

what we found

in brief:

Some of the findings from the scheme:



1. Quern-stone
Quern-stone found within pit at **Scart**.
(Photo: VJK Ltd)



2. Cremation site
Cremated human bone on the floor of a cist at **Knockmoylan**.
(Photo: VJK Ltd)



3. Spearhead
An iron spearhead found during excavation of the multi-period site at **Baysrath**.
(Photo: VJK Ltd)



4. Reaping hook
An iron reaping hook was discovered at **Baysrath**.
(Photo: VJK Ltd)

background

The N9/N10 Waterford to Knocktopher road project is the southernmost part of a new national road linking **Kilcullen to Carlow, Kilkenny and Waterford**.

The scheme involves the construction of 23.5 km of dual carriageway between the Waterford City Bypass and the town of Knocktopher, Co. Kilkenny.

Archaeological works were carried out by **Margaret Gowen & Co. Ltd** and **Valerie J Keeley Ltd (VJK Ltd)** between January 2006 and February 2007 on behalf of the **National Roads Authority** and **Kilkenny**

County Council. A total of 54 previously unknown sites dating from the **fourth millennium BC** to the **19th century AD** were uncovered as a result of this work. Post-excavation analysis of the remains discovered on these sites is ongoing.

This road is built through varied landscapes commencing with the valley of the River Suir in the south. It crosses over the Walsh Mountains between Mullinavat and Ballyhale and then descends into the central lowlands of Kilkenny at Knocktopher. The archaeological investigations have shown a greater density and diversity of sites in lowland areas compared with upland locations. These discoveries are enabling archaeologists and historians to build upon the existing knowledge of man and the environment in this part of Ireland.

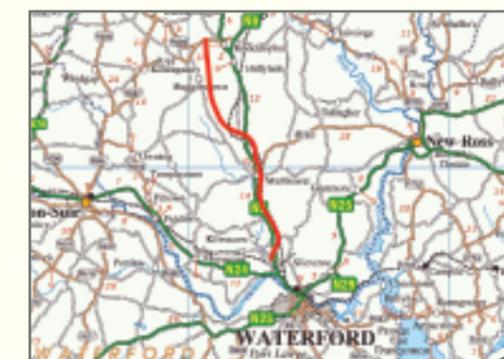


The most common Bronze Age site type encountered during the excavations was the *fulacht fiadh*/burnt mound, of which eight were excavated on the scheme. Here an archaeologist excavates a trough at **Ballykeoghan**.
(Photo: NRA)

**N9/N10 KILCULLEN TO WATERFORD SCHEME:
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archaeological DISCOVERIES

front cover images

LEFT: Archaeologists excavating a skeleton at **Baysrath**. Due to the nature of the soil, burials were poorly preserved.
(Photo: NRA)

RIGHT: The remains of a kiln at **Ballykillaboy**. (Photo: NRA)

MIDDLE: Ringfort and earlier palisade enclosure discovered at **Baysrath**. (Photo: AirShots Ltd)



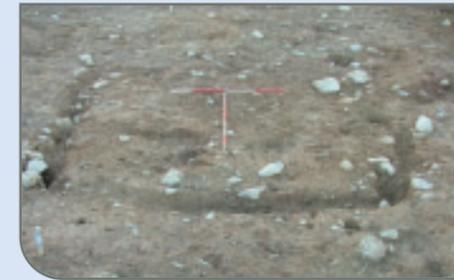
neolithic

kilkenny's first farmers

While Kilkenny is well known for its upstanding medieval remains, archaeologists excavating in advance of the construction of the road, discovered much evidence of the county's prehistoric communities.

A number of stone axeheads found on various sites along the scheme, such as at **Rahard West** and **Earlsrath**, may have been used by the first farmers to clear the woodland and prepare the land for farming.

An early Neolithic structure built by these farmers was excavated at **Kilkeasy**. Trenches forming the foundations for a wooden building enclosed an area measuring 30 m². Several pits were found outside the structure and contained charred seeds, hazelnut shells, pottery sherds, flint and a stone axehead.



Foundations of an early Neolithic structure uncovered at **Kilkeasy**. (Photo: VJK Ltd)

At **Scart**, on a prominent location with extensive views to the south, a large number of pits and post-holes are testament to intensive activity in the later Neolithic period. Examination of the layout of these features suggests that a circular structure and two four-post



Circular, late Neolithic structure at **Scart**. Wooden posts have been placed within the excavated post-holes. (Photo: VJK Ltd)

structures once occupied this location. The circular structure was defined by nine pits and had a south-east-facing porched entrance. Several of the pits excavated contained flint flakes and pottery sherds, including a distinctive type of pottery known as



Site at **Scart** where a series of pits and post-holes represent intensive Neolithic activity. The remains of one of the four-post structures is visible in the foreground. (Photo: VJK Ltd)

Grooved Ware. A flint arrowhead, a stone axehead and a quern-stone were also retrieved. The form of these structures and the type of pottery associated with them suggest that the site may have functioned as a centre of ritual activity within the foothills of Tory Hill in the late Neolithic.

The foundations of two rectangular buildings located 4 m apart were excavated in **Earlsrath**. They measured 13 m in maximum length and 8 m in width and had a north-west-south-east orientation. The southernmost of these structures consisted of a large foundation trench into which a number of post-holes had been cut. An internal foundation trench divided the structure into two rooms. As few artefacts were



Foundations of two rectangular structures at **Earlsrath**. (Photo: VJK Ltd)

retrieved from the site, the date of these buildings will only be confirmed after radiocarbon dating results are received.

bronze age

life and death

An Early Bronze Age cemetery was found at **Knockmoylan**. The burials had been cremated. Two of them were placed in decorated pottery urns, while others were found in cists and pits.

At **Coolmore**, token deposits of cremated bone were found within 24 pits suggesting that burial at this site took place in the later Bronze Age.



An archaeologist prepares to lift the capstone covering a Bronze Age cist at **Knockmoylan**. (Photo: VJK Ltd)



Rectangular cist at **Knockmoylan**. A cist is a stone-lined pit within which burials were placed. (Photo: VJK Ltd)



Bronze Age urn containing cremated bone in a cist at **Knockmoylan**. (Photo: VJK Ltd)

A small number of pits containing cremated bone were excavated at **Baysrath**, to the west of Knocktopher. These pits represented just one element of a complex multi-period site. Circular slot-trenches also found at this location, signified the remains of roundhouses that may have been inhabited during the Bronze Age.

iron age-early medieval

the craft of metalworking

Once iron was introduced, about 600 BC, it became a necessity for the manufacture and repair of tools, weapons and ornaments. Every activity from shoeing a horse to building a house soon required the products of the forge.



An archaeologist excavates a pit containing metalworking residues at **Ballynamorahan**. (Photo: VJK Ltd)

managing the land

Farming has long been a key aspect of Irish society and some of the best-known upstanding archaeological monuments in the rural landscape are the remains of defended early medieval farmsteads known as raths or ringforts. Occasionally, no trace of these large monuments exists above the ground surface and they are only discovered in the process of archaeological test trenching. The largest site excavated on the road scheme was located in **Baysrath**. While the townland name reflects the presence of two known ringforts, archaeologists uncovered evidence for a third, previously unknown

In the past, iron was produced through a number of stages commencing with the sourcing of iron ore from local bogs or wetlands. Once washed, this rough ore was roasted and smelted to reduce impurities, leaving an iron bloom. The smith took the bloom, heated, hammered and shaped it so that it could be used to make and mend tools and weapons. Early Irish writings have indicated that smiths were held in esteem within the community.

Evidence for iron smelting was uncovered at **Ballynamorahan** and **Baysrath** where pits containing metalworking waste were excavated, while at **Ballykillaboy**, evidence for both smelting and smithing was encountered.

ringfort on a slight rise. This ringfort, measuring almost 37 m in external diameter, displayed an east-facing entrance.

A number of ditches adjacent to the monument possibly served as field boundaries, used to define working areas, protect crops or keep animals in or out. Several grain-drying kilns were excavated to the north of the ringfort, indicating the importance of cereal crops in the local economy. Such kilns were used to dry grain after harvesting, making it easier to grind, or to ensure that it did not rot in storage.

The occupants of the ringfort were not the first to settle in this part of **Baysrath**. Archaeologists discovered that the ringfort was constructed partially upon an earlier palisade or timber enclosure measuring 40 m in diameter. The date of this feature will be determined through radiocarbon analysis. Post-holes and pits were excavated in the interior and may have been the remains of buildings. The palisade trench in turn had been built upon the remains of earlier circular houses that may date to the Bronze Age.



Curvilinear enclosures of similar date to the ringfort at **Baysrath** were found at **Earlsrath** and **Knockmoylan**. An archaeologist records the fills within the ditch of the enclosure at **Knockmoylan**. (Photo: NRA)

living with the ancestors

The tradition of burial at **Baysrath** continued outside the enclosed area around the ringfort, to the north-east, where a small, annular ring-ditch encircled a pit

containing a cremation. Ring-ditches represent a place of burial in the Bronze Age or Iron Age.



Ring-ditches at **Baysrath** with grave cuts in foreground. (Photo: AirShots Ltd)

To the south-east of the ring-ditch, archaeologists revealed a single, unburnt burial. Both ring-ditch and inhumation were in turn enclosed by a larger ring-ditch measuring almost 17 m in diameter and with two narrow causeways in its circumference. An inhumation cemetery of 61 grave-cuts extended in a rough arc outside the eastern and north-eastern confines of the larger ring-ditch. The graves were, for the most part, unlined and oriented south-west-north-east.