Paul Stevens describes the excavation of a portion of an Early Christian monastic site in which evidence of metalwork and handbell production has been recovered.

A monastic enclosure site at Clonfad, Co. Westmeath

Excavation in advance of the new N6 Kinnegad–Kilcock dual carriageway revealed a previously unknown large Early Christian and medieval monastic enclosure close to Lough Ennell, Co. Westmeath. The partial excavation (approximately 10%) of the enclosure produced very significant evidence for monastic life and work in the early medieval period and a very large and significant assemblage of Early Christian artefacts, including the largest Irish early historic metalworking assemblage to date and unique evidence of handbell production.

The site, ‘Clonfad 3’, was excavated between November 2004 and February 2005 by the author for Valerie J. Keeley Ltd on behalf of the Westmeath Road Design Office/National Roads Authority. It is adjacent to the present NS2, 2.5km north of Tyrrellspass, Co. Westmeath (NGR 240599/240591), near a disused graveyard and ruined church (RMP WM 032:089). Burial in this graveyard ceased in 1969 and the gravestones date back to 1793.

Background
Clonfad (Chluain Fada, ‘the long meadow’) was strategically located at an elevation on the eastern slope of a low hillside, surrounded by low-lying bogland, to the south-east of Lough Ennell (above), which historically formed the western border of the territory of Meath. The early historic monastic origins of this site appear to lie in the late sixth century; it was founded by Bishop Etchen some time before his death in 578. It is mentioned in the mid-eighth century and again in 799, and the Annals of the Four Masters describe it as being burnt and desecrated in 887. Before excavation the site was only visible as a simple ruined stone.
church within a circular stone-walled graveyard, lying to the west of the road corridor and outside the excavation area.

During the second half of the sixth century there was a rapid rise in monasticism in Ireland, with the founding of such important centres as Clonmacnoise, Co. Offaly, Durrow, Co. Offaly, Bangor, Co. Down, and Iona, Argyll (Scotland). During the seventh and eighth centuries Ireland became a predominantly Christian country, with increasing power struggles between rival power bases. This, together with the rise of the 'cult of the relic' in the seventh century, led to the reorganisation of the early monastery and the construction of enclosures or valla around the ecclesiastical sites, whose interiors were organised to encompass the varying needs of the population: monks, clerics, lay people, craftsmen and pilgrims. The valla frequently enclosed large areas and were usually curvilinear, with two or three concentric enclosures. Churches were usually in the central enclosure or in separate enclosures around the site.

Excavation
The excavation of the proposed road corridor measured 130m in length and 30-40m in width, and encroached on only part of this very large site. At least two concentric ditches enclosing the innermost

walled graveyard and church were revealed. The outer ditch is estimated at 200–220m in diameter (enclosing approximately 1.25 hectares/3.08 acres), while the inner ditch was approximately 100–110m in diameter. Both terminated at an old stream course to the south, but the line of the outer enclosure is traceable as a faint earthwork in the field to the west. If proved to be contemporary, both ditches would have enclosed the church and graveyard, which would then form the innermost concentric enclosure, itself measuring 47–50m in diameter, thus making Clonfad a relatively large trivallate enclosure, typical of a medium- to high-status Early Christian monastic site.

The excavation revealed ecclesiastical occupation dating from the Early Christian period to the medieval period, and later secular occupation in the post-medieval period. The early monastic phase (phase 1) was delimited to the south by a pre-existing stream and to the north by a very large, curving enclosure ditch. The interior was further subdivided by two internal enclosing ditches that drained into the stream. This phase produced structural occupation evidence such as wells, refuse-pits and post-holes, as well as a very large artefact and faunal assemblage, including evidence of bone/antler comb-making and other bone-working, and around 2 tonnes
of metalworking waste that provided evidence for large-scale iron-smithing, handbell-brazing and fine bronze-working activity. A second, later monastic phase in the Anglo-Norman period (phase 2) was far more sparsely represented; it consisted of both the existing medieval church (RMP WM032: 089, outside the CPO/excavation area) and two stone-lined corn-drying kilns, which produced datable medieval material. Two further undated kilns and a sub-adult Christian inhumation may also relate to the ecclesiastical phase(s) of activity. Finally, post-medieval activity (phase 3) followed the abandonment of the church site and the creation of the existing walled graveyard, the construction of a large courtyard and dwelling, and the associated reorganisation of the field boundaries around the graveyard and surrounding area. The building was then abandoned and demolished in the twentieth century (phase 4), whilst burial in the graveyard continued until 1969.

Artifactual assemblage

Preliminary analysis of the artefacts points to a general date range from the sixth to the tenth century AD for the occupation of this site, with a second smaller assemblage of thirteenth/fourteenth-century material and some late seventeenth-century to twentieth-century material.

Over 600 finds were recovered from this excavation, with a range typical of a large, high-status Early Christian site. The majority of the stratified artefacts were recovered from phase 1, the Early Christian features and layers. Moreover, the lower fills of the large outer enclosing ditch produced over half the assemblage, with additional material recovered from wells and pits inside the enclosure. A limited number of medieval finds were also produced. A large number of objects associated with iron-smithing were revealed. A metal-detector survey also produced a large quantity of unstratified, mostly ferrous metal artefacts. The finds assemblage included iron tools, blades and a ringed pin, a bronze ringed pin, coins, bone pins, antler combs, rotary quern stones, rotary grinding stones and a lignite bracelet. Significant evidence for iron-smithing, fine metal- (bronze-) working, bone/antler comb and button/bead manufacture and some evidence for textile production was revealed. Two burials were also recovered from this site, that of a child lying east-west and supine, and a fragment of ex situ skull from a plough furrow. Post-medieval finds included seventeenth-century gun-money, onion-shaped wine bottles, red and black earthenware pottery, china and delftware pottery, and clay pipe stems.

Industrial residues

Perhaps the most significant element of this excavation was the recovery of nearly two metric tonnes of archaeometallurgical residues—one of the largest Irish metalworking assemblages recovered from a site of this date. This included the unique discovery of evidence for production of wrought-iron handbells: pieces of vitrified clay have been identified by archaeometallurgy specialist Tim Young as the coating from brazing of type 1 wrought-iron handbells: 'This is of enormous significance as such handbells formed an important symbol in the Celtic church, from the seventh century to the tenth century. Although widely distributed across the area of influence of the Celtic church (Wales, Scotland, Ireland), they are most common in the Irish south Midlands. The thin, non-ferrous coating on the iron bells has not been studied in detail, but the Clonfad evidence suggests for the first time that it was applied by brazing.' Other diagnostic material—particularly smithing hearth cakes attributable to iron-working, together with pyramidal ceramic crucibles, stone/clay moulds, large tuyères, baked clay, vitrified clay and amorphous iron slag and bog ore deposits—was recovered from both the outer ditch fills and the vicinity of large furnace bowls in one large dump at the stream's edge. Although no evidence for iron-smelting was recovered, it is postulated that the site was producing secondary blooms (ballets) for smithing. Most of the material was stratigraphically dated to the early historic phase, although at least one smithing hearth (which produced a seventeenth-century coin and numerous pieces of hammer scale) was post-medieval in date.

Discussion

Although this excavation examined only about 10% of the total enclosure, it has produced evidence of multi-period occupation, both ecclesiastical and secular, as well as a very large and significant assemblage of Early Christian artefacts. The site's history probably stretches from the
sixth century, and it continued to be in use to some extent as a burial-place until the 1960s. This excavation produced a probable trivallate enclosure larger in size than Nendrum, Co. Down (excavated in 1922–4 by Lawlor), 183m in outer diameter, and half the size of that at Armagh city excavated by Lynn, Galley and Harper, estimated at 360–480m in outer diameter, with a middle ditch 200m in diameter surrounding the summit of the hill.

Evidence of handbell production is unique to this site to date. However, bronze-working is also evident at Clonfad from the presence of fine objects such as ringed pins, crucible fragments, ingots, moulds, sheets and corner strips, offcuts and stone moulds. It is likely that much of the fine metalwork was for church plate and composite items such as shrines, although material may also have been produced for the wider community. Copper-alloy-working was also noted at Garryduff I, Co. Cork, Movilla Abbey, Co. Down, Moynagh Lough, Co. Meath, and Clogher, Co. Tyrone. Garranes, Co. Cork, also produced pyramidal crucibles, stone ingot moulds, bone artefacts and pins similar to those from Clonfad. Evidence for bone- and antler-working is very common from Early Christian sites, and large collections of bone pins are known from Lagore, Co. Meath, Ballinderry, Co. Offaly, and Cahercormaun, Co. Clare, which also yielded perforated discs similar to that found at Clonfad. The range of bone

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presence of a well-beater, used in textile manufacture, and a pair of iron shears may also indicate wool production on the site.

Clonfad did, therefore, produce considerable insight into early monastic life in Ireland, with significant evidence for iron-working, handbell-making, ornamental bronze-working and bone-working, as well as arable farming and textile-processing. Personal items such as two ringed pins, a lignite stone bracelet and several bone and antler combs are among the finer artefacts to be recovered. As such, the Early Christian assemblage from Clonfad is typical of a high-status site of the period. Similar collections are known from secular royal sites at Moynagh Lough, Co. Meath, Garranes, Co. Cork, and Lagore, Co. Meath, and from ecclesiastical sites such as Armagh, Movilla Abbey, Co. Down, and Clonmacnoise, Co. Offaly. However, many questions remain as to the wider nature of the site, its level of influence and trading network, the date range of its occupation(s), and the nature and extent of the industrial processes carried out there. Much work is still left to do on the iron-working activity on the site, which may have important implications for the wider study of early Irish metalworking. Analysis is still at a preliminary stage, but an intensive programme of analysis and dating will begin in early 2006.

Opposite page: One of the medieval kilns under excavation.

Above: Medieval kiln after excavation.

Below: An array of bone artefacts from the site.

items—from faint circular incisions on jaw bones and scapulas, to deeply scored pieces, to fully removed perforated discs or beads—suggests that this was an industry producing circular beads or perforated discs. The

Archaeology Ireland Summer 2006