the rectilinear medieval street ... reflected in the eighteenth and nineteenth century topography.' This model of the origin of street pattern is applicable for Cashel from the Medieval period.

Post-Medieval Period: The Stone Building (F80)

Excavation

House walls F3, F4 and F77

The foundations of three post-medieval walls (F3, F4 and F77) were identified in the excavation. The northwestern and northeastern walls (F3 and F77, respectively) were on average 0.90m wide, whereas the southeastern wall (F4) was on average 1m wide. The northwestern and northeastern walls were constructed on rubble-stone foundations (F24 and F79) between 0.25m and 1.90m deep (depending on the stability of the underlying ground). The foundations were 1.15m wide and were evident externally as a plinth running along the base of the house wall. Up to two courses of masonry survived above the foundations. The internal and external faces of the walls were constructed from large, roughly dressed limestone blocks, with smaller stones filling the core. The limestone blocks measured from between 0.50m by 0.40m to 0.10m by 0.15m, and they were bonded with a creamy brown sandy crumbly mortar.

Internal masonry fabric (F9, F40 and F42)

A large fireplace (F9) was present in the northwestern house wall (F3). It stood 0.65m proud of the wall and measured 2.35m wide. The hearth within the fireplace was centrally placed and measured 1.40m wide and 0.70m deep. A stone foundation/footing (F40) was located adjacent and parallel to the southeastern house wall (F4). It possibly functioned as a foundation for a wooden stairwell. It measured 3.80m northeast–southwest and 0.90m northwest–southeast. The foundation was of single-course construction. The northwestern edge of the structure was faced with large limestone blocks. A similar stone foundation/footing (F43) was evident adjacent and parallel to the northwestern house wall (F3). It was 0.53m wide and 1.65m long, although it was truncated on its southwestern end by later activity. The original clay floor (F21) clearly abutted the feature, and it was also incorporated into the northwestern house wall; however, little other evidence for the function of the structure survives.

External path (F12)

A layer of stony sandy clay (F12) was deposited along the northwestern edge of the northwestern house wall (F3). This area was largely disturbed by the presence of a modern sewer pipe (F12) running northeast–southwest through the cutting, removing deposits in a rectangular trench 1.10m wide and 0.39m deep. However, a deposit of sandy stony clay was identified abutting the exterior of F3. This was interpreted as a surface or path along the northwestern exterior of the house (F80).

Interpretation

The stone house

The walls identified in Cuttings 1 and 2 formed part of a substantial rectangular stone building (F80). Its external dimensions were 14m northeast–southwest by 7.40m northwest–southeast. The building was constructed with its narrow gable end fronting onto Friar Street. Evidence for the two external side walls (F3 and F4) was identified in Cutting 1; the rear wall (F77) was located in Cutting 2. The wall foundations (F3, F4 and F77) were about 1m wide, suggesting a building two to three storeys high. The southwestern street-front wall was removed by the insertion of the concrete foundation F78, associated with the later construction of the convent building in 1929. The walls identified in Cuttings 1 and 2 were separated by the insertion of the rear foundation wall of the convent building.

Occupation

The house was continually occupied from its construction in c. 1600 until it was demolished prior to the construction of the convent in 1929. The floor within the building was constructed from clay and cobbles, and the excavation identified various episodes of repair and remodelling (described as occupation phases I to III below). The external walls (F3, F4 and F77) and fireplace (F9) were used throughout the occupation of the building. The stair support (F40) appears to have gone out of use after Phase I.

Dating and architectural comparisons

The construction date for the building is based on the retrieval of sherds of early post-medieval pottery associated with floor levels within the structure. A single sherd from a French chafing dish (14:2) was retrieved from the second phase of occupation (from F14). Other datable finds, such as North Devon gravel-tempered ware and glazed red, black and mottled wares, date from the seventeenth and eighteenth centuries. The succession of house floors and range of datable

finds, albeit low in quantity, suggest a construction date between the late sixteenth century and the early seventeenth century and occupation up to the end of the nineteenth century.

Comparison with other urban buildings of the period

The layout of the Friar Street building compares with other similarly-sized early post-medieval urban buildings. Examples in Kilkenny include the Shee Alms House (1582) (O’Cochlain 1986), a building in New Building Lane (O’Donovan 1998) and a Tudor building that occupied the corner site adjoining St Canice’s Place and the Irishtown (O’Donovan 1998, 104). All these buildings are rectangular and have their gable ends fronting towards the street. The Friar Street building compares closely in floor plan, wall thickness and gable-front street orientation. Such buildings are not as elaborate as the more sophisticated and larger Tudor merchant houses in Kilkenny, such as Rothe House (1594), Langton House (1609) or Archer House (1582) (Lanigan & Tyler 1987). However, architectural comparisons (layout, stone-dressed fireplaces, hood moulding and window frame embrasures) between the larger, dated merchant houses and the smaller group of Tudor buildings to which the Friar Street building belongs suggest a construction date for the Friar Street property in the mid-sixteenth to early seventeenth century.

Post-Medieval Occupation Phase I (Fig. 15)

Excavation

House floors and occupation (F21, F27 and F23)

A layer of grey/brown gravely mixed clay (F29) was laid above the late medieval garden soil (F30). This layer was located within the house walls F3, F4, and F77. It measured between 0.06m and 0.10m deep and formed the foundation on which the primary house floors (F21 and F27) within the post-medieval building (F80) were laid (Plate 7). A thick deposit (between 0.10m and



*Plate 7: Phase I,
post-medieval
house and floor,
F21, F2, F9*

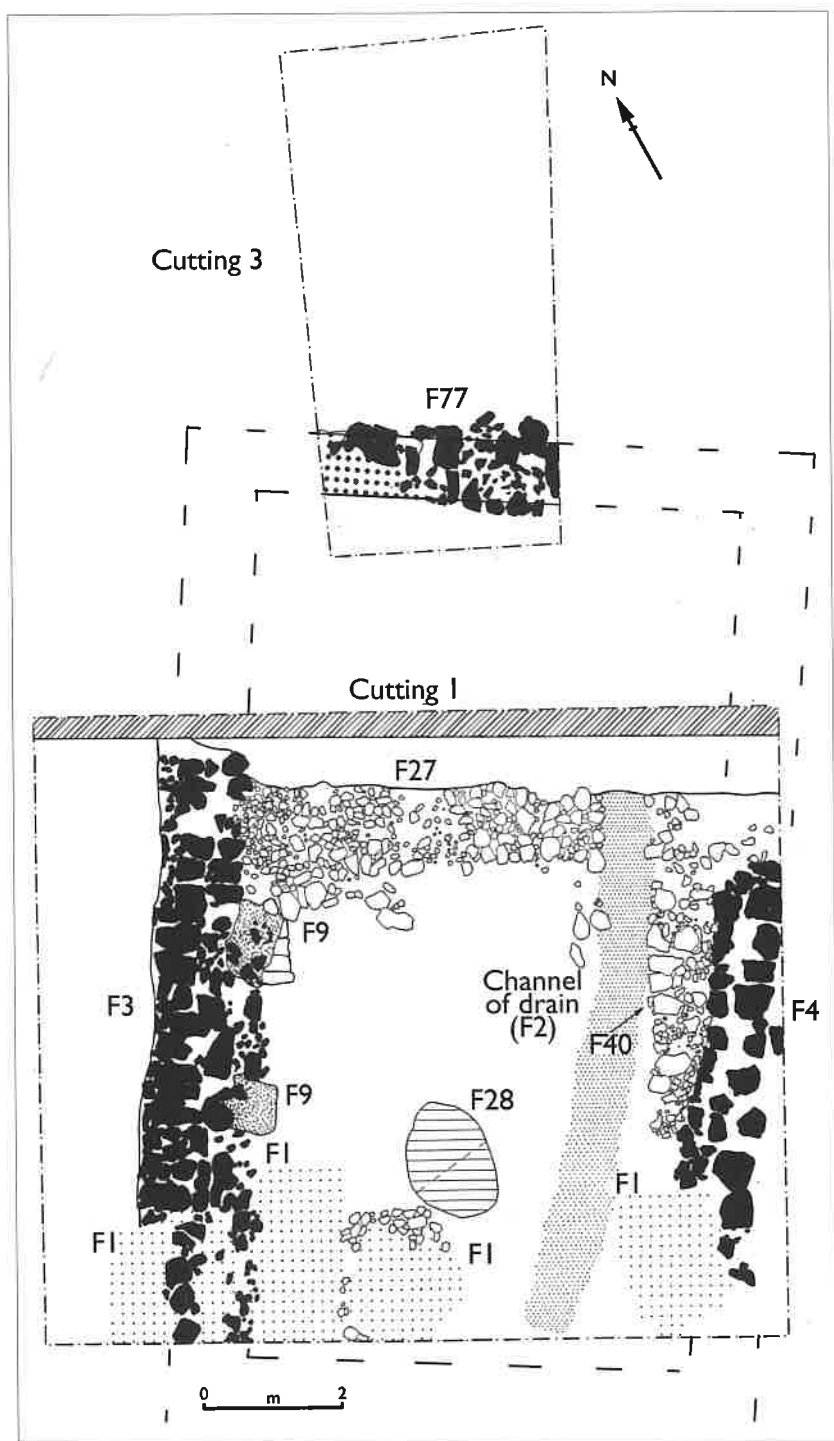


Fig. 15: Phase I, post-medieval building F80

0.14m deep) of redeposited tan boulder clay (F21) was laid above F29, forming the floor surface at the southwestern end of the building. A thin layer (50mm) of sticky grey charcoal-flecked clay (F23) lay above the primary house floor. This occupation deposit accumulated in hollows in the floor up to 0.21m deep.

The floor at the northeastern end of the building was cobbled (F27). The cobbling was set into the redeposited layer of boulder clay (F21). The floor surface (F27) was made up of tightly packed rectangular- and square-shaped cobbles (roughly 0.15m in diameter). A clear line dividing the cobbled and the clay floor ran northwest–southeast through the building, although both surfaces were clearly contemporary. A northeast–southwest path/entrance into the paved area was present in the cobbles.

The pit/furnace F28

A pit (F28) was located centrally in the room, cut into the floor (F21). The feature measured 1.30m east–west, 1.25m north–south and 0.21m deep (Plate 8). It was filled with two deposits. The basal fill consisted of charcoal-rich black/brown sandy clay, with patches of redeposited boulder clay in the northwestern corner of the pit. The bottom layer was filled with fragments of slag. The pit was sealed with a thin layer (0.06–0.07m) of orange burnt clay.

Interpretation

Ground-floor layout

Evidence for the layout of the ground floor within the building (F80) was based on the floors. Front and rear rooms (F81 and F82, respectively) were located at ground-floor level. The



Plate 8: Post-medieval stone-lined hearth, F28

southwestern room (F81) was located adjacent to the street front and was identified by its uniform clay floor (F21). The room covered an area 7.30m northeast–southwest by 6.60m northwest–southeast, with a large fireplace (F9) located along the northwestern wall (Plate 7). Evidence for small-scale industrial activity in the room was identified through the slag associated with the pit F28.

The northeastern room (F82) was located at the rear of the building. It had internal dimensions measuring 4.90m northeast–southwest and 6.60m northwest–southeast. There was no evidence for internal walls in the building, however, the cobbled surface in the rear room clearly marked the line of the internal dividing wall. This was possibly timber-framed, but no trace of the structure survived. The entrance or door between the two rooms was clearly evident in the arrangement of the cobbles in the northeastern room. The door was located centrally in the building and may have led to a corridor through the rear of the house to a back door.

Internal structures

A stone platform (F40) was located along the southeastern wall. The function of the structure is uncertain, but it may have been utilised as a solid foundation on which an internal structure such as a stairwell would have been supported. A similar feature (F43) was identified along the northwestern wall. Again, its function is uncertain, but it may be an earlier wall, predating the building and incorporated into the structure of the house wall (F4). Little trace of an occupation surface was evident above the primary construction layers in the house. This would suggest that the structure was kept clean or cleaned out prior to the repair of the floors.

Post-Medieval Occupation Phase II

Excavation

Clay floor deposits (F22 and F25) in the front room (F81)

Two distinct layers of redeposited boulder clay were evident above the primary clay floor (F21) and the occupation debris (F23). These deposits (F22 and F25) were located on the southern side of the southwestern room (F81), and they covered an area 5m north–south by 5.50m east–west. A 0.06–0.18m deep layer of compact redeposited boulder clay (F22) was evident along the northwest and southwest walls. A 0.13–0.18m deep compact deposit of grey clay (F25) was present along the northeastern end of the room. The grey clay (F25) was stony and formed a hard surface. The floor surface was heavily charcoal-stained. A distinct deposit of red and black cinders was located in the centre of the room on F22. The deposit was roughly circular, with a diameter of 0.90m. A larger deposit of gravel and compacted stones (F19) was present to the northwest of this. The feature (F19) measured 2.30m northwest–southeast and 1.70m northeast–southwest and was located in a hollow 1.30m from the hearth (F9) in the northwestern house wall (F5).

Cobbled surface (F27) in the rear room (F82)

Small patches of repair were evident on the cobbled surface (F27). Cobbles, measuring 0.05m to 0.10m in diameter, were evident covering a square metre of the surface in the western corner of the rear room.

Interpretation

The repair to the primary floor (F21) with additional deposits of clay (F22 and F25) illustrates how the floors were continually repaired throughout the life of the building. The patchy nature of the repairs assigned to this phase suggests infrequent and minor alterations occasioned by

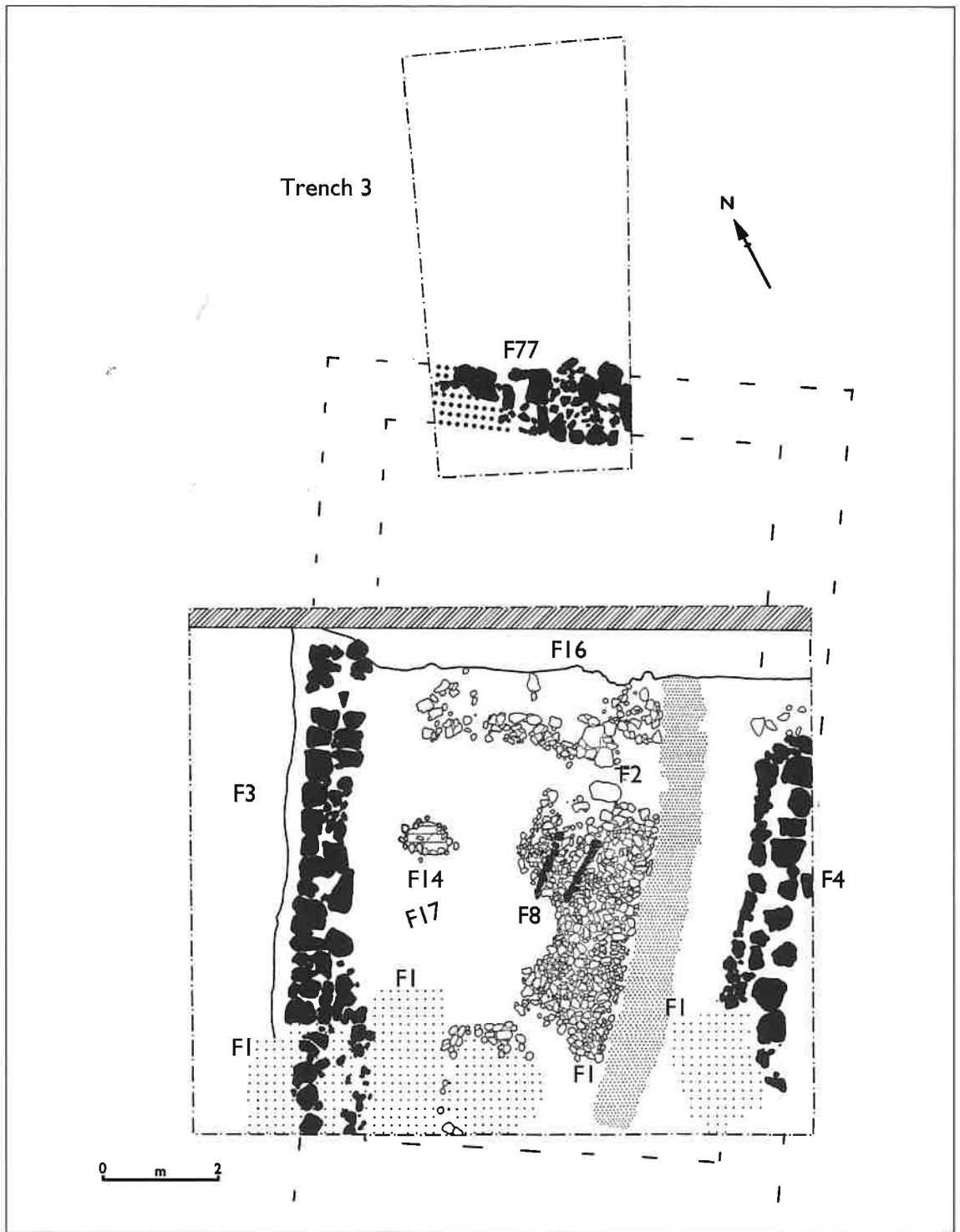


Fig. 16: Phase II, post-medieval building F80

use. The upper surface of the floor was compact and stained. Occupation deposits survived in the form of clays compacted into the pre-existing and added surfaces. It appears from this that the floor was kept as clean as possible and that accumulations were removed as and when they occurred.

The internal partitioning of the building continued into the second phase of occupation, indicated by the additional cobbling in the rear room (F82). The build-up of debris (F26) in the northeastern room (F82) may be the result of occupation during this phase.

Post-Medieval Occupation Phase III (Fig. 16)

Excavation

Clay and cobbled floor deposits F8, F16 and F17

A third floor (F17 and F8) was laid within the entire building, above F81 and F82, opening the two rooms into a single large space within the external walls of the building. A clay floor (F17) was laid above F22 and F25 in the western corner of the building. A thin layer of grey gravel (F19) was evident under F17. The primary cobbled floor (Phase IF27) at the rear of the building was raised with compact brown sandy clay containing charcoal, mortar and brick (F11 and F26). This deposition brought the floor level in the northeastern room (F81) level with the new floor (F17 and F8) in the southwestern room (F82). The southeastern side of the interior was then cobbled (F8). The cobbled floor (F8 and F16) was made up of rounded limestone river cobbles covering an area 6m northeast–southwest by 4m northwest–southeast, laid above F22, F25 and F11. The cobbles ranged between 0.10m and 0.20m in diameter and were tightly packed. They surrounded a linear, 1.50m long, east–west-aligned open drain in the centre of the floor. Two parallel stone kerbs set 0.35m apart lined the feature. The drain was an integral part of the cobbled floor (F8).

Pit F14

An oval pit (F14), contemporary with F17 and F8, was cut into the floor (F22 and F25). The pit measured 1.25m northeast–southwest, 1.70m northwest–southeast and 0.37m deep. The base of the pit was filled with a deposit of black/brown, heavily charcoal-flecked clay mixed with boulder clay. The upper edge of the feature was lined with stone. This was sealed with a thin (0.06m) layer of burnt orange clay. The floor surface above the feature was strewn with ash and stone.

Occupation deposit F5

A 0.05m thick occupation deposit (F5) of dark grey clay was identified above the Phase III floor, overlying the cobbles F8 and the clay floor F17. It survived best above the cobbled surface. The deposit was heavily charcoal-stained and included a small quantity of butchered animal bone.

Hearth surround

A mortar-bonded L-shaped brick and slate hearth surround (F7) was inserted into the main hearth (F9). The structure was angular and measured 0.70m northwest–southeast, 0.75m northeast–southwest and 0.19m deep. It was located above the primary stone-lined hearth and was clearly additional to the structure. It contained a hardened red/black charcoal-flecked ash deposit (F10).

Interpretation

The interior of the building was remodelled during this phase of activity. The insertion of the third clay floor opened the ground floor of the post-medieval building into one large room. The alteration of the internal layout of the building with the insertion of the stone-lined drain and floor surface (F8) suggests that the function of the building may have changed during this last phase of activity, possibly associated with the stone-lined pit (F14). The pit contained *in situ* burnt material and is not likely to have functioned as a hearth, as the fireplace is located 0.80m from it. The floor space within the building may have been utilised for light industrial activity. The occupation deposits (F5) and ash deposits (F10) are indicative of occupation through this period.

A single sherd of North Devon gravel-tempered ware was retrieved from the fill (F11) above the cobbled surface (F27). This suggests that the construction of the final floor level within the post-medieval building could date from as early as 1700. Few other archaeological objects were recovered from this level, although modern disturbed deposits were located immediately above the occupation deposit (F11).

Modern Activity

A linear French drain (F2) was identified running northeast–southwest through the cutting. The drain was 0.29–0.31m wide internally and 0.48m deep. It traversed the cutting. The culvert (F2) was stone-lined and lintelled, and the presence of silt along the base of the feature indicated its function as a water drain. The feature was clearly cut into the earlier post-medieval cobbled floor (F8) and indicated a period of use of the site postdating the Tudor building (F80).

Two substantial concrete foundations were located on the northeast and southwest sides of the cutting. The foundations supported the 1929 convent school building. The foundations disturbed an area up to 2m wide. The northeastern boundary of the cutting was delineated by the extent of the truncation.

A modern concrete sewer ran along the northwestern edge of the post-medieval building. The pipe disturbed the post-medieval deposits northwest of the wall F5. Four large pits measuring between 1.50m and 2m in diameter were present along the western baulk. The pits were modern and removed the archaeological deposit down to the surface of the boulder clay.

The uppermost deposits on site consisted of a uniform layer of rubble overburden (F1). These deposits consisted of building debris associated with the convent and school built on the site in 1929. The rubble was made up of gravel, mortar, clay, red brick and stone and varied between 0.38m and 0.45m in depth. These deposits were removed mechanically.

Pottery

Catherine Johnson and Clare McCutcheon

Introduction

A total of 405 sherds were recovered from the site, of which 367 (90.6%) were medieval, dating to the later thirteenth/fourteenth century AD. The majority of the medieval assemblage (96%) was identified as being most probably local to the Cashel area. Only eight sherds of imported ware were recovered, indicating both the self-sufficiency of the local industry and the probable later date of the assemblage.

Methodology

The material was identified visually, and the findings are presented below in tabular form (Tables 1 and 2). The tables indicate the number of sherds in each fabric type, the minimum number of vessels (MNV) represented by the sherds, the probable vessel forms and the date range for the fabric types in Ireland. Some reassembly was possible, resulting in a slight reduction in the sherd count.

Medieval Wares

Summary

TABLE 1
Medieval wares

Fabric	Sherds	MNV	Form	Date
Ham Green B	2	<1	Jug	L12 th -M13 th
Saintonge green glazed	3	<1	Jug	13 th -14 th
Leinster cooking ware	6	1	Cooking pot	L12 th -14 th
Cashel-type	353	8	6 Jugs, ?lamp, storage vessel	13 th -14 th
Unidentified (French)?	3	<1	Jug	?13 th /14 th
Total	367	12		

Imported wares

Ham Green B ware

Ham Green B ware, from the Ham Green kiln near Bristol, is hand-built, glazed and fired to a dark grey colour (Barton 1963). It is consistently found on Anglo-Norman sites in Ireland. The diagnostic 'B' ware vessels have thumbled bases and moulded rims. Ham Green B dates from c.1175 to c.1250 (Ponsford 1991, 98). The fact that only two sherds of this ware were recovered from Friar Street site reflects the later thirteenth-fourteenth-century nature of the assemblage.

Saintonge ware

Saintonge ware was imported from the Bordeaux region of France throughout the thirteenth and fourteenth centuries as a by-product of the wine trade (Deroeux & Dufournier 1991). Like Ham Green B, it is consistently found on Anglo-Norman sites in Ireland. Three sherds of this fine white, wheel-thrown earthenware were found. All have the distinctive mottled green glaze caused by the addition of copper filings to the clear lead glaze. Item 30:46 is part of the flat base of a tall wine jug, which would have had a bridge spout, strap handle and applied decoration of thumbled strips.

Local wares

Leinster cooking ware

Leinster cooking ware is the single most widespread medieval pottery type in Leinster (O Floinn 1988, 340), but the ware clearly had a very widespread distribution beyond the province, being found in Waterford (Gahan & McCutcheon 1997) and Dungarvan (McCutcheon forthcoming). The vessels are hand-built, with large inclusions of mica, quartz and other stone.

They vary in colour from grey to orange and have a characteristic sand-pitted base (O Floinn 1988, 327). The assemblage from Friar Street includes six sherds of this ware, representing at least one standard cooking pot with an everted rim. The external surface of the rim appears to have crude incised line decoration.

Cashel-type ware

The suffix *-type* is used to describe pottery that appears to be local to the area but for which no production site has been found (Blake & Davey 1983, 39–40). The term is also used in London, as it 'conveniently brings together pottery types whose similarities in fabric and methods of manufacture suggest either a single source, or group of sources sharing a potting tradition' (Pearce et al. 1985, 2). Until such time as a comprehensive sample of pottery from the area has been excavated and the results published, the broad term Cashel-type ware should adequately cover those wares that, despite some variation in fabric, were probably locally produced.

The 353 sherds of Cashel-type ware found at the Friar Street site account for 96% of the pottery in the assemblage. No significant groups could be clearly identified among the fabric variations. The fabric of Cashel-type ware is typically iron-rich, mainly red-fired clay. In general, it is well reduced, and a number of sherds are fired to such a degree that they resemble stoneware. Similar well-reduced ware has been recovered at Adare Castle, Co. Limerick (Sweetman 1980, 4). Some sherds have a sandwich appearance, with a dark grey centre and pale margins. Other sherds have the appearance of bursting apart, and this was also a feature of some of the pottery found in Adare and Limerick city.

The sherds are from wheel-thrown vessels with a green lead glaze. Some sherds of cooking ware are included. There are at least eight vessels: a possible lamp, a possible storage jar and a minimum of six jugs, which were quantified on the basis of rim/handle junctions. In form and shape, they conform to the classic thirteenth–fourteenth-century Anglo-Norman pottery tradition, with some Ham Green B and Saintonge green-glazed traits apparent.

Two of the jugs (Nos. 34:46/39 and 30:34; Fig. 17) have bridge or applied spouts. Two others (34:62/30:7 and 35:10) have pulled or pinched spouts, made by pulling out the rim from inside with one finger while supporting the rim in position on the outside with two fingers. There are a number of different rim types in the assemblage. No. 30:34 (Fig. 17) has a flat-topped rim; No. 29:7 (Fig. 18) comes from a thin-bodied vessel with a rounded rim. No. 34:62/30 has a pronounced channel through the centre of the rim, which was distorted by pressure from the

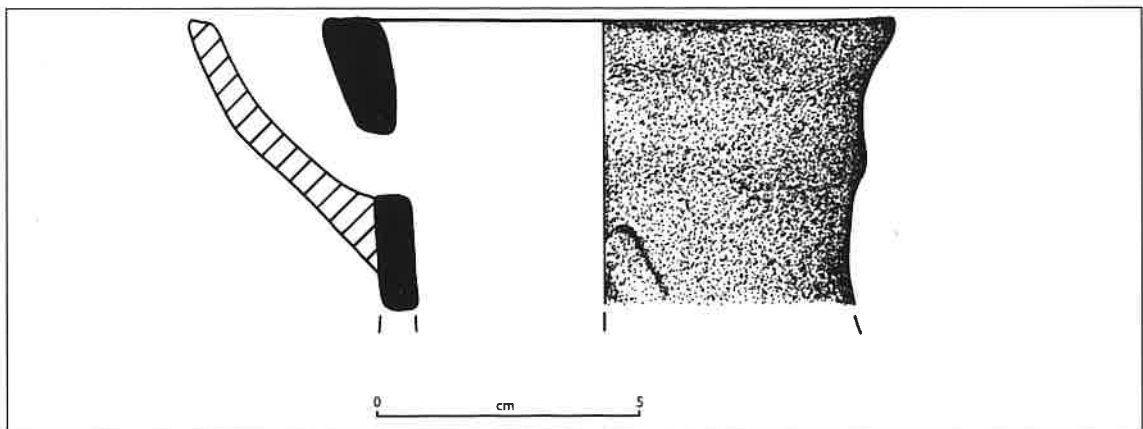


Fig. 17: No. 30:34 Cashel-Type Ware, jug spout

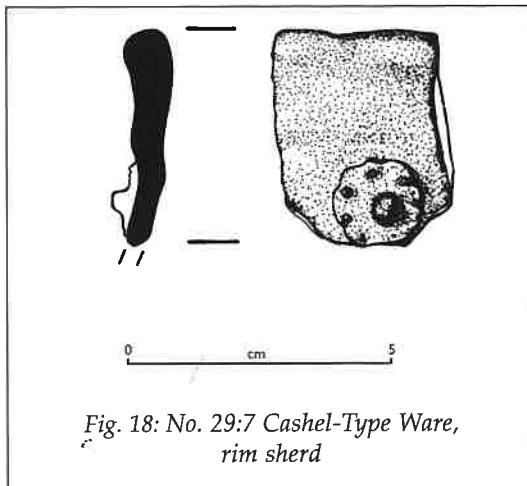


Fig. 18: No. 29:7 Cashel-Type Ware,
rim sherd

fingers while pulling the spout. All have mouldings beneath the rims.

All twelve handle fragments recovered belong to strap-handled vessels. Eleven of the twelve fragments were sufficiently large for the decoration to be deciphered. Seven different styles occur, including one undecorated fragment (No. 35:97). The remainder have deeply incised lines or stabbing, which may originally have served a functional as well as

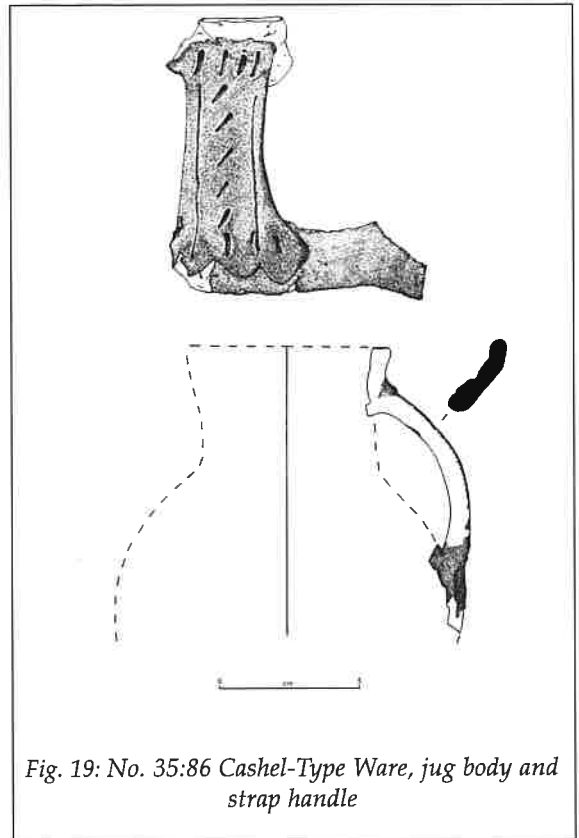


Fig. 19: No. 35:86 Cashel-Type Ware, jug body and
strap handle

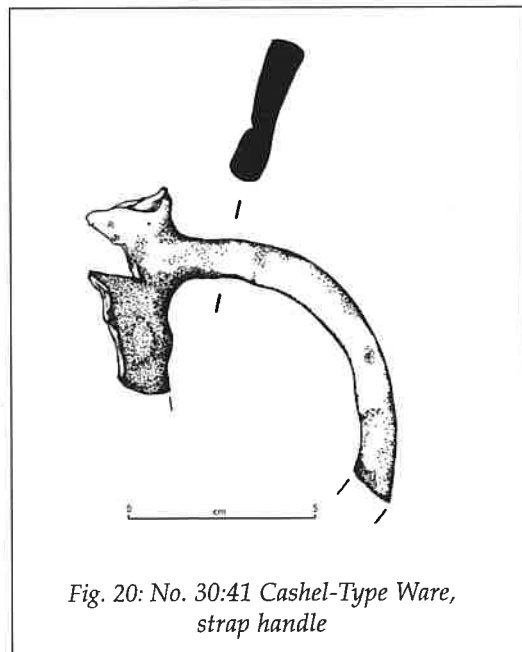


Fig. 20: No. 30:41 Cashel-Type Ware,
strap handle

a decorative purpose, enabling the handles to dry out without cracking. This variety of decoration indicates a predominantly later thirteenth- rather than fourteenth-century date for the assemblage, reflecting the Ham Green influence on the pottery. By the fourteenth century, the designs become noticeably plainer and the decoration is less deeply incised. Four of the fragments have two parallel lines bordering diagonal slashes (35:86, Fig. 19; 35:40/49; 35:90 and 35:91). Two of the handles (No. 30:41, Fig. 20, and No. 56:2) are slightly narrower and have a single row of diagonal slashes. There is one example of each of the following patterns: three rows of short vertical slashes (No. 35:83), two rows of short vertical slashes (No. 29:22), two rows of short vertical slashes divided by an incised central line (No. 41:1), and two parallel lines bordering a loose arrangement of short vertical stab lines (No. 29:20).

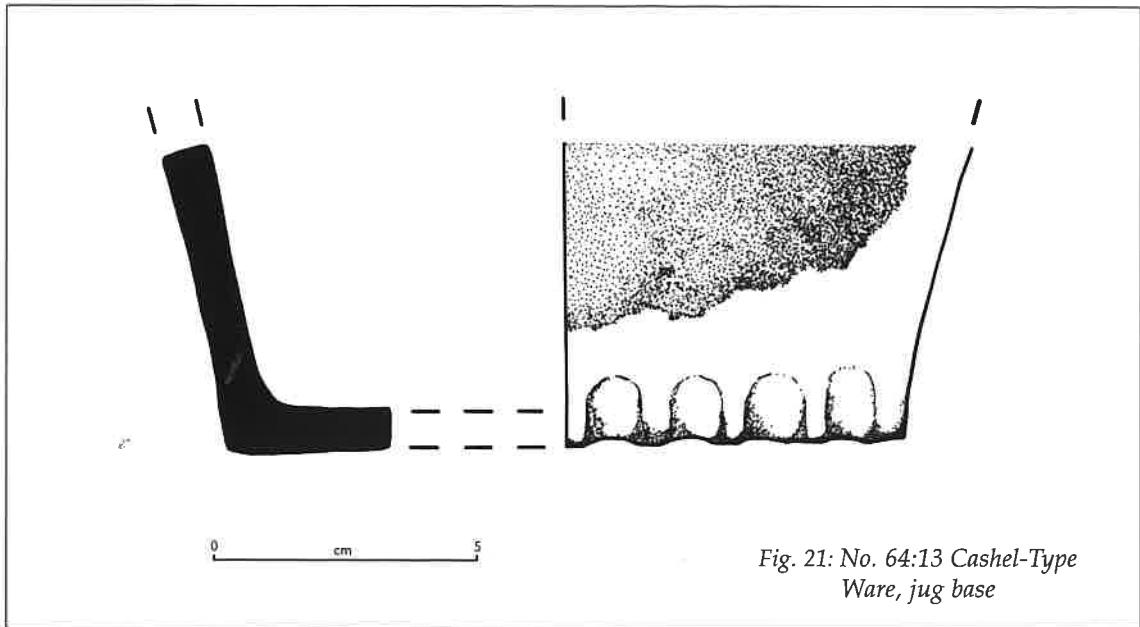


Fig. 21: No. 64:13 Cashel-Type Ware, jug base

The vessels have fairly flat bases with little sagging. The majority of base fragments have decorative thumbing, which can be quite wide. It is not possible to be certain whether plain vessels also occur, as some bases with alternate plain and thumbed areas are present (No. 64:13, Fig. 21) Base No. 34:22 (Fig. 22), which is thumbed at regular intervals, may be slightly later in date, as the sides of the vessel slope inward.

The decorative motifs that occur – the applied seed pad (No. 3:8.), applied pellet (No. 29:7, Fig. 18) and scales (No. 12:4) – are all found on contemporary medieval pottery in Ireland, although not in great numbers. Finally, No. 30:34 appears to imitate a Saintonge jug, with its applied thumbed strip decoration.

The other identified pieces consist of a storage vessel and a lamp. The storage vessel is similar in shape to a cooking pot, but the fabric appears to be slightly different and may have been fired at a higher temperature. The lamp

(No. 64:8) is an odd piece: unglazed except for what may have been the base of a cup. The stem above the base is very short, and there is no clear indication of an incurving or cup shape above it. The identification of the piece as a possible lamp is, therefore, very speculative.

The function of fragment No. 35:103 (Fig. 23) is unknown. This fragment is fairly cylindrical in shape and is broken at both ends. The surface is almost completely

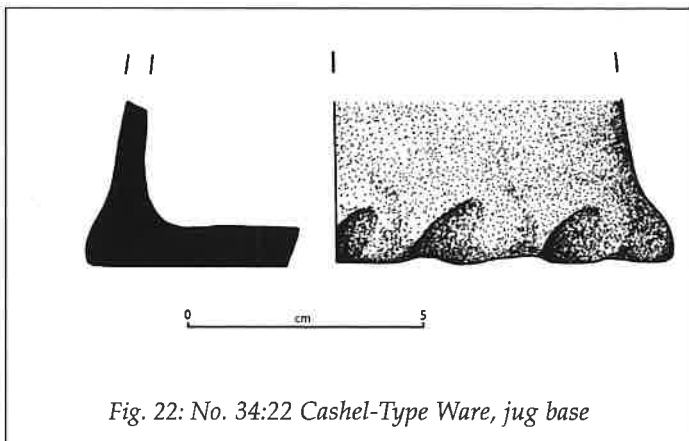
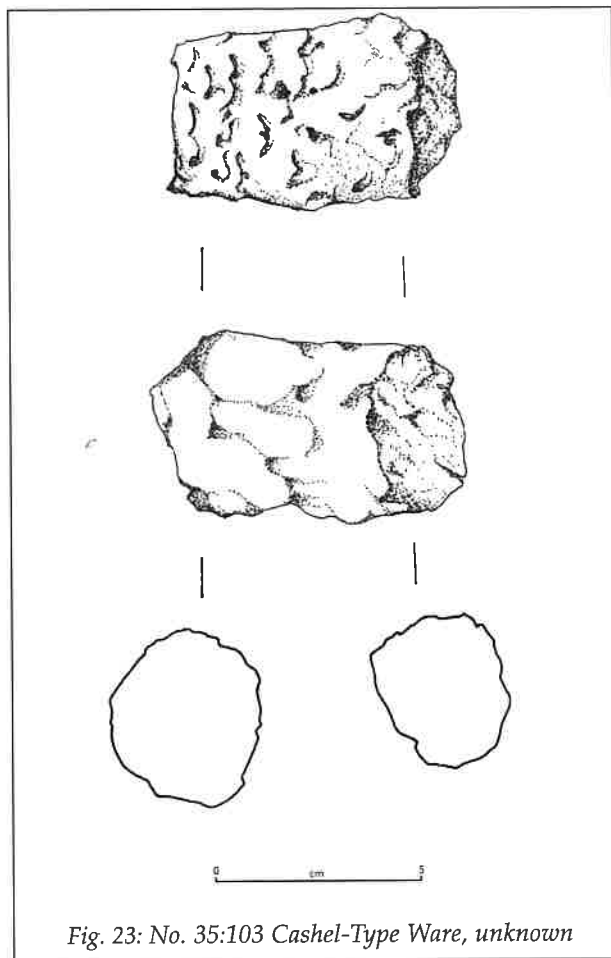


Fig. 22: No. 34:22 Cashel-Type Ware, jug base



glazed and covered with incised wavy lines and deep, slanting perforations. It may be a handle for a large vessel or even a fragment of roof furniture.

Unidentified

The three unidentified sherds of medieval pottery represent more than one vessel. All are glazed and have a creamy pink fabric. They are possibly thirteenth-century French wares.

Post-Medieval/Modern Wares

Summary

Thirty-nine sherds of post-medieval pottery were recovered from the site. All but two were identified and are described and quantified in tabular form (Table 2). The wares are all well represented in assemblages from Dublin and elsewhere in Ireland (Meenan 1994; McCutcheon 1995) and date predominantly from the seventeenth and eighteenth centuries.

TABLE 2
Post-medieval/modern wares

Fabric	Sherds	MNV	Form	Date
Unidentified (?French)	2	2	Chafing dish, plate	?16 th -17 th
North Devon gravel tempered	3	1	Storage vessel	17 th
Tin glazed earthenware	1	1	?Bowl	17 th -18 th
Black glazed ware	2	<1	Bowl	18 th
Glazed red earthenware	19	3	2 Plates, bowl	18 th
Mottled ware	9	2	Tankards	18 th
Stoneware	2	1	Preserve jar	L19 th -20 th
Chinaware	1	1	Plate	L19 th -20 th
Total	39	12		

Unidentified

Two sherds of unidentified pottery are possibly sixteenth–seventeenth-century French wares. No. 6a:1 is a base fragment from a plate. The fabric is cream coloured, with an internal mustard yellow glaze, which has trickled onto the underside of the base. No. 14:2 is a body sherd, possibly from a chafing dish. The fabric is grey with fine micaceous inclusions and a speckled green glaze on both surfaces. The external surface has applied decoration.

North Devon wares

North Devon wares are found on practically every seventeenth-century Irish site, and the success of their production was, to a certain extent, a consequence of the exploration and exploitation of the American colonies.

Tin-glazed earthenware

The tin-glazed earthenware fragment (No. 6a:6) is an undecorated base sherd, possibly from a bowl.

Black-glazed wares

Black glazed wares are commonly found in Ireland and were largely imported from the south Lancashire/Buckley regions of England and North Wales. Black glazed wares were also made in Dublin from the early eighteenth century (McCutcheon 1995, 56).

Glazed red earthenware

The largest group in the post-medieval/modern assemblage is the eighteenth-century glazed red earthenware. The nineteen sherds represent at least three vessels, two plates and a bowl. One of the plates (No. 5:7) is decorated with slip trailing around the rim.

Mottled ware

The second largest group in the assemblage is the English brown mottled ware, which began to appear in the late seventeenth century (Meenan 1994, 57). The vessels represented are both tankards, the most common vessel form for this type of pottery.

Chinaware/stoneware

Finally, the assemblage includes three sherds of nineteenth–twentieth-century stoneware and chinaware, which are not generally included in a post-medieval assemblage, the cutoff date being c.1800.

Small Finds

Catherine Johnson

The archaeological finds retrieved from the site have all been labelled with the site excavation number (98E0286), followed by a unique find number. All of the artefacts have been submitted to the National Museum of Ireland. The finds described below were the principal artefacts found on the site. Other artefacts, such as miscellaneous iron and glass objects, have been omitted from this report. These are described fully in the original excavation report submitted to the National Museum of Ireland and the National Monuments Section of the Department of the Environment.

Non-Pottery Ceramics

Ridge tile

29:23 is a small fragment of ridge tile, completely covered on the exterior face with an olive green speckled glaze. Part of one edge remains. The fabric is sandy, with micaceous inclusions. It is pinkish-buff in colour, with patches of grey in the core. The underside has four deep, circular perforations. Length: 77mm; width: 54mm; thickness: 15mm.

I am very grateful to Johnanna Wren for commenting on this object, as follows: 'This is from a ridge tile made in a fabric resembling one found at Kells Priory (K40. Wren in Clyne, forthcoming). It is covered with a green lead glaze and has stab marks on its exterior face. The Kells tiles had similar decoration and either low flat-topped or low cockscomb crestring. The styles of crestring and decoration suggested they were made in Ireland, but an exact location for the clay source could not be identified (Mc Corry pers. comm.). The tiles probably dated to the late fourteenth or fifteenth centuries.'

Metal

Copper alloy sheet metal

57:5 is a small fragment of heavily corroded sheet metal, sub-rectangular shape, with a C-shaped indentation at one end. Length: 56.5mm; width: 29mm; thickness: 1.5mm.

Copper alloy webbed foot

37:12 is a cast, webbed foot with three toes and claws, broken at the base of the tarsus (ankle). The underside is flat. Length: 28mm; width: 27mm; thickness: 16mm.

This object is possibly from a footed vessel, such as a tripod ewer, a candle holder or a stand. Similar objects dating to the Medieval Period have been recovered from excavations in London (Egan 1998, 149, 164, 298).

Lead weight

34:61 (Fig. 24) is a slightly irregular plano-convex lead weight with a large, slightly off-centre circular perforation, 8mm in diameter. It is wedge-shaped in section. The surface is worn. Length: 25mm; width: 22mm; thickness: 12mm; weight: 28.99g.

I am very grateful to Dr Patrick Wallace for examining this object and for commenting on it, prior to the publication of his forthcoming work on lead weights. The weight is a Wallace Type 4, of which only eighty have been found outside Dublin, including one from County Tipperary. Most of these weights are Viking in date, and this one is unlikely to be later than the thirteenth century. At 28.99g, it weighs slightly more than the Dublin ounce of 26.6g.

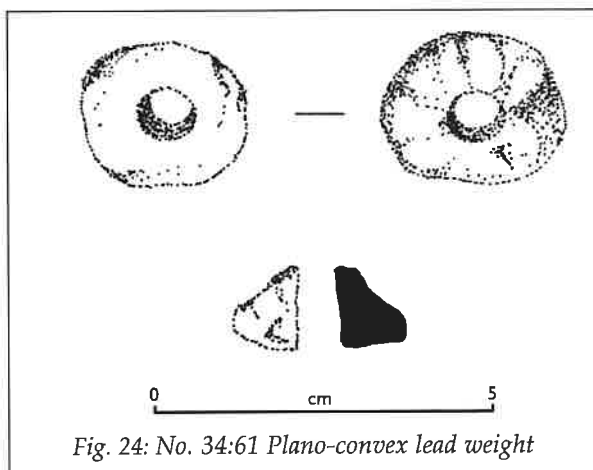


Fig. 24: No. 34:61 Plano-convex lead weight

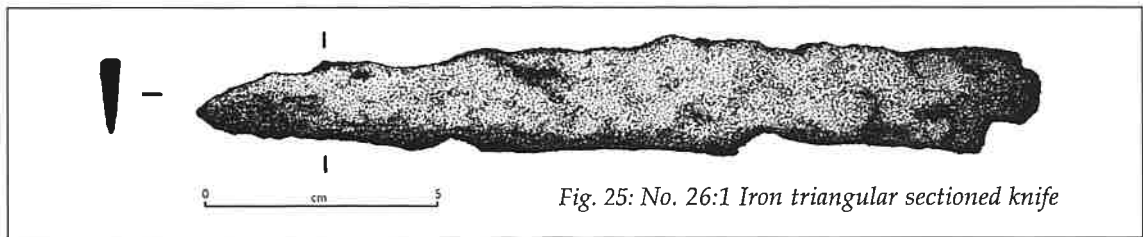


Fig. 25: No. 26:1 Iron triangular sectioned knife

Iron knives

26:1 (Fig. 25) is an incomplete whittle-tanged knife, triangular in section. It is in poor condition. The surface is corroded, and the tang is broken at the base. Length: 165mm; maximum width: 26mm; thickness: 7mm. There is a straight shoulder and choil, and the tang is set just below the shoulder. Maximum width of tang: 12mm; thickness: 2.5mm; length: 9mm (incomplete). Overall length: 178mm.

30:50 is a highly corroded fragment that may be part of a blade. The object appears to have a rectangular section. The ends are slanted. Length: 75mm; width: 17mm; thickness: 9mm.

Iron Nails

34:87 is a complete small nail, corroded and in poor condition. The head is flat and circular, measuring 17mm by 16mm by 3mm. The shank is tapered (12mm by 13mm to 6mm by 5mm) and has a heavy coating of grit. Length: 46mm.

34:88 is an incomplete nail similar to 34:87. It is badly corroded and grit-encrusted. The head is flat and circular, measuring 17mm by 15mm by 4mm. The shank tapers from 10mm by 9mm to 7mm by 6mm and is broken above the tip. Length: 38mm.

34:89 is a nail shank, rectangular in section and corroded and grit-encrusted. Both terminals are broken. The shank tapers from 9mm by 6.5mm to 3mm by 1mm. Length: 41.5mm.

61:13 is an almost complete iron nail, square in section, with a flat circular head, 17mm by 15mm by 1mm, and a bent shank. Maximum width: 7mm; maximum thickness 7mm. There is a broad, broken terminal, 5mm by 5mm. Length: 62mm.

61:14 is an iron nail with a bent, flat, oval head, 15mm by 9mm by 1mm. It has a rectangular-sectioned shank with a maximum width by thickness of 4mm by 5mm. The shank is slightly bent towards the tip, which is blunt (3mm by 2mm). Length: 51mm.

Metal slag

35:137-139 are three small pieces of vitrified clay, possibly a hearth or furnace lining. The fragments are grey in colour, with porous areas. They have one vitreous side with patches of red and one rough side with orange patches. The largest piece has, in addition, a fairly flat, vitrified edge. Length: 69mm, 42mm and 29mm, respectively; width: 56mm, 42mm and 21mm, respectively; thickness: 23mm, 22mm and 11mm, respectively.

Bone

Bone gaming counter

30:48 (Fig. 26) is a flat discoid gaming piece, possibly made from a cattle mandible, with areas of spongy surface tissue on both faces. The object is decorated on one face with dot-in-circle motifs,

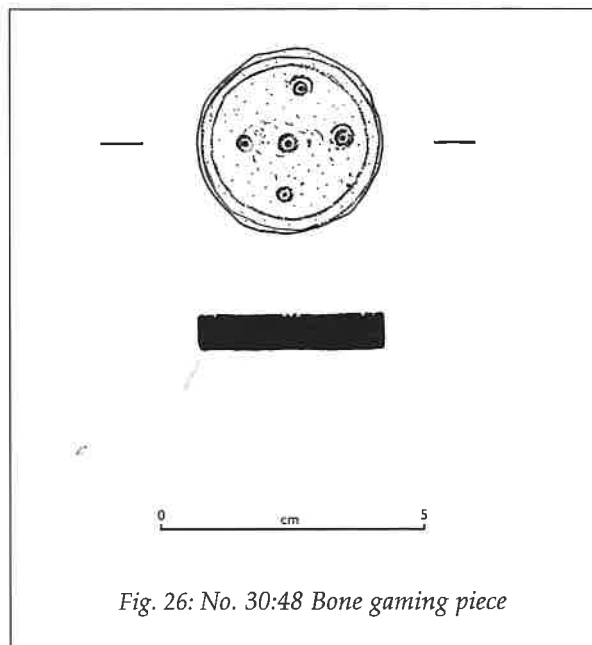


Fig. 26: No. 30:48 Bone gaming piece

enclosed by two outer bands of incised lines. Diameter: 35mm; thickness: 8mm.

This type of gaming counter made its appearance after the Norman Conquest and is associated with the game of tables – a series of different board games played with either two or three dice (McGregor 1985, 135). The tablemen averaged 40–50mm in diameter and 10mm in thickness and were commonly decorated with dot-in-circle motifs. Tablemen similar to the Friar Street example occur frequently on Anglo-Norman sites in Ireland, such as Trim Castle, Co Meath (Sweetman 1978, 183–184), and Waterford (Hurley 1997, 666).

Buzz-bone/bone toggle

41:35 (Fig. 27) is a pig metapodial with a central circular perforation 4.5mm in diameter. The surface is unpolished. Length: 54mm; width: 15mm.

Perforated pig metapodials are frequently recovered from medieval and earlier sites in Britain, Ireland and elsewhere. They are referred to as toggles, bobbins or 'buzz-bones' – a type of primitive musical instrument, whereby the hole was threaded with cord and the bone was spun to make a noise (Lawson & Brown 1990, 589–91).

Bone bobbin?

61:15 (Fig. 28) is a highly polished, well-made cylindrical object with a large sub-circular axial perforation, 6mm by 5mm in diameter. The object has a slight central swelling and bands of four incised lines at both ends. Length: 64mm; diameter: 8.5mm.

Objects very similar to this have been tentatively identified by McGregor (1985, 183) as bobbins, used by medieval women for sewing, lace-making or embroidery. They have been

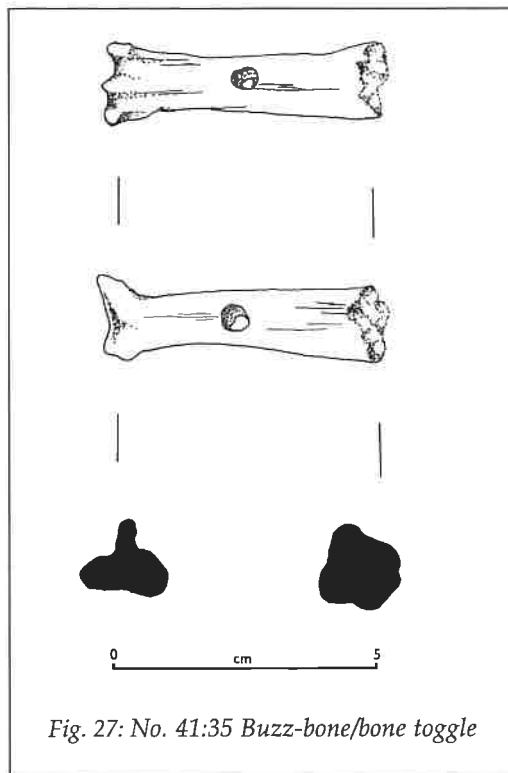
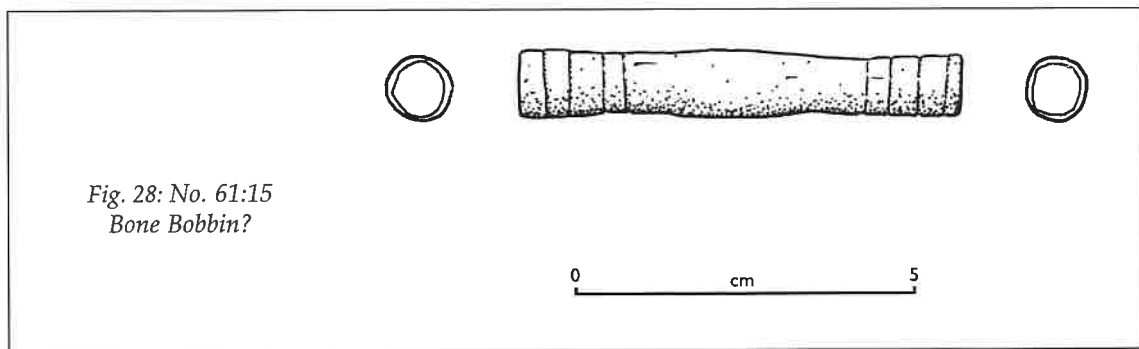


Fig. 27: No. 41:35 Buzz-bone/bone toggle



found on a number of sites in England and Scotland and date from about the twelfth to the fourteenth centuries.

Stone

Grinding/sharpening stones

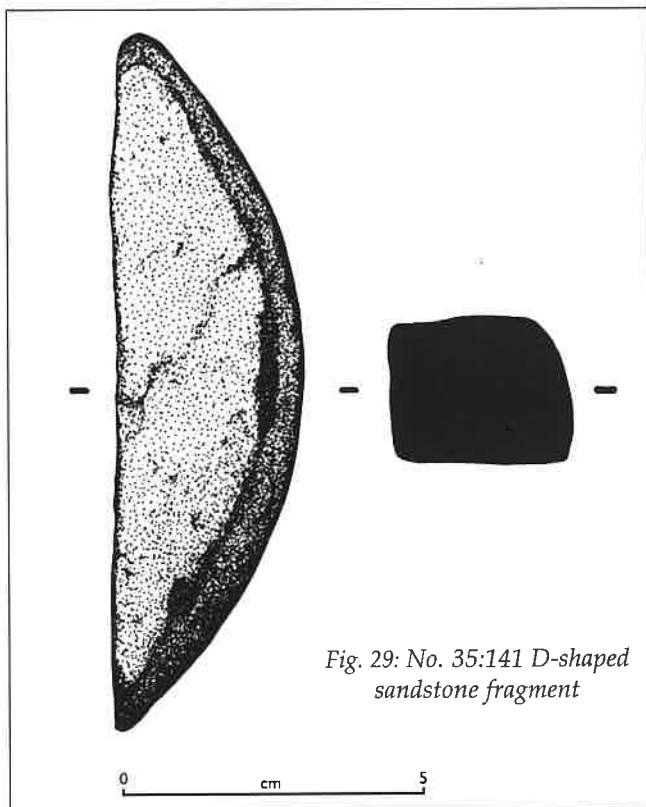
1:1 is a D-shaped fragment of a 50mm diameter rotary grinding stone, broken across the central aperture. The underside of the stone is smooth from wear. The circumference has a slightly pecked surface. There is a small circular handle socket, 15.5mm in diameter and 11mm deep, on the upper face of the object. The socket is 18mm from the circumference. Length: 235mm; width: 100mm; thickness: 80mm.

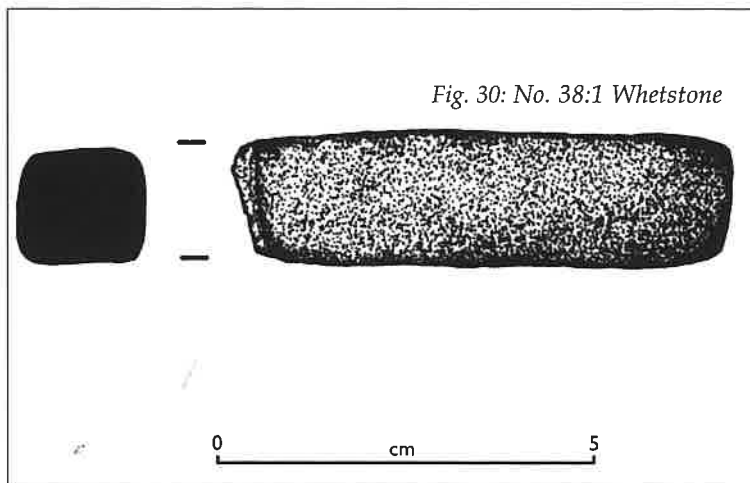
35:140 is a small fragment of rotary quern stone/grinding stone, rectangular in section. There is a broken perforation at one end of the object. The perforation is smooth and has been bored from one side only. It tapers in diameter from 18mm to 11mm. Length: 131mm; width: 55mm; thickness: 31mm.

35:141 (Fig. 29) is a small D-shaped fragment of sandstone with smooth surfaces. The outer edge is slightly curved, and the other three surfaces are cut straight, giving an almost rectangular section. Length: 114mm; width: 31mm; thickness: 24mm.

Whetstones

38:1 (Fig. 30) is an incomplete small rectangular whetstone, broken across one end. It is rectangular in section,





17mm by 16mm, tapering to 12.5mm by 15mm at the intact end. The other end is broken through a 5mm diameter, hourglass perforation, which would have acted as a suspension hole. The object has three smooth sides. The fourth side is very well-polished from wear. Length: 63mm.

57:5 (Fig. 31) is a rectangular-shaped whetstone, rectangular in section. There is one

straight and one oblique end. Part of one face and one edge are smooth from extensive wear. The remaining surfaces are roughly dressed, with no signs of wear. Length: 160mm; width: 37mm; thickness: 21mm.

Fragmentary quern stone

45:1 (Plate 4) is an incomplete, circular rotary quern stone in four fragments, fire cracked from its re-use in a hearth. The object is made from a granite conglomerate, and the surfaces are rough and pitted. One side is blackened from the hearth. The largest fragment has an L-shaped opening, 45mm by 30mm, which is part of a larger square or rectangular aperture. The radius of the fragment, measured from hole to circumference, is 180mm. The upper face has a 32mm deep oval handle socket. The socket tapers towards the base from 39mm by 30mm on the surface. The stone has a rectangular section. Radius (incomplete): 180mm; thickness: 50mm.

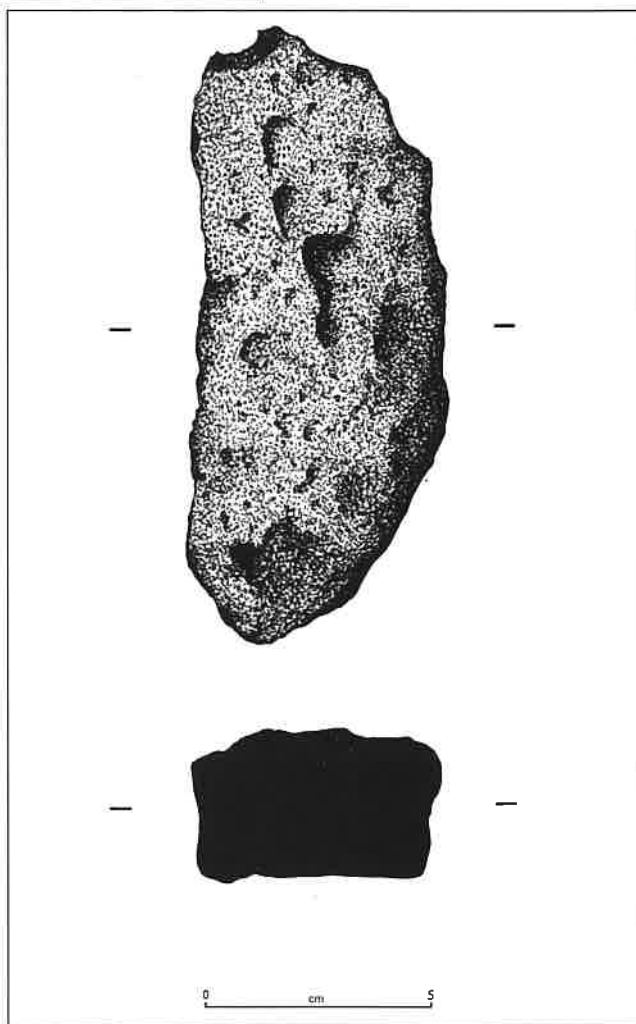


Fig. 31: No. 57:5 Whetstone

Animal Bone

Andrea Cremin

Introduction

The excavation at Friar Street produced a small sample of some six hundred and fifty animal bones. The assemblage covered two periods: the Medieval Period (1300-1500) and the Post-Medieval Period (1550-1700). The majority of bones were those of cattle, followed by sheep/goat and pig. Horse, dog, cat, fowl, deer and fish were also present in much smaller numbers. As the Post-Medieval layers contained so few bones, the analysis concentrates on the medieval material.

Methodology

The bones were identified with reference to material held by the writer. All measurements are those used in von den Driesch (1976). The withers heights for sheep and pigs are based on Teichert (1974, 355). The ageing data are based on the state of tooth eruption and dental wear (Higham 1967; Grant 1982). The difficulty in differentiating between sheep and goat is well documented; therefore, unless otherwise stated, it is assumed that the majority of sheep/goat bones are those of sheep and will be referred to as such in the text. The bone lists have been edited from this report owing to space considerations, these lists can be accessed by viewing the original excavation report submitted to the National Museum of Ireland and the National Monuments Section of the Department of the Environment.

Results

Species representation

As in other medieval urban assemblages, cattle bone is the most common bone, constituting 48.9% of the fragment count, followed by sheep/goat at 34.4% and pig at 14.8%. Horse, dog, cat, fowl and deer make up the remaining 1.8%. However, in terms of the minimum number of individuals (MNI), sheep were the most important species, constituting 50% of the assemblage, followed by cattle at 33.3% and pig at 26.7%. This most likely represents the importance of wool on the international market, the trade in which reached its zenith in the Medieval Period. Unlike modern practices, whereby demand determines supply, in the Medieval Period, meat available at market was determined by the producers.

Despite the economic importance of sheep, cattle were the most important source of meat at the site, providing an estimated 83% of the meat, sheep 5.2% and pig 11.8% (ref.*Legge 1981; Boyd et al. 1964 and Wijngaarden-Bakker 1986).

Age

The ageing data were based on the state of tooth eruption and dental wear (Grant 1982). Ten sheep mandibles (jaw bones) were present, all over the age of twenty-one months, and the majority (80%) over twenty-six months. The establishment of a new feudal system with the arrival of the Anglo-Normans had a profound effect on the economic and agricultural practices of the time. Land became the main source of wealth, and intensive farming became the order of

the day. Sheep rose to new heights of economic importance. They had a clear advantage over cattle or pigs, being kept as a cash crop for their wool. Wool, unlike the coats of most other animals, can be sheared a number of times in the animal's lifetime. It is economically more profitable to delay slaughtering sheep until they are at least one year old, and, the older the animal, the more shearings of wool can be collected.

Sheep

It is of interest to compare the age-slaughter pattern of sheep at the Friar Street site with medieval sites in Dublin, keeping in mind that the Cashel sample is very small. Table 1 summarises slaughter patterns at Friar Street and five Dublin sites.

TABLE 1
Age slaughter pattern of sheep from medieval Dublin and Cashel
(after McCormick a ,b, and c)

	Fishamble Street (10th– 14thC)	Back Lane (L11th– 14thC)	Patrick Street (L13th– 14thC)	Arran Quay (14 th – 15thC)	Nicholas Street (14th–16thC)	Friar Street (14thC)
AGE AT SLAUGHTER (months)	NO. OF ANIMALS					
0-11	16.5	16	2.1	6.9	4.2	0
12-26	51.3	38	57.6	46.5	70.8	20*
26+	32.2	46	40.3	46.5	25.0	80
Totals	115.0	50	52.0	43.0	24.0	10

*All over 21 months

If the production of wool alone had been the sole factor behind sheep rearing, we would expect that few sheep would be slaughtered before they reached at least two years. With the exception of juvenile mortalities, most of the flock would have lived a number of years. Males, rather than being culled, would have been castrated and kept as wethers (particularly as wethers produce a heavier fleece than ewes) (Maltby 1979, 85). The archaeozoological evidence does not support such views and clearly points to the fact that, in Dublin at least, supplying meat for market was important. In medieval Dublin levels from the late eleventh to the late thirteenth century, there is a peak at twenty-six months or more, while from the late thirteenth to the fourteenth century, the peak occurs between twelve months and twenty-six months, younger than might be expected if wool was so highly prized. Despite the very small sample from Cashel, it is of interest to note the peak in the age slaughter pattern at twenty-six months or more – more consistent with a wool-producing area than with a solely meat-producing area.

Pig

Seven pig mandibles were present, all over seventeen months, with the majority (71.4 %) at or over twenty-five months. A peak in pig slaughter between twelve and twenty-three months, once they have reached full size, is common on both rural and urban sites across the country. A very small percentage of animals lived beyond thirty months, the majority of which were female sows kept for breeding.

Cattle

Only one cattle mandible gave an age of thirty to thirty-one months. However, the majority of the cattle bones were fused, and their size was consistent with those of adults from other sites. Young animals were also present on the site, and there were a small number of unfused bones from the three main species, as well as one very porous cattle horn. Faint cut marks were also present on these bones, suggesting that their meat was consumed. The younger animals may represent the culling of young males.

Sheep and pig height

Sheep ranged in height from 52.7cm to 53cm, which would place them within the size range noted for medieval sheep, albeit at the smaller end of the scale. Pig ranged in height from 65.2cm to 67cm, which is again consistent with other medieval Irish sites.

Bone type

Bones from all parts of the skeleton are present, although there are proportionately fewer low meat-yielding bones from the three main species. High meat-yielding bones include the vertebral column (excluding the tail), upper leg bones, shoulder and pelvic area; medium meat-yielding bones include the lower leg bones, the skull (with brain and jaw musculature), mandible, ribs and sternum; low meat-yielding bones include the face bones, the tail and the feet. There is evidence of butchery on the vast majority of bones, ranging from faint cut marks to the chopping and halving of long bones for marrow extraction.

Animals other than sheep, pigs and cattle

A number of other species were also present. Three horse bones were found, all with faint cut marks on the first toe bone, suggesting skinning of the animal for hides for the manufacture of perhaps saddles. Six goat horns were found. Three examples were identified as being female and probably represent the keeping of goats in the town as a source of milk. These may have been kept in gardens behind individual houses or in fields within the town mentioned by Thomas (1992).

Only one dog bone (a jaw) and two adult cat bones were found. There was no evidence of skinning or butchering on these bones. Two examples of unworked antler were recovered; five fowl bones were recovered from the site – bantam, the skull of a sparrowhawk, two duck bones and the legbone of a falcon. Only five large fish vertebrae were recovered.

Discussion

The faunal assemblage from Friar Street is similar to that of other urban Irish sites representing discarded domestic waste. The majority of bones are those of cattle, sheep and pig. Of interest is the large number of sheep bones present. Unfortunately, the sample is very small, and the results must be considered cautiously. However, it is noteworthy that half of the MNI present are sheep, and, where possible, all were aged to over twenty-one months. As previously mentioned, such an age-slaughter pattern is not uncommon in a wool-producing environment, and these bones undoubtedly represent the by-product of such an industry.

Geographic factors were extremely important in Cashel's development, particularly its position on an intersection of major routeways from Dublin to Kilkenny and Cork and from Limerick to Waterford, and played an important role in its rise and prosperity. The Anglo-

Normans brought with them a fully fledged concept of the town that helped them to colonise the country and to gain control of routeways, markets and commerce and therefore its wealth (Bradley 1985a, 446). Cashel developed a substantial market economy. Of the actual market itself, few records remain, but the presence of the shambles is referred to in the town's charter of 1230. Murage grants were an important source of revenue for the town. Cashel was granted a murage grant from 1303 to 1307 and another one for five years in 1319. One way in which taxes were raised was by taxing all goods brought to the town for sale. In fact, murage was still collected at markets and fairs in Cashel until well into the Post-Medieval Period (Bradley 1985b).

There was a heavy emphasis on tillage in the Medieval Period (wheat, flour and mills are referred to in association with Cashel), with sheep farming being a significant supplementary income, reflecting the growing European market for wool. It is very clear that intensive exploitation of agriculture was a definite priority. The following record for Inch Manor, a fief northwest of Thurles, in 1303 demonstrates this point (Empey 1985, 80):

And there are in the same manor a new hail, and an old wooden chapel, and other rooms. There are 360 acres of arable land in demesne that they value at 12d. an acre per annum. There are sixty acres of pasture without wood or bog worth 26/8 a year on which the lord can maintain twenty cows, forty pigs and 100 sheep besides 200 sheep on the demesne.

The period between 1250 and 1300 saw the arrival of the three principal religious orders: the Dominicans in 1243, the Franciscans in 1265 and the Cistercians in 1272 (Power 1989, 22). Ecclesiastical lords were not slow to realise the financial opportunities and advantages of the growth of towns and manors in order to increase their own wealth and standing. The abbot of Cashel possessed two important towns and sources of revenue in Cashel and Fethard. The abbots of Cashel also held in demesne the manors of Camus, Kilmalloch, Everard, Killardry, Kylmacleth, Killough and Burgagleth. Based on pipe roll entries, it is estimated that the average income for the abbots of Cashel for the last quarter of the thirteenth century and the beginning of the fourteenth century was £125. This was enough to place the abbots in the ranks of the great landlords (Empey 1985, 85). The town helped both the archbishop and religious orders control the trade and commerce of the region and provided both with a great deal of revenue in the form of rents, taxes and trade. Cashel continued to grow and prosper throughout the Medieval Period to an extent that, in 1637, Charles I granted it the title of city.

The Cistercians benefited greatly from the growth in urban centres. The expansion of sheep farming and the development of the wool trade had probably begun with the establishment of Cistercian monasteries in Ireland from c.1142, since they had previously been the first to organise the export of wool from England (O'Neil 1985, 58). The Cistercians maintained huge flocks of sheep across the country, particularly in the north and southeast. The order relied almost entirely on land for its income and as a result developed a comprehensive system of contacts in Ireland and abroad in order to sell its produce. For example, when Hore Abbey was dissolved in 1540, it was recorded as having 600 acres of land, excluding its gardens, messuages and cottages, with Cistercian property being valued at £21 4s 10d, the wealthiest in the area (Gwynn & Hadcock 1988, 129). While the monastic orders did play an important role in this area, wool was also produced by small individual land-holders and large manorial estates. Manorial lists indicate that some estates maintained very large numbers of sheep, examples of which are given in Table 2.

TABLE 2
Manorial holdings of sheep, 1280–1289 (after Down (1987, 478))

	1280-81	1282-83	1283-84	1284-85	1285-86	1286-87	1287-88	1289
Ballysax	365						333	
Forth		287	388	325	129	280	475	
Old Ross	821							1894

Cashel's wealth lay in the surrounding land and its produce. For his discussion of the economy of the town, MacShamhráin has extensively researched this subject in this volume. Animals, as both primary and secondary sources, played vital roles in both the diet and economy of the town. Some animals such as pigs, goats and fowl may have been kept within the town itself, with others being brought in for slaughter. The majority of bones found at this site were from older animals, unsurprising in itself. With the constant fear of food shortages, the slaughtering of young animals for their choice meat was never encouraged. Although a small assemblage, this site gives further insight into the overall economy of Cashel in the Middle Ages.

Macrofossil Plant Remains

Penny Johnston

Introduction

The archaeological excavation on Friar Street revealed the remains of a medieval house floor and part of the adjacent street. The house floor was sealed by a layer of charcoal, suggesting that the house was destroyed by fire. The organic deposits and abundance of charred material suggested that there was the potential for various forms of environmental analysis. Three environmental samples were selected for analysis. These proved to be rich in archaeobotanical material.

Methodology

The samples were collected as bulk soil. Two different methods of processing were used. The first sample (F36) was rich in charred remains and was processed using a wash-over technique. The other two samples (F35 and F53) were divided in two, and half of each sample was processed by paraffin flotation (for extraction of beetle remains) and half by wet sieving to examine seed remains.

Sorting was carried out using a low-powered binocular microscope, and identification was completed with the aid of the Praeger Collection of Irish Seeds, housed in the National Botanic Gardens. Nomenclature and the order of taxa lists follow Clapham et al. (1962), except for cereals, which are listed first. A record of the species found is presented in Table 1.

The Samples

The first sample was taken from organic 'refuse' (F35) dumped on the street, contemporary with the occupation within and outside the medieval house (F71). The sample from F36 was taken from behind the hearth within the building, from a burnt charcoal rich layer which overlay the house floor. The samples from F35 and F36 are contemporary contexts and relate to each other spatially.

The final sample was taken from a cesspit (F53) that predated the house – the feature was stratigraphically sealed by the house floor. In addition to its stratigraphic relationship, preceding the house, this sample is derived from a very different context type to the other samples. This functional difference renders it unsuitable for comparison with F35 and F36, and any differences in seed assemblages cannot be interpreted as changes through time. Instead, F53 augments the species record and demonstrates the presence of a range of species in the Cashel area during the Medieval Period.

Preservation

The presence of seeds in archaeological samples may be the result of several factors. These factors can be reduced to two main types: anthropogenic or ecological. Preservation by charring suggests a connection with anthropogenic activity. Cultivated plants can be charred during cooking or processing, and contaminant weeds can also sometimes be charred as a result of these activities. In the case of the accidental burning of food storage, any weed seeds recovered are also likely to have been related to the crop, and therefore are present in the archaeological sample as a direct result of human activity.

Determining whether preservation occurred as a result of anthropogenic or ecological factors in waterlogged contexts is more ambiguous. Wild seeds may form part of a deposit because the plants were growing naturally on the site, or their presence may be the result of human activity, such as the collection of wild foods, the use of plant material for bedding, *etc.* Apart from the seeds found in F36, most of the wild species recovered from the site were preserved by water logging.

The Plant Remains

The edible plants

Cereals

The remains of wheat (*Triticum* spp.), barley (*Hordeum* spp.) and oat (*Avena* spp.) were recovered from the Friar Street samples. These were largely collected from the street and the house (F35 and F36). The cereal assemblage was dominated by oat.

Legumes

Features F35 and F36 both contained charred legumes – both cultivated types (beans and peas) and smaller legume seeds, possibly wild species. Most of the peas and beans were recovered from F36. The majority of the legumes recovered from the street (F35) were small. These may have been contaminants in the cultivated legume crop.

Nuts

Several fragments of hazelnut shells (*Corylus avellana*) were recovered from the excavation. The hazelnut fragments from this site were present both as waterlogged and charred fragments. No samples indicated storage of nuts, and none was present in F36, the sample that contained stored crop species. The hazelnut fragments were part of the debris found on the street and in the cess/rubbish deposit F53.

Wild plants

The habitat information for the main wild species from the waterlogged samples indicated the presence of wild plants that frequent environments of damp, waste places and disturbed open ground.

The combined ecological information for the waterlogged seeds recovered from F35 and F53 suggests that these seeds are constituents of a single plant community and therefore may be environmental indicators rather than being directly indicative of human activity. However, the range of samples is small. Therefore, it is best to restrict interpretative statements about the plant assemblage to a consideration of the formation processes for each context, including the events that facilitated the preservation of the particular seed assemblages in each case.

Interpretation: Formation Processes and the Seed Assemblage

F36

The seeds from F36 were very well-preserved. The majority were from cultivated plants. Differential charring of light weed seeds and heavier cereal grains can affect the proportion of weeds to cereals recovered from archaeological samples, with weeds generally being destroyed at lower temperatures than cereals. However, chaff is the most fragile part of the cereal plant (Boardman & Jones 1990), and any fire that damaged weed seeds would also have destroyed the cereal chaff.

Chaff survived (as straw, rachis internodes and lemmas on the cereal, oat in particular) in F36. This indicates that these remains are reasonably representative of the plants that were originally present on the site in the thirteenth century, and the absence of weed seeds is unlikely to be explained by differential charring.

The wheat grains from F36 indicate that the majority of the wheats were glume wheats, not free-threshing grains. However, no wheat chaff was recovered from the sample, indicating that the wheat was processed prior to the fire that preserved the crop. The wheat may have been part of a crop that was being stored in the house ready for domestic use.

Oat was the dominant cereal type found in F36. In contrast to the wheat, the oat crop does not appear to have been processed prior to preservation, as many grains were found with chaff still attached (mainly paleas and lemmas, rather than rachis material.) The high incidences of oat found indicate storage, and the preservation of chaff suggests that this crop was stored prior to processing. The storage of grains in chaff is known to be an effective means of preventing disease and fungal attacks.

There was also a high incidence of straw nodes in F36. The excavator concluded that the deposit was derived from burnt roof material, including thatch and the timber roof beams. Therefore, the straw nodes are very likely to be the fragmentary remains of the thatch, and the grass rachis would be derived from colonising grasses growing on the house roof. The cereals and legumes may have been hung in sacks and baskets from the roof for storage. This is speculative, but on stratigraphic grounds it is unlikely that mixing occurred with other contexts, as the layer of burning (F36) was well sealed.

Weed seeds from F36 were limited. They consisted mostly of some goosefoot (*Chenopodiaceae*), dock (*Polygonaceae*) and many sedges (*Cyperaceae*). It is likely that they are present in the sample because they were weeds of the field that contaminated the crop. If they were crop contaminants, it is most likely that they came into the town with the oat crop, or perhaps with the barley. Chaff from both these cereal was found, and this indicates that full crop processing had not yet been

carried out and therefore weed seeds were not properly separated from the grain crop. The other cereal grains (wheat) seem to have been brought in as a fully cleaned crop.

F35

General

Sample F35 contained both charred and waterlogged plant remains. The waterlogged remains consisted of weed seeds, some bits of straw and a few nutshell fragments. In contrast, the charred remains were mainly cultivated plants, including cereals, straw, legumes, one type of weed seed (*Galium aparine*) and nutshell fragments. The differences between the plant types preserved by charring and those preserved by waterlogging indicate that two separate formation processes have influenced the seed assemblage from this sample. The charred remains should be considered as a separate event, or a separate series of events, to the waterlogged seeds.

The charred plants

The site stratigraphy indicated that the cereals from F35 could not be spillage from the burnt layer (F36), and there were some notable differences in the composition of the charred remains from the house and those from the road. The proportion of wheat from the cultivated plants in F35 was much greater than the proportion of wheat in F36. However, the amount of oat in F35 was much smaller than in F36. Also, the preservation of the cereals in F35 was not as good as in F36, with many grains in a degraded state. This is reflected in the high proportion of grains that were not fully identified and that were placed in indeterminate categories such as 'cereal indet.' Plant remains from F35 were also slightly encrusted, suggesting a deposit that built up slowly. This gradual accumulation might be expected from a street context. The charred seeds in this sample may have been burnt rubbish that was thrown out onto the streets to clear the houses.

The waterlogged plants

While the charred remains from F35 are mostly cultural plants, and may be rubbish or stored foods in the house, the weed assemblage from F35 is mostly waterlogged and consists of Orache (*Atriplex* species), Bramble/Raspberry (*Rubus* species), Nipplewort (*Lapsana communis*) and Dock (*Polygonaceae*). The combination of ecological information from these weeds indicates open, disturbed ground, but generally a damp environment. This interpretation fits into the understanding of F35 as a street where these hardy plants are most likely to thrive.

F53

The sample from F53 is supposedly from a cess deposit, and it is therefore entirely different in character to the samples taken from F35 and F36.

There was a very low cereal count; two indeterminate cereals were found in a severely degraded state. This degradation may be the result of passing through a digestive system. However, many of the other plant remains present did not seem to be consistent with the interpretation of the deposit as a cesspit. Most of the seeds were weeds rather than cultigens. Seeds of goosefoots, such as *Chenopodium glaucum/rubrum*, plants that may grow on manure heaps, were present in small amounts, but this plant also grows on disturbed ground and wasteland, along with Orache (*Atriplex* spp.), Nipplewort (*Lapsana communis*), Prickly sow thistle (*Sonchus asper*) and several Dock (*Polygonaceae*). The presence of seeds that are very likely to be Fool's parsley (*Aethusa cynapium*) would also be strange for a cess deposit, as this plant is poisonous, but is, nonetheless, often found in medieval deposits, such as those from Dublin (Collins 1997) and Waterford (Tierney & Hannon 1997), and it thrives in urban areas.

Discussion: Comparison of Results with Studies from other Medieval Irish Sites

Introduction

Studies of the plant remains from several other medieval urban Irish sites, including several sites in Dublin (Collins 1997 and Geraghty 1996) and Waterford (Tierney & Hannon 1997), have been published. All these studies have reported a greater species range than that found at Friar Street; however, they were all part of larger excavation projects. In general, the main taxa present at Friar Street are comparable to the common seeds represented on other urban medieval Irish sites.

Cereals

In deposits from the Viking houses at Fishamble Street, Dublin, cereals were not common, but barley dominated the grain assemblage, followed by oat and then wheat (Geraghty 1996). It was suggested that the consistent ratio of five barley to one oat discovered in carbonised grain samples from Fishamble Street may have been the result of a 'maslin' crop. A maslin is a specific preferred mix of cereals, rather than a contamination of the barley crop by oats (Geraghty 1996). The stored cereal crop from F36 at Friar Street revealed the reverse trend, with a ratio of approximately one barley grain to every four oats. The presence of some barley chaff in this sample indicates that, as with the oat, the barley crop had not been fully cleaned. It is possible that the barley in F36 is there as part of a maslin crop with oat, albeit in a reverse trend to that found at Fishamble Street. This may be the result of differences in farming practices from the Viking Age to the Later Medieval Period. However, it may also be indicative of regional trends or simply personal preference.

Oat was the dominant crop recovered from F36, and although this result was only obtained from one sample, this cereal was also dominant in the Waterford assemblage analysed by Tierney & Hannon (1997), who found that, while samples with wheat were generally free of chaff, oat grains were commonly found still attached to their chaff. It was concluded that wheat was processed outside the town, whereas it was speculated that the oats may have been processed within the town, using either of the two processes known as 'shelling' (using quern stones) or 'graddaning' (parching the crop over the fire). Similar procedures may have been carried out in Cashel. However, one sample is an extremely tentative basis for such a suggestion.

Seeds from 'cess' deposits

Greig (1982) suggests that most medieval sewage deposits have produced fruit seeds in vast quantities (a characteristic referred to as 'medieval fruit salad'). Cess remains from Fishamble Street, Dublin, contained seeds of fruits such as apple, pear, cherry, bilberry, blackberry and raspberry (Geraghty 1996), while at Waterford, certain taxa and plant parts were used as indicators that the deposit was cess-related. These included cereal bran, corncockle seed fragments, apple pips, elder seeds, blackberry pips, sloe stones, wild cherrystones, flax seeds, grape pips, figs seeds and moss (Tierney & Hannon 1997).

No such indicators were present in F53 at Friar Street. However, cesspits are known to have been multifunctional, and the deposits from medieval cesspits frequently contain material that is not cess related. The seeds from F53 in Friar Street may indicate periods of disuse or emptying and backfilling, or it may be that the feature was only occasionally used as a cesspit. Pits can

often be used as general rubbish dumps, and some cesspits from Waterford, for example, had been emptied and reused or backfilled with urban rubbish (Tierney & Hannon 1997).

The wild seed assemblage

Many of the wild taxa found at Friar Street are common colonisers of urban areas. For example, Nipplewort (*Lapsana communis*) was found, and it appears to have been a ubiquitous weed of medieval urban settlements. In Waterford, it was found in almost all the samples with waterlogged preservation (Tierney & Hannon 1997), and it was also recovered from several Dublin sites, including Fishamble Street (Geraghty 1996).

Some wild plants that are commonly gathered for food were recovered from Friar Street, in particular species of Bramble/Raspberry (*Rubus* species) and Hazel (*Corylus avellana*). The range of wild seeds recovered was small compared with the seed assemblages found on other Irish medieval urban sites. However, these differences are related to the varying scales of the projects involved, rather than to a limited practice of gathering wild foods in Cashel.

Conclusion

The results of the archaeobotanical analysis of the Friar Street samples suggest that crop plants, including legumes, wheats, oats and barley, were stored for domestic consumption within the excavated house. It is speculated that wheat was processed outside the town, but that oat and barley were stored in the building prior to processing. Charred cereal grains recovered from the street suggest that occasionally domestic refuse was scattered there, and wild species found in that locality indicate a fairly damp environment, in an area of reasonably open waste ground that was colonised by common urban weeds.

TABLE 1
Summary of plant species found

Feature number	F35	F35	F36	F53
Mesh size	>1mm	>300µm	All meshes	All meshes
Fraction sorted	All	¼	All	All
Gramineae	The Grass Family			
<i>Triticum dicoccum</i> (2 seeded)	Emmer wheat (two-seeded grains)	12	14	
<i>Triticum cf dicoccum</i> (2 seeded)	Possible emmer wheat (two-seeded grains)	20	11	
<i>Triticum dicoccum</i> (1 seeded)	Emmer wheat (one-seeded grains)		4	
<i>Triticum cf dicoccum</i> (1 seeded)	Possible emmer wheat (one-seeded grains)		3	
<i>Triticum spelta</i>	Spelt wheat		5	
<i>Triticum cf spelta</i>	Possible spelt wheat	1	7	
<i>Triticum monococcum/dicoccum</i> (2seeded)	Einkorn/emmer wheat (2seeded grains)		7	
<i>Triticum dicoccum/spelta</i>	Emmer/spelt wheat	2		
Glume wheat indet.	Glume wheat indet.		3	
<i>Triticum aestivum/compactum</i>	Bread wheat	1	7	
<i>Triticum cf aestivum/compactum</i>	Possible bread wheat		4	

Feature number		F35	F35	F36	F53
Mesh size		>1mm	>300µm	All meshes	All meshes
Fraction sorted		All	¼	All	All
<i>Triticum dicoccum/aestivum/compactum</i>	Emmer/bread wheat			2	
<i>Triticum spelta/aestivum/compactum</i>	Spelt/bread wheat			1	
<i>Triticum</i> spp.	Wheat species indet.	23		24	
<i>Hordeum sativum</i> (hulled)	Hulled barley	5		8	
<i>Hordeum sativum</i> (cf naked)	Possible naked barley			2	
<i>Hordeum</i> spp.	Barley species indet.			21	
cf <i>Hordeum</i> spp.	Possible barley species			6	
<i>Hordeum sativum</i> (6 row) rachis internodes	Six row barley rachis internodes	4	1	9	
<i>Avena</i> spp.	Oat species indet.	11		59	
cf <i>Avena</i> spp.	Possible oat species indet.	3		86	
<i>Avena sativa</i> (florete bases)	Cultivated oat florete bases			3	
<i>Avena</i> cf <i>sterilis</i> (florete bases)	Wild oat florete base			1	
<i>Avena</i> / <i>Hordeum</i>	Barley/oat	5		20	
Cereal indet.	Cereal indet.	47		61	2
<i>Bromus</i> spp.	Brome species			2	
Gramineae indet. (waterlogged)	Waterlogged grass seed indet. species	1		36	3
Gramineae indet. (charred)	Charred grass seed, indet. species	13			
Straw/grass nodes (charred)	Straw or grass stalk material (charred)	1		114	
Straw/grass nodes (waterlogged)	Straw or grass stalk material (waterlogged)	11			
Ranunculaceae		The Buttercup Family			
<i>Ranunculus acris/repens</i>	Creeping/meadow buttercup	3			
<i>Ranunculus</i> cf <i>acris/repens</i>	Possible creeping/meadow buttercup	3			
<i>Ranunculus</i> cf <i>sceleratus</i>	Possible celery-leaved buttercup	1			
Caryophyllaceae		The Pink Family			
<i>Stellaria media</i>	Common chickweed				10
<i>Stellaria</i> cf <i>media</i>	Possible common chickweed	1			
Chenopodiaceae		The Goosefoot Family			
cf <i>Chenopodium album</i>	Possible fat hen				1
<i>Chenopodium rubrum</i>	Red goosefoot				6
<i>Chenopodium</i> spp.	Goosefoot species				
<i>Atriplex</i> cf <i>patula</i>	Possible common orache	25			10
<i>Atriplex</i> spp.	Orache species				25
Chenopodiaceae indet.	Goosefoot indet.	3		8	7
Leguminosae		The Legume Family			
<i>Vicia sativa</i>	Cultivated bean	1		1	
<i>Vicia faba minor</i>	Minor broad bean			7	
<i>Pisum sativa</i>	Cultivated pea	2		9	

Feature number		F35	F35	F36	F53
Mesh size		>1mm	>300µm	All meshes	All meshes
Fraction sorted		All	¼	All	All
Large legumes indet. (fragments) legume	Fragments of indeterminate large 2				
Small weed legumes indet.	Indeterminate small legumes	12		16	
Rosaceae	The Rose Family				
<i>Rubus idaeus</i>	Raspberry	1			
<i>Rubus idaeus/fruticosus</i>	Raspberry/blackberry	11			
<i>Potentilla tormentilla</i>	Cinquefoil				2
cf <i>Potentilla</i> spp.	Possible cinquefoil	1			1
Rosaceae indet.	Indeterminate seed from the rose family		1	1	
Umbellifereae	The Carrot Family				
cf <i>Aethusa cynapium</i>	Possible fool's parsley				7
cf <i>Carum</i> spp.	Possible caraway				1
Umbellifereae indet.	Indeterminate seed from the carrot family			4	
Polygonaceae	The Dock Family				
<i>Polygonum aviculare</i>	Knotgrass				1
cf <i>Polygonum aviculare</i>	Possible knotgrass	4			6
<i>Polygonum persicaria/lapathifolium</i>	Redshank/pale persicaria	1			
<i>Polygonum convolvulus</i>	Black bindweed				
cf <i>Polygonum convolvulus</i>	Possible black bindweed	11			4
<i>Polygonum</i> spp.	Indeterminate knotgrass species				9
cf <i>Polygonum</i> spp.	Possible knotgrass species			2	1
<i>Rumex</i> spp.	Sorrel/dock	2		19	1
Polygonaceae indet.	Indeterminate seeds from the dock family	4		2	
Urticaceae	The Nettle Family				
cf <i>Urtica dioica</i>	Possible common nettle	1			
Corylaceae	The Hazel Family				
<i>Corylus avellana</i>	Hazel (entire nut shell)				1
<i>Corylus avellana</i> fragments (waterlogged)	Waterlogged fragments of hazelnut shell	17			
<i>Corylus avellana</i> fragments (charred)	Charred fragments of hazelnut shell	8			
Labiatae	The Mint Family				
<i>Galeopsis tetrahit</i>	Common hemp nettle	1			
cf <i>Galeopsis tetrahit</i>	Possible common hemp nettle	1			1

Feature number		F35	F35	F36	F53
Mesh size		>1mm	>300µm	All meshes	All meshes
Fraction sorted		All	¼	All	All
Labiatae indet.	Indeterminate seeds from the mint family	2			
Compositae					
<i>Lapsana communis</i>	Nipplewort	5	1		6
cf <i>Lapsana communis</i>	Possible nipplewort	3			
<i>Sonchus asper</i>	Prickly sow thistle				2
cf <i>Sonchus asper</i>	Possible prickly sow thistle				2
Cyperaceae The Sedge Family					
<i>Eleocharis palustris</i>	Common spike rush				
cf <i>Eleocharis palustris</i>	Possible common spike rush	4			
Cyperaceae indet.	Indeterminate seeds from the sedge family	5	11	126	3
Brassicaceae The Cabbage Family					
Brassicaceae indet.	Indeterminate seeds from the cabbage family			6	
Rubiaceae The Bedstraw Family					
<i>Galium aparine</i>	Cleavers (robin-run-the-hedge)	2		3	
<i>Galium cf aparine</i>	Possible cleavers (robin-run-the-hedge)			1	

Insect Remains

Eileen Reilly

Introduction

Three samples were processed for insect remains. However, it was clear during processing that only two would produce insect remains. F36 was comprised of burnt material from the final occupation level of the house, and no insect remains survived within the deposit. The other two samples, F53 and F35, were more productive. F53 was a cesspit that dated from the thirteenth century medieval occupation on the site. F35 was an organic deposit that had built up outside the medieval house (F71), dated to the fourteenth century. Although the two samples were not contemporaneous, some comparisons can be made, as it is clear that the two insect assemblages result from different formation processes. Both shed light on the surrounding environment of the site, as well as the microenvironments of the pit and street front.

Methodology

The samples were processed using the paraffin flotation method devised by Coope & Osborne (1968) and later improved by Kenward et al. (1980; 1986). The resultant flots were examined and sorted under a low-powered binocular microscope. The insect fragments were identified using a number of entomological keys and the writer's own reference collection.

The beetles are presented in taxonomic order in Table 1 after Anderson et al. (1997), the recently published list of Irish Coleoptera, partly based on Pope (1977), the most recent list of British Coleoptera. However, a number of substantial phylogenetic revisions have been made since Pope's list, which makes it somewhat out of date. The present Irish list is therefore based on recent continental lists, including those of Lohse & Lucht (1989, 1992) and Hansen (1996), that include changes in both layout and the accepted names of individual taxa.

Each species or taxon has been assigned an ecological code, which is given in the right-hand column, in order to readily access the habitat data. Figs. 32 and 33 present this information in graphic form. The codes follow those of Hall et al. (1983) and Hall & Kenward (1990) and have been used successfully to interpret other urban archaeological contexts (e.g., Moffet & Smith 1996).

Table 2 presents the basic statistics for the samples based on habitat groupings. Rank order curves were also produced to illustrate the composition of the sample and to enable comparisons between samples from different locations (Fig. 34) (after Kenward 1978). The data from which these graphs are produced are presented in Table 3. In addition, the index of diversity was calculated. This is a measure of the species richness of a sample (Fisher's ; Fisher et al. 1943) (Table 2). Also calculated was the index of diversity for some of the habitat groups in F53 (F35 contained too few individuals to do the same), which produced interesting results. This statistic has proved a very useful tool in urban contexts in identifying the origins of different assemblages (e.g., Kenward & Hall 1995).

Analysis

Overview

Table 1 summarises the species found in the features sampled, and Table 2 presents the basic habitat statistics for the samples.

Pit F53

General

The sample from F53 was quite rich in insect remains and showed a good degree of species diversity (Table 2). However, two ecological groups dominated the assemblage and indicated that the pit, at least in its final stages, was not used exclusively as a cesspit (Fig. 32).

House fauna (h) and drier decomposers (rd)

The dominant ecological group in the sample was derived from the so-called house fauna range of species. This group overlaps with the 'rd' group (drier organic matter) by some 83% (Table 2). In total, sixty-seven individuals out of one hundred and forty-four belong to this group. The rank order curve (Table 3; Fig. 32) shows the dominance of one taxon, *Mycetaea hirta*. This beetle occurs at the damper end of the 'rd' spectrum and occurs today in mouldy materials, particularly straw. It was seen in very large numbers from a pit in Thomas Street, Dublin (Reilly

2003, 50). The next most frequently occurring species, *Cryptophagus* spp. (Table 3), along with species such as *Tipnus unicolor*, may have originated in thatch rather than floor or bedding material (Smith 1996). However, *Cryptophagus dentatus*, particularly, is found in rotting wood in both natural and synanthropic situations. Along with *Grynobius planus* and *Anobium punctatum*, it indicates the presence of decaying wood or wood fragments in the pit. This wood, of course, may also have originated in a house. Other dominant taxa, such as the *Lathridius minutus* group, *Xylodromus concinnus* and *Atomaria* sp. (Table 3; Fig. 34) are part of the house fauna group.

The index of diversity for both the h and rd groups was very low (= 3 and 4, respectively), indicating a strongly localised origin for most of the species present. Certainly, many of the individual beetles identified were immatures, reflecting a breeding population. This would indicate that at least part of the pit fill was either long lived or long-forming or that it originated as a single deposit from a house floor or roofing material that supported breeding populations.

Eurytopic decomposers (rt)

This group has the second largest representation of species, discounting the rd group, due to the dramatic overlap between it and the house fauna group (Fig. 32). The word eurytopic means 'many and varied biotopes' and includes most of the Staphylinidae family. In general, members of this family are decomposers and feed on a wide variety of plant and animal material. These beetles could also be considered opportunistic, meaning that they take advantage of any situation where decomposing vegetation has built up. In this way, they are found in both natural and human-created niches. Species such as *Anotylus complanatus*, *A. rugosus* and *Oxytelus sculptus* form a group that Kenward & Hall (1995) calls the 'oxyteline association.' They occur towards the fouler end of the decomposing spectrum and are, therefore, common in pits and middens in the Medieval Period. However, they are not necessarily synanthropic, i.e., not 'dependant on humans.'

Other species within this group overlap with the 'house' fauna, as they occur again and again in samples from medieval house floors. These include *Xylodromus concinnus*, *Crataraea suturalis* and *Aglenus brunneus*. However, it is worth noting that one of the most frequently occurring taxa from this sample is *Micropeplus fulvus*, part of the rt group. Along with *Mycetaea hirta*, it indicates the presence of mouldy hay or straw refuse in the pit. Again, the question arises as to whether this species is exploiting the pit environment or originated in the ejectema that went into the pit.

Outdoor component (oa+ob), plant-associated beetles (p) and aquatics/damp ground (w/d)

There is a lot of overlap between these three groups, so they are considered together. Some of the species recovered, such as the ground beetle species *Trechus quadristriatus*, *Bembidion* sp. and *Agonum mulleri*, were probably accidental inclusions in the assemblage (i.e., the pit acting as a 'pit-fall trap'). All of these species would have been common in the surrounding area. *A. mulleri*, in particular, is associated with cultivated ground. However, none would be found naturally breeding in or inhabiting a pit, with the possible exception of *T. quadristriatus*, which is known to inhabit caves.

Overall, this group of beetles reflects the wider environment. The weevil *Stiona striatellus* occurs on gorse, which would have been abundant on the nearby hillsides. It was common to graze sheep on this type of land from earliest times (Kelly 1998), and gorse may have been brought onto sites for use as floor litter in stables also (Lucas 1960, cited in Kenward & Hall 1997). The dung beetle *Geotrupes* sp. is found in dung in upland locations, particularly moorland and heath, and may be an accidental inclusion or brought in with turf or furze. Other weevils recovered from this sample include *Ceutorhynchus contractus* and *C. erysimi*, which feed on

members of the cabbage family, both cultivated and weed varieties. Presumably vegetables were cultivated in nearby kitchen gardens, while weed species such as *Capsella bursa-pastoris* (shepherd's purse), which *C. erysimi* exploits, would have been growing in nearby cultivated fields. It should be noted that no seeds of the cabbage family were found in the sample. However, both of these species exploit the fleshy parts of the plant, and these would not necessarily survive or be identifiable in samples.

The other group of species present reflects waterside or damp-ground habitats. Their presence could be due to a number of sources. Puddles and pools of water within the pit could explain the presence of *Helophorus* spp. Other species, such as *Carpelimus corticinus*, *Platystethus degener* and *P. nitens*, occur in damp bank-side/waterside muds and in urban contexts. They may be reflecting a wet muddy environment with puddles and pools around, or indeed in, the pit.

Foul decomposers (rf)

There is a very small true 'foul' element in the assemblage (Fig. 32). This group accounts for 3.5% of the assemblage, compared with the other decomposer groups, rd and rt, which together account for 72.9%. Two of these taxa, *Aphodius prodromus* and *Geotrupes* sp., may even be accidental inclusions, as they are generally found on animal dung in outdoor locations and not necessarily in cess. *Cercyon unipunctatus* is the only true 'cess' beetle in the sample, and it occurs in small numbers. This would seem to indicate that the pit was not necessarily used for disposing of cess material, at least not in its final use, which this deposit reflects.

However, this is not a completely accurate reflection of the content of the pit. If the 'oxyteline' group of taxa, mentioned above, is taken into consideration, the pit fill contains more species that can tolerate some level of foul, moist content.

Wood and woodland (l)

This is the smallest element within the sample. While some species within the decomposer groups are found in decaying wood, the only true lignicoles recovered were one example each of *Grynobius planus* and *Anobium punctatum*. Unless a pit is wood-lined, such as some of those found at Temple Bar West and Back Lane, Dublin, it would not be unusual for the wood element of an assemblage to be quite small. Both these species have become highly synanthropic, probably from the late Iron Age/Early Medieval Period on. They were probably carried on house floor or roofing material ejected into the pit.

Outdoor midden F35

General

F35 was an organic build-up outside the medieval house (F71). The number of insect remains recovered was surprisingly small, given the organic content of the sample observed during processing. It would not have been subject to the same protection as the pit fill, however, and was probably exposed to the elements for longer, allowing decomposition. However, the results are still informative, if somewhat less definitive than those from F53. Overall, the index of diversity is high ($H' = 41$), reflecting the very mixed nature of the assemblage and the low percentage representation of each taxon (rank order curve is plotted in Fig. 34).

Outdoor component (oa) (plant-associated beetles (p), aquatics/damp ground (w/d) and woodland (l))

The largest component within the assemblage perhaps unsurprisingly came from taxa that represented various outdoor habitats (Table 2). This 'outdoor' element incorporates plant-

associated species, aquatic and damp-ground species and woodland indicators (Fig. 33).

The presence of *Helophorus* spp. in the assemblage is probably due to puddles or pools of water on the street surface. The ground beetle *Pterostichus vernalis* occurs in wet meadows and was probably quite common in the grasslands surrounding Cashel. Another ground beetle *Amara apricaria* is found in cultivated drier ground and all arable situations and is known to be highly synanthropic. Therefore, its presence in the street is not surprising. *Sitona striatellus* was also present in the midden and, as mentioned above, is found on gorse, which would have been growing on the hillsides around Cashel.

All of these species could have been found naturally in the street of a medieval rural town, however, it is important to point out that their ultimate origin may have been from an indoor source, in the form of dumped plant material and gathered crops that were brought indoors and used as floor, bedding or roofing material. The floor levels of the house itself were remarkably clean during excavation and showed that the usual organic build-up observed during excavations of medieval buildings was being cleaned out and dumped regularly. However, none of these species would have occurred naturally indoors, so the picture they show of the wider environment is still an accurate one.

House fauna (h)

The second largest group of taxa, the house fauna, indicated the presence of ejected material from a house floor within the midden layer (this group entirely overlaps with the rd group in the assemblage; Fig. 33). Members of this group, including the *Lathridius minutus* group, *Aglenus brunneus* and *Atomaria* sp., occur in small numbers, along with the woodworm beetle *Anobium punctatum*. *A. punctatum*, however, may also have originated from house walls or beams that faced onto the street.

Foul decomposers (rf)

Foul decomposers represented the next largest ecological group, although numbers of individual taxon were small. The dung beetle genus *Aphodius* spp. was present and was probably exploiting dung in the street or in nearby animal pens. *Cercyon unipunctatus* is commonly found in cesspits and may also have exploited dung in the vicinity of rotting plant material on the street. Equally, *Tachnius rufipennis*, found in this sample, exploits all sorts of foul habitats, including dung, carrion and rotting vegetation but is considered to have originally inhabited woodland. This species is not on the 1997 Irish Coleoptera list and is considered rare in Britain, with only one or two recordings post-1970 in mid-West Yorkshire and near Durham (Hyman 1994). However, it has been recorded from similarly medieval-dated archaeological contexts in Dublin (Reilly 2003), and its distribution was clearly once more widespread than it is today. Given the presence of *Helophorus* spp., mentioned above, it would appear this assemblage is reflecting a phase of wet weather where mouldy vegetation and dung on the street combined to provide an ideal habitat for these species.

Discussion and Conclusions

General

The two samples, although coming from different periods of the site's history, provide a useful contrast in terms of context. It is unfortunate that the third sample from the house floor layer did not contain any insect remains, as this would have provided a third typical context from

medieval urban sites for comparing with the pit fill and outdoor midden layer.

Nevertheless, interesting differences can be seen between the two contexts, the most striking being the more abundant and rich nature of the pit fill assemblage relative to the midden assemblage (Tables 1 and 3). The location of the early pit, later sealed by the clay floors of the house, ensured good preservation of the pit fill and a very clear and detailed picture of the nature of its formation processes. However, the more gradual accumulation of material on a street front, with attendant degradation and erosion, meant that the assemblage here was much smaller. A pit also allows for concentration of species, and even breeding, which can increase the numbers of individual taxa present, whereas a street-front accumulation will not necessarily have the same 'trapping' effect. A sample three times larger would be needed from the midden layer to provide the same numbers of taxa as the pit layer.

Pit F53

The dominant ecological group represented in the pit was house-associated fauna. It would appear that much of the material that made up this final use of the pit originated indoors. Indeed, the presence of certain species may more specifically indicate roofing rather than floor material. These associations have been noted during the analysis of large bodies of material in York and elsewhere (Kenward & Hall 1995); the identification of 'roofing' material is discussed in Smith (1996). However, isolated samples from pits such as the one at Friar Street should not be taken as too representative. It is likely that the final fill of a pit, afterwards sealed before the area is reused, will be filled up with any material readily available and not simply with cess, for which it may have been originally intended. This has been seen on sites in Dublin, particularly Temple Bar West, where cesspits, classic in terms of structural form, do not have a typical cesspit fauna (Reilly 2003). This may appear self-evident but is in fact an important point when trying to determine the use and nature of pit types. A number of pit samples examined from excavations at Peter Street/High Street, Waterford (Reilly 1994), showed differences in the composition of assemblages. Most reflected a typical cesspit fauna, but one or two were dominated by the so-called house fauna. These differences were also noted in the plant remains (Tierney & Hannon 1997). An assessment of samples from a series of pits at the Munster Hotel site in Thurles, Co. Tipperary (Reilly 2000), has provided a useful comparison with Cashel. This was a rural medieval settlement also, and all the pits showed a high percentage presence of outdoor species. Unlike at Cashel, it appears that none of the Munster Hotel pits was deliberately backfilled with either household waste or cess, but rather reflected an environment open to the elements, gradually filling or accumulating with plant material and rubbish from a variety of sources.

The issue of whether pit-fill assemblages reflect simply the last material deposited in them randomly before sealing or the actual purpose for which the pit was dug remains to be answered. It is important that in sampling and examining pits that a number of deposits are examined, from the edges, the base, the middle and the top because subtle variations in fauna from these different locations may identify the original use of the pit.

Midden assemblage F53

Some elements of the house fauna group are seen in the midden assemblage and clearly show its mixed origin. The presence of reasonable numbers of 'outdoor' species in the pit fill probably reflects its origin location in a yard or behind a contemporary house. The presence of cultivated farmland, wet meadow and furze-covered hillsides are all indicated in the fauna, and this picture is repeated in the street layer as well. Indeed, this picture is familiar to anyone who

knows the Cashel area today. The one element that is not well represented is woodland. The structural pests *Anobium punctatum* and *Grynobius planus* are present in very small numbers, and one ground beetle from the midden layer, *Carabus intricatus* (?), is a native of woodland. However, even this species may have been making a home among the wooden structures of the medieval town or may have been brought to the site with logs from nearby woodland. No other wood-dependant species are present. However, as only two samples for one location in the town were examined, it is impossible to draw any conclusions about the nature of woodland in the surrounding landscape.

Conclusion

This is the first rural medieval town in Ireland for which insect remains have been fully analysed. The results are very encouraging and would indicate that there is a rich reservoir of information waiting to be gathered from similar sites. The assessment of samples from the Munster Hotel site in Thurles would also seem to indicate this. It is important that the method statements of future excavations of similar rural medieval settlements with organic preservation include an examination of the insect fauna. This will help to build up as complete a picture as possible of the environmental context of the settlement. It will also ensure that the 'mosaic' picture of the Irish fossil insect fauna is continuously updated, and it may aid a more comprehensive assessment of the distribution and regional patterns of certain species or ecological groups.

TABLE 1
Species List (nomenclature after Anderson et al. (1997))

Feature number	F35	F35	Ecological Code
Species/Genus	Pit fill	Midden outside house	
Carabidae			
<i>Carabus intricatus</i> (Linnaeus)?		1	oa-l
<i>Trechus quadristriatus</i> Shrank	1	1	oa
<i>Bembidion</i> sp.	1		oa-u
<i>Pterostichus vernalis</i> Panzer		1	oa-d
<i>Agonum mulleri</i> Herbst	1		oa
<i>Amara apricaria</i> Paykull		1	oa
<i>Harapulus</i> sp.		1	oa-u
Ptilidae			
<i>Ptenidium</i> sp.	4		rt
<i>Ptilidae</i> gen. et sp. indet.	1		rt
Staphylinidae			
<i>Micropeplus fulvus</i> Erichsson	5		rt
<i>Omalius caesum</i> Gravenhorst	2		rt

Feature number	F53	F35	Ecological Code
Species/Genus	Pit fill	Midden outside house	
<i>O. riparium</i> Thom.	2		rt
<i>Omalium</i> sp.	2		rt
<i>Xylodromus concinnus</i> (Marsham)	5		rt-h
<i>Carpelimus bilineatus</i> Stephens	2		rt
<i>C. corticinus</i> (Gravenhorst)	2		oa-d
<i>Platystethus degener</i> Mulsant & Ray	2		oa-d
<i>P. nitens</i> (Sahlberg)	1		oa-d
<i>Platysfethus</i> sp.	1		rt
<i>Anotylus complanatus</i> (Erichsson)	3		rt
<i>A. rugosus</i> (Fabricius)	2		rt
<i>Oxytelus sculptus</i> Gravenhorst	3		rt
<i>Stenus</i> sp.	2		rt
<i>Gyrophypnus fraticorne</i> (Muller)		1	rt
<i>Xantholinus linearis/longiventris</i> (Ol.)/Heer	3		rt
<i>Philonthus</i> spp.	5	2	rt-u
<i>Tachinus rufipennis</i> Gyllenhal		1	rf
<i>Tachinus/Tachyporus</i> sp.	1	1	u
<i>Crataraea suturalis</i> (Mannerheim)	3		rd-h
<i>Aleocharinae</i> gen. et sp. indet.	2		u
Pselaphidae			
<i>Bryaxis</i> sp.	1		u
<i>Brachygluta</i> sp.	1		u
Geotrupidae			
<i>Geotrupes</i> sp.?	1		oa-rf
Scarabidae			
<i>Aphodius prodromus</i> (Brahm)	1		ob-rf
<i>Aphodius</i> spp.		2	rf
Helophoridae			
<i>Helophorus</i> spp.	4	2	w
Hydrophilidae			
<i>Cercyon analis</i> (Paykull)	3		rt

Feature number	F53	F35	Ecological Code
Species/Genus	Pit fill	Midden outside house	
<i>Cercyon unipunctatus</i> (Linnaeus)	3	1	rf
<i>Megasternum obscurum</i> (Marsh.)	1		rt
Silphidae			
<i>Silpha subrotundata</i> (Leach)	1		rt-u
Scydmaenidae			
<i>Scydmaenidae</i> gen. et sp. indet.	2		rt
Anobidae			
<i>Grynobius planus</i> (Fabricius)	1		l-h
<i>Anobium punctatum</i> (DeGeer)	1	1	l-h
Ptinidae			
<i>Tipnus unicolor</i> (Piller & Mitterpacher)	5		rd-h
<i>Ptinus fur</i> (Linnaeus)	1		rd-h
Ryzophagidae			
<i>Monotoma</i> sp.	4		rt
Cryptophagidae			
<i>Cryptophagus dentatus</i> group	5		rd-h
<i>Cryptophagus</i> spp.	8		rd-h
<i>Atomaria</i> sp.	5	1	rd-h
Endomychidae			
<i>Mycetea hirta</i> Stephens	24		rd-h
Lathridiidae			
<i>Lathridius minutus</i> group	8	2	rd-h
Colydiidae			
<i>Aglenus brunneus</i> Gyllenhal	1	1	rt-h
Anthicidae			
<i>Anthicus</i> sp.	2		rt
Curculionidae			
<i>Sitona striatellus</i> Gyllenhal	1	1	oa-p
<i>Ceutorrynchus contractus</i> (Marshall)	3		oa-p

Feature number	F53	F35	Ecological Code
Species/Genus	Pit fill	Midden outside house	
<i>C. erysimi</i> (Fabricius)	1		oa-p
Total	144	21	

Diptera (puparia only)

Cyclorrhapha

Sepsidae gen. st sp. indet.	**	*	rf
Muscidae gen. et sp. indet.	**	*	rf

Ecological Codes for Coleoptera: oa or ob – outdoor; rd – drier organic matter; rf – foul organic matter; rt – eurytopic decomposers; l – woodland insects; 'h' – house fauna; w/d – aquatics/damp ground; p – plant-associated beetles.

Diptera Code: * Occasional ** Moderate *** Abundant

TABLE 2
Basic habitat statistics

Feature number	F53	F35
vol. (litre)	4	4
number of individuals (n)	144	21
number of taxa (s)	52	17
Index of diversity (a)	30	41
% oa+ob	12.5	38
RT (rd+rf+rt)	110	10
%rd	36.8	14.3
Alpha rd	3	0
%rf	3.5	19.1
%rt	36.1	14.3
Alpha rt	15	0
%l	1.4	9.5
%'h'	46.5	23.8
Alpha 'h'	4	0
%w/d	6.25	14.3
%p	3.5	4.7

TABLE 3
Rank Order Statistics

Feature number	N	Rank Order	Percentage
<i>Mycetea hirta</i> Stephens	24	1	16.67
<i>Cryptophagus</i> spp.	8	2	5.56
<i>Lathridius minutus</i> group	8	2	5.56
<i>Micropeplus fulvus</i> Erichsson	5	4	3.47
<i>Xylochromus concinnus</i> (Marshall)	5	4	3.47
<i>Philonthus</i> spp.	5	4	3.47
<i>Tipnus unicolor</i> (Piller & Mitterpacher)	5	4	3.47
<i>Cryptophagus dentatus</i> group	5	4	3.47
<i>Atomaria</i> sp.	5	4	3.47
<i>Helophorus</i> spp.	4	10	2.78
<i>Ptenidium</i> sp.	4	10	2.78
<i>Monotoma</i> sp.	4	10	2.78
<i>Cercyon analis</i> (Paykull)	3	13	2.08
<i>Cercyon unipunctatus</i> (Linnaeus)	3	13	2.08
<i>Anotylus complanatus</i> (Erichsson)	3	13	2.08
<i>Oxytelus sculptus</i> Gravenhorst	3	13	2.08
<i>Xantholinus linearis/longiventris</i> (Ol.)/Heer	3	13	2.08
<i>Crataraea suturalis</i> (Mannerheim)	3	13	2.08
<i>Ceutorhynchus contractus</i> (Marshall)	3	13	2.08
<i>Scydmaenidae</i> gen. et sp. indet.	2	20	1.39
<i>Omalium caesum</i> Gravenhorst	2	20	1.39
<i>O. riparium</i> Thom.	2	20	1.39
<i>Omalium</i> sp.	2	20	1.39
<i>Carpelimus bilineatus</i> Stephens	2	20	1.39
<i>C. corticinus</i> (Gravenhorst)	2	20	1.39
<i>Platystethus degener</i> Mulsant & Ray	2	20	1.39
<i>A. rugosus</i> (Fabricius)	2	20	1.39
<i>Stenus</i> sp.	2	20	1.39
<i>Aleocharinae</i> gen. et sp. indet.	2	20	1.39
<i>Anthicus</i> sp.	2	20	1.39
<i>Trechus quadristriatus</i> Shrank	1	30	0.69
<i>Bembidion</i> sp.	1	30	0.69
<i>Agonum mulleri</i> Herbst	1	30	0.69
<i>Megasternum obscurum</i> (Marsh.)	1	30	0.69
<i>Ptilidae</i> gen. et sp. indet.	1	30	0.69
<i>Silpha subrotundata</i> (Leach)	1	30	0.69
<i>P. nitens</i> (Sahlberg)	1	30	0.69
<i>Platystethus</i> sp.	1	30	0.69
<i>Tachinus/Tachyporus</i> sp.	1	30	0.69

Feature number	N	Rank Order	Percentage
<i>Bryaxis</i> sp.	1	30	0.69
<i>Brachygluta</i> sp.	1	30	0.69
<i>Geotrupes</i> sp.?	1	30	0.69
<i>Aphodius prodromus</i> (Brahm)	1	30	0.69
<i>Grynobius planus</i> (Fabricius)	1	30	0.69
<i>Anobium punctatum</i> (DeGeer)	1	30	0.69
<i>Ptinus fur</i> (Linnaeus)	1	30	0.69
<i>Aglenus brunneus</i> Gyllenhal	1	30	0.69
<i>Sitona striatellus</i> Gyllenhal	1	30	0.69
<i>C. erysimi</i> (Fabricius)	1	30	0.69
Total	144		

Species/Genus F35	N	Rank Order	Percentage
<i>Helophorus</i> spp.	2	1	9.52
<i>Philonthus</i> spp.	2	1	9.52
<i>Aphodius</i> spp.	2	1	9.52
<i>Lathridius minutus</i> group	2	1	9.52
<i>Carabus intricatus</i> (Linnaeus)?	1	5	4.76
<i>Trechus quadristriatus</i> Shrank	1	5	4.76
<i>Pterostichus vernalis</i> Panzer	1	5	4.76
<i>Amara apricaria</i> Paykull	1	5	4.76
<i>Haraplus</i> sp.	1	5	4.76
<i>Cercyon unipunctatus</i> (Linnaeus)	1	5	4.76
<i>Gyrophypnus fraticorne</i> (Muller)	1	5	4.76
<i>Tachinus rufipennis</i> Gyllenhal	1	5	4.76
<i>Tachinus/Tachyporus</i> sp.	1	5	4.76
<i>Anobium punctatum</i> (DeGeer)	1	5	4.76
<i>Atomaria</i> sp.	1	5	4.76
<i>Aglenus brunneus</i> Gyllenhal	1	5	4.76
<i>Sitona striatellus</i> Gyllenhal	1	5	4.76
Total	21		

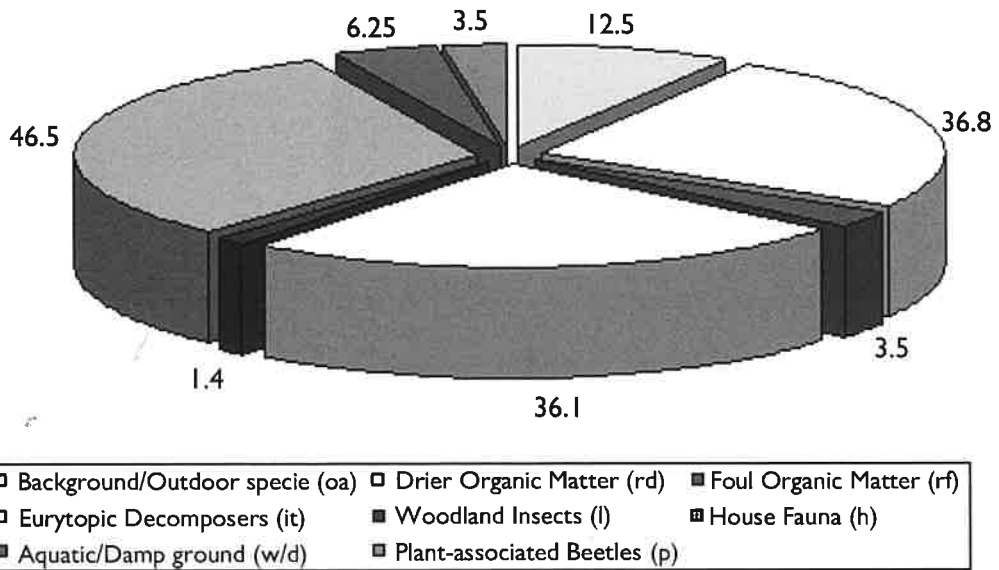


Figure 32: Percentage of each identified ecological group in pit fill sample F53

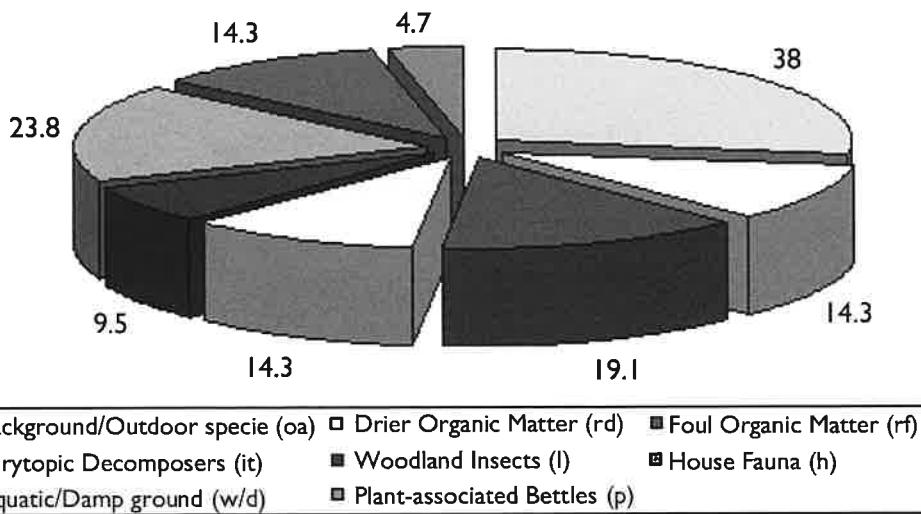


Figure 33: Percentage of each identified ecological group in 'outdoor' organic deposit sample F35

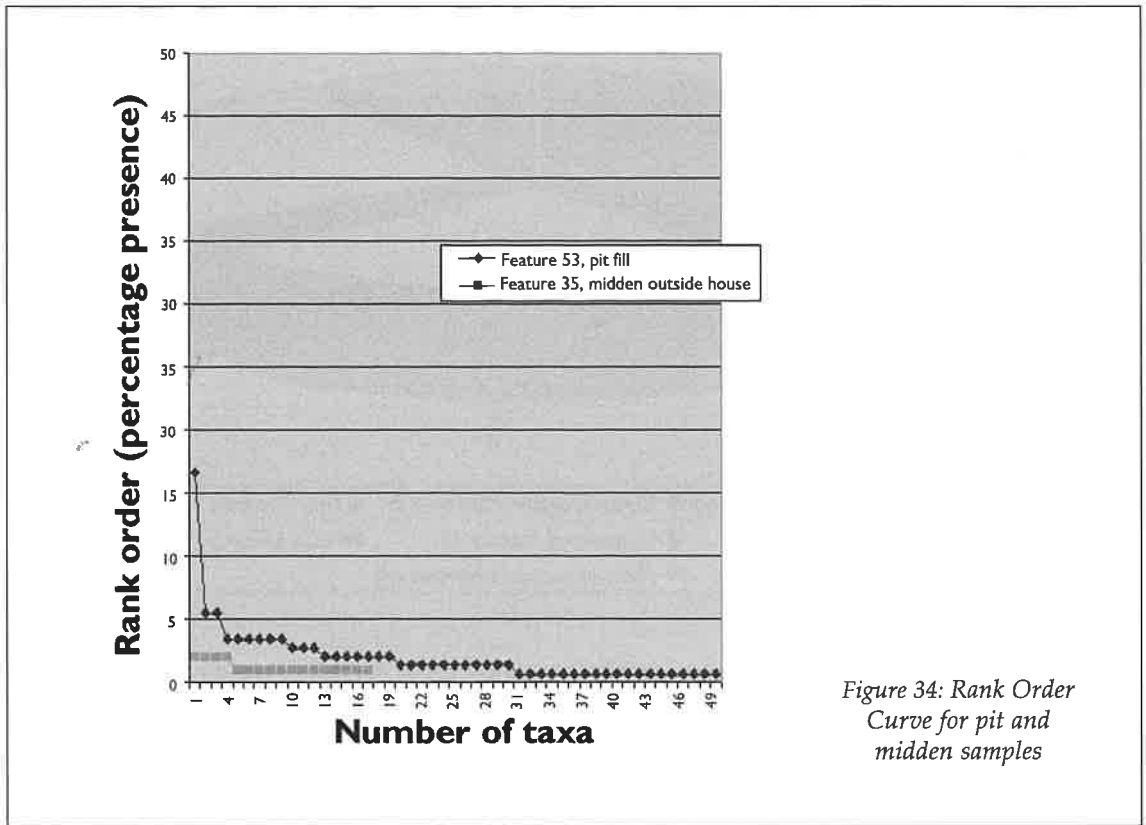


Figure 34: Rank Order Curve for pit and midden samples

Charcoal and Wood Report

Dr Ingelise Stuijts

Introduction

Charcoal and waterlogged wood samples were retrieved during the excavation at Friar Street for identification and analysis. The samples were principally collected from three separate contexts, each derived from different elements of the medieval house (F71).

Sample 1 (F36)

Context

F36 was a thick dense layer of charcoal overlying a medieval house floor. The burnt deposits were interpreted at the time of excavation as the burnt remains of a wooden building. The wood was preserved by its conversion to charcoal.

Sample details

Feature: F36, 1 bag
Residue: 201 ml, including seeds (115 ml 1.0 mm, 84 ml 0.5 mm, 2 ml 0.3 mm)
Charcoal: 505 ml

Species identification

Species	Pieces	Volume (ml)	Description
<i>Alnus</i> (alder)	25	25	1 branch, 12 years, and small lumps
	1	144	Small rectangular plank or lath, 6 cm by 3 cm, radius 4 cm. This could very well represent material of the medieval house itself. The pith of the wood is approx. in the middle of the lump. No indications for insect channels. Good growth, approx. 11 years at least.
<i>Betula</i> (birch)	1	1	Very small birch fragment
<i>Corylus</i> (hazel)	45	90	Branches of various ages: 2 (5x), 3 (6x), 4 (11x), 5 (4x), 6 (1x), 7 (7x), 9 (4x), 11 (5x, variable growth - 2/7) and 13 (2x, variable growth - 3/10). Very uniform, good growth, almost all cut in springtime and looks very much like managed wood; could be part of wattlework
<i>Euonymus</i> (spindle tree)	4	5	Branch, approx. 13 years
<i>Fraxinus</i> (ash)	2	5	Rectangular chips from small lath, radial cut; very fast growth
	2x	10ml	From same implement, probably handle (of knife?). Slow growth, more than 22 years, variable growth, heart of wood, round diameter
	65	60	Branches of various ages: 2 (2x), 3 (2x), 4 (4x), 5 (4x), 6 (6x), 7 (10x), 8 (4x) and 9 (1x); rest is small lumps. Mostly very good growth and cut after growth season. Looks very managed. Small roundwood, with a diameter of 3 cm. The roundwood is probably a stake. Some bark is still present; the wood must have been quite fresh. The roundwood is 14 years old, cut just after the beginning of spring (around April) because the big vessels have just been formed. Sent for ¹⁴ C dating.
<i>Ilex</i> (holly)	1	1	Branch, approx. 5 years
<i>Prunus avium/padus</i> (wild/bird cherry)	10	16	Branch, approx. 13 years, with bark. Good growth, cut after growth season
<i>Prunus spinosa</i> (sloe)	3	2	Branch, approx. 4 years
<i>Quercus</i> (oak)	75	80	Chips, square lumps. Mostly well grown, few sintered
	88	40	8 branches, 5 years, rest square lumps
<i>Salix</i> (willow)	25	25	Branches of various ages: 3 (1x), 6 (2x), 7 (2x) and 1-2 years (rest)
<i>Taxus</i> (yew)	1	1	Small chip

Discussion

The charcoal from F36 was discovered in a medieval domestic stratified context thought to be the burnt remains of a building. Eleven wood species are represented in the charcoal, most of which consists of *Quercus* (oak), *Corylus* (hazel) and *Fraxinus* (ash).

Generally in habitation areas, many species of wood can be expected because all kinds of objects used in household situations – branches, broken bowls or plates, pieces of rotten furniture – may be burnt. In this case, however, most of the charcoal seems to represent natural roundwood, especially young branches. Moreover, almost no insect channels were found.

Some of the charcoal was not roundwood. Two pieces were probably part of an ash handle (95E286:36:101), possibly of a knife. Two other pieces of ash were rectangular chips from a small lath. Many pieces of oak looked like square chips, but this is probably a consequence of the natural breaking lines of wood from this species.

The species found all belong to the natural indigenous flora of Ireland. The limited use of alder and birch indicates that enough other wood species were available to choose from; alder and birch are mostly found in rather wet environments. It is, however, possible that alder and birch were used more extensively in other parts of the immediate settlement. The variety of wood species available would also explain the absence of certain species such as elm and apple-type wood.

The favouring of only a few species of wood reflects the choice of the inhabitants of the house. The dominance of branches indicates that this sample represents a rather specific situation. Most of the branches were quite young, mostly seven years or younger. The oldest branches were approximately thirteen years old. The most interesting branches were those of hazel, which occurred most frequently. The branches looked very uniform and were almost all cut in springtime, at a time when young shoots would be fresh and flexible. In contrast to the wattlework generally found in houses or fences, the branches were not flattened. Therefore, it can be proposed that what in fact is represented here forms part of a burnt roof or other wood layer made predominantly of hazel rods, mixed with some other species such as willow and ash, and possibly oak, although part of the oak charcoal clearly does not derive from small roundwood branches. It is possible that the oak derives from the structural supports for the house.

Euonymus, spindle tree, is often used for spinning purposes. The importance of wool production in Cashel is highlighted in the report on the faunal remains (Cremin this volume) from the site and in historical sources for Cashel (MacShamhráin this volume). The *Euonymus* charcoal found in F36 represents a branch of thirteen years old, the same age as some of the hazel, wild cherry and alder.

Conclusion

The charcoal in Sample 1 represents a single burning event in which a layer of rather young branches was burnt (the absence of many insect channels and the presence of bark points to rather fresh wood). The age and growth pattern of the branches indicate that the wood in the environment was managed. Most of the wood was cut in spring, maybe April or May. Therefore, it is possible that the wood was gathered on one occasion, to obtain a uniform size and uniform age. The temperature of the fire that produced the charcoal was not too high, as only a few pieces were sintered and the particles of charcoal survived in the form of the branches.

Sample 2 (F52)

Context

The wood was sampled from a cesspit (F54) that predated the wooden building (F71). However, the internal wooden stakes (F52) that subdivided the building were driven into the cesspit (F54) and were thus preserved by the anaerobic conditions in the pit. Other stake holes (F52) were identified during the excavation, but these cut into the boulder clay, where the stakes rotted *in situ*. Eight wood pieces were recovered from the stakes (F52).

Species identification

The first piece was the point of stake, 5.5–6 cm, slightly flattened. The species was *Fraxinus* (ash). The wood showed slow growth, especially in the last three years, when almost no growth occurred. There were slight indications of the presence of bark. The wood was cut after the growth season, between May and February. The tree was approximately twenty-five years old. Many small holes made by roots indicated that the sample was not preserved under totally anaerobic conditions.

The second piece was a branch of 2.5 cm, six years old, of good growth and with bark. It was cut directly after the growth season ended, probably in May or June. The wood was discoloured and had many iron incrustations from contact with iron-rich groundwater. The species was *Corylus* (hazel).

The third piece was a cut stake from a segment of a larger branch of 2–2.5 cm, with a square cross section. No bark was present. The species was *Fraxinus* (ash). The branch was nine years old, of medium growth and cut after the growth season, between May and February. The wood was in bad condition and had many small holes made by the roots of grasses, *etc.*

The fourth piece was a segment of a branch with a radius of 3 cm. The species was again *Fraxinus*. The growth was very variable, especially slow between thirteen and twenty-eight years. The branch was twenty-eight years old and in bad condition, with many roots.

The fifth piece was a segment of a branch, probably the same as Piece 4, with the same age, growth pattern and species.

The sixth piece was the point of a stake, 4–5 cm wide, with a radius of 2.5 cm. The species was *Fraxinus*. The wood was in bad condition and had many iron incrustations. The point was made of nine-year-old roundwood of good growth, cut after the growth season ended. This stake may have come from the same tree as Piece 3.

The seventh piece was the point of a stake, 4 cm wide, with a radius of 2.5 cm. Again, the species was *Fraxinus*, and again the wood was in bad condition. The roundwood was thirteen years old, with variable growth. The best growth occurred in the last six years before cutting. No cutting season could be established.

The eighth piece was a split roundwood of 6.5 cm and a radius of approx. 2.5 cm. The roundwood was twenty-six years old, with variable growth. The slowest growth occurred between fourteen and twenty-one years before cutting. There was much iron incrustation. The species was *Fraxinus*.

Conclusions

Most of the stakes were made of *Fraxinus* (ash). It is possible that most of them were derived from the same tree, considering their growth patterns. (Piece 1 may have been some years older because its exterior was shaped.) The data point to the use of an ash tree of approximately twenty-eight years old. The upper part of the tree always has fewer annual rings, explaining the difference

between Pieces 4 and 5 and Piece 8. Most of the wood was cut after the growth season, leaving a period between June and February. The wood was quite fresh, without traces of insect channels.

Sample 3 (F49)

Context

The post holes (F49) for the building supported the structure of the medieval house (F71). They were dug into the boulder clay, and the tip of one post survived in one of the holes (F49:10). Waterlogging at the base of the post pit preserved the tip of the post.

Species identification

The post wood came from the heart of a *Pomoideae* (apple-type) trunk with a diameter of 10–14cm and a radius of 6.5cm. The apple-type includes crab apple, wild pear, rowan, service tree and hawthorn. The wood was reddish-brown in colour and was filled with many iron incrustations, implying that it had been in contact with iron-rich water. There were no indications for pruning (presence of curl wood or traumatic tissue). The wood was fast grown, approximately twenty-five years old.

Radiocarbon Dating

Drs Gerry McCormac and Ingelise Stuijts

Introduction

A number of charcoal fragments from F36 were examined to identify the most suitable sample for ¹⁴C dating. The charcoal was retrieved from the large layer of burning (F36) associated with the timber house (F71). Ingelise Stuijts carried out the selection process; Gerry McCormac of Queens University Belfast processed the samples and provided the radiocarbon and calibrated dates.

Sample

A small lump from a roundwood, ash (*Fraxinus*), with a diameter of 3 cm was selected for dating. The roundwood was a stake and is likely to have been used as a structural timber within the building. Some bark was still present; the wood must have been quite fresh. The wood was 14 years old, cut just after spring (sometime in April perhaps) because the big vessels had just been formed.

The sample was very suitable for ¹⁴C dating for the following reasons:

It was of limited age

It was a roundwood with some bark still attached, indicating rather fresh conditions

The wood was certainly not reused timber from an earlier structure or artefact

Dating Results

Sample No:	UB 4371
Material:	Charcoal
Site:	Friar Street, Cashel, Co. Tipperary
Field Identification:	F36; 95E286:36

Delta ¹³ C rel. PDB:	-26.039 ± 0.200
Radiocarbon Age:	614 ± 38 yr. BP
Calibrated Age Ranges:	1 sigma range: cal AD 1289–1397, cal BP 661–553
	2 sigma range: cal AD 1280–1408, cal BP 670–542

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Notes

- 1 See for instance Aubrey Gwynn, *The Irish Church in the eleventh and twelfth centuries* (Dublin, 1992), p. 97-8; Munster rulers continued this association with the site, with Cormac Mac Cárthaig king of Desmond ordering the construction of 'Cormac's Chapel' (consecrated in 1134) and Domnall Mór Ua Briain king of Thomond having a cathedral built c. 1170. Recent discussion of Cormac's chapel and its context includes Tadhg O'Keefe, 'Romanesque as metaphor: architecture and reform in early twelfth-century Ireland', pp. 313-22, and Dagmar Ó Riain-Raedel, 'German influence on Munster Church and kings in the twelfth century', pp. 323-30, in A.P. Smyth (ed.), *Seanchas: studies in Early and Medieval Irish Archaeology, History and Literature in honour of Francis J. Byrne* (Dublin, 2000).
- 2 See Bart Jaski, *Early Irish kingship and succession* (Dublin, 2000), pp. 221-5; T.M. Charles-Edwards, *Early Christian Ireland* (Cambridge, 2000), pp. 596, 597-9; Letitia Campbell, 'Cormac mac Cuilennáin' and 'Fedelmí mac Crimthainn' in Seán Duffy (ed.), *Medieval Ireland: an encyclopedia* (New York & London, 2004, forthcoming).
- 3 B.J. Hodgkinson, 'Cormac's Chapel, Cashel: Church and Graveyard', *Excavations*, 1993, 73.
- 4 A. Thomas, *The Walled Towns of Ireland* (Dublin, 1992), p. 48.
- 5 *Annals of Inisfallen* (Ann. Inisf.), ed. Seán Mac Airt (Dublin, 1944), A.D. 995; Samuel Lewis, *Topographical Dictionary of Ireland* (Dublin, 1837), I, p. 284, notes that local folk memory placed a fortress of Brian's at the corner of Chapel Lane; perhaps some medieval structure in fact stood here.
- 6 *Annals of the Four Masters* (A.F.M.), ed. John O'Donovan (Dublin, 1851), A.D. 1195.
- 7 Ann. Inisf., A.D. 1093, 1118, 1194.
- 8 Close, 3 Henry III, p.2 m.13; *Calendar of Documents relating to Ireland* (Cal. Doc. Ire.), ed. H.S. Sweetman (London, 1877), I, §857, p. 128; *Inspeximus and Confirmation of the Charter of Archbishop Marianus*, in Thomas Laffan, 'Abstracts from the Ancient Records of the Corporation of Cashel', *Jnl. Roy. Soc. Antiq. Ire.*, 34 (1904), 33-4.
- 9 C. Adrian Empey, 'The Norman Period, 1185-1500', W. Nolan (ed.), *Tipperary: History and Society* (Dublin, 1985), p. 77.
- 10 Ann. Inisf. A.D. 1195, 1206.
- 11 Empey, 'The Norman Period', p. 76-83.
- 12 *Ibid.*, p. 85
- 13 Tadhg O'Keefe, 'Cashel', in A. Simms & J.H. Andrews (ed.), *More Irish Country Towns* (Cork & Dublin, 1994), p. 159-60; 'they [the Anglo-Normans] had no difficulty in having Irish men serve there as archbishops ... and archbishops of Irish birth were not averse to getting involved in the Norman colonisation of Ireland'. This seems not to reflect the reality, as far as Cashel was concerned.
- 14 Close, 3 Henry III, p.2 m. 13; Royal Letters no. 58; *Cal. Doc. Ire.*, I, §§ 857, 920, pp. 128, 137; John A. Watt, *The Church in Medieval Ireland* (Dublin, 1972), pp. 110, 112-13, where the author merges the two Ua Longargáin archbishops in the persona of 'Donal O Longargain'.
- 15 Empey, 'The Norman Period', p. 85.
- 16 Ann. Inisf. A.D. 1317; Ann. Clynn s.a. 1318 merely notes the transfer of Walter from Ossory; the archdeacon in question was Tomás Ua Loingsigh.
- 17 O'Keefe, 'Cashel', p. 159.
- 18 as suggested by Empey, 'The Norman Period', p. 85.
- 19 *Ibid.*, p. 85-6.
- 20 see *Inspeximus and Confirmation of Archbishop Marianus' charter*, in Laffan, 'Abstracts from the Ancient Records' 33-4.
- 21 Such an emergency arose in the reign of King Richard III, 1483-5; see Laffan, 'Abstracts from the Ancient Records', 35; and see below discussion on walling of town.
- 22 J. Farrelly & E. Fitzpatrick, 'Cashel', unpubl. O.P.W. Report, p. 41; Sometimes the archbishop's officials could be of English descent, as with Sir David Latimer, reeve of Archbishop Mairín Ua Briain.
- 23 Chart 13 Henry III, p.1 m.17; *Cal. Doc. Ire.*, I, §1633, p. 244-5.
- 24 Empey, 'The Norman Period', p. 75-6.
- 25 *Ibid.*, p. 74.
- 26 Chart 13 Henry III, p.1 m. 17; *Cal. Doc. Ire.*, I, §1633, p. 244-5.
- 27 Letter of Archbishop-elect Eóin Ua Grádaigh, dated to 1332, seeks confirmation of his possessions

- including his *Castrum*; presumably there was a residence at an earlier date; G.O. Sayles (ed.), *Documents on the Affairs of Ireland before the King's Council* (Dublin, 1979), § 178, p. 158.
- 28 A. Gwynn and R.N. Hadcock, *Medieval Religious Houses: Ireland*. new ed. (Dublin & London, 1988), p. 347; O'Keefe, 'Cashel', p. 161-2.
- 29 Gwynn and Hadcock, *Med. Relig. Houses*, p. 223.
- 30 *Ibid.*, p. 244.
- 31 Chart., 5 Edw. I, m.1; *Cal. Doc. Ire.*, I, §1361, p. 252; G.O. Sayles, *Documents on the Affairs of Ireland*, §§ 8, 178, pp. 6, 158; objections to a prison were later raised by Archbishop-elect Eóin Ua Grádaigh.
- 32 Liber A., Chapter House, fo. 416; *Cal. Doc. Ire.*, I, §1361, p. 252.
- 33 O'Keefe, 'Cashel', p. 161-2; Gwynn and Hadcock, *Med. Relig. Houses*, p.347.
- 34 Thomas, *Walled Towns*, p. 47-8.
- 35 Tracey E. Collins, 'The Medieval Town Defences of Cashel', *Tipp. Hist. Jnl.* (1997), 126-8.
- 36 E. O'Donovan, 'Friar Street, Cashel', *Excavations, 1996*, p. 99.
- 37 Thomas, *Walled Towns*, p. 48.
- 38 Ann. Inisf. A.D. 1311, 1313.
- 39 Empey, 'The Norman Period', p. 75, 88-9.
- 40 James Carney (ed.), *Topographical Poems* (Dublin, 1943).
- 41 *The Annals of Ireland by Friar John Chlynn and Thady Dowling*, ed. Richard Butler (Dublin, 1849), sub anno 1421.
- 42 Laffan, 'Abstracts from the Ancient Records', 35; above n. 21.
- 43 Thomas, *Walled Towns*, p. 46; see further discussion of plant remains by Penny Johnston, below.
- 44 Gwynn and Hadcock, *Med. Relig. Houses*, p. 223, 244. The Franciscan site is presumably represented by the Td. of St. Francisabbey
- 45 Thomas, *Walled Towns*, p. 48.
- 46 T. O'Neill, *Merchants and Mariners in Medieval Ireland* (Dublin, 1987), p. 58-9; see further discussion of bone remains by Andrea Cremin, below.
- 47 F. Kelly, *Early Irish Farming* (Dublin, 1997), p. 71-3.
- 48 O'Neill, *Merchants and Mariners*, p. 59, 61.
- 49 Confirmation of a Grant by the Dean of Cashel, *Calendar of Ormond Deeds*, ed. E. Curtis (Dublin, 1932-5), volume I: 1172-1350, §148, p. 66; see further discussion of wood and its role in house-building by Edmond O'Donovan, below.
- 50 R. Simington (ed.), *The Civil Survey A.D. 1654-56, The County of Tipperary*, volume I (Dublin, 1931), p. 225.
- 51 Laffan, "Abstracts from the Ancient Records', 34.
- 52 O'Keefe, 'Cashel', p. 161-2.
- 53 S. Stephens, 'Main Street Cashel', *Excavations, 1990*, p. 51; B.J. Hodgkinson, 'Cormac's Chapel, Cashel: Church and Graveyard', *Excavations, 1993*, p. 73; see further discussion of small finds (some relating to manufacturing industry) by Catherine Johnson and of pottery by Catherine Johnson and Clare McCutcheon, below.
- 54 A.F.M., A.D. 1581.
- 55 Laffan, "Abstracts from the Ancient Records', 34; O'Keefe, 'Cashel', p. 160.
- 56 O'Keefe, 'Cashel', p. 161.
- 57 Gwynn and Hadcock, *Med. Relig. Houses*, p.223.
- 58 *Ibid.*, p. 244.
- 59 Lewis, *Topographical Dictionary*, I, p. 284.
- 60 Thomas, *Walled Towns*, p. 46.
- 61 *Ibid.*, p. 47.
- 62 Farrelly and Fitzpatrick, 'Cashel', p. 38.
- 63 Lewis, *Topographical Dictionary*, I, p. 284; Farrelly and Fitzpatrick, 'Cashel', p. 39; *Ibid.*, p. 46, comment on removal of monuments from Franciscan Friary cemetery to C. of I. cathedral.
- 64 For example Archibald Stark, cited in O'Keefe, 'Cashel', p. 165-6; Samuel C. Hall and Anna Maria Hall, *Hall's Ireland: Mr. and Mrs. Hall's Tour of 1840* (orig. publ. London, 1841), new edition, ed. Michael Scott (London & Sydney, 1984), I, p. 158-64.