



RUN OF THE MILL?

Excavation of an early medieval site at Raystown, Co. Meath

Matthew Seaver, archaeologist and project manager with CRDS Ltd, describes the extensive discoveries made in advance of the N2 road realignment in County Meath.

Raystown is a small townland just north-west of the nine mile stone, a famous marker on the N2 turnpike, south-west of the rapidly expanding town of Ashbourne, Co. Meath. Archaeological excavations on a greenfield site by CRDS Ltd on behalf of Meath County Council and the National Roads Authority in advance of the N2 road realignment have uncovered, among other sites, an exciting early medieval complex occupied for between 500 and 600 years. The

complex consists of multiple enclosures, a cemetery, kilns, furnaces and the remains of at least eight watermills, along with their associated complicated watercourses.

The site can be found up a narrow lane off the Swords to Ratoath road and sprawls over a long north-south boulder clay ridge. This was bounded to the west by waterlogged ground and to the east by a branch of the Broad Meadow River. This stream is one of numerous sinuous branches of a river system known in Irish as *An Gabhar*, which flows from Lagore Bog eastwards through Ratoath before joining another branch at Killelland near Ashbourne. To the north the site is bordered by another

branch of the same river, thus enclosing the irregular block of land containing the site with watercourses. Initial traces of the site were uncovered during the route assessment stage following an aerial and geophysical survey that revealed a complex of anomalies at least 160m north-south by 210m east-west. This survey included a large area on either side of the road corridor, which was up to 60m wide and covers about a third of the overall complex. Subsequent test-trenching of the road corridor confirmed the presence of a large early medieval site. Excavations took place between November 2003 and January 2005.

Above: Northern habitation area under excavation.

(Photo: Hawkeye)



KEY
Excavation area
CPO

Geophysical
survey data



Above left: **Aerial photograph of the site prior to excavation.** (Photo: Meath County Council)

Above: **Aerial photograph of northern area of Raystown during excavations.** (Photo: Studiolab)

The research programme centred on the excavation involves interpreting the remains of the site, including the written archive, drawings and photographs, palaeo-environmental samples and artefacts. Ongoing work is also focused on placing the site in its landscape context through maps, site types and other excavations.

Enclosing the dead—the cemetery

The crest of the ridge was ringed by two concentric enclosures that contained a cemetery. The inner, shallow penannular enclosure measured c. 20m in diameter and was surrounded by a larger oval space, 50m in diameter, defined by a ditch that was recut numerous times. The 93 burials were in shallow graves and ranged from east/west to north-west/south-east in orientation. They were concentrated within the inner enclosure, but groups were buried both outside and cut into the ditch on the southern and eastern sides. The southern group contained a significant percentage of children.

AMS radiocarbon dates have been obtained for fourteen burials from different locations and suggest a range between the early fifth and late tenth centuries AD. The dating programme suggests that people were buried both inside and outside the enclosure from an early stage, perhaps implying different groupings. A number of individuals were buried with grave-goods, including a ringed pin, a spiral copper-alloy finger-ring and a knife. One child had a blue glass bead at the neck, probably an amulet to ward off evil. Some of these artefacts indicate that people

were buried clothed.

A total of 93 articulated skeletons were analysed by osteoarchaeologist Linda Fibiger and comprised 68 adults, three adolescents, twenty juveniles and two older infants/very young juveniles. Over 70% of all sexed adults were in the 'old middle adult' (36–45 years) or 'mature adult' (45+ years) age categories, with most of the remaining individuals aged between 26 and 35 years. A further minimum number of 40 individuals were indicated by disarticulated bone disturbed through grave-digging or later agriculture. The ratios of male to female burials were approximately equal where sexing was possible, implying a very mixed community.

A range of pathologies were identified, many indicating the physical hardship of manual work. These included, most commonly, degenerative bone conditions such as osteoarthritis and spinal problems, indicating heavy lifting and upper body movement. A significant number of fractures and broken bones were observed, along with smaller numbers of people with indications of dietary deficiencies such as scurvy and rickets. Adults frequently suffered from tooth loss and abscesses, a factor influenced by the percentage living to a relatively old age. Systemic infections, which probably include tuberculosis, affected 10% of adults and 22% of children. This may have been particularly common owing to close contact with animals. Evidence of turbulent times is provided by two men in their twenties or early thirties who had large numbers of unhealed blade, probably sword, injuries. In one case the lower jaw and

neck had been struck, while the second case involved injuries to the pelvis, left and right ribs, and left and right shoulder. An unusual north-south burial was found haphazardly arranged in a probable kiln containing charred cereals and covered in stones. While the cause of death could not be determined, this young person (possibly male) seemed to be an outcast.

The living

To the north of the cemetery was a yard area paved with small compacted stones and cut by various gullies, pits and post-holes. This was littered with animal bone and artefacts including a horse-bit, bone pins, a socketed and pronged tool and knives. This yard was probably associated with buildings. Two souterrains, underground passages used for refuge and/or storage, were excavated. The first had a narrow constricted passage leading to a rounded chamber. It contained frequent post-holes and was clearly wooden, although the entrance was subsequently rebuilt in stone. The second was stone-built and had a sloping passageway leading to a large rectangular chamber. This had a rear exit through an unlined ramped passage. The cemetery and the habitation area were later enclosed by a large subrectangular ditch. Ditches radiated out from the large enclosures forming boundaries/drains that were maintained over long periods of time.



A stone-lined kiln was located within this enclosure, and large quantities of charcoal and charred cereal were washed through the ditch and ran down the hill. A horse-bit was found in the base of the ditch and the only parallel is an identical example from Lagore crannog. This lake fortress, c. 7km from Raystown, was the royal centre for the sub-kingdom of Southern Brega.

Serial milling

As work continued on the site, it became clear that milling and the preparation of cereal dominated the archaeological remains. Five figure-of-eight drying kilns were excavated, and flotation of the soil revealed large quantities of wheat, oats and barley. A surprising total of eight mills with associated watercourses and ponds were excavated. It is possible that pairs of mills operated together owing to similarities in design and the fact that millraces defined the limit of the core settlement. The mills were fed by water from a source to the west of the road corridor

indicated on the geophysical survey. The water subsequently ran through the mills and continued through tailraces to the stream to the east. To the north two millraces and mill undercrofts were uncovered. The millraces were engineered and levelled to allow slow movement of water to be delivered to the area in front of the mill dam. To do this the builders had to cut up to 2m into the hillside in order to reach the water source. A complex of five intercutting mills was identified at the south and a further example at the centre of the site. The built remains consisted of a wooden and/or stone undercroft that supported the original upper mill building. No millstones or wheel remains were found.

In the later of the northern mills rubble-built stone walls were located over wooden baseplates that had rectangular mortices on either end to support wooden uprights. These were lap-jointed into a transverse timber that had an adze-cut slot to rest the flume. The flume or penstock was a wooden delivery mechanism that allowed water to gain pressure before hitting the horizontal wheel. No wheels or flumes were found during excavations, and it is likely that they were removed along with the millstones. Another timber contained a slot and dowel hole that allowed a timber known as a bridge sole to be pinned into position. The bridge sole would have contained a niche that supported the horizontal wheel and the shaft that turned the millstones. A timber from this mill was dated to cal. AD 887–1017 (UB-6524).

The southernmost mill contained an *in situ* bridge sole that showed evidence for several resettings of the wheel. In this case the upper mill structure was supported on three oak posts and one willow post. Some of the mills had bypass channels that allowed drainage of excess water from the dams to prevent damage and flooding. While tree-ring sequences were too short to obtain dendrochronological dates, oak timbers from three of the southern mill structures were radiocarbon-dated to cal. AD 660–782, 653–730 and 763–895 (UB-6521–6523).

The appliance of science—making sense of the samples

Excavations from the remains of the site at Raystown recovered c. 700kg of animal bone, c. 6200kg of soil samples, pollen cores and 135 timber/wood samples. Discussions between excavators and specialists are ongoing to allow

realistic analysis of the material in order to interpret the range of human activities on the site. The key criteria are the context and quality of the sample relative to the information required. On a site where people have lived for prolonged periods of time bone, wood and charred plant remains from earlier periods can be disturbed and deposited in later contexts. This requires a critical approach in the analysis of samples. A total of 900 artefact types were recovered, largely comprising tools and utensils such as knives, socketed tools, horse-bits, spindle-whorls, hone stones and rotary querns, and personal objects such as glass beads, lignite bracelets, bone combs, and bone, iron and copper-alloy pins. Conservation and examination of these are ongoing.

Forgotten lives—the interpretation of Raystown

In the twelfth century, after 500 years of occupation, Raystown was abandoned and left no folklore or historical resonance, despite an active folklore tradition that protected many Irish archaeological sites of the period, such as ringforts, church sites and holy wells. Even the name of the townland evolved from an Anglo-

Above left (top): Burial at Raystown.

Above left (bottom): Unlucky or unusual?

Below (top): Northern mill 2 at Raystown.

Below (bottom): Southern mill complex. (Photos: CRDS)





Above (top): Through the mill — southern mills 4 and 5.



Above (bottom): Western souterrain under excavation. (Photos: CRDS)

Norman landlord, its Gaelic name lost without trace. How can the remains at Raystown be interpreted and placed in context?

Raystown is a site where the first burials took place in the transitional period between the old belief systems and Christianity. It is in an area close to early church sites associated with St Patrick and his associates at Dunshaughlin and Donaghmore. There is no known church site or church remains associated with Raystown. In recent years a significant number of excavated early medieval sites have yielded burials, some of which were contained within enclosures. Many of these are associated with outer enclosures, settlement, kilns and sometimes souterrains. Examples include Ninch, Co. Meath, and Balriggeran, Co. Louth. Few of these sites can be positively linked with church sites through archaeological or historical evidence.

It has been suggested that burial took place at ancestral burial-grounds up until the eighth century. Burial at Raystown continued into the tenth century. An emerging trend seems to be the establishment of burial-grounds for mixed communities in the fourth/fifth century during the transition period to Christianity. There is an obvious difficulty in determining whether these are pagan or Christian burial-grounds owing to the widespread adoption of east-west burial in the later Roman period.

Some of these sites may have become church sites while others remained largely farm sites. It is possible that some belonged to secular lords, such as those resident at Lagore, or to significant monastic centres such as Dunshaughlin.

Archaeological and historical research provides extensive evidence for early medieval mills in Ireland, but not for the context of their operation. The dominance of cattle as a currency in the historical record has perhaps led to an under-emphasis on the role of cereals. Many excavations and discoveries of mill sites in Ireland were a result of drainage work, and archaeological work was often restricted to the immediate environs of the mill, leaving the surrounding context unknown. A number of Irish and British early medieval sites have yielded multiple mill sites. In most of these cases, except for Little Island, Co. Cork, the multiple mill structures are replacements for early mills.

There are no immediately comparable sites for the Raystown complex in this respect. The large scale of the work involved in digging the millraces and the repeated attempts to reach an ideal arrangement for milling demonstrate the resources available to the builders of the site and the desire for significant quantities of milled cereals. They also demonstrate an unwillingness to move to a more suitable location for milling, perhaps because the landholders did not have that option or because the presence of the cemetery secured their possession of the land. The obvious question is whether this cereal was for consumption on site or whether it was processed and redistributed into a wider economic network; this may be addressed through analysis of recovered grain and weeds. It seems likely that a millwright was involved in the layout and construction of the mill. These individuals are mentioned in documentary sources as having the same honour-price as shipbuilders.

Right: Sketch of construction of one of the mills.

Summary

While the post-excavation programme is ongoing, the results of analysis have added to the study of early medieval Ireland. The interim findings show that Raystown became a place of burial during the transition to Christianity, the act of interring people in the soil at the heart of the settlement fixing its presence in the landscape. While the inhabitants established and defined their core living space, they developed a large farm engaged in the long-lived production of animals and cereal on a significant scale. Indeed, those living within and without may have perceived the site as being defined by mills. The act of forgetting suggests that the site was in decline prior to the Anglo-Norman invasion. The interpretation of this and other similar sites will significantly add to our knowledge of the archaeology of early medieval Ireland.

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