

## **8. Through the mill—excavation of an early medieval settlement at Raystown, County Meath**

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On a long, low ridge in the small townland of Raystown, Co. Meath, west of what is now Ashbourne, people began burying their dead in an enclosed cemetery in the early fifth century AD. This place was to endure for at least 600 years as a large farming settlement. The building and maintenance of a remarkable series of watermills and watercourses and the production of cereals defined the lives of generations before the site became disused sometime in the 11th or 12th century.

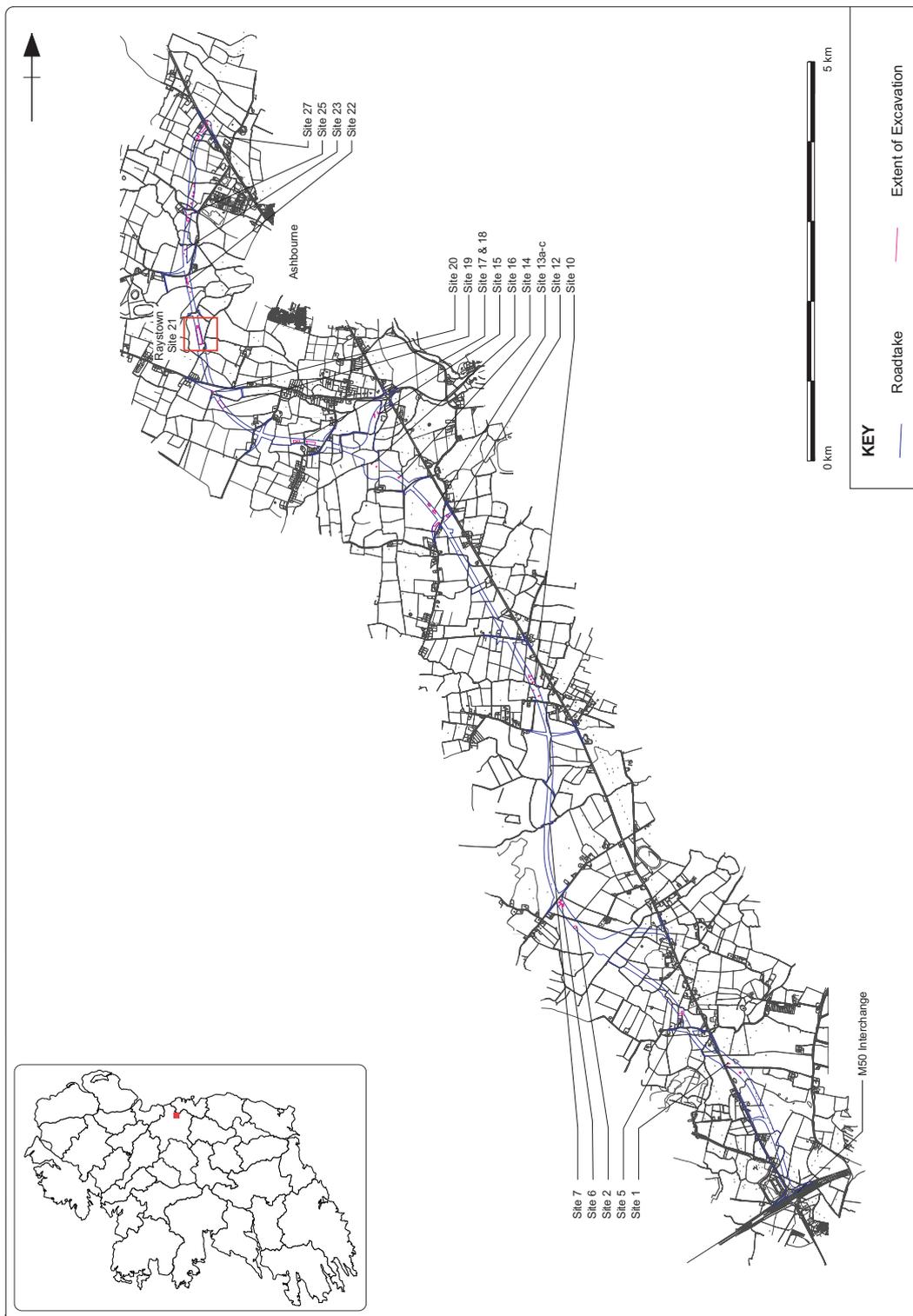
Excavations in 2004 and 2005 by Cultural Resource Development Services Ltd (CRDS Ltd) in the road corridor of the N2 Finglas–Ashbourne road scheme uncovered the extensive remains of this settlement (NGR 304976, 251474; height 65–71 m OD; excavation licence no. 03E1229 extension; ministerial direction no. A011). This route bypasses the growing town of Ashbourne. Raystown was one of 20 sites (Illus. 1) excavated on behalf of the National Roads Authority and Meath County Council (see FitzGerald, this volume). This paper aims to outline the results of the excavation of this unique site and to illustrate its potential to add to our knowledge of early medieval Ireland.

### **Discovery**

The site is in the barony and parish of Ratoath, between the towns of Ashbourne and Ratoath. It is situated c. 350 m north of the east–west road between Swords and Ashbourne. This was a medieval communications route from Dublin to Trim and was used by King John in 1185 (Orpen 1911, 247). The importance of the road declined after the construction of the north–south turnpike road in the 18th century, which became known as the N2. The site is centred on a north–south ridge in an area of relatively low-lying land, criss-crossed by numerous streams (Illus. 2). It is bordered to the east by a stream, which farther north enters the Broad Meadow River, and to the west by low-lying, sometimes waterlogged, ground. This leaves the site bounded on three sides by water. The site was discovered by GSB Prospection Ltd during an extensive pre-development geophysical survey of selected areas in 2002. The survey suggested that the site, which extended beyond the road corridor, covered an area measuring at least 160 m east–west by 250 m. Trial trenching and initial excavation by Judith Carroll Network Archaeology Ltd in 2003 confirmed the presence of a significant early medieval site. The entire area within the road corridor, approximately one-third of the overall site, was subsequently excavated by CRDS Ltd.

### **History and landscape**

It is important to place the site within its contemporary early medieval landscape: it lay in the ancient kingdom of Brega and in the sub-kingdom of Deisceart Breg (Southern Brega). This important early kingdom, which may have evolved in the seventh century, was later



Illus. 1—Location map showing Raystown (Site 21) and other sites identified on the route of the N2 Finglas–Ashbourne road scheme (CRDS Ltd, based on Ordnance Survey Ireland map)

incorporated into the expanding kingdom of Mide (Charles-Edwards 2000, 234; Bhreathnach 1999, 3). Southern Brega was in turn divided into a number of smaller territories, whose extents correspond with the later barony boundaries. The barony of Ratoath relates to the area held by the Mac Gilla Sechnaill (Clann Chernaig Sotail), a family of the Southern Uí Néill dynasty.

In the immediate area the physical remains of this period survive both as sites listed in the Record of Monuments and Places (RMP) and as sites discovered through archaeological excavation. The kingship of Brega was centred on the royal stronghold at Lagore crannóg, an artificial island in a lake close to Dunshaughlin, excavated in the 1930s. Christianity was introduced to the area in the fifth century, and missionaries linked to St Patrick founded churches at Dunshaughlin (RMP No. ME044-003), Trevet (ME038-017) and Kilbrew (ME038-023). Raystown is close to early church sites at Donaghmore (ME045-008) and Killeland (ME045-002 & -003). Both sites incorporate underground passages known as souterrains. Another souterrain is known from Baltrasna (ME045-022-06). Another church site of unknown, but at least medieval, date can be found at Cookstown bridge (ME045-001). (All of the sites noted above are 1–9 km from the Raystown site.)

Ringforts, the ubiquitous monuments of the period, are relatively sparse in the area. These were circular, ditched farmstead enclosures, often set within their own fields. Owing to ploughing and clearance, many of these monuments have been levelled and are identifiable only through aerial/geophysical survey, careful observation of field patterns, accidental discovery or archaeological excavation. Probable examples can be found at Killeland, and a further enclosure (Site 22) in the same townland may also be a ringfort. The N2 realigned route passes close to the latter site, and a number of kilns and furnaces were excavated nearby and are likely to be late Iron Age/early medieval in date. (Site 22 was excavated by Laurence McGowan under excavation licence no. 03E1327.) Part of another large ringfort (Site 25) was also excavated on the route at Cookstown. (Site 25 was excavated by Richard Clutterbuck under excavation licence no. 03E1252.)

## **The excavated site**

The excavations at Raystown uncovered a burial ground enclosed by a series of concentric ditches, as well as two areas of domestic activity, one of which incorporated two souterrains. Outside this core area were a large number of radiating boundary and drainage ditches, clusters of cereal-drying kilns and the remains of at least eight watermills and the large watercourses that powered them (Illus. 3 & 4).

### *Secrets from the grave*

The burial ground at Raystown was centred on the top of a ridge, and approximately half of it was within the road corridor. There was no excavated evidence for an entrance, but geophysical survey suggests that this was on the western edge, beyond the road corridor. A further concentric enclosure, measuring 50 m across, was defined by a more substantial ditch, which had been recut on numerous occasions.

The presence of a burial ground always makes the actions of humans in the past seem more tangible, and excavations here recovered 93 articulated burials. Grave-digging and



**KEY**  
Excavation area ———  
Roadtake ———  
Geophysical survey data ———

Illus. 2—Aerial photograph of Raystown with topographical contours at 1 m intervals (white lines) and geophysical survey data (blue lines) (CRDS Ltd and GSB Prospection Ltd)



Illus. 3—Plan of Raystown showing geophysical survey data and excavated remains (CRDS Ltd and GSB Prospection Ltd)

later agriculture had disturbed at least a further 40 burials, which were indicated by disarticulated bone scattered through the soil. Sometimes this was placed in clusters known as charnel deposits, in which bones disturbed during grave-digging were stacked, either in the grave or in a separate pit. Radiocarbon dates obtained from the human bone indicate burial between the early fifth and the late 10th century (for details see Appendix 1). The burials were in simple, shallow and mostly unlined graves, and the skeletons were generally aligned with heads to the west. The tightly bound postures of a number of skeletons suggested that these people had been buried in shrouds. Others may have been dressed differently for burial: objects such as an iron knife and an iron pin (probably ringed) may indicate this. Other objects found included a copper-alloy ring and, perhaps most poignantly, a blue glass bead at the neck of a child. The practice of including personal objects, jewellery and dress-fasteners is seen in other, contemporaneous burials in Britain and Ireland (O'Brien 1999, 179–84).

The human bone was analysed by osteoarchaeologist Linda Fibiger. The burials comprised 68 adults, three adolescents, 20 juveniles and two older infants. During this period children frequently did not live beyond four years of age. The percentage of juveniles and infants is very low, and neonatal babies (babies from birth to four weeks) are absent from the Raystown burials, suggesting that they may have been buried elsewhere. The majority of children at Raystown who had died at between one and eight years of age were buried in a specific area to the south of an inner ring-ditch. Of the adults at Raystown, 70 per cent had lived beyond 36–45 years, and women had lived longer than men. Measurements of stature showed that women were taller than those on comparable early medieval Irish sites, perhaps owing to diet and/or hereditary factors. Chemical analysis of isotopes laid down in bone during life indicated that the diet at Raystown was mainly land-based.

Disease was a factor of everyday life, and relatively high numbers of adults suffered from systemic infections such as tuberculosis. These would have been more prevalent than the skeletal remains suggest, as only severe cases leave impacts on bone. The close proximity of large numbers of animals would have contributed to the spread of disease. Lifestyle and work also directly affected human bone. This could be observed in patterns of degenerative joint disease in men, with compression of the lower spine indicating heavy lifting, while women had degenerative changes of the neck, suggesting repetitive back-and-forth movement. Women generally suffered more than men from non-spinal joint disease. The exception to this pattern was that men had higher levels of joint disease in the wrist and shoulder on their less dominant side. The archaeological evidence suggests many activities that could have caused these patterns in women and men, including hauling timbers and stones, digging for mill-races, reaping, threshing, food preparation and tending large numbers of animals.

A number of burials demonstrate the violent nature of early medieval Irish life. Two male burials had cuts to the bone, indicating blade trauma. One had been struck on the neck and jaw, and the other had more than 108 cut-marks all over his body. Although this translates into a smaller number of injuries, as each wound could leave multiple impacts, it suggests a ferocious attack indicative of armed combat.

Unusual burial practice was also in evidence. A male burial was inserted in a former drying kiln, a considerable distance from the other burials. Unlike the other burials he was covered with stones and laid in a north-south position on his right side with legs flexed.



Illus. 4—Aerial photograph of the north-eastern part of the Raystown site (CRDS Ltd and Studio Lab)



*Illus. 5—Unusual burial in the remains of a kiln on the edge of the enclosure. This man was buried a considerable distance from the other burials and was laid in a north–south position (CRDS Ltd)*

The outer burial enclosure later cut through this burial (Illus. 5). Why was he deliberately placed away from the other burials and treated differently?

### *Living*

On either side of the cemetery were dense areas of settlement. To the north was an area paved with small stones. It was littered with animal bone and artefacts such as bone and iron pins, needles, iron tools and a horse bit. Gullies and post-holes suggested a structure, possibly a house, and a small stone-built cereal-drying kiln. Two souterrains were uncovered in this area (Illus. 6). The first had a narrow, low, winding passageway leading to a rounded chamber. It was initially timber-built, with the entrance having been replaced in stone. Wooden souterrains are relatively unusual in County Meath. The second souterrain was stone-built and had a corbelled roof. It had a narrow passageway leading to a large, rectangular chamber. This structure had a rear exit through a lintelled opening (Illus. 7). It is not known which souterrain was built first, and scientific dating is currently under way.

It is clear that the souterrains were later additions to the settlement. This area of Brega was originally thought to have had relatively few souterrains (Clinton 2001, 38), but excavations are now suggesting a complex picture. The northern settlement area and the cemetery were later enclosed by a large, subrectangular enclosure (Illus. 4), indicating that the people felt the need to distinguish this area of the site from the farming activity outside. To the south of the cemetery was a dense pattern of gullies, hearths and a probable house site.



*Illus. 6—Excavation in progress of two souterrains in the northern area of the Raystown site (Hawkeye)*



*Illus. 7—Souterrain in northern area with rear exit through lintelled opening, with inset of excavation in progress (CRDS Ltd)*

*After the harvest—grain and grinding*

Features relating to work and production, with field enclosures, possible livestock enclosures, kilns and mills, dominated the land outside the cemetery and settlement areas. Ditches radiating out from the core enclosures subdivided it. These ditches ran downslope and would have formed drains and boundaries. Several of them had been recut numerous times over the centuries. Repeated actions such as recutting boundaries suggest that the inhabitants strictly maintained and controlled the way that land was divided.

Five cereal-drying kilns were found in these outlying areas. They were all figure-of-eight-shaped pits. These structures, found on early medieval sites throughout Ireland, allowed heat to dry cereal crops gently after harvesting and threshing. The surviving pits are the remains of a more complex kiln structure that would have had a clay or wattle superstructure. Processing of the soil from the kilns recovered large quantities of barley, oats, wheat, rye and weed species that had been accidentally charred during drying. The drying was essential in the damp and cold Irish climate. It staved off decay and allowed the grain to be milled more efficiently.

The remains of up to eight watermills were excavated at Raystown, along with the substantial watercourses that fed them. They were concentrated in clusters: two in the northern part of the site, one in the centre and up to five in the southern area. Watermills had been introduced to Ireland by the mid-first millennium AD, possibly from mainland Europe (Rynne 2000, 47). They are known from both archaeological and historical evidence. Watermills revolutionised the processing of cereals, which had previously been ground by hand on quern-stones.

At Raystown the water source was situated a considerable distance to the south of the excavated areas and is likely to have been a natural or artificial channel connecting to the Broad Meadow River. The levels of the mill-races were carefully designed to bring water from the source to the mills. This meant that some of the races had to be cut to a depth of over 2 m into the hillside. The water may have provided a resource for other purposes, such as watering animals, washing and drinking. The mill-races led to the mill, in some cases via a reservoir or a pond, and the water was held in place by an earthen, wooden or stone dam.

The remains of the mills themselves consisted of the undercrofts or wheel-pits (Illus. 8 & 9). The majority used horizontal wheels and were fed water from the race or pond by a wooden chute known as a flume. This allowed water to be directed at force at the wheel, which in turn drove a shaft that turned the millstones in the upper building. This building was supported on wooden and/or stone foundations that survived in the waterlogged conditions in five of the mill sites. The mill buildings were variously supported by large oak base plates, which had carpentry joints to hold upright timbers, by large posts driven into the undercrofts or by stone walls bonded with clay (Illus. 10). Horizontal mills of these types can still be seen operating in parts of the world such as Bosnia, Spain and Portugal and were in common use in Ireland until the 20th century (Moog 1994; Knox 1907).

A vertical undershot mill may also have been present in the southern area of the site. In this type of mill, water runs through a race and enters the mill at the same level as the base of the vertical wheel. This required a gearing system to drive the shaft and millstones. No millstones or wheels were recovered, and it is likely that these were intentionally removed from each structure because of their high value. The mills were radiocarbon-dated to between the seventh and the 10th century AD. (Dendrochronology or tree-ring dating could not be employed because the oak used in the construction of the mills came from



*Illus. 8—Aerial photograph of mills under excavation (Hawkeye)*

fast-growing, slightly warped trees that did not have enough rings.) Owing to the symmetrical arrangement of mill-races on either side of the site, it is possible that pairs of mills were used together. The people of the site were physically and socially defined by them.

#### *Animals*

While the physical remains of the mills are spectacular, animal husbandry clearly played a large part in the lives and subsistence of the inhabitants of this site. More than 700 kg of animal bone was recovered during excavations, and a corral-like feature was noted in the results of the geophysical survey to the west of the site. Analysis of this bone is continuing, but it is clear that cattle, pig, sheep/goat, horse, deer and bird are all represented. Examination of this bone will aim to discover whether differences in the patterns of animal use over the centuries can be distinguished.

#### *End of a settlement*

The current dating and artefactual evidence suggests that the mills, settlement and cemetery had been abandoned by the 12th century. The latest of the mill structures contained a sherd of medieval pottery in the soil that filled the upper part of it. Anglo-Norman settlers arrived

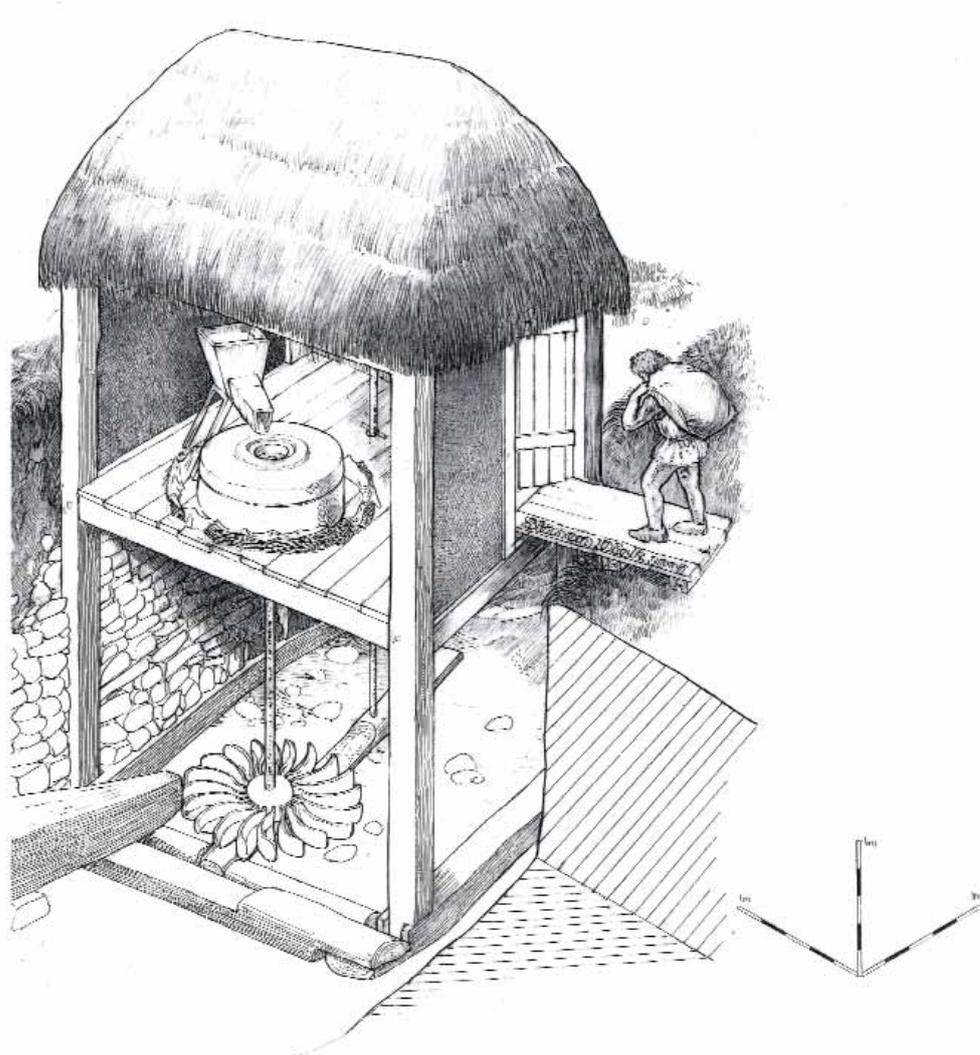


*Illus. 9—Northern Mill 2 under excavation (CRDS Ltd)*

in the area in the late 12th century, and the first mention of the name Raystown is in a 14th-century document, which refers to Walter Ray, a free tenant, with land in Raystown (Orpen 1921, 73). The original name of the townland is unknown, and there are no early medieval references that can be linked to the site. Plough-pebbles, which are small stones for protecting the sides of wooden ploughs, were found during the excavation and suggest that the land continued to be cultivated in the 13th century. The recovery of a small number of medieval potsherds and an iron candleholder suggest continued occupation nearby.

### **Towards meaning**

Raystown clearly has a fascinating tale to tell and raises a number of important issues. The earliest dated activity is the burial of the dead. Cemeteries form powerful symbolic places in the landscape and signify spiritual claims to the land. Burials began in Raystown at approximately the time when the first Irish Christians sought a bishop from Rome. Burials of a relatively small community continued into the 10th century. There are considerable difficulties in distinguishing Christian from non-Christian ancestral cemeteries. There is also confusion about how ancestral cemeteries were allowed to continue. Circular burial enclosures around burial sites had a long ancestry in Ireland and were used to surround



*Illus. 10—Reconstruction of Northern Mill 2 (Simon Dick for CRDS Ltd)*

groups of inhumations (burials of articulated skeletons) in the early centuries AD. Some of these may have been focused on a central or principal burial. Circular enclosures were also used to surround monastic sites, often including outer settlements. In this sense Raystown is different—only the cemetery was enclosed in the initial phase.

Excavations at Raystown have allowed a close examination of the context of milling in early medieval Ireland. The Raystown community lived through the building, maintenance and use of mills. Mills have often been recovered in small-scale excavations but can rarely be placed in context with their surroundings. In recent years a strong link has emerged between church sites and large-scale milling. Monastic and ecclesiastical sites such as Nendrum, Co. Down, and, on a smaller scale, Killoteran, Co. Waterford, (Murphy & Rathbone, this volume) used watermills to process cereals. In these cases the mills were situated at some distance from the monastery. Documentary evidence suggests that farmers, such as those who inhabited ringforts, and religious sites had access to, or a share in, mill



Illus. 11—Reconstruction of Raystown c. AD 900 (Simon Dick for CRDS Ltd)

sites. The mills were central to life at Raystown and suggest that the people needed to maximise the potential of the location through the power of water, even if it meant engineering complex and labour-intensive watercourses, probably with specialist assistance. Millwrights are well attested in early medieval documents and held the same kind of status as shipbuilders. All of this suggests planning, control and power.

How does Raystown differ from traditional church sites, which may also have contained a cemetery, settlement, farm and mills? A number of sites have emerged in recent years that include cemeteries, large enclosures and, in some cases, souterrains and mills. None have unambiguous church buildings or associations. These sites have a different range of activities from those at ringforts and are generally of a much larger scale. Indeed their scale suggests that they may have been controlled by larger interests, possibly a significant ecclesiastical site, such as Dunshaughlin, or by local rulers, such as the kings at Lagore crannóg, in the case of Raystown.

## **Conclusion**

The discovery of Raystown on the N2 Finglas–Ashbourne road scheme is a dramatic illustration of how archaeological research can flow from previously unknown sites. Research-based archaeology picks its subject carefully, moving from the general to the particular. The building of roads and the associated archaeological investigations have meant that unknown sites and new site types have emerged. With scientific excavation and analysis these sites can change and initiate research agendas. The site at Raystown tells a fascinating story of a people's efforts to produce food through technology. Moreover, the evidence from this site can be used to discuss power relationships between people, both on the site and within the region. Although the mills are silent, the intentions of those who built them will occupy the thoughts of anyone with an interest in early medieval Ireland for some time to come.

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