PLACES FOR THE
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DEAD

Archaeological discoveries on the
N25 New Ross Bypass

Edited by
James Eogan and James Hession

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Front cover—The landscape of the early medieval territories of Síl mBriain and Benntraige and the late medieval manor of Old Ross viewed from the summit of Slievecoiltia looking north towards the Blackstairs Mountains (J Eogan).

Back cover—The Rose Fitzgerald Kennedy Bridge viewed from Carrickclooney, Co. Kilkenny (J Walsh).

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Dedication

In memory of Mandy Stephens
1970–2016

Foreword

Growing up in New Ross I was aware of the town's illustrious history and rich medieval heritage. The town's medieval origins are evident in the layout of its streets, the remnants of its town walls and its historic buildings, such as St Mary's parish church. In the years after its foundation by Isabella de Clare and William Marshal, one of its defining attributes was its bridge across the River Barrow. Construction of the bridge was a substantial and costly undertaking and its significance is reflected in one of the earliest documentary references to the town in 1210—*Pons Novus, villa Willelmi Marescalli* ([the] new bridge [of] William Marshal's town) and the subsequent use of the name Rospont (the bridge of Ross) for the town throughout the Middle Ages.

Eight hundred years later the N25 New Ross Bypass, a project conceived to relieve traffic congestion, enhance road safety and improve journey times for people and businesses, involved the construction of Ireland's longest bridge—the iconic Rose Fitzgerald Kennedy Bridge—a monumental piece of transport infrastructure six kilometres downstream from its medieval forebear. Construction of the bypass necessitated a programme of archaeological survey and excavation before and during construction. The results of the archaeologists' work detailed in this book allow us to bridge the ages so we can travel back in time and examine the lives of the communities who called this area home over

the past nine millennia. While Transport Infrastructure Ireland and our project partners in Wexford and Kilkenny County Councils may have been required to carry out detailed archaeological investigations to meet our obligations under national and European environmental and heritage law, the end result is of much greater significance than simply ticking the compliance box.

During the route option selection and environmental evaluation phases much effort was put into designing a bypass that minimised impacts on upstanding archaeological monuments. Nonetheless, we know from previous national road schemes, and other development projects, that many significant archaeological sites will only be identified once archaeologists get the opportunity to carry out surveys and test excavations. So it was on this project, where almost 40 previously unidentified archaeological sites were revealed during the pre-construction archaeological test excavations, with three further sites identified as a result of archaeological monitoring during the construction phase. It is fascinating to read about the discovery of the remains of a timber house at Ryleen, built by some of the first Neolithic farmers who cleared the natural woodlands, planted crops and raised their livestock in this area almost 6,000 years ago. Analysis of Bronze Age cremation burials found in Berkeley, Camlin and Stokestown reveals aspects of the belief systems of communities living in

the New Ross area three to four millennia ago. At Landscape the remains of a medieval farmstead were uncovered; the farming folk who lived there would have seen ships sailing up and down the Barrow participating in the vibrant international trade carried on from the medieval port of New Ross. The archaeological investigation of the route of the bypass led to the discovery of these sites. Their careful excavation was followed by post-excavation research by a team of dedicated archaeologists and historians. This has deepened our knowledge of the history and heritage of this part of Wexford and Kilkenny—a history that we can now see stretches back at least seven millennia before the foundation of the medieval town.

I would like to thank the authors, editors and contributors and acknowledge the commitment of Rubicon Heritage Services to the completion of this book. I would also like to acknowledge the support and assistance provided by the staff of Tramore House National Roads Regional Office, Mott MacDonald Ireland and the N25 New Ross Bypass PPP company.

Peter Walsh
Chief Executive
Transport Infrastructure Ireland

Acknowledgements

CHAPTER 1

Introduction: methodology and the environmental,
archaeological and historical background to the project

James Eogan, Patricia Long Hourihan and Carmelita Troy

Introduction

From the vantage point of the rocky summit of Slievecoiltia, south of the New Ross Bypass, Wexford's rolling lowlands spread out to the north-east, east and south-east. The land in this part of south-east Ireland generally does not exceed an elevation of 100 m above sea level, apart from the line of hills, including Creakan, Lacken, Carrickbyrne and Bree, extending to the north-east. On a clear day, the Wexford coast from Bannow Bay to Carnsore Point is visible, with the Saltee Islands offshore. Looking south-west the sunlight reflected off its waters transforms the River Barrow into a silvery ribbon draped across the landscape as it flows to its confluence with the Suir at Cheekpoint. From their confluence these two great rivers flow down Waterford Harbour meeting the sea at Hook Head, 30 km to the south. To the west the distinctive profile of Tory Hill in south Kilkenny punctuates the skyline, while the mountains of east Munster, the Comeraghs in Waterford and Slievenamon in Tipperary are visible on the horizon. Northwards, with Brandon Hill to the west and the Blackstairs Mountains to the east, the eye is drawn up the Barrow Valley and beyond to the fertile lowlands of Kilkenny and Carlow (Illus. 1.1).

Since the 19th century, discoveries have been made which revealed the presence of ancient communities in this landscape.

In July 1934, during drought conditions part of the bank of the River Barrow in Dunganstown collapsed and exposed the remains of a dugout boat (6.01 m long) which was found by local fishermen. The only information about this discovery comes from a report in the local newspaper.[1] Unfortunately, the boat was not inspected or archaeologically recorded, and its remains were not preserved. This was not the first time a dugout boat was found on this part of the Barrow; around 1813, a dugout boat (5.2 m long and 1.2 m wide), made from a single piece of oak, was dredged from the bed of the River Barrow in New Ross about 50 yards (45 m) downstream from the old bridge (Anon. 1858, 205; Grattan Esmonde 1899). It appears that the vessel was kept in New Ross for some years before it was presented to Sir Thomas Esmonde, who had it at Ballynastragh House, the Esmonde family seat near Gorey, until the early 20th century. No further details are known about this boat apart from an undated photograph (Hore 1911, 602). Dugout boats were used on Irish rivers and lakes, and possibly along the coast, from the Neolithic to the post-medieval period (Fry 2000; Cleary 2016).

In 1833, an Early Bronze Age copper halberd was found 'at the foot of Sleeve Kileta [Slievecoiltia] Hill' (Kemble 1863, 164). It was subsequently obtained by Redmond

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1 *New Ross Standard,* July 20, 1943, page 7

Chapter title image View of the River Barrow downstream from the bypass in Ballyverneen, Co. Kilkenny, Dunganstown, Co. Wexford (left), Carrickcloney, Co. Kilkenny (right) (J Eogan).

Illus. 1.1 View northwards from Slievecoiltia. Creakan Hill is in the foreground, New Ross town is visible in the middle distance, in the background the Barrow Valley opens up between Brandon Hill (left) and the Blackstairs Mountains (right) (J Eogan).

Anthony, an inn keeper from Piltown, Co. Kilkenny, who displayed it in his private museum. The British Museum purchased the halberd from Anthony's heir and it remains part of its permanent collection (Harbison 1969, no. 234).[2] In May 1849, Rev. Philip Moore, a curate of Rosbercon parish, reported the discovery of a 'hitherto unnoticed Cromleac' at Glencloghlea, south of Rosbercon, to a meeting of the Kilkenny Archaeological Society (Anon. 1849, 27). We now know that this megalith is a portal tomb constructed in the Early Neolithic almost 6,000 years ago.

Five years later, in November 1854, John H Glascott travelled from his home at Killowen, south of New Ross, to attend a meeting of the same Society in Kilkenny. At the meeting he displayed sherds of two decorated pottery vessels and some cremated bone and reported to the members present that they had been found the previous summer on his father's land 'about six feet below the surface of the field' by workmen quarrying a 'natural sandbank' near the River Barrow at Dunganstown (Anon. 1854–5, 204). Unfortunately, the pottery and the cremated bone were not preserved. However, from Glascott's description it can be determined that the 'crocks' found were the remains of two Early Bronze Age encrusted urns, around 4,000 years old (Kavanagh 1973, no. 80).

It was the curiosity of antiquarians like Rev. Moore and the serendipity of individuals like Redmond Anthony and John H Glascott learning about chance discoveries of archaeological objects that provided the main source of data for researchers seeking to understand the archaeology of Wexford and south-east Ireland between the 1830s and 1980s. However, the types of monuments recognised by antiquarians were generally restricted to those with substantial upstanding remains, and the range of archaeological finds recorded was mostly limited to stone and metal tools, weapons and ornaments, and pottery from Early Bronze Age burials. Nonetheless their endeavours provided the data which enabled subsequent researchers, such as Terry Barry (1977), Edward Culleton (1984), Geraldine Stout (1987) and Charles Mount (1997; 2001), to synthesise aspects of the region's archaeological heritage. When it comes to historic eras, the work of historians, such as Canon William Carrigan (1905), Philip Herbert Hore (1900) and Goddard Henry Orpen (1911; 2005), in identifying, recording and transcribing early documentary sources laid the groundwork for modern historical research in the region by scholars such as Adrian Empey (1990) and Billy Colfer (1987; 2002; 2013).

Illus. 1.2 Extent of land acquired for construction of the N25 New Ross Bypass (Rubicon Heritage Services Ltd).

Scheme background and methodology

The New Ross Bypass is 14 km long, extending from Jamestown, east of Glenmore in south Kilkenny, to Rathgaroge, on the N30 7 km north-east of New Ross. The bypass route crosses 16 townlands, Jamestown, Graiguenakill, Forestalstown and Ballyverneen in County Kilkenny and Stokestown, Landscape, Camlin, Creakan Lower, Creakan Upper, Arnestown, Ballymacar, Ryleen, Lacken, Berkeley, Rathgaroge and Knockroe in County Wexford (Illus. 1.2).

The most notable feature of the bypass is the almost 900 m-long Rose Fitzgerald Kennedy Bridge, the longest bridge on the island of Ireland, constructed where the route crosses the River Barrow between Pink Rock in Kilkenny and Stokestown in Wexford (Illus. 1.3).

Construction of the bypass was funded by the Department of Transport under the *National Development Plan 2007–2013, Transport 21* and *Project Ireland 2040*. The need for a bypass of New Ross and a second bridge across the River Barrow became apparent in the 1980s when travellers began experiencing significant delays in the town. Steady increases in the volume of traffic using O'Hanrahan Bridge, particularly heavy goods vehicles and long-distance traffic, led to congestion and delays which resulted in New Ross frequently featuring on *AA Roadwatch* bulletins. By the early years of this century tailbacks at peak times could extend several kilometres either side of the town. Not only did this lead to driver frustration, but it also had significant environmental and economic

Illus. 1.3 The Rose Fitzgerald Kennedy Bridge viewed from Carrickclooney, Co. Kilkenny. The Dunganstown burials were found in 1854 in the triangular field to the right of the pier on the eastern bank of the river downstream from the bridge. An undated dugout boat was found along this shoreline in 1934 (J Walsh).

impacts on residents and businesses in New Ross and its hinterland, as well as the wider region.

The planning process for the New Ross Bypass commenced in 2000. A constraints report was completed in 2001 which documented all archaeological and architectural heritage sites within an approximately 90 km^2 study area. This was followed by the technical, economic and environmental evaluation of several route options within the study area. At the conclusion of this route selection phase in October 2002, a Route Selection Report was prepared that identified a preferred route bypassing New Ross to the south and east (Mott MacDonald EPO 2002). An assessment of the significant environmental impacts of the bypass was published in 2007. It identified a direct impact on one recorded archaeological monument, the site of an enclosure in Lacken, and direct impacts on the vicinities of five other recorded monuments (CRDS 2007a). A direct impact on one architectural heritage site, Ballymacar Bridge, and direct impacts on three demesnes were also identified (CRDS 2007b). The Environmental Impact Statement (EIS) highlighted the likelihood that the sub-surface remains of additional archaeological sites and features could survive within the lands to be acquired for construction of the bypass (Howell et al. 2007, NTS-19). Following an oral hearing, An Bord Pleanála approved the project in December 2008.

Archaeological assessment and excavations

The constraints, route selection and environmental impact assessment phases were focussed on identifying the location and extent of documented heritage sites and

seeking, as far as practicable, to minimise significant effects on them by designing a road that avoided them. Following statutory approval, the focus shifted to implementation of the measures to mitigate the cultural heritage impacts identified in the EIS. An archaeological assessment strategy, setting out the scope of a systematic pre-construction archaeological assessment to identify the below-ground remains of any undocumented archaeological sites located within the scheme boundaries, was prepared and submitted with an application for Directions to the Minister for Environment, Heritage and Local Government, in accordance with the requirements of the National Monuments Acts. Following Ministerial approval, the assessment phase commenced with geophysical survey of 10 areas by Earthsound Archaeological Geophysics in 2009 and 2010 (Bonsall & Gimson 2010). While the geophysical survey progressed, Wexford County Council undertook the procurement of an archaeological consultant to provide the pre-construction archaeological services required to implement the assessment and mitigation strategy, comprising test excavations along with surveys of townland boundaries and watercourses crossed by the project, and survey and recording of architectural heritage structures.

Wexford County Council appointed Headland Archaeology (Ireland) (now Rubicon Heritage Services Ltd) to undertake the pre-construction archaeological services. Test excavations, and the other surveys, commenced in November 2009. Implementation of pre-construction archaeological services for this project was complicated because of two external factors. Firstly, some significant blocks of land could not be accessed in 2009 and 2010, and

secondly, the temporary suspension of site works due to the curtailment of expenditure on capital projects for three years because of the implementation of the 2010 EU/IMF *Economic Adjustment Programme for Ireland*.

Test excavations were carried out in a systematic fashion in accordance with the methodology agreed with the National Monuments Service. Test trenches were generally laid out according to a standard array of a centreline trench with regularly spaced offset trenches (Illus. 1.4). Trench layouts were altered where necessary to take account of the road design, topography, drainage and ground conditions and obstacles such as fences and overhead powerlines. Geophysical anomalies and topographical

features or areas of archaeological potential were specifically targeted. At locations where suspected archaeological remains were identified, additional test trenches were excavated to ensure that their full extents were identified.

Test excavation in all lands available was completed by the end of January 2010. These investigations resulted in the identification of 27 previously unknown archaeologically significant sites (Doyle et al. 2010) (Illus. 1.5). Due to its small size, one site, Camlin 9, which comprised six scattered cut features, one of which produced three sherds from an Early Neolithic carinated bowl, was fully excavated during this phase. All townland boundaries impacted by the scheme were

Illus. 1.4 Test excavation in Ballymacar, with Ryleen and Lacken Hill visible in the background (Rubicon Heritage Services Ltd).
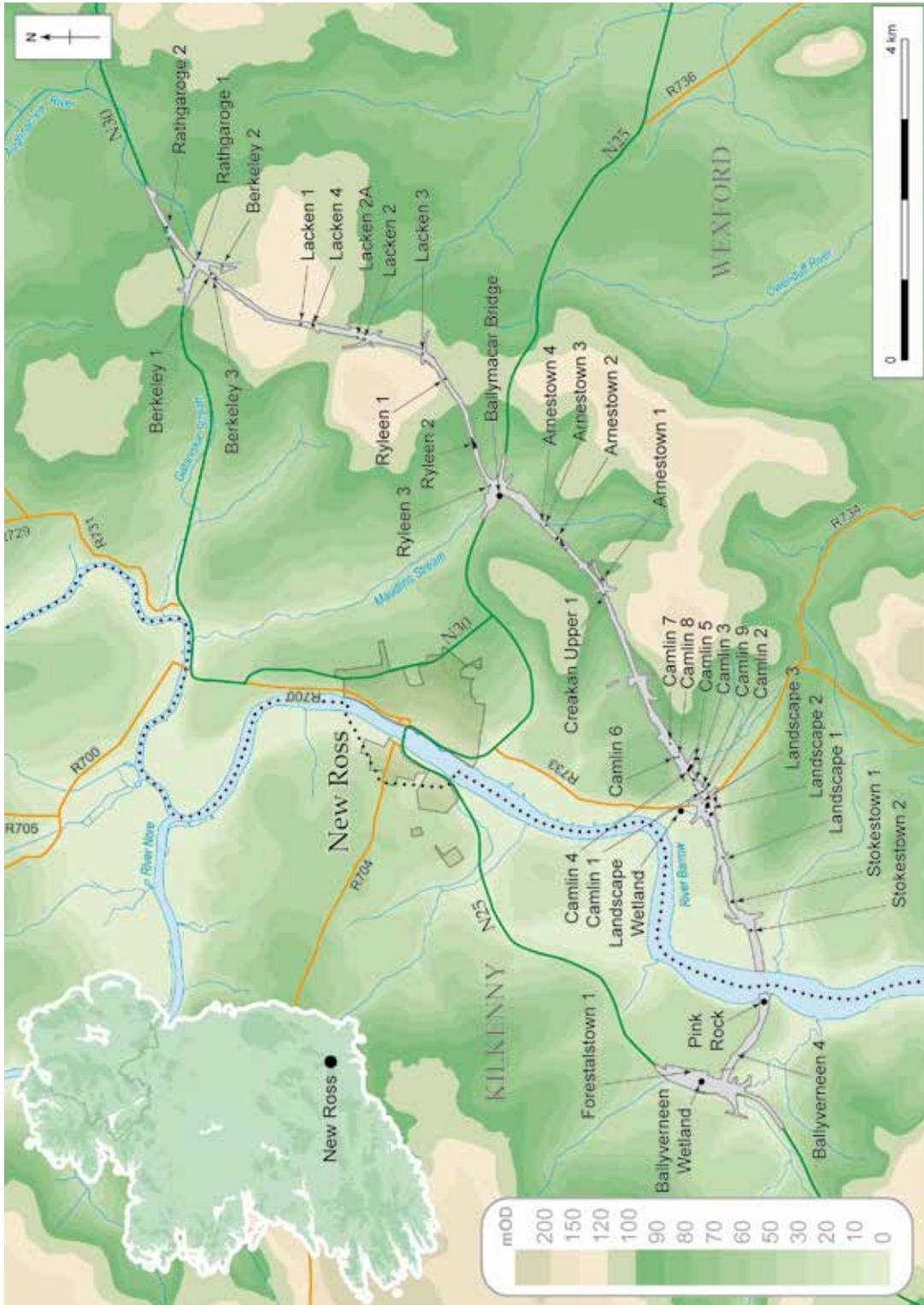
Illus. 1.5 Location of archaeological sites investigated (Rubicon Heritage Services Ltd).

Illus. 1.6 Surveying the Stokestown Folly (Rubicon Heritage Services Ltd).

surveyed during the test excavation phase; wade surveys of three watercourses were also completed and four architectural heritage sites within the scheme boundary, including a folly associated with Stokestown House demesne, were surveyed (Illus. 1.6). Following submission of the test excavation and survey reports, the Minister for Environment, Heritage and Local Government approved a strategy to mitigate the impact of the bypass on the identified archaeological sites by archaeological excavation to preserve them by record before construction commenced.

The pre-construction mitigation stage of the archaeological services on the New Ross Bypass commenced in April 2010. This involved the archaeologically supervised machine excavation of topsoil at 24 of the sites identified during the test excavation. The objective was to determine the character and full extents of the remains identified during test excavation. Archaeologists cleaned back each excavation area and planned the features identified (Illus. 1.7). One site, Arnestown 1, was found to comprise the remains of the foundations of a building. The remains were documented and determined to require no further archaeological investigation (see Chapter 8).

The remaining 23 sites were excavated over eight weeks in May and June 2010. A sediment core for palynological and palaeoenvironmental analysis was also extracted from the Landscape Wetland where it was impacted by the bypass during this phase of the investigation.

Twelve areas that were not accessible during the first phase of test excavation were investigated in autumn 2013. These test excavations led to the identification of a further six sites, three of which (Forestalstown 1, Lacken 2A and Ballyverneen 4) were small in scale and were fully excavated and recorded during the test excavations. The three other sites, and two

Illus. 1.7 Archaeologists cleaning back Camlin 1 following the removal of topsoil (B Kelly).

sites identified in 2009 where excavation was not possible in 2010, were excavated over six weeks in November and December 2013.

The aim of Transport Infrastructure Ireland's systematic approach to archaeological evaluation is to excavate test trenches equivalent to a minimum sample of 12% of the 'greenfield' (previously undeveloped agricultural land) acquired for road construction. Between the two phases of test excavation in 2010 and 2013 more than 2,000 test trenches were excavated with an aggregate length of 101.9 km. In terms of their area, the test trenches amounted to a sample of 15.7% of the 117 hectares of the undeveloped 'greenfield' land acquired for construction of the bypass. The aggregate area of the 29 sites excavated before construction commenced was 3.4 hectares, equivalent to 2.9% of the greenfield land

acquired for construction.

Almost 12 hectares of undeveloped land required for construction of the project could not be investigated before construction commenced in 2016. These were wooded or heavily overgrown areas, wetlands, areas of foreshore and steeply sloping ground. Under the contract for construction of the new road it was the responsibility of the N25 New Ross Public Private Partnership (PPP) company to undertake the archaeological assessment of these areas and mitigate any impacts on archaeological or architectural heritage sites identified within them in accordance with the Ministerial Directions. Irish Archaeological Consultancy Ltd was appointed by the New Ross JV on behalf of the PPP company to undertake construction phase archaeological services. Their work involved a combination of test excavation in some areas (e.g.

woodland) following clearance by the construction contractor, and archaeological monitoring of construction works in other areas, such as wetlands and the River Barrow mudflats where one of the bridge piers was being built. This work took place periodically between June 2016 and January 2020, as construction progressed. Three *fulachtaí fia* were identified which were excavated in 2016 and 2017 and pre-demolition architectural heritage surveys were completed of two buildings and three bridges (Meharg et al. forthcoming).

A derelict octagonal 18th-century folly or turret associated with the Stokestown House estate stands on high ground overlooking the River Barrow, just outside the project boundary. Prior to construction, an architectural heritage survey was completed by Rubicon Heritage Services; a structural engineer completed a condition survey, which recommended a methodology to minimise construction-related vibrations that could damage the folly (Coughlan & Stevens 2021, App. 3). Vibrations were monitored at the folly for 19 months from June 2016 while construction was underway in the vicinity, and it was inspected for any evidence of changes to its condition. A post-construction structural assessment confirmed that construction of the road had not had any adverse impact on the folly (ibid.).

The potential impact of the construction of the Rose Fitzgerald Kennedy Bridge on the underwater or maritime archaeological heritage was assessed by surveys of the River Barrow carried out during the route selection phase and immediately before commencement of construction in 2016. The latter survey led to the identification of a previously undocumented shipwreck of unknown date approximately 0.2 km upstream from Pink Rock. An exclusion zone was established around the wreck site and the National Monuments Service added the details to the national wrecks database.[3]

Following the completion of the on-site excavation phases, the archaeological teams completed post-excavation services. This involved compiling the site records, analysing each site's stratigraphic sequence, processing soil samples for environmental remains, registering and conserving finds, liaising with specialists and undertaking scientific analysis. This work culminated in the completion of 34 final excavation reports and the compilation of the excavation datasets and archives for submission to the National Monuments Service and the National Museum of Ireland.

The archaeological sites revealed as a result of the investigation on the New Ross Bypass route represent a broad span of human activity in the hinterland of New Ross from the Mesolithic to the post-medieval era (Table 1.1). While sites were distributed along the entire length of the scheme, a notable cluster of sites of all periods was located in the townlands of Landscape and Camlin and a concentration of Middle to Late Bronze Age sites was identified in Berkeley and Rathgaroge townlands.

Table 1.1—Periods of activity identified on excavated sites from south to north

Site Name	Reg. no.	Mesolithic	Neolithic	Chalcolithic	Bronze Age	Iron Age	Early Medieval	Late Medieval	Post Medieval
Ballyverneen 1–3	E4531				■			■	
Ballyverneen 4	E4067							■	■
Forestalstown 1	E4067							■	
Stokestown 2	E4524	?			■				■
Stokestown 1	E4523				■				■
Landscape 1	E4107						■		
Landscape 2	E4108		■		■		■	■	■
Landscape 3	E4891				■				
Camlin 9	E4067		■						
Camlin 1	E4106							■	■
Camlin 2	E4103				■				■
Camlin 3	E4104				■				
Camlin 4	E4101				■				
Camlin 5	E4100						■	■	■
Camlin 6	E4528						■		
Camlin 8	E4105				■				■
Camlin 7	E4113						■		
Creakan Lower 1	E4532						■	■	
Creakan Upper 1	E4112								■
Arnestown 1	E4067								■
Arnestown 2	E4111	■	■		■				
Arnestown 4	E4783								■
Arnestown 3	E4129				?				■
Ryleen 3	E4115				■	■			■
Ryleen 2	E4116	■	■				■		
Ryleen 1	E4119		■						
Lacken 3	E4124				■				■
Lacken 2	E4125								■
Lacken 2A	E4067							■	■
Lacken 4	E4869				■				
Lacken 1	E4120				■				
Berkeley 2	E4121				■				■
Berkeley 3	E4122				■				
Berkeley 1	E4123				■				■
Rathgaroge 1	E4130				■				■
Rathgaroge 2	E4131				■				

Chronology and radiocarbon dates

For the purposes of consistency, the following chronological periods are used (Table 1.2). Unless stated otherwise, the radiocarbon date ranges cited in the book are the two-sigma (95.4% probability) calibrated ranges reported by the dating laboratories. The radiocarbon dating dataset is available to download from the Transport Infrastructure Ireland (TII) Digital Heritage Collections at the Digital Repository of Ireland (www.dri.ie).

Table 1.2—Chronological time periods used in this book

Period	Date
Early Mesolithic	8000–6700? BC
Late Mesolithic	6700?–4000? BC
Early Neolithic	4000?–3600 BC
Middle Neolithic	3600–3100 BC
Late Neolithic	3100–2500 BC
Chalcolithic/Copper Age	2500–2200 BC
Early Bronze Age	2200–1600 BC
Middle Bronze Age	1600–1100 BC
Late Bronze Age	1100–800 BC
Early Iron Age	800–400 BC
Developed Iron Age	400 BC–0 BC/AD
Late Iron Age	0 BC/AD–AD 400
Early medieval	AD 400–c. 1169
Late medieval	c. AD 1169–1540
Post-medieval	AD 1540–1700
Early modern	post AD 1700

This schema largely aligns with the recently published PeriodO *Archaeological periods for the island of Ireland* (Carlin et al. 2022).

The physical environment

The topography in the area surrounding the N25 New Ross Bypass scheme is a gentle undulating landscape, falling mostly within the catchment area of the River Barrow. In the south-west the route crosses the southern end of an elevated ridge overlooking the River Barrow in Ballyverneen. It crosses the Barrow between the outcrop known locally as Pink Rock and a wide reclaimed floodplain in Stokestown (Illus. 1.8). The route continues towards the north-east cutting through the north end of a ridge in Stokestown before passing between the locally prominent Camlin and Creakan hills, reaching an elevation of 100 m in Creakan Upper (Illus. 1.9). The bypass runs along the north side of the valley of the Maudlins Stream through Arnestown to Ballymacar, where it crosses the stream. From there it rises to an elevation of 100 m in Ryleen. The route passes to the east of Lacken Hill and reaches its highest elevation (135 m) at the northern end of Lacken, from where it terminates on a level plateau in Rathgaroge. The land is drained by streams which mostly flow into the River Barrow; however, lands in Lacken and Ryleen are in the catchment of the Owenduff River which enters the sea at Bannow Bay.

Illus. 1.8 View of Pink Rock and the River Barrow from the east across the reclaimed lands in Stokestown (J Eogan).

Illus. 1.9 View of Camlin Hill from Creakan Hill with the River Barrow and south Kilkenny in the background (J Eogan).

Geology and soils

The bedrock underlying the New Ross area is Lower Ordovician metasediments of the Ribband Group (Illus. 1.10).[4] This group is characterised by variously coloured slatey mudstones, frequently thinly laminated with pale grey siltstones. The bypass is underlain by two formations within the Ribband Group—the Oaklands Formation on the western side and the Ballylane Formation on the eastern side (Tietzsch-Tyler 1994).

The soils in this area are mostly well-drained acid brown earths (Gardiner & Ryan 1964), which are suitable for a wide range of agricultural uses (Gardiner & Radford 1980). Alluvial deposits, comprising silts and peat, are associated with the River Barrow and its tributaries.

Land-use along the bypass route is dominated by pasture and arable agriculture. Areas of reclaimed marshland along the River Barrow form rich low-lying grasslands. Land reclamation works undertaken in this area in the early modern period substantially altered the landscape; prior to this the River Barrow's intertidal wetland was much more extensive in the townlands of Ballyverneen, Stokestown and Camlin.
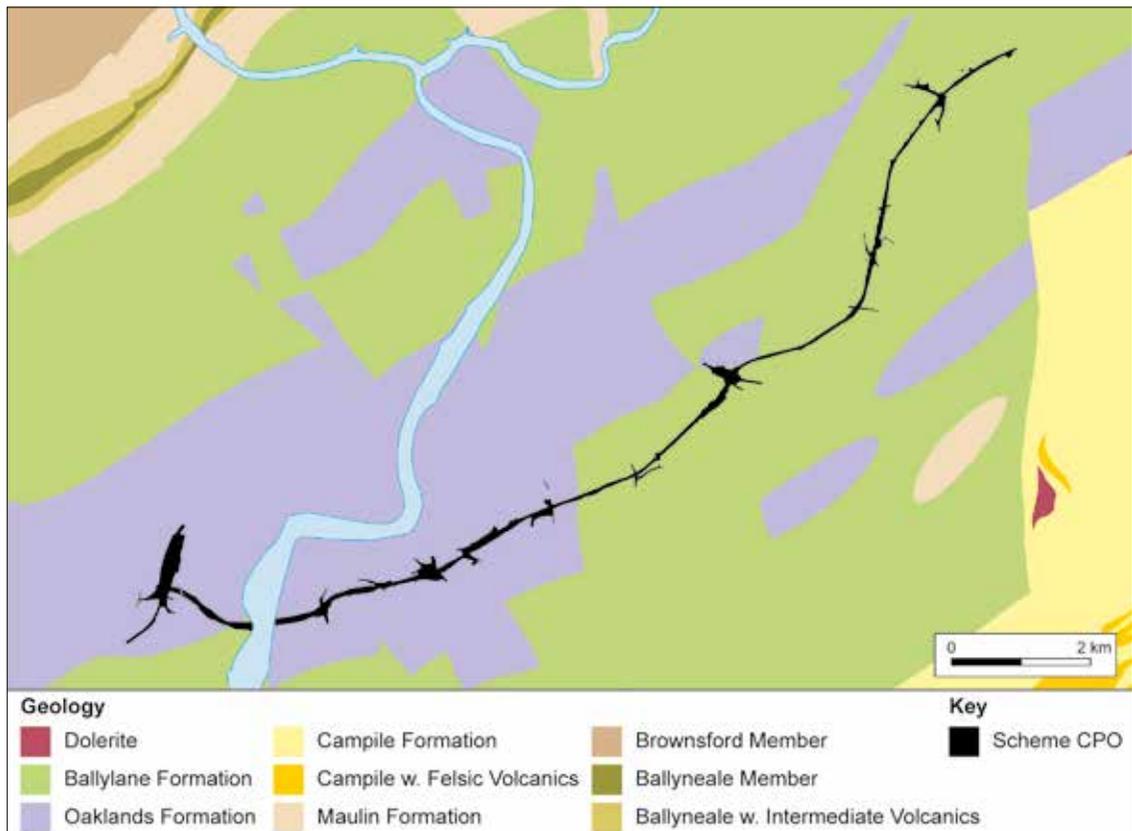
Illus. 1.10 Bedrock geology. Source of data: Geological Survey of Ireland (Rubicon Heritage Services Ltd).

4   Geological Survey of Ireland datasets public viewer. http://spatial.dcenr.gov.ie/imf/imf.jsp?site=GSI_Simple, accessed Feb. 2022

Archaeological and historical background

The *Archaeological Inventory of County Wexford* (Moore 1996) provides a baseline description of the archaeological monuments in the county. The long history of intensive tillage agriculture on Wexford's fertile soils has affected the survival of monuments in the county. The Heritage Council-funded *Archaeological Features at Risk* study found that by the 1990s upstanding remains of only one-third of mapped monuments survived in the Wexford study area (O'Sullivan et al. 2000, 56). A number of overviews of prehistoric settlement and society in County Wexford were published in the 1980s (Culleton 1984; Stout 1987), and archaeological evidence from Wexford and the south-east region was included in a number of publications focussing on specific periods, types of sites or studies of objects (e.g. Barry 1977; Brindley 2007; Eogan 1983; 1994; Mount 1997; 2001; Ó Ríordáin & Waddell 1993; Waddell 1990). However, in comparison with other regions, Ireland's south-east was not the focus of sustained or large-scale archaeological research projects in the 20th century (Eogan 2011a).

The archaeology and history of early medieval Wexford has been the focus of publications by Isabel Bennett (1989) and Edward Culleton (1999). Rural late medieval archaeological and documentary evidence has been considered in several books and papers published by Billy Colfer (1987; 2002; 2013). In terms of late medieval and post-medieval archaeology, the development of New Ross town has been considered in overviews of the history of County Wexford published in the early part of the 20th century (Orpen 1911; Hore 1900) and in more recent publications (e.g. Furlong 2003; Ó Drisceoil

2017). The work undertaken by the Urban Archaeological Survey (Bradley and King n.d.) and the Irish Historic Towns Atlas (Doran 2008) focussed on describing the upstanding historical remains and spatial development of the town.

Most archaeological excavations carried out in the area before 2009 were development-led investigations within the historic town, with very little archaeological work undertaken in its hinterland, a notable exception being Claire Cotter's (1986–87) limited excavation at the site of MacMurrough Castle during the realignment of a section of the N30 in 1985, one of the earliest archaeological excavations undertaken as a result of road construction in the country. Therefore, the systematic archaeological investigations undertaken in response to construction of the N25 New Ross Bypass have provided an opportunity to increase our knowledge of the archaeology in the hinterland of the town from the prehistoric to medieval periods. The rest of this chapter summarises the regional archaeological background to the project.

The Mesolithic

Eight thousand years ago this landscape, apart from rocky hilltops, was cloaked in a dense mixed deciduous woodland. Sea levels were considerably lower at this time (Warren 2022, 36–8), so the Barrow may not have been tidal and any people living in the area would have been much further from the coastline than at present. The evidence of pollen preserved in the sediments in the bed of Lough Cullin in south Kilkenny, 13 km to the south-west, suggests this woodland was dominated by oak and elm with a significant understorey of hazel (Kearney et al. 2022). There is no evidence for Mesolithic activity

in the vicinity of New Ross. Evidence for Mesolithic communities is known from other parts of County Wexford. In the early 1980s, Late Mesolithic flint tools were found at Camolin, and along the east coast between Kilmichael and Carnsore (Stout 1987, 3). The Bally Lough Survey and Barrow Valley Survey carried out in the early 1990s (Green & Zvelebil 1990; Zvelebil et al. 1996) identified scatters of Early and Late Mesolithic stone tools at locations along the River Barrow both to the north and south of New Ross. This suggests that the Barrow and its tributaries are likely to have been used by hunter-gatherers to access inland areas in the wooded landscape, as was the case with other river systems (Woodman 2015; Woodman & Sternke 2015). A review of a range of palaeoenvironmental datasets suggests that Mesolithic hunter-gatherer communities across the island of Ireland adopted strategies that could have resulted in the promotion of certain types of plants which provided food or useful materials (Warren et al. 2014). Recent excavations in advance of road schemes elsewhere in the catchment of the River Barrow have identified a small but significant range of Mesolithic evidence. A cache of three Later Mesolithic blades was found within a pit at Prumpelstown Lower 5 and a large core rejuvenation flake of possible Late Mesolithic date was found in a secondary context at Moone 1 in the valley of a tributary of the Barrow north-east of Carlow (Long et al. in prep.). This has added to the Later Mesolithic material that was identified during the Barrow Valley Survey and indicates that there was an established presence in the area during that period, even if the evidence for occupation sites remains elusive.

Evidence from other road schemes in Wexford also suggests that Mesolithic people exploited the natural corridors provided by watercourses. In the catchment of the River Slaney, a scatter of Early and Late Mesolithic lithics were found at Ballydawmore 5, north-east of Enniscorthy (Rajic & Ruttle 2013). An Early Mesolithic flint core axe, found in Killybegs in the valley of the Clonough River north-east of Gorey, suggests that, in the Early Mesolithic, communities in that part of Wexford were actively managing their environment to create conditions suitable for useful plants to thrive or to improve their chances of hunting success (Eogan forthcoming). A group of Late Mesolithic people appears to have camped at Coolnaveagh, beside the Banoge River, south of Gorey (Flynn 2011). Other evidence suggests that Mesolithic communities were also expanding their territories from the river valleys. Woodman and Sternke (2015, 89) noted that Late Mesolithic sites found on the Carlow Bypass were situated in a low-lying, flat, rolling landscape but they were not confined to the Barrow or Burren river valley floors; three sites which produced Mesolithic radiocarbon dates in County Kildare were located over 2 km from the nearest river (Long et al. in prep.). In the Lower Suir Valley, Shee Twohig (2011, 247) observed a similar pattern of Late Mesolithic sites occurring on the slopes of tributaries at some distance from the River Suir.

The Neolithic

A significant change in subsistence, social organisation and ritual practice occurred between 6,000 and 5,500 years ago with the commencement of the Neolithic era. Over the course of five centuries, new people arrived onto the island bringing with them domesticated crops and animals, as well as new forms of architecture, material culture,

subsistence and social organisation. In comparison with the preceding Mesolithic, there is a greater quantity of evidence for Neolithic activity in Wexford and the south-east.

The Early Neolithic is associated with the establishment of the first farming communities and the clearance of woodlands to create fields for crop cultivation and the rearing of livestock. These crops and livestock were not native to Ireland and were introduced by immigrants from the neighbouring island and the continent. Evidence from the Lough Cullin pollen core suggests that the earliest Neolithic communities cleared areas of woodland around 4000 BC which they then farmed for the following 220–450 years (Kearney et al. 2022). The Early Neolithic is also associated with the construction of large rectangular timber houses and the burial of the dead in the first megalithic tombs (portal tombs and court tombs), as well as diversification of the range of material culture used in Ireland and evidence for long-distance trade in some types of objects and raw material. One portal tomb is known in the New Ross area, located in a small valley called Glencloghlea, west of New Ross (Illus. 1.11). The tomb overlooks a small stream that drains into the River Barrow two and a half kilometres to the east. Another portal tomb is located in Newbawn, south of Carrickbyrne Hill; it overlooks a tributary of the Corock River which flows into Bannow Bay. The only court tomb known in the region is located on the east slopes of Tory Hill, north of Lough Cullin. The megalithic tomb distribution indicates that Early Neolithic communities were widely dispersed across the fertile lowlands of south-east Ireland early in the fourth millennium BC.

The distribution of Neolithic communities

Illus. 1.11 Glencloghlea portal tomb, from the north-west (J Eogan).

can also be inferred from the occurrence of polished stone axeheads across the region. Eighty-three stone axes have been recorded, 32 of which were found in County Wexford. Neolithic people used stone axes to clear woodlands, work timbers for use in construction and for more prosaic uses, such as chopping firewood. While they are sometimes found on Bronze Age and later sites, the analysis of worked timbers from trackways and other wetland sites indicates that there is little evidence for their widespread use after the Neolithic (Cathy Moore pers. comm.). Therefore, their distribution in the region encompassing the catchments of the lower Barrow, Suir and Nore and Waterford Harbour is a good

indicator that Neolithic communities were more widespread in the area than is indicated by the surviving megalithic tombs (Illus. 1.12). Another significant aspect of stone axes is that some of them are made from rocks that do not occur in the region, most notably examples made from porcellanite, quarried in County Antrim, and a volcanic tuff, quarried in the Lake District in north-west England. Their occurrence indicates that Neolithic communities in the south-east participated in exchange networks that extended beyond the region. We can surmise that objects were not the only things that were passed along these networks but that they were also the means by which these early agricultural communities obtained access to social, economic and ritual innovations.

While megalithic tombs and stone axes have been documented for almost two centuries, it is only in the last two decades that archaeological excavation carried out in advance of development has transformed our understanding of these early farming communities. Excavations in advance of housing, commercial development, roads and energy transmission networks have uncovered a range of Early Neolithic sites which provide us with valuable insights. Sherds of distinctive Early Neolithic pottery bowls were found in pits at two sites south of Wexford town, Kerloge (McLoughlin 2002a) and Courtlands East (Purcell 2002a), and at Moneylawn Lower, south of Gorey (McKinstry 2008; Grogan & Roche 2008) and Cooladine, east of Enniscorthy (McNamara et al. 2013). Similar pottery was found placed in a pit with a stone axe and flint objects at Newrath 35, County Kilkenny (Hughes et al. 2011). While pottery bowls, flint tools and stone axes had functional everyday uses, the repeated pattern of their
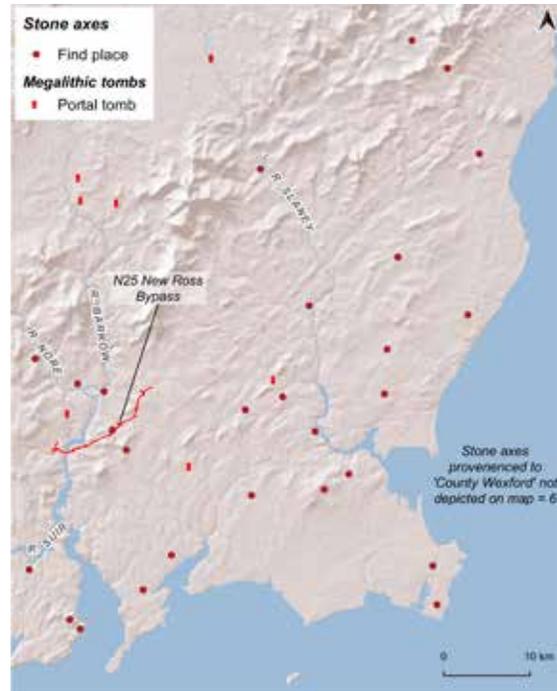
Illus. 1.12 Distribution of stone axes and Early Neolithic megalithic tombs in Wexford and Kilkenny. Sources of data: axes – NMI IAD Collections Database and Irish Stone Axe Project Database (with additions); monuments – Sites and Monuments Record (ASI Open Data, release 21/07/2022) (basemap: ESRI Shaded Relief) (J Eogan).

deliberate deposition in pits, either singly or in combination, suggests that, in these contexts, their significance for Neolithic people was more than just functional. It is believed that through structured deposition these, often broken, everyday objects were transformed into significant offerings representing the individuals or communities who created them or through whose hands they passed before their burial (Smyth 2014, 126–30).

While the Neolithic house excavated at Ryleen on the New Ross Bypass was the first Neolithic house identified in County Wexford, recent excavations in the Slaney Valley, uncovered another Early Neolithic

house and a possible second contemporary building at Dunsinane 3 (Gallagher et al. 2015). Rectangular Early Neolithic houses have been identified at a few sites across the south-east including a pair of houses at Granny 27, and single houses at Earlsrath, Kilkeasy and Newrath, in south County Kilkenny (Hughes & Price 2011; McKinstry 2010; Monteith 2010; Wren & Price 2011a). In the middle part of the River Barrow catchment, evidence for Early Neolithic activity was found on the hilltop occupied by the later prehistoric royal site of Dún Ailinne, Co. Kildare (Johnston & Wailes 2007). In the catchment of the River Slaney, recent archaeological excavations at a number of large hilltop enclosures have shown that examples on Spinans Hill and Rathcoran, Co. Wicklow and Hughestown Hill, Co. Kildare were constructed towards the end of the Early Neolithic (O'Brien 2017; Hawkes 2021).

The archaeological record for the Middle Neolithic period in Ireland is dominated by evidence for burial and ritual. This is the period in which the great passage tomb complexes were constructed in Brú na Bóinne, Loughcrew and Carrowmore. No passage tombs have been identified in Wexford; however, a group of passage tombs has been identified in south Kilkenny. In the south-east at this time individuals, predominantly male, were buried in stone tombs, built on the ground surface, which were then covered with stone and earthen mounds. These Middle Neolithic burial mounds, termed Linkardstown Graves, are most frequent in the rich lands along the valleys of the Barrow, Nore and Slaney rivers and their tributaries (Waddell 2010, 111–13). One example was excavated in the 1940s at Norrismount, just east of Camolin; the grave contained the remains of an adult who had been buried with a highly decorated

Impressed Ware pottery bowl (Lucas 1950). Occasionally, Impressed Ware pottery has been found on sites with evidence of Early Neolithic activity, such as Newrath 35, where the pottery was associated with a ring-ditch (Hughes et al. 2011). However, in most cases the only evidence of Middle Neolithic activity is a scatter of sherds. The presence of Early and Middle Neolithic pottery on the same sites suggests some degree of continuity of activity, though the sparse remains mean that the nature of the Middle Neolithic activity on these sites is difficult to interpret. Interestingly, in the Lough Cullin pollen core the Middle Neolithic coincides with a period of woodland regeneration, which implies a reduction of human activity in the surrounding landscape (Kearney et al. 2022, 271).

A Late Neolithic phase has only been clearly recognised by Irish archaeologists in the past three decades. Initially Late Neolithic activity was identified within, or in proximity to, some of the Middle Neolithic passage tomb complexes. The distinctive type of artefact that distinguishes the Late Neolithic is a style of flat-bottomed pottery vessel known as Grooved Ware (Grogan & Roche 2010). This pottery is believed to have originated in Orkney, Scotland, during the early third millennium and was quickly adopted by communities across Ireland and Britain. Grooved Ware is frequently associated with distinctive types of monuments with circular plans such as rings of upright wooden posts (timber circles) and embanked enclosures (henges). These monuments marked a shift in ritual focus away from structures designed to contain the bones of the ancestors to ones in which it appears that open-air ceremonies were enacted. However, these Late Neolithic monuments were frequently constructed

within already symbolically charged landscapes such as Brú na Bóinne (Smyth 2014, 85–6; Carlin 2017). Sherds of six Grooved Ware vessels were found at Ask Site 42–44, north of Gorey. The pottery and some distinctive flint tools, known as end scrapers, were found in two groups of disturbed pits. It is not possible to say if the pits were the remains of a timber circle or another type of structure. Nonetheless, the pottery and stone tools are conclusive evidence for Late Neolithic activity in north Wexford (Stevens 2011). At Scart, north-west of Lough Cullin, Grooved Ware was associated with four small circular post-built structures, several hearths and pits, and evidence for flint tool production. Two larger pits were found in proximity to the structures; they contained more than 1,000 sherds of Grooved Ware pottery which originated from eight individual vessels (Laidlaw 2009; 2010; 2017; Monteith 2011). The Scart structures appear to be domestic in nature; however, in their architecture they mirror some aspects of the architecture of the larger ritual timber circles. These finds demonstrate that communities in the south-east participated in the social and ritual innovations that occurred around the Irish Sea in the Late Neolithic. Palaeoenvironmental evidence from Lough Cullin suggests that in this period there was a reduction in woodland cover and an expansion of open meadow environments, while the occurrence of cereal pollen indicates that arable farming was being practised (Kearney et al. 2022, 271–2). Another significant environmental change that Mesolithic and Neolithic communities would have been aware of was sea level rise. Following the end of the ice age sea levels around the Ireland's southern coastline rose. This led to the inundation of coastal lands, the expansion of tidal estuarine conditions

in rivers like the Barrow and Suir and the development of wetlands along the river margins as a consequence of hydrological changes. It is probable that the wetlands in Stokestown and Landscape developed around this time, in the same way that wetlands developed at Woodstown and Newrath along the River Suir (Timpany 2011a, 190). The resulting changes to vegetation along the riverbanks and fish species in the river, as well as the barriers that expanding wetlands would have created would have been perceived by contemporary communities.

The Chalcolithic

A type of decorated ceramic known as Beaker pottery is found at archaeological sites along Europe's Atlantic coast in the fourth and third millennia BC. It has a distinctive shape and is decorated with horizontally banded geometric motifs. Archaeologists term this period the Chalcolithic or Copper Age. In Ireland the appearance of Beaker pottery is dated to 2500 BC and coincides with the acquisition of the knowledge of copper and gold metallurgy. A pair of Chalcolithic sheet gold sun discs were found at Kilmuckridge in the 19th century and are interpreted as the 'materialisation of solar imagery', which it is assumed reflects new forms of religious practice likely to have been introduced alongside knowledge of metal-working (Cahill 2015, 33). Excavation has revealed that the people who exploited the earliest copper mines at Ross Island, on the shores of Lough Leane, Co. Kerry, used Beaker pottery (O'Brien 2004). In the south-east, extensive and accessible deposits of copper ore occur along Waterford's 'Copper Coast'. There is no archaeological evidence for the prehistoric exploitation of these ores; it is probable that a combination of coastal erosion and 19th-

century mining has removed any evidence of prehistoric mining. However, archaeological excavation has uncovered the remains of Beaker pottery at nearby sites at Ahanaglogh, Graigueshoneen and Rathnaskilloge, indicating the presence of communities living in proximity to these rich copper deposits during the Chalcolithic (Johnston et al. 2008, 30–43; Hindli 2022).

In January 1926, a workman removing stones from the south side of a piece of rocky, furze-covered ground at Carrickshedge in Nash townland, approximately 5 km east of Slievecoiltia, exposed the mouth of a 'cave'. The finder discovered three flat copper axes, an axe-shaped copper ingot and three or four pieces of unworked copper cake about 1.2 m inside the cave lying 'on a shelf of rock' (Bremer 1926). Based on the morphology of the axes, this hoard belongs to the earliest phase of metal-working in Ireland (Waddell 2010, 134–5). While there is no evidence that these early copper objects were made with ore mined on the 'Copper Coast', this find demonstrates that Chalcolithic communities in the New Ross area had access to this valuable new material and the individuals who had the know-how to work it.

Evidence of Chalcolithic activity was identified at eight sites on the route of the M11 Gorey to Enniscorthy. The characteristic shared by these sites is that sherds of Beaker pottery, some freshly broken and some abraded, were found in layers of soil filling pits, frequently a mix of burnt and unburnt soils, which incorporated other cultural material such as food remains and stone tools or waste from the knapping of stone tools. Neil Carlin (2018, 208) has recognised a pattern of placing material 'of a strongly "domestic character"' in pits at many Irish Chalcolithic sites. He believes that it represents structured and deliberate

activity related to the need of communities at that time to connect with the ancestors by burying material related to everyday life in the ground as offerings. Another significant aspect of the Chalcolithic activity is that at five of the sites there is evidence of Early Neolithic activity, two of which also contained evidence for Middle Neolithic activity. This suggests that the communities who used pottery associated with the earliest metallurgy in this region continued to exploit environments and locations in the landscape used by their Neolithic forebears. This has implications for our understanding of the process of acquisition of this new technology and its associated material culture. In England, studies of ancient DNA and isotopes from the skeletons of people buried with Beaker pottery and related material have revealed that there was immigration from the continent at this time, though it is not possible to quantify the scale of immigration and to discern what effects it had on social organisation and cultural expression (Garrow & Wilkin 2022, 161–70). In terms of the environment in which Chalcolithic communities lived, the evidence from Lough Cullin is that the open areas established in the Late Neolithic persisted but that there was no evidence for significant additional woodland clearances (Kearney et al. 2022). It seems that the Chalcolithic in south-east Ireland was on the one hand, a period of change represented by the introduction of Beaker pottery and the first use of metal, but on the other a period of continuity, in terms of settlement, depositional practices, and agricultural economy.

The Bronze Age

There is a limited range of Early Bronze Age metal artefacts recorded from Wexford: 11

flat bronze axes and a halberd. A hoard of three axes was found at Cahore, the others were apparently single finds. A single bronze flat axe found at Glinn, just north of Rosbercon, is the only flat axe from the adjacent part of Kilkenny. Only nine Middle Bronze Age artefacts are recorded from Wexford; however, the types of artefacts recorded are more varied than those from the preceding period. Finds include tools—a flanged axe and a palstave; weapons—two spearheads and two dirks; and spectacular gold ornaments—a hoard containing a torc and a neck ring from the Enniscorthy area, and a single find of a torc from Toberduff or Ask, north of Gorey. Thirty-seven Late Bronze Age objects, from 16 locations, are provenanced to County Wexford. More than half of the objects were found in five separate hoards, two of which contained tools and three of which contained gold ornaments. The 'New Ross Hoard' contained four gold bracelets and a dress fastener, with an aggregate weight of 0.86 kg (Illus. 1.13). The report of the discovery states that the objects were found 'in the bed of a small river near New Ross … covered with portions of the soil in which they had long been concealed' (Frazer 1893–6, 780); a second contemporary account laments that 'As usual the exact locality [where the hoard was found] will not be easily discovered' (Anon. 1895).

Unfortunately, these are the only details of the discovery of this hoard; its context of discovery is unusual as it is the only Irish Late Bronze Age hoard described as being found in a watercourse (Eogan 1983). While there is uncertainty about the New Ross Hoard's precise find place, the richness of this hoard demonstrates the material wealth available to Late Bronze Age communities in the region. Some of the most spectacular finds from this period are gold earspools

Illus. 1.13 The 'New Ross Hoard' of penannular bracelets and a dress fastener (copyright National Museum of Ireland).

found in hoards near Enniscorthy and at Ballinesker, near Curracloe. It is believed that these ornaments were worn in the perforated and distended earlobes of Bronze Age people (Cahill 1994b; 2004). A hoard of nine bronze objects including socketed axes, rings, a knife and a gouge, were found buried in a coarseware ceramic vessel at Ballyvadden, near Kilmuckridge (Armstrong 1850). A second hoard containing tools was found on Forth Mountain (Eogan 1983). The other Late Bronze Age finds from the county are single finds; the most frequent objects are socketed axes, of which eight examples are known. The only Late Bronze Age weapon recorded in Wexford is a sword which was reputedly 'recommissioned' and used during the 1798 Battle of New Ross, more than 2,500 years after its manufacture (Mason 2020). Two single finds of gold ornaments are also known: a flat bracelet with recurved terminals found at Dunbrody which is a type of ornament probably manufactured in southern Britain, and a small plain penannular gold ring known as a 'hair ring' or 'ring-money' which was found at an unknown location in the county.

What conclusions can be drawn from
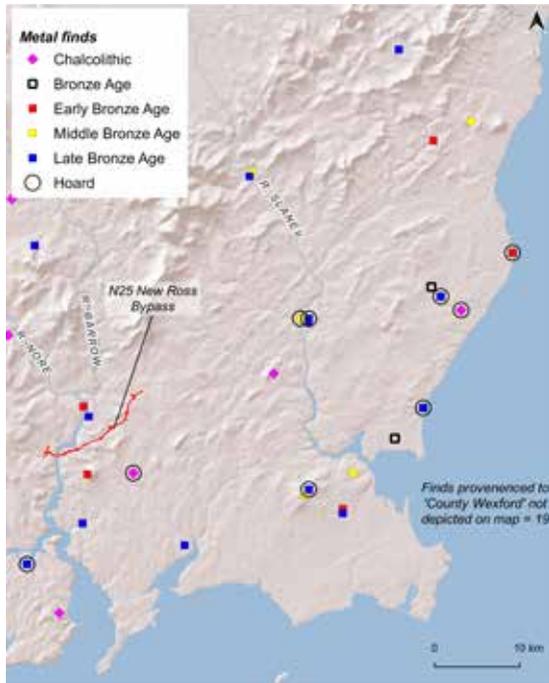
Illus. 1.14 Distribution of Chalcolithic and Bronze Age metal finds from non-funerary contexts in the south-east. Sources of data: NMI IAD Collections Database (with additions) (basemap: ESRI Shaded Relief) (J Eogan).

a review of the almost 60 Chalcolithic and Bronze Age objects from non-funerary contexts in County Wexford? The distribution of metal finds is focussed on the eastern half of the county, in particular the lower Slaney Valley and the eastern coastal fringe (Illus. 1.14). The frequency of metal objects in Wexford, and adjacent counties, is low in comparison to many other parts of the island, while the full range of Bronze Age artefacts is not found in Wexford. It is particularly noticeable that very low numbers of weapons have been found. This may be because weapons, such as swords and spearheads, were frequently deposited in rivers in the Bronze Age (Cooney & Grogan 1999, 166–7). In contrast to other parts of Ireland, land in Wexford is comparatively well drained, therefore there was not the

same need for arterial drainage schemes in the 19th and early 20th centuries. In consequence, the opportunities to recover objects deposited in these contexts in the Bronze Age was reduced. This has led to the under-appreciation of the later prehistoric artefactual record in Wexford and the south-east in comparison with other regions (e.g. Grogan 2005b, 169–73). While the numbers of finds may be lower and the range of objects more restricted, the material culture indicates that Late Bronze Age communities in the south-east followed trends that suggest the emergence of elites. It is not possible to draw a simple correlation between the number of Bronze Age gold finds and material wealth in the Bronze Age, but the increasing volume of gold in circulation during the Middle and Late Bronze Age shows that there were communities in Wexford with access to significant resources (Illus. 1.15).

The 'New Ross Hoard' demonstrates that Late Bronze Age communities living in the lower River Barrow and Waterford Harbour catchment had access to prestige objects. Contemporary gold bracelets found at Dunbrody, Co. Wexford, and Ballymaclode, Co. Waterford, are a southern British type; their discovery at sites along the shore of Waterford Harbour can be used to infer maritime connections between south-east Ireland and southern Britain at this time. These exceptional objects can be viewed as an indication of the complex and wide-ranging social and trade networks of Late Bronze Age communities living close to major waterways in the south-east of Ireland.

The compilation of the County Wexford Sites and Monuments Record in the 1980s and the systematic work of the Archaeological Survey of Ireland in completing the *Archaeological Inventory*
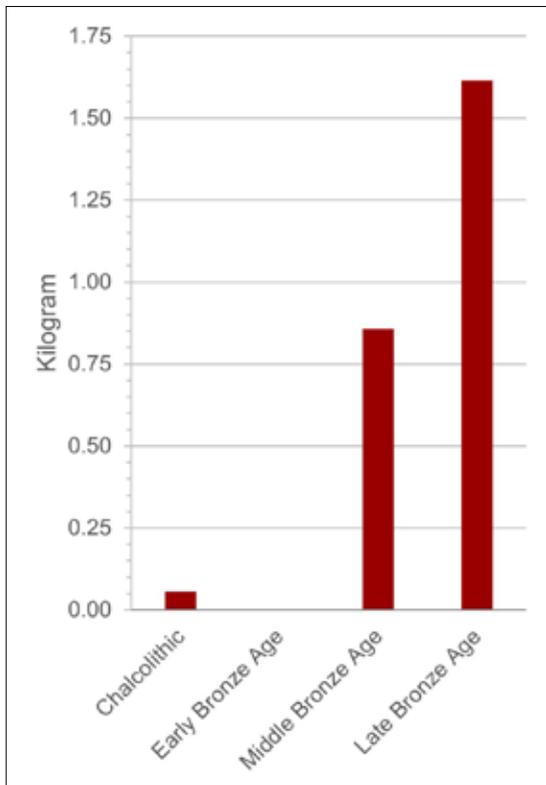
Illus. 1.15 Histogram showing the increasing weight of Wexford gold finds from the Chalcolithic to the Late Bronze Age (J Eogan).

of County Wexford in the 1990s led to the identification of many surviving Bronze Age field monuments (Stout 1987; Moore 1996). A standing stone in Ryleen, close to the bypass route, is one of almost 80 examples identified by the Archaeological Survey in the county (Illus. 1.16). In the absence of excavation, it is not possible to date the erection of the Ryleen monument. However, standing stones have been found to be associated with Bronze Age burial and ritual activity in other parts of the country (Eogan 2004). At Loggan Lower in the north-east of the county an urn burial was found near a standing stone in the 19th century; however, the relationship of the monument to the burial was not recorded (Kinahan 1879–88, 154–5). The distribution of standing stones

in Wexford shows five main concentrations, one centred on the north-east of the county, a second in the Slaney Valley, a third around Carnsore, a fourth in the catchment of the Corock and Owenduff rivers and finally along the Lower Barrow Valley. Related types of monuments are stone rows, four-posters and stone circles. An impressive three-stone row is sited in the valley of a small stream that drains to the Barrow in Whitechurch, east of Slievecoiltia (Illus. 1.17). An enigmatic monument is located on the summit of a low hill in Robinstown Great, 4 km east of the bypass. What survives are four uprights in a roughly rectangular arrangement, with an outlying stone located to the south-west. It has been suggested that this monument may be the remains of a stone circle (Browne 2002–3).

Fulachtaí fia and burnt mounds are the most common type of Bronze Age site found in Ireland. Sixty-seven such sites were recorded in the *Archaeological Inventory of County Wexford* (Moore 1996), one being a burnt mound in Rathgaroge close to the north-east end of the bypass. Since the publication of the inventory, 161 *fulachtaí fia* or burnt mound sites have been added to the Sites and Monuments Record throughout County Wexford. Some were identified during the work of the Archaeological Survey of Ireland, but most were found during archaeological investigations of road schemes and other types of development projects—afforestation, commercial and residential development, renewable energy and water services. In a recent review of 1,165 burnt mounds excavated in Ireland, Alan Hawkes (2018, 227) concluded that their principal function was cooking. However, he suggests that the cooking carried out at burnt mounds was not for daily domestic consumption but involved

Illus. 1.16 Standing stone in Ryleen (J Eogan).

Illus. 1.17 Stone row in Whitechurch (J Eogan).

the preparation and cooking of food as part of regular, possibly seasonal 'gatherings of kin and neighbours' (ibid., 168). Eoin Grogan (2005b, 142) has suggested that social bonds within and between kin-groups were 'created and maintained' at these sites. If these hypotheses are correct then *fulachtaí fia*, despite their simple form and siting in seemingly peripheral or marginal locations in the landscape, could have played a central role in developing and maintaining social bonds during the Bronze Age. Burnt mounds of similar form and date range are also found in Wales and western Scotland demonstrating that Bronze Age communities in south-east Ireland participated in social practices that spanned the Irish Sea.

Archaeological evidence indicates that standing stones, *fulachtaí fia* and burnt mounds could have been in use throughout the Bronze Age. However, other types of finds and monuments can be more closely dated and provide an insight into the development of society over the 1,600 years covered by the period. The archaeological evidence for Early Bronze Age Wexford is dominated by the corpus of 72 graves found at 55 locations in the county over the last 200 years. The distribution of these burials is focussed on the north-east of the county and the lower Slaney Valley; the Dunganstown burials (see above) are one of a few examples identified in the west of the county, and there are notable gaps in the distribution along the Blackstairs Mountains and along the south coast (Illus. 1.18).

Four of the 19th-century discoveries were reputedly made at 'mounds'; however, it is not possible to determine if these were natural gravel mounds or constructed burial mounds. Two-thirds of these sites came to light before 1950 and few of these discoveries were investigated by
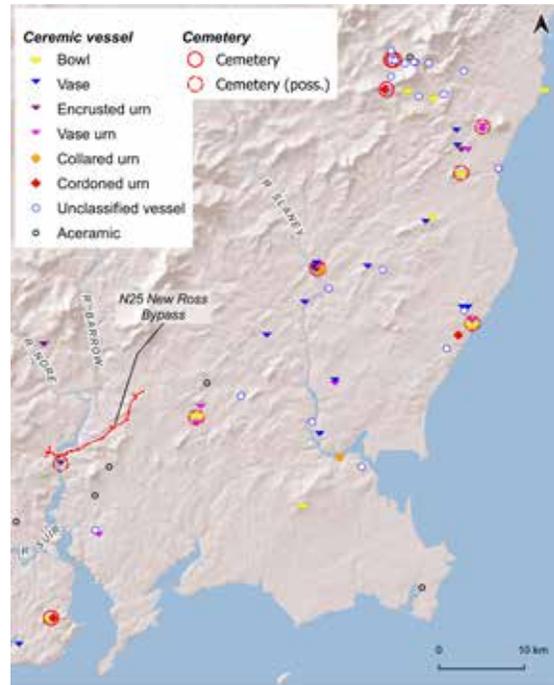
Illus. 1.18 Distribution of Early Bronze Age burials in the south-east. Sources of data: Waddell 1990; Ó Ríordáin & Waddell 1993; Brindley 2007; Cahill & Sikora 2011 (basemap: ESRI Shaded Relief) (J Eogan).

archaeologists. Consequently, the quality of the records is sometimes limited. Single burials were found at 38 sites and multiple burials were identified at 12 sites. At least 41 of the graves were stone-lined cists with 13 pit graves being identified. Human remains were recorded in 41 of the graves; four graves contained inhumation burials, the rest were cremations. The remains of a minimum of 53 individuals are represented. Most of the burials were not examined by osteoarchaeologists. Four burials, two inhumations and two cremations were found to contain the remains of two individuals; exceptionally the cremated remains of 17 individuals were interred in a cist at Tomfarney (Sikora & Reilly 2011).

Many of the burials were accompanied by, or contained in, different types of ceramic

vessel. The typological development and chronological span of the different forms of Early Bronze Age funerary pottery is well understood (Ó Ríordáin & Waddell 1993; Brindley 2007; Bayliss & O'Sullivan 2013; McSparron 2021). The earliest type is the bowl food vessel which is typically found accompanying burials between the mid-22nd and early 20th centuries BC. Nine bowl food vessels are recorded from Wexford. Vase food vessels, vase urns and encrusted urns belong to the Vase Tradition (Waddell 1990). Production of vase food vessels seems to commence in the late 22nd or early 21st century BC and they continued in use until the mid-19th century BC. Like the bowls, this type of vessel is typically placed in the grave alongside the inhumed or cremated remains of the deceased. Ten vase food vessels have been found in the county. Within a few generations of the commencement of the use of vase food vessels two new forms of pottery—encrusted urns and vase urns—were added to the potters' repertoire, in response to a change in burial practice around 2000 BC. As indicated by their names, these pots typically contain the cremated remains of the deceased. Encrusted urns and vase urns continued in use for about 150 years. Five encrusted urns and nine vase urns are recorded from County Wexford.

It is worth noting that in the 20th century BC it appears that those who buried the dead had a range of choices when it came to the treatment and burial of deceased members of their communities. The dead could be inhumed or cremated, their remains could be placed in a pit or cist grave accompanied by two different forms of food vessel, or they could be placed in an urn before burial in a pit or cist.

By 1800 BC, as the use of food vessels and Vase Tradition urns was coming to an end, a new form of pot, the collared urn, appears in the burial record. Collared urns continued in use into the 17th century BC but by the mid-18th century another form of urn, the cordoned urn, also comes into use. Cordoned urns continued in use for burial into the 15th century BC. The later types of urn are less frequent in the record; two collared urns and a single cordoned urn are recorded from County Wexford. However, it should be noted that 19th-century antiquarian accounts record the discovery of at least 17 'urns' which cannot be classified as the pottery was not retained or adequately described.

The evidence for burial practices in the Middle and Late Bronze Age is much more difficult to identify following the cessation of burial in cordoned urns around the mid-15th century BC. As a result, later Bronze Age burials were not recognised by antiquarians. This is due to the shift in burial practice to the predominant practice of depositing cremations without an associated ceramic vessel. The change in burial rituals that occurred at this time also involved the abandonment of the practice of placing grave goods, apart from sherds of coarseware pottery, with the burial and the widespread adoption of token cremation burial whereby only a portion of the cremated bones of the deceased individual was interred (Cooney & Grogan 1999, 135; Grogan 2004b).

Recent excavations have uncovered evidence for Middle and Late Bronze Age burial in Wexford. Three Middle Bronze Age token cremation burials were excavated at an extensive multi-period cemetery complex at Ask on the Gorey Bypass. A central cremation burial was located within a ring-ditch, and a cremation pit burial and a crushed inverted urn containing cremated human remains

were also identified on the site (Stevens 2007; Troy 2011). At Knockrathkyle 1 on the M11 Gorey to Enniscorthy road scheme, a line of 10 pits containing small quantities of cremated human bone was associated with two ring-ditches. Sherds from undecorated bucket-shaped Middle Bronze Age vessels were found in three of the pits (Rajic & Hardy 2012). Also on this scheme, single Middle Bronze Age token cremation burials were excavated at Drumgold 3 (Taylor & Hardy 2013) and Tinnacross 2 (Hardy & Taylor 2012). There appears to be continuity of burial rites into the later Bronze Age, though formal burial sites appear to have become less common and, in most cases, regardless of status, people were buried in a simple manner (Cooney & Grogan 1999, 144). Single token cremation burials identified at Knockrathkyle 1 and Dunsinane 3 were radiocarbon dated to the Late Bronze Age (Rajic & Hardy 2012; Gallagher et al. 2015).

When it comes to evidence for the settlements that people occupied in the Bronze Age in Wexford, it is sparser. Martin Doody's (2000) seminal study of Bronze Age houses in Ireland did not identify any settlement sites in Wexford. Excavation at Moneytucker 1 in advance of construction of the realignment of the N30 between Enniscorthy and Clonroche exposed approximately half of a post-built roundhouse with a projected internal diameter of 7.5 m. A sherd of Middle or Late Bronze Age coarseware pottery was associated with the structure, and a sample of ash and hazel charcoal from one of the post-holes was radiocarbon dated to the Middle Bronze Age (Ó Maoldúin 2009). A potential Bronze Age house was uncovered in a 2005 excavation at Strandfield (Area 2) on the outskirts of Wexford town

(MacManus 2008). The building was defined by a 10.2 m-diameter circular slot-trench; 22 stake-holes were identified in the base of the slot-trench and several sherds of coarse pottery were recovered from its fill (Catherine McLoughlin pers. comm.). Two circular post-built structures were uncovered within a large (1.8 ha.) sub-oval ditched enclosure discovered at Drumgold 6 south-east of Enniscorthy prior to construction of the M11 (Hull 2014). One of the structures, probably occupied in the 15th century BC, was approximately 6 m in diameter and its outer wall was defined by a ring of seven post-holes with a south-facing doorway. The other structure was approximately 7.5 m in diameter. It too was defined by a ring of post-holes and had a south-facing door; however, it was more complex architecturally as it had an inner ring of roof supports. The enclosure was defined by a ditch which was up to 2.16 m wide and 1.3 m deep. Radiocarbon dating indicates that it was constructed in the later Early Bronze Age or early Middle Bronze Age and that the ditch went out of use in the late Middle Bronze Age or early Late Bronze Age. A large, centrally located pit contained a substantial assemblage of sherds from undecorated bucket-shaped pottery vessels. Two pit cremation burials were found within the enclosure, each containing a single token adult cremation. Radiocarbon dating revealed that one of them dates to the Middle Bronze Age (Taylor & Hardy 2013); it is likely that the burials were contemporary with the structures and enclosure. Elsewhere in County Wexford, large enclosures at Courthoyle New and Ballybuckley have been classified as hillforts. Both these examples are univallate, surrounded by a single bank and ditch, enclosing areas of approximately 1.1 and 1.8 hectares

respectively.[5] Recent research has shown that the major construction period of hillforts dates to the Middle and Late Bronze Age (O'Brien 2017); in the absence of excavation the relationship of these hilltop enclosures to the lower-lying Drumgold 6 enclosure is unclear. Large enclosures represented a major undertaking for the communities that built them, requiring labour to excavate ditches and build banks and the sourcing of timber or stone for palisades or revetments. As a result, it has been suggested that their construction represents the emergence of hierarchical societies and the existence of individuals or elites who could direct these significant undertakings. At the same time, objects, such as those found in the New Ross Hoard, may have been worn or displayed as symbols of prestige or power, or kinship with elite groups in other regions. Environmental evidence shows that in the Lough Cullin area, after a period of continued stability of vegetation, the Middle Bronze Age witnessed a 'period of intensive human impact on the environment' (Kearney et al. 2022, 272). The palaeoenvironmental evidence (pollen, geochemical and soil erosion) strongly indicates that at this time the landscape in this area was cleared of much of its woodland cover and that open grassland or meadow environments dominated, with localised areas of arable cultivation. This suggests a sustained human impact on the environment during the Middle Bronze Age. Whether this can be attributed to a rise in population or the emergence of a centralised authority directing land-use, or a combination of factors is an open question. Comparable patterns of increased Middle Bronze Age human activity have been observed in palaeoenvironmental data in other parts of the island (Plunkett 2009; Ginn & Plunkett 2020) and analysis of radiocarbon dates suggest a peak of human activity between 1050 and 900 BC, followed by a century in which evidence for human activity steadily declines (Armit et al. 2013). The environmental picture changes towards the end of the Late Bronze Age as woodland recovered, although indicators of farming activity are still evident in the Lough Cullin core (Kearney et al. 2022, 272).

The Iron Age

During the Iron Age, documentary sources compiled in the classical world begin to refer to Ireland. The *Geografia* compiled by a Greek geographer, Claudius Ptolemaeus, in Alexandria in the second century AD assigns a tribal name Brigantes to the people occupying the south-east corner of the island and gives coordinates for points along the Wexford coastline (Culleton 1999, 35–6). These landmarks included the mouth of the Birgos river which has been identified as the mouth of the Barrow at Waterford Harbour (Condit & Moore 2003). Evidence of connections to the classical world in the later Iron Age can be traced through finds of a range of objects originating from the Roman world in the south-east, particularly in the catchments of the Slaney, Suir, Barrow and Nore rivers, demonstrating that people living in the region maintained maritime connections with the Roman world and were interested in acquiring objects associated with a Roman way of life (Cahill Wilson 2014a; 2014b; Stevens 2022).

However, during the first 700 years or so of the Iron Age very little artefactual evidence for Iron Age activity is known

from County Wexford and the south-east region, in stark contrast to the rich material culture associated with the preceding Bronze Age. This is a pattern observed across the southern half of the island which caused the late Prof. Barry Raftery (1994, 226–8) to refer to 'the enigma of southern Ireland' in the Iron Age. Analysis of radiocarbon dates from across the island shows a rapid fall in human activity at the start of the Iron Age c. 800–750 BC, and palaeoenvironmental indicators suggest that a period of climatic deterioration commenced around 750 BC (Armit et al. 2014). The environmental evidence from the Lough Cullin core suggests that vegetation in that area saw a series of marked transformations over the course of the Iron Age (Kearney et al. 2022, 272, 274). In the period covering the Bronze Age–Iron Age transition, land that had been cleared for farming in the Bronze Age was recolonised by woodland and indicators of human activity in the landscape disappear. This is followed by four or five centuries where there is evidence for a resurgence of human activity, which resulted in woodland clearance, the expansion of grassland and evidence for cereal cultivation in the third to fifth centuries BC. However, this phase of significant human activity in the Lough Cullin catchment was followed by up to seven centuries where there appears to have been a possible 'complete cessation of human activity' (ibid., 272). The environmental evidence provides a lens through which the absence of obvious Iron Age material culture can be viewed. It seems that despite the absence of recognisable Iron Age finds in this area human activity waned, waxed and then waned again over the course of the Iron Age.

It has been suggested that coastal promontory forts date to the Iron Age. Two examples have been identified on the County

Wexford side of Waterford Harbour at Nook, just south of the confluence of the rivers Suir and Barrow, and at Duncannon (Moore 1996; Stout 1987, 27–8). Stout (1987, 27) proposed that some large hilltop enclosures may have been constructed in the Iron Age. In the absence of independent dating of any of these monuments they cannot be assigned an Iron Age date. However, recent investigation of a promontory fort near Annestown, Co. Waterford, has confirmed activity in the Iron Age (Pollard 2021).

Until the early centuries AD the principal funerary rite was cremation; Iron Age communities buried their dead at earthen mounds (barrows) often surrounded by a ditch (Raftery 1994, 250–8; McGarry 2009). A badly damaged mound surrounded by a ditch on the northern slopes of Lacken Hill may be an Iron Age burial monument (Illus. 1.19).

Archaeological investigations of a variety of infrastructure and commercial developments since the late 1990s has altered our knowledge of the Iron Age in Wexford to a great extent. There is evidence of continuity of use of some *fulachtaí fia* into the Iron Age; at Moneycross Upper on the Gorey Bypass a substantial plank-lined trough was constructed in the Early Iron

Illus. 1.19 Damaged barrow in woodland on the north slopes of Lacken Hill (J Eogan).

Age, between 725 and 400 BC, at a burnt mound that had been previously used in the Late Bronze Age (Stevens & Schweitzer 2010). Continuity is also evident in the placement of the dead in the landscape; at Ask a penannular ring-ditch (5.4 m diameter) was constructed near its Middle Bronze Age precursor. Two charred birch planks were found in the ditch fill. Cremated human bone was associated with the planks and a bone sample returned a radiocarbon date of 360–50 BC; a glass bead was also found in the ditch (Stevens 2007; 2011). Birch and oak planks, some of which contained iron nails, were laid in the fill of an Iron Age ring-ditch (5.4 m diameter) uncovered during construction of a drainage scheme at Ferns. Four cremation deposits, containing the remains of seven individuals, had been inserted in the ditch after deposition of the planks. Some of the burials were associated with decorated glass beads. Two charcoal samples returned dates ranging from the fourth to first centuries BC (Ryan 2012). The cremated remains of a single individual were found in a sub-rectangular pit at a development site in Kerloge on the outskirts of Wexford town; the pit was located off-centre within a structure defined by a penannular ring-ditch (14.6 m diameter). The ditch also enclosed post-holes, gullies and stake-holes suggestive of a building though no clear ground plan could be discerned. A charcoal sample associated with the burial returned a radiocarbon date of 390–170 BC (McLoughlin 2012). The truncated remains of two contemporary Iron Age houses were identified at Moneylawn Lower on the Gorey Bypass (McKinstry 2008; Becker et al. 2017). Structure 1 has similarities to the Kerloge structure; it was defined by a curvilinear gully (maximum diameter 15.4 m) which enclosed a concentric curvilinear gully and a series of

post- and stake-holes. Structure 2 comprised a series of post-holes and stake-holes delineating a roughly sub-rectangular area 12.9 m by 10 m; it had a centrally located hearth. Charcoal from an isolated hearth at Bricketstown, near Camaross, returned a date in the second century AD (Elder & Johnston 2009b). These discoveries have addressed what Geraldine Stout (1987, 33) characterised as the 'inadequate' evidence for the Iron Age in Wexford and have gone some way to solving Raftery's (1994) southern Irish Iron Age enigma by demonstrating that the northern distribution of recognisably Iron Age objects does not tell the full story of the settlement of Ireland in this period.

Early medieval

In a recent review of the archaeology of early medieval Wexford, Ian Doyle (2016) has noted how little new evidence has come to light in the last couple of decades, despite the large-scale pre-construction archaeological investigations of developments that have revealed so much new evidence for the county's prehistoric inhabitants. Test excavation on a proposed development site adjacent to a ringfort in Lacken, near the bypass, uncovered undated evidence of two areas of burning and a possible field system (Stafford 2008). Excavation at Moneylawn Lower, south of Gorey, revealed that a circular earthwork, interpreted as a tree-ring, was constructed on the site of an early medieval enclosure defined by two concentric ditches (McKinstry 2008). A previously undocumented enclosure, defined by an oval enclosure ditch and associated with iron-working and a cereal-drying kiln, was uncovered at Corbally 2 and 3, east of Enniscorthy (Rajic & Hardy 2013). Early medieval cereal-drying kilns were uncovered

adjacent to a ringfort at Raheenagurraun West, south-east of Gorey (Breen 2007), and the possible remains of an early medieval field system associated with three cereal-drying kilns was revealed by excavation at Drumgold, south-east of Enniscorthy (Whitty & Kavanagh 2018).

The early medieval period saw the introduction of Christianity and literacy to Ireland in the fifth century. Over time this led to several significant developments that can be traced in the archaeological and historical record including the adoption of a new form of burial (extended inhumation), new forms of secular settlement (ringforts/cashels), innovations in agricultural technology (cereal-drying kilns), the foundation of churches and monasteries, and the construction and maintenance of infrastructure such as mills, roads and bridges (O'Sullivan et al. 2014). This period also witnessed the emergence of a hierarchical society underpinned by legal and administrative structures, which by the 12th century led to the development of a society with elements of a feudal structure and the appearance of strong regional kingdoms, such as the Uí Ceannsellaig in Wexford (MacCotter 2008). The early medieval period also saw significant artistic developments particularly in secular and ecclesiastical metalwork and ecclesiastical sculpture and manuscript illumination (Laing 2006). During the Viking Age, urban settlements such as Wexford and Waterford were established. The seven centuries covered by the early medieval period witnessed profound and significant changes across all aspects of society.

The documentary sources indicate that in the early medieval period the area through which the New Ross Bypass runs was in the northern part of a territory named Síl mBriain. It seems that the Síl mBriain were a branch of the Loígis, whose principal territory was in the middle catchment of the River Barrow, in modern-day County Laois. Síl mBriain may have been subdivided into two local kingdoms, ruled by Loígis and Benntraige dynasties (MacCotter 2008, 252). St Abbán, who probably lived in fifth to early sixth centuries AD, is credited with the foundation of a monastery in the New Ross area (Culleton 1999, 99). The site of St Abbán's monastery is believed to be indicated by the large circular enclosure (approximately 170 m diameter) demarcating St Stephen's Cemetery in Irishtown, which is associated with a holy well and two bullaun stones (Moore 1996, 118; Ó Drisceoil 2017) (Illus. 1.20). However, it has also been suggested
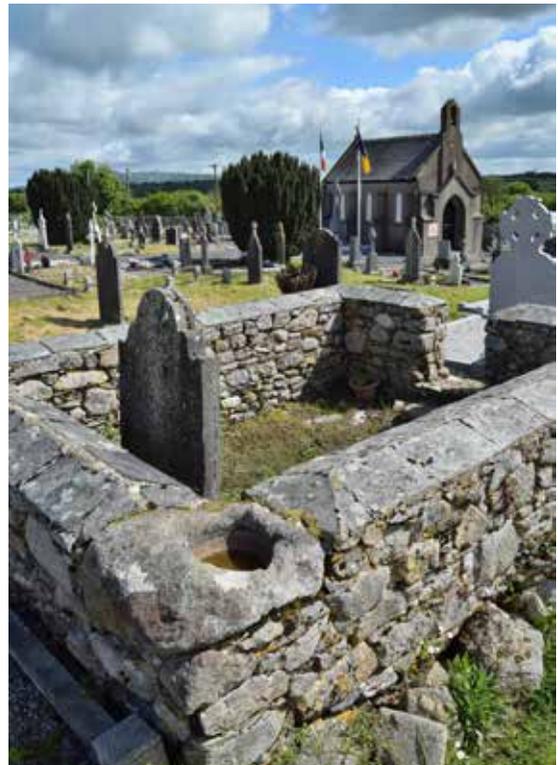
Illus. 1.20 Early medieval bullaun stone built into a later grave enclosure in St Stephen's graveyard (J Eogan).

33

that St Abbán's monastery may have been located in the vicinity of John Street, an area known locally as 'the Abbey' (Doran 2008). The choice of location for the ecclesiastical settlement was probably influenced by its proximity to the point where the Slighe Cualann, one of the five great roads described in early Irish literature, crossed the River Barrow, probably by means of a ferry. The Slighe Cualann ran through Dublin, west Wicklow, Carlow, Kilkenny and Wexford, before terminating at Waterford. Early law tracts describe a variety of types of roads in early medieval Ireland (Doherty 2015); this important ecclesiastical site was probably located at the nexus of a network of regional and local roads converging on the crossing point on the River Barrow.

At this time documentary sources suggest the countryside around St Abbán's monastery would have been divided into a series of agricultural landholdings, each containing a mix of arable, grazing and woodland, and commonage controlled by a kin-group. In the idealised system of landholding described in the early law tracts, the basic grade of free landowner was the *bóaire*; Paul MacCotter (2008, 105–6) has estimated that each *bóaire* farmed a holding of between 400 and 600 acres. The *bóaire* lived with their extended family in a rath (ringfort) and owned a herd of cattle, a plough-team and other livestock, pigs, sheep, horses and poultry (ibid., 104). Unfree and semi-free tenants provided labour, tilling the fields, cultivating crops and tending to livestock. Cattle were the main form of currency in early medieval Ireland; a significant portion of the tribute paid by client farmers to their dynastic overlords were cows and oxen (McCormick 1995; Kelly 1998, 57–8). However, archaeological excavation has demonstrated the significance of tillage crops in the early medieval economy

too (O'Sullivan et al. 2014, 194–209; Monk 2015). Cereal pollen quantities in the portion of the Lough Cullin core dated to the early medieval period indicate clearance of some woodland species in the locality, a significant and sustained expansion of arable cultivation and an expansion of grassland/pasture. This indicates the resumption of significant human activity in this landscape following the so-called Late Iron Age Lull. Towards the end of the period there are indications of substantial woodland clearance across all parts of the Lough Cullin catchment and possible eutrophication of the lake's waters because of increased organic run-off from agricultural activity (Kearney et al. 2022, 272–3, 275).

Early medieval agricultural practices probably resulted in zoning within each landholding; the land in the immediate vicinity of the ringfort was probably enclosed and subdivided into fields where vegetables and tillage crops were grown (Kelly 1998, 370–1), and more distant parts of the landholding were probably used as pasture for the cattle herd. As hay was not saved by Irish early medieval farmers (ibid., 46–8; O'Sullivan et al. 2014, 181–3), livestock must have been excluded from some of these pastures in the summer months with these areas being utilised for winter grazing.

The most visible evidence for early medieval secular settlement is the ringfort or rath, mostly circular earthworks defined by one or more banks and ditches; some of these are associated with underground structures known as souterrains (Stout 1997; O'Sullivan et al. 2014, 48–50). Current evidence indicates that ringforts were constructed and occupied between the sixth and 10th centuries AD (Kerr & McCormick 2014). Finbar McCormick (1995) has associated the widespread adoption of ringforts with

the development of a dairying economy and the need to protect valuable livestock from raiding. Early Irish documentary sources suggest that multivallate ringforts (that is, examples with two or three enclosing banks and ditches) reflected the higher social and economic status of the occupants (Stout 1997, 110–15). The Archaeological Survey of Ireland has recorded 641 monuments in County Wexford which it has classified as 'ringfort – rath' and 148 monuments which are classified as 'ringfort – unclassified'.[6] Almost 400 of these monuments were depicted on various editions of Ordnance Survey maps surveyed in the 19th and early 20th centuries. Survey records indicate that almost 120 of these ringforts survive in a reasonably good state of preservation in the landscape and another 80 or so survive in a damaged state. Of the other, approximately 200, ringforts depicted on historic maps, 52 have been observed as cropmarks in aerial, drone and satellite images, 11 have been quarried or built on, and no visible trace has been recorded of 130. These statistics starkly illustrate the attrition of early medieval settlement sites in Wexford over the past two centuries. However, it can be suggested that this process has been going on for longer as 376 ringforts which were not mapped by the Ordnance Survey have been identified as cropmarks in aerial imagery. The high rate of damage and destruction of Wexford ringforts has been attributed to the long history of tillage farming in the county (Bennett 1989; Culleton 1999).

The distribution of approximately 400 ringforts known in Wexford in the 1980s was analysed by Isabel Bennett (1989). She found the greatest densities on the well-drained, fertile brown earth soils in
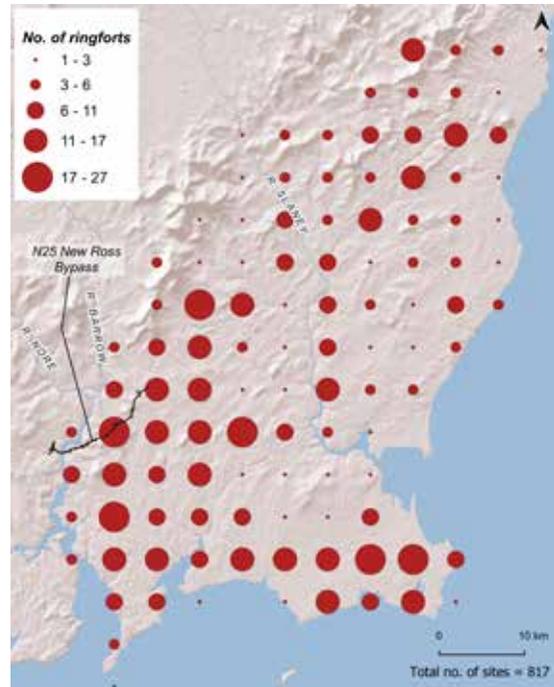
Illus. 1.21 Frequency of ringforts in County Wexford (5 km² grid). Source of data: Sites and Monuments Record (ASI Open Data, release 21/07/2022) (basemap: ESRI Shaded Relief) (J Eogan).

the west of the county, and that they were most frequently sited between altitudes of 30 m and 120 m. She concluded that, when choosing a site, Wexford's ringfort builders demonstrated an awareness of altitude, soil quality and drainage (ibid., 42). The land acquired for construction of the New Ross Bypass generally falls within the altitude range and soil type preferred for ringforts and some of the highest densities of ringforts have been identified in this part of County Wexford (Illus. 1.21). Eight ringforts are located within 0.5 km of the bypass: three bivallate examples, in Creaken Upper (destroyed), Arnestown (ploughed out) and Begerin (Loftus); and univallate examples in

6   *Archaeological Survey of Ireland Open Data_2022_07_21* https://data.gov.ie/dataset/national-monuments-service-archaeological-survey-of-ireland?nocache=true. Accessed 27/10/2022.

Knockmullin, Begerin (Lloyd) (ploughed out), Lacken (two examples) and Rathgaroge.

Documentary sources for the 11th–12th centuries suggest continuity of kin-group forms of land ownership (MacCotter 2008). However, the construction and occupation of ringforts appears to have ceased by and large after the early 11th century (Kerr & McCormick 2014). It has been suggested that the importance of cattle as a means of exchange declined because of the greater use of silver bullion as a means of exchange from the ninth century (McCormick & Murray 2007, 111–12). As a result, it is believed that the need for ringforts to protect valuable livestock reduced and the lack of evidence for the construction and occupation of ringforts in the 11th–12th centuries can be understood as a consequence of this significant economic change. However, it should be noted that there is a general absence of archaeological evidence for rural settlement in lowland parts of the country in the latter centuries of the early medieval period, between the period when ringforts were built and occupied and the establishment of new forms of rural settlement by the Anglo-Normans. This gap in the rural settlement evidence has persisted despite two decades of archaeological work on large-scale infrastructure projects. This gap is puzzling given the apparently vibrant agricultural economy which in the 12th century produced significant surpluses for provincial kings, such as Diarmait Mac Murchada in the south-east (Swift 2015).

Late medieval

Diarmait Mac Murchada was the powerful and ambitious king of Uí Chennselaig for four decades from the early 1230s. Through a series of alliances and military campaigns he extended his power beyond the Uí Chennselaig heartland of the Slaney Valley, and by the early 1160s he is referred to as king of Leinster and king of Dublin. Following a series of reverses, Mac Murchada's provincial rivals invaded Uí Chennselaig which resulted in the loss of his kingdom and exile in 1267 (Ní Mhaonaigh 2009). In exile he formed an alliance with the Cambro-Norman noble, Richard de Clare, earl of Strigoil, better known as Strongbow. Strongbow's inducement was the promise of Mac Murchada's daughter Aífe's hand in marriage and the right to succeed Diarmait. Strongbow landed in Waterford Harbour in 1170 with a force of Anglo-Norman knights and troops (Beresford 2009a). Aífe was Diarmait's sole legitimate heir when he died the following year. In accordance with Anglo-Norman feudal custom, in the absence of a male heir, Strongbow became Diarmait's successor, heralding the English lordship of Leinster (O'Byrne 2007).

Strongbow's acquisition of the lordship of Leinster resulted in the establishment of the Anglo-Norman colony in the subsequent decades. This process involved the transfer of lands from Irish to Anglo-Norman control and the establishment of a feudal system of land ownership and a manorial based agricultural economy. The establishment of the colony was associated with the foundation of new towns, construction of defensive earthworks, such as motte and bailey castles and ringworks, and in the 13th century the building of defended farmsteads, moated sites (Colfer 2002).

Among the first land transferred to Anglo-Norman control was the territory of Síl mBriain which was granted by Mac Murchada to Strongbow's uncle, Hervey de Montmorency, one of the leaders of the initial Anglo-Norman incursion in 1169.

Illus. 1.22 View across the bailey to Old Ross motte. The Blackstairs Mountains, visible in the background, remained a refuge for the Gaelic Irish in the 13th–14th centuries (J Eogan).

Once he obtained the lordship, Strongbow set about establishing a feudal system by making grants of land in the newly created cantred of Shirebryn (which survives as the barony name Shelburne) to his followers, before his own death in 1176 (Colfer 2002, 35–45, 98–102; 2013, 26–32).

Strongbow established a demesne manor, covering approximately 75 km², at a strategic location below the confluence of the rivers Barrow and Nore and encompassing the site of St Abbán's monastery and the crossing point of the River Barrow (Colfer 2002, 40). Hore (1900, 131) recorded a local tradition that Strongbow and Aífe lived for a time at Mac Murrough's Castle (Macmurroughs td.) on the south bank of the Barrow 3 km north of New Ross, but his claim that Strongbow signed charters there is not supported by the evidence (Marie Therese Flanagan pers. comm.). Archaeological investigation of part of the site in the1980s uncovered the stone foundations of a rectangular building of probable post-medieval date; a section of walling from an earlier undated building was identified under the foundations. A small assemblage of glazed medieval pottery, including three sherds from vessels made in France, was recovered from topsoil contexts (Cotter 1986; 1986–87). Charcoal from a hearth approximately 20 m south of the building returned a radiocarbon date with a calibrated date range of AD 1441–1793 (Claire Cotter pers. comm.).[7]

The caput (administrative centre) of the manor of Ross was established at the

7   Unidentified charcoal sample from fill of Feature A, hearth. Lab ID: UB-3000; radiocarbon age: 340±65 BP; calibrated range: 1 σ (68.3% probability) AD 1480–1634, 2 σ (95.4% probability) AD 1441–1793. Calibration programme: Calib 8.20. Calibration dataset: IntCal20.

inland site of Old Ross, where Strongbow may have built the motte and bailey castle before his death (Illus. 1.22). Old Ross became the location of a settlement, which was granted the status of borough, with a marketplace, a church, a mill, and where some decades later a stone castle was built (Marshall & McMorran 2016). Strongbow and Aífe's daughter, Isabel, married William Marshal in 1189. Around 1200, Isabel and William visited Old Ross and their Irish estates and founded the town and port of New Ross on lands in the north-western portion of the demesne manor. The town was strategically located to facilitate trade to and from their extensive lands in the lordship of Leinster, and the construction of a bridge linked the road networks in the Marshal-controlled lands on both sides of the Barrow. Construction of the bridge was a substantial and costly undertaking; its significance is reflected in the first documentary reference to the town – *Pons Novus, villa Willielmi Marescalli* ([the] new bridge [of] William Marshal's town) (Ó Drisceoil 2017).

Over the following century the manor of Old Ross passed through the ownership of various descendants of Isabel and William. Detailed manorial accounts survive for a 13-year period in the late 13th century, which give a valuable insight into the manorial economy (see Chapter 3). The entries in the accounts also give a sense of the way in which the manorial landscape was organised. Expenses are recorded for the maintenance and repair of sheepfolds and byres, the digging of boundary ditches and the fencing of land and repairing roadways. Boat loads of sand were brought from sandbanks in Waterford Harbour and spread on land to improve its productivity. Land was also fertilised with manure drawn from farmyards

and sheepfolds on the manor, and poor-quality land was reclaimed by burning (Hore 1900, 9–39).

In 1283, the accounts include expenses associated with the construction of a moated site at Ballyconnor, which Billy Colfer (1996) identified as the earthwork in Mylerspark, 3.3 km south-east of the bypass. This is one of a cluster of moated sites in this part of the manor of Old Ross, whose construction was possibly associated with a second phase of Anglo-Norman land clearance and colonisation (Colfer 2002, 91–4). Moated sites are rectangular or square earthworks which are generally dated to the 13th century. Two examples have been excavated in recent decades in advance of the construction of new sections of the N25 bypassing Camaross and the N30 between Clonroche and Enniscorthy (Tierney 2009; Fegan 2009). Recent excavations in other parts of Wexford and adjacent parts of Kilkenny, in advance of road and gas pipeline construction, have also uncovered evidence for unenclosed late medieval settlements and other features of the contemporary rural landscape (Eogan & Kelly 2016; Flynn 2013).

The Black Death, Gaelic resurgence and other political and economic factors in the 14th, 15th and 16th centuries led to the reduction in the extent of the colony. New Ross and its hinterland were on the frontline between the areas controlled by the resurgent Mac Murchada dynasty and their kinsmen the Kavanaghs to the north, including the Blackstairs Mountains, and the parts of southern and western Wexford controlled by colonists. Documentary sources from the mid-14th century onwards record persistent raiding by the Irish. In 1539, the English administration wrote to Thomas Cromwell, Henry VIII's chief minister, that New Ross

was 'utterlie decaid and wastid ... by reason of the contynuall war and adnoyance of the Kavenaghes' (Hore 1900, 238).

Post-medieval and early modern

Post-medieval Ireland is characterised by dramatic change and turbulence in the social, political, economic and religious spheres as the government authorities in Dublin and London sought to subdue Ireland. The continued construction of tower houses was a response of the land-owning class in the turbulent 16th century (Colfer 2013, 84–95). Stokestown Castle tower house was probably constructed at this time (ibid.,

168, 244). Tower houses were also built in Forestalstown and Annaghs, Co. Kilkenny, and Camlin, Arnestown, Lacken and possibly Rathgaroge, Co. Wexford (Illus. 1.23). Tower houses were defended dwellings constructed from the late 14th century; their upper floors were occupied by the lord and his family, while the ground floor, which is usually vaulted, could be used to store valuable goods. Despite the turmoil and disruption of this period it appears that farming and other activities, such as fishing on the Barrow, continued in this landscape and that wealthy landowners built these distinctive fortified dwellings to protect themselves, their property and their agricultural produce.

Illus. 1.23 Stokestown Castle, the 16th-century tower house was incorporated into a farmyard of the Stokestown House estate in the 19th century around the time that the estuarine wetlands were reclaimed. When it was built the tower house would have been closer to the River Barrow, visible in the background (J Eogan).

Many tower houses were surrounded by a walled enclosure, known as a bawn, where agricultural equipment, livestock and produce could be protected. It may be that the layout of an earlier bawn is preserved in part of the 19th-century farmyard associated with Stokestown Castle. The dimensions of the western end of the farmyard are within the general range of smaller bawns (Rory Sherlock pers. comm.).

In the 16th and 17th centuries, the cultural differences between the 'Old English' descendants of the Norman colonists and the Gaelic Irish had largely been diluted. They found common cause in opposing the aggressive policies, particularly plantation, of the Tudor and Stuart administrations in Ireland, especially following the Protestant Reformation instituted by Henry VIII, due to their shared Catholicism. While the Lower Barrow Valley was not directly impacted by the conflicts and famines unleashed during the Tudor conquest, the post-Reformation dissolution of religious houses resulted in the transfer of the buildings and lands owned by the Augustinian, Dominican and Franciscan monasteries in New Ross, and the Cistercian houses of Tintern and Dunbrody to the Crown. These valuable assets were then granted to favoured allies of the monarch, such as the Butlers, Etchinghams and Colcloughs. The disturbed conditions of this period are reflected in the fact that New Ross's town defences were extended in the 17th century (Doran 2008, 12).

The outbreak of rebellion in Ulster in 1641 and the Irish Confederate Wars resulted in death and destruction on an unprecedented scale across the island. New Ross's bridge was destroyed in 1643, when the Duke of Ormond's royalist forces unsuccessfully besieged the town; it would not be rebuilt for a century and a half (ibid., 12–13). However, six years later the town fell to Oliver Cromwell's New Model Army. By 1653 Cromwell had secured victory for the English Commonwealth in Ireland. Parliament sanctioned the confiscation of lands from Catholic landowners and its redistribution to Cromwellian officers, soldiers and financiers. This led to the establishment of a survey under William Petty to quantify the land available for redistribution by the Cromwellian administration to pay off its debts. This became known as the Down Survey and provides us with the first detailed cartographic depiction of New Ross and its hinterland.[8] The Civil Survey compiled at the same time describes the type of lands within forfeited estates and other details such as the presence of castles, mills and weirs. The Civil Survey lists Nicholas Dormer 'Irish Papist' as the owner of a 'faire Castle', 500 acres of land, a mill and a weir to trap fish at Stokestown (Simington 1953, 203). Dormer's property was confiscated and granted to Roger Drake, a London merchant who had lent money to the Parliament in England during the Civil War.[9]

The Cromwellian confiscations and redistribution of land led to the emergence of an Anglican ascendancy class in the 18th and 19th centuries. This ruling class consolidated their economic and political power by sectarian restrictions on land ownership and participation in local and national administrative structures. Daniel Gahan's (1987) research has shown that in this part of Wexford in the early 18th century estates averaged more than 1,000

8 The Down Survey of Ireland https://downsurvey.tchpc.tcd.ie/. Accessed 27/10/2022.
9 Archaeological Survey of Ireland SMR File WX034-015----

acres, and that Wexford's land-owning class was dominated by New English families. In the 1770s the names Corbet, Drake, Napper, Pickering, Sankey and Tottenham were recorded as proprietors of 'Gentlemen's Seats' in the vicinity of New Ross (Taylor & Skinner 1778). Labour was plentiful and agricultural improvements led to a growing agricultural economy encompassing livestock, dairy and tillage. In the 1790s the principal agricultural exports from New Ross port were beef and butter (Hore 1900, 109). The opening of the Barrow Navigation in 1890, and its connection to the Grand Canal a year later, linked New Ross to an extensive inland waterway transport network and stimulated trade (O'Sullivan 2001, 208). This prosperity had an effect on New Ross town; in the mid-18th century, public buildings and facilities such as the tholsel, a meat market, and a shambles were constructed, and in 1796 the bridge across the Barrow was rebuilt by an American engineer, Lemuel Cox (Doran 2008). In the town's hinterland, landlords invested capital in their estates with the amalgamation of fields, planting of trees, drainage of wetlands and liming of land to improve its yield. In the Georgian era, ascendancy families built new estate houses, such as Stokestown, Arnestown, Talbot Hall and Berkeley Forest, with associated walled gardens, landscaped grounds and fashionable parkland demesnes. Other elements of the built heritage also date to this period; estate walls were constructed to enclose the demesnes, gate lodges were built to control access to them, farmyards were developed to accommodate new machinery and draught animals, and houses were constructed for estate workers. At this time the grand jury system that was controlled by the major local landowners improved road infrastructure by funding the construction

of roads and bridges (Gurrin et al. 2021). In the pre-famine era, intertidal wetlands along the River Barrow in Ballyverneen and Stokestown were reclaimed and transformed into productive farmland with the erection of substantial levees and a system of drains and sluices. All these developments led to a transformation of the rural landscape around New Ross in the century between 1740 and 1840.

However, despite the positive economic outlook, Ireland's political situation remained unsettled in this period. The most obvious evidence of this was the 1798 Rebellion which had a major impact on the town of New Ross and its hinterland. There were also periodic famines and outbreaks of disease which impacted the rural population, particularly the landless class. Ireland's population grew to eight million by 1841. By this time the rural social and economic structure that had developed comprised a wealthy, mostly Anglican, land-owning elite, reliant on mostly Catholic small-holding tenant farmer-labourers and a large population of landless labourers. The great Irish famine significantly changed the population structure through death and emigration; between 1841 and 1851 the population in the rural hinterland of New Ross fell by 10–20% (Smyth, W J 2012, fig. 5) and resulted in the shrinking or disappearance of settlements such as Bearstown in Ballyverneen, Co. Kilkenny, and an unnamed settlement in Ryleen, Co. Wexford. The Land War and later Plan of Campaign of the 1870s and 1880s resulted in tenants refusing to pay rents and landlords carrying out evictions in reprisal (Nolan 2012). A small house beside the bypass in Ballymacar, Co. Wexford, was reputedly constructed by the local Land League in a single week during the 1880s to house an

evicted family. The reforms brought about in response to these campaigns, through a series of land acts, led to the break-up of landed estates and the redistribution of the land to farmer proprietors (ibid.). Many of the landlord class sold up, their demesnes were returned to farmland and some of the 'big houses' and their associated buildings and infrastructure became obsolete and began a descent into dereliction.

CHAPTER 2

Selected summary excavation reports

Lyndsey Clark and Stephen Hourihan

Selected summary excavation reports

This chapter contains summary reports of eight of the most significant archaeological excavations conducted in advance of construction of the N25 New Ross Bypass. The reports are ordered from south to north by townland. Within the townlands the reports have been presented in order of site name. In addition, details of the ten *fulachtaí fia* investigated during the project have been summarised in tabular format (see Appendix 1).

The archive of final excavation reports for all archaeological excavations undertaken as part of the project and associated datasets can be accessed online in the TII Digital Heritage Collections (see Appendix 1).

Stokestown 2—Early Bronze Age flat cemetery and possible ring-ditch

Excavation Director: Mandy Stephens
Report: Mandy Stephens and Stephen Hourihan

Introduction

The site at Stokestown 2 comprised an Early Bronze Age flat cemetery containing three cremation burials, two of which were interred in inverted Early Bronze Age Vase Tradition pottery vessels, and a possible truncated pit grave.[10] Two of the burials were contained in small rectangular cist graves and the third was a pit grave. Two linear pits may be the remains of a truncated ring-ditch, which could have enclosed one of the cist burials; the pit grave was cut into the terminal of one of these linear features. Associated features include a possible burial marker and a series of quarry pits and pits of indeterminate function and date.

The site

Stokestown 2 was located on a level terrace at the top of a west-facing slope overlooking the River Barrow and what would in prehistoric times have been an extensive estuarine wetland. The site is located on lands associated with the later Stokestown Castle/Stokestown House estate.

The excavation

Three distinct groups of pits were excavated, in the south, north-east and north-west of the excavated area (Illus. 2.1). In the absence of datable material these features remain undated, but they are thought to be contemporary with each other and later than

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10 Excavation No. E4524; ITM 669203 623386; altitude 11 m OD; Whitechurch parish; Bantry barony; County Wexford.

Chapter title image Osteoarchaeologist excavating cremated remains contained in an encrusted urn buried in a cist at Stokestown 2 (J Eogan).
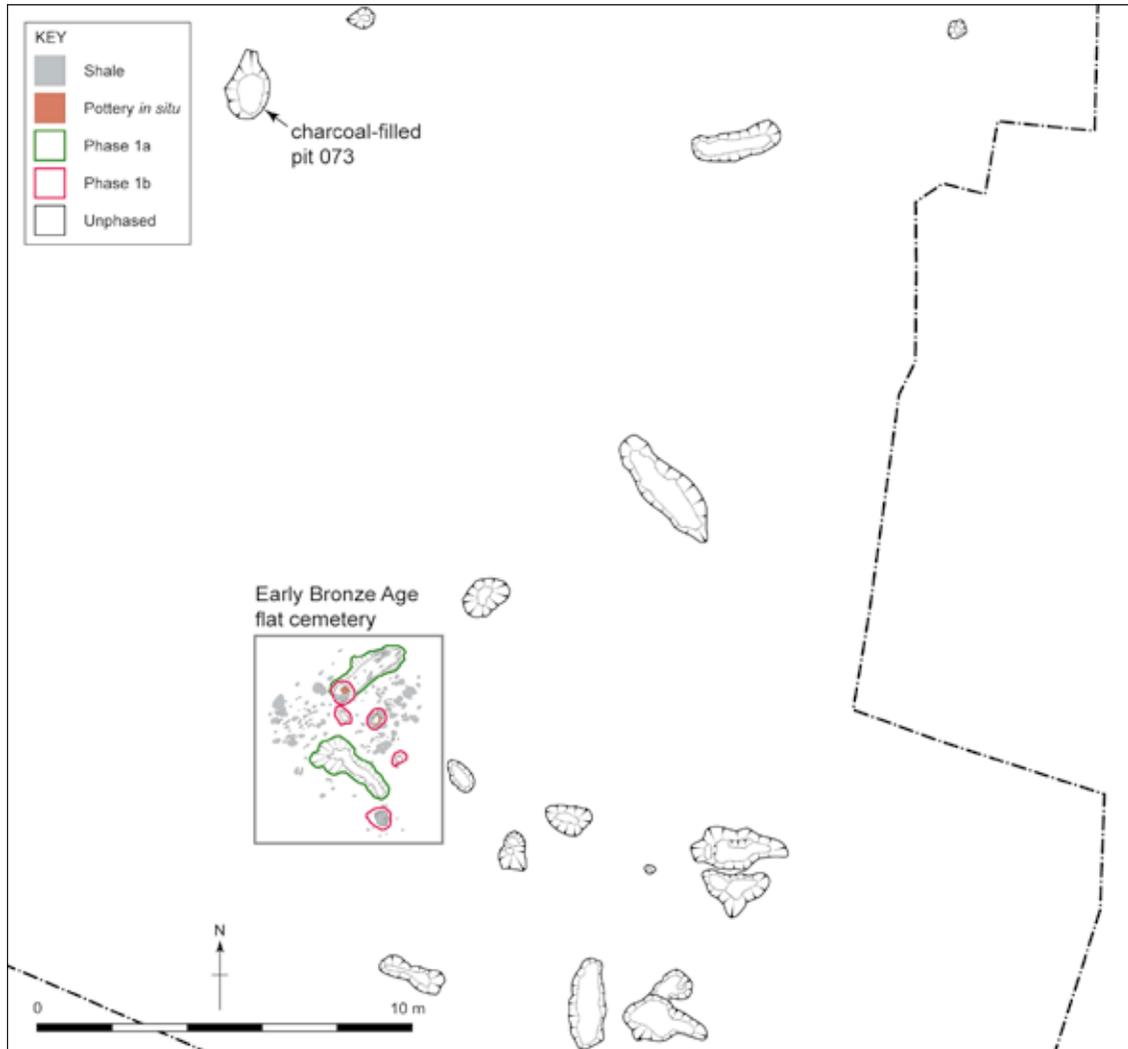
Illus. 2.1 Stokestown 2 site plan (Rubicon Heritage Services Ltd).

the Early Bronze Age activity located in the south of the site where the three cremation burials and the possible truncated ring-ditch were identified (Illus. 2.2). The Bronze Age funerary activity in the cemetery has been divided into two sub-phases: 1a and 1b. A final phase of activity, consisting of a series of NW–SE orientated furrows, represents modern agricultural activity.

Phase 1a: possible ring-ditch (012) (014)

The earliest phase was represented by the remnants of two heavily truncated features possibly representing the remains of a ring-ditch. This feature was composed of two slightly curvilinear elongated pits (012) and (014). The pits measured between 2.10 m and 2.20 m in length, 0.70 m and 1.0 m in width and between 0.15 m and 0.27 m in depth. Both features contained single silty fills with

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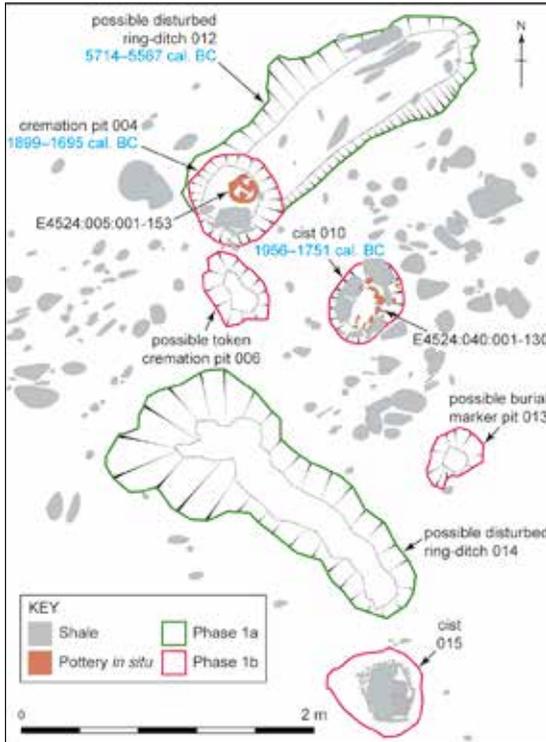
Illus. 2.2 Stokestown 2, plan of Early Bronze Age cemetery (Rubicon Heritage Services Ltd).

occasional pieces of charcoal. Analysis of the charcoal showed that hazel, oak and ash were present; minute quantities of unidentifiable burnt bone were found in the fills. A sample of hazel charcoal from the fill of pit (012) returned a Late Mesolithic date of 5714–5567 BC (SUERC-53864); however, it is thought that this date derives from residual charcoal that became incorporated in the pit's fill. A cist (010) was located approximately 0.60 m south-east of this pit and 0.80 m east of pit (014). Pit grave (004) was cut into the western terminus of pit (012). A second cist (015) lay 0.23 m south of the south-east terminus of elongated pit (014).

While the pits were not connected and did not form the classic ring-ditch shape, their physical and spatial association with a Bronze Age cemetery suggests they may represent

the remnants of a heavily disturbed ring-ditch.

Phase 1b: cremation burials (004), (010), (015) and pits (006) and (013)

Two shale-lined cists (010) and (015), one of which contained an encrusted urn, were found. Based on their spatial relationship and morphological similarity, these are assumed to be broadly contemporary. One further feature, pit (013), may be related and has been interpreted as a pit or support for a possible burial marker.

The first cist (010) was located 0.70 m east of cremation burial (004) and contained an inverted encrusted urn. The cist was constructed within a sub-circular pit which measured 0.67 m by 0.42 m by 0.25 m. Its steep sides and concave base were lined with a thick, flat base slab (0.45 m by 0.36 m by 0.15 m) and four flat angular side slabs (average size: 0.36 m by 0.28 m by 0.05 m) (Illus. 2.3). The inverted encrusted urn and cremation deposit (040) were tightly contained within this arrangement of slabs. Cremation deposit (040) consisted of a 0.20 m-thick deposit of burnt bone in a matrix of orange-brown sandy silt. Occasional charcoal flecking was noted. Analysis of the cremated bone suggests they

Illus. 2.3 Post-excavation view of cist (010) facing south (0.4 m scale) (Rubicon Heritage Services Ltd).

represent the remains of an adult male. Radiocarbon dating of the cremated human bone returned an Early Bronze Age date of 1956–1751 BC (SUERC-53820).

A second shale-lined cist (015) was located 2.20 m south of burials (004) and (010) and measured 0.56 m in diameter and 0.30 m in depth. Its stone lining was composed of a base slab (0.27 m by 0.28 m by 0.04 m) and six side slabs (ranging in size from 0.22 m by 0.21 m by 0.03 m to 0.23 m by 0.25 m by 0.03 m) and a collapsed capstone (0.26 m by 0.20 m by 0.06 m), which formed a roughly hexagonal space. The cremation deposit was dark grey-brown sandy silt containing flecks of burnt bone and charcoal. Analysis of the cremated bone could not determine the age or sex of the individual.

A pit grave (004) containing the cremated remains of an adult of indeterminate sex was cut into the south-western terminus of elongated pit (012). The unlined, circular pit measured 0.60 m in diameter and 0.22 m in depth. The cremation deposit (005) consisted of burnt bone and charcoal in a matrix of dark brown to black silt, found around, under and within an inverted bipartite vase. Radiocarbon dating of cremated bone from deposit (005) returned an Early Bronze Age date of 1899–1695 BC (SUERC-53821).

A possible pit grave (006) was located on the south-east side of the cremation burial (004). Sub-circular in plan, it measured 0.53 m long, 0.42 m wide and 0.15 m deep. It contained a single fill comprising dark brown silty clay with charcoal flecking throughout. While there was no burnt bone visible within the fill, it may represent a truncated pit burial.

Pit (013) was identified 0.90 m south-east of cist (010). Sub-circular, it measured 0.35 m in length by 0.30 m in width and 0.12 m in depth. It was filled by a deposit of red brown sandy silt. The function of this feature is unclear; the lack of charcoal and burnt bone in its fill suggests it was not a burial in itself, but there is a possibility it is a related feature and possibly held a burial marker.

Unphased: possible quarry pits and pits of indeterminate date and function

A total of 11 elongated or irregularly shaped pits were excavated across the site; these were broadly similar in size and morphology, measuring between 0.80 m and 3.53 m in length, 0.50 m and 1.07 m in width and 0.12 m to 0.31 m in depth. All were excavated through areas of shale outcropping; many contained shattered stone in their fills but no charcoal or other cultural material, suggesting they may represent backfilled quarry pits. The majority of these elongated pits occurred in two groups in the south-eastern portion of the site, with isolated examples located further north and north-west.

Two further pits excavated in the north of the site are of indeterminate date and function. Shallow charcoal-filled pit (073) was sub-circular in plan and measured 1.50 m long, 1.06 m wide and 0.08 m deep. Its fill was charcoal-rich, moderately compact silty clay (074). There was no evidence of scorching along its sides or base, suggesting that the fill was dumped into the feature rather than being burnt *in situ*.

Pit (075) lay 2.60 m north-east of the charcoal-rich pit (073). Oval in plan, the pit was steep sided to its east, gradual elsewhere and had a concave base. It has recorded measurements of 0.62 m by 0.55 m by 0.18 m. The pit's silty clay fill contained occasional charcoal flecking.

Pits (024), (022) and (089) were located in a group on the east side of the cemetery.

These have no obvious function and are of indeterminate date. They differed from the quarry pits in morphology, size and nature of their fills, which were largely sterile deposits of silt and sand but containing little to no shattered shale. All of the pits were oval in plan with gradual sides and concave bases and measured between 0.28 m and 1.05 m in length, 0.23 m and 0.86 m in width and 0.09 m and 0.14 m in depth.

Finds

Pottery
Eoin Grogan and Helen Roche

The ceramic assemblage comprises the fragmented remains of two inverted vessels (E4524:005:001–153) and (E4524:040:001–130). The vessels were found to be an unusual bipartite vase (Vessel 1: E4524:005:001–153) from pit (004) (Illus. 2.4; Illus. 2.6) and an encrusted urn (Vessel 2: E4524:040:001–130) from pit (010) (Illus. 2.5; Illus. 2.7). While Vessel 1 and the mouth of Vessel 2 were preserved *in situ* both had been shattered and sherds of Vessel 2 were dispersed throughout the lower grave fill;

Illus. 2.4 Bipartite vase from the pit grave (004) (Rubicon Heritage Services Ltd).

the damage appears to be the result of agricultural activity which severely truncated the pits.

Miscellaneous small finds
A single stone object (E4524:001:001) was retrieved during the excavation from the topsoil. The possible rubbing stone is sub-rectangular in plan with a slightly convex profile, narrower at base with a rounded/worn head.

Discussion

The results of the excavation at Stokestown 2 indicate the use of the site as a cremation cemetery during the Early Bronze Age, probably between 1900 and 1750 BC. The cremations may have been associated with a ring-ditch, which only partially survived. Numerous pits were also identified throughout the site which could not be linked directly to the cemetery activity, but at least some of which may be related to the quarrying of shale.

Two of the burials were contained in inverted Early Bronze Age vessels— an unusual bipartite vase (Vessel 1: E4524:005:001–153) from pit (004) and an encrusted urn (Vessel 2: E4524:040:001–130) from pit (010).

The urned male cremation from pit (010) weighed 1,903.5 g. It is probable that all of the remains of this individual were placed in the urn. The urned cremation burial (004) weighing 99.8 g and the cist cremation burial (015) weighing 21.4 g represented token interments. It is clear that the pyre technology at Stokestown 2 was well understood, as the vast majority of the bone was completely oxidised. This was achieved by supplying the fire with an adequate amount and type of fuel and ensuring that

Illus. 2.5 Top: image derived from 3D-model of the encrusted urn from the cist (010). Bottom: decoration inside the rim (left). Finger impression on a base sherd (right) (Rubicon Heritage Services Ltd).
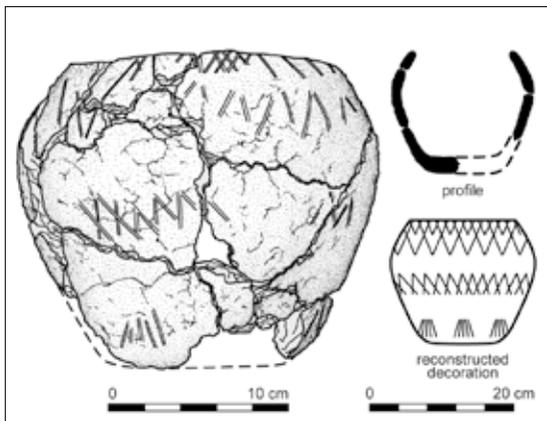
Illus. 2.6 Line drawing of the bipartite vase from the pit grave (004) (H Sims).
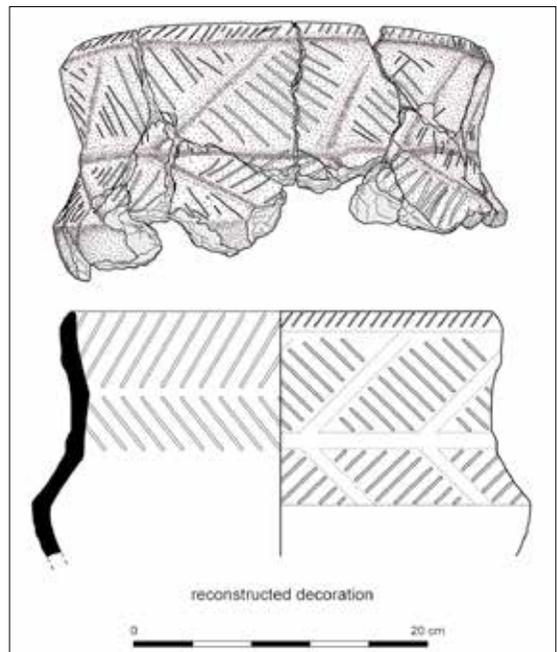
Illus. 2.7 Line drawing of the encrusted urn from the cist (010) (H Sims).

an ample amount of time and sufficient amount of oxygen reached the pyre. The location of the funerary pyres at Stokestown 2 remains unknown; however, analysis of the charcoal from the cremation deposits showed dominance of oak, and to a lesser extent ash and hazel.

The use of oak in cremation pyres has been well documented from analysed charcoal fragments across Ireland (e.g. O'Donnell 2007) and would have been a highly resourced tree-type for such activities due to its high calorific content and ability to burn at high temperatures for prolonged periods of time. The use of ash in cremations has been suggested to have a possible cultural value in the funerals of the individuals (Timpany & MacLeod 2015). A small quantity of hazelnut shell was also retrieved from cremation deposit (010); similar findings of nutshell and in some instances cereal grain from other Bronze Age cremations in Ireland have been suggested to represent the deliberate placing of food as tokens during the cremation process (Johnston 2007).

The fills of the possible ring-ditch at Stokestown 2 did not contain any significant quantities of burnt bone and the bone fragments that were found could not be identified to species. It should be noted, however, that it did seem to be heavily truncated by ploughing activity.

Although the elongated pits did not form the classic ring-ditch shape, they are believed to represent the remnants of a heavily disturbed ring-ditch based on their physical and spatial association with the cremation burials. Other examples of truncated ring-ditches were identified during excavations on the line of the Bord Gáis pipeline at Shanaclogh (Site 2/38/3), Duntryleague (Site 2/16/2) and Adamstown

(Site 2/25/6), Co. Limerick (Gowen 1988). However, the pottery recovered during these excavations would suggest that they date to the Late Bronze Age. A more recent and directly comparable example was uncovered in Derrycraw, Co. Down, in advance of the A1 Dualing Scheme – Loughbrickland to Beech Hill, where two annular ring-ditches were excavated and were associated with three semi-circular or crescent-shaped features and a pit containing a complete vase urn burial (Chapple et al. 2009). The possibility that the two linear pits that form the possible ring-ditch might also represent the truncated remains of a segmented ditch cannot be entirely ruled out. However, segmented ring-ditches of Bronze Age date are rarely identified in Ireland; these monument types more commonly have their origins in the Neolithic period or are associated with larger structures such as henges, barrows and hillforts.

The Stokestown 2 cemetery was located on a level terrace at the top of a gentle west-facing slope overlooking the River Barrow and its associated wetlands. This siting is paralleled by other Early Bronze Age cemeteries. The contemporary cemetery discovered during quarrying in Dunganstown, 1.2 km to the south-west, also appears to have been located on a terrace overlooking the Barrow and its intertidal wetland. At Newrath 37 in south Kilkenny, a vase urn containing the cremated remains of an adult male was buried in a cist under a barrow surrounded by a ring-ditch located on a terrace overlooking the wetlands at the confluence of the River Blackwater with the River Suir (Wren & Price 2011a). Charles Mount (1998, 66) previously highlighted the proximity of Early Bronze Age cemeteries in south-east Ireland to major rivers. Using the cemeteries as proxies for settlement

he observed that this indicated that these communities had access to a wide range of resources. It is also worth considering that cemeteries, such as Stokestown 2, Dunganstown and Newrath 37, were sited in these topographically prominent locations along natural boundaries and visible from both land and water as a way of marking territories.

Landscape: 2A—medieval rural settlement

Excavation Director: James Hession
Report: James Hession

Introduction

Landscape 2 was located in a large tillage field; four separate cuttings were excavated (A–D).[11] Four principal phases of activity were identified dating to the Early Neolithic, the Early or Middle Bronze Age, the early to late medieval period, and the late medieval. The most significant archaeological remains were located in Landscape 2A where a group of Early Neolithic pits and an enclosed medieval rural farm settlement containing five structures were uncovered (Illus. 2.8).

The site

Landscape 2A was situated on the edge of a tract of low-lying fertile ground located at the southern end of an estuarine wetland which formed at the confluence of the Camlin Stream with the River Barrow to the west of Camlin and Creakan hills.

The excavation

Early Neolithic activity at Landscape 2A was characterised by a series of sub-circular cooking/roasting pits (c. 0.32–1.15 m in length, 0.32–1 m in width and 0.09–0.30 m in depth) containing inclusions of burnt clay and heat-shattered stone. These were located in the south-west corner of the site. A sample of apple charcoal from one of these pits (290) produced a radiocarbon date of 3650–3380 BC (SUERC-35190).

Early Bronze Age activity was represented by an assemblage of lithic artefacts consisting of 13 pieces flint and one piece of possibly flaked chert, mostly found in residual contexts.

The late medieval rural farm settlement was located on the outermost periphery of the manor of Old Ross in the historic townland of Stokestown. In the medieval period the site would have been situated on the western limits of the manor, beside the River Barrow's estuarine wetland. The farmstead was characterised by an enclosed sub-rectangular area—measuring 37 m (east–west) by 25 m—containing five structures bounded to the south by a curvilinear ditch and to the north by a roughly east–west orientated ditch that separated the settlement from the adjacent wetland (Illus. 2.9). Dating between the late 12th and the early 15th centuries, the buildings consisted of a cottage, a barn or storage area, a hayrick, a granary and a sheepfold. The layout and positioning of the structures and enclosing ditches suggest that the farmstead was a planned settlement, with all of the buildings sharing common alignments, with long axes either parallel or

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11 Excavation No. E4108; ITM 670791 623939; altitude 8 m OD; Whitechurch parish; Bantry barony; County Wexford.
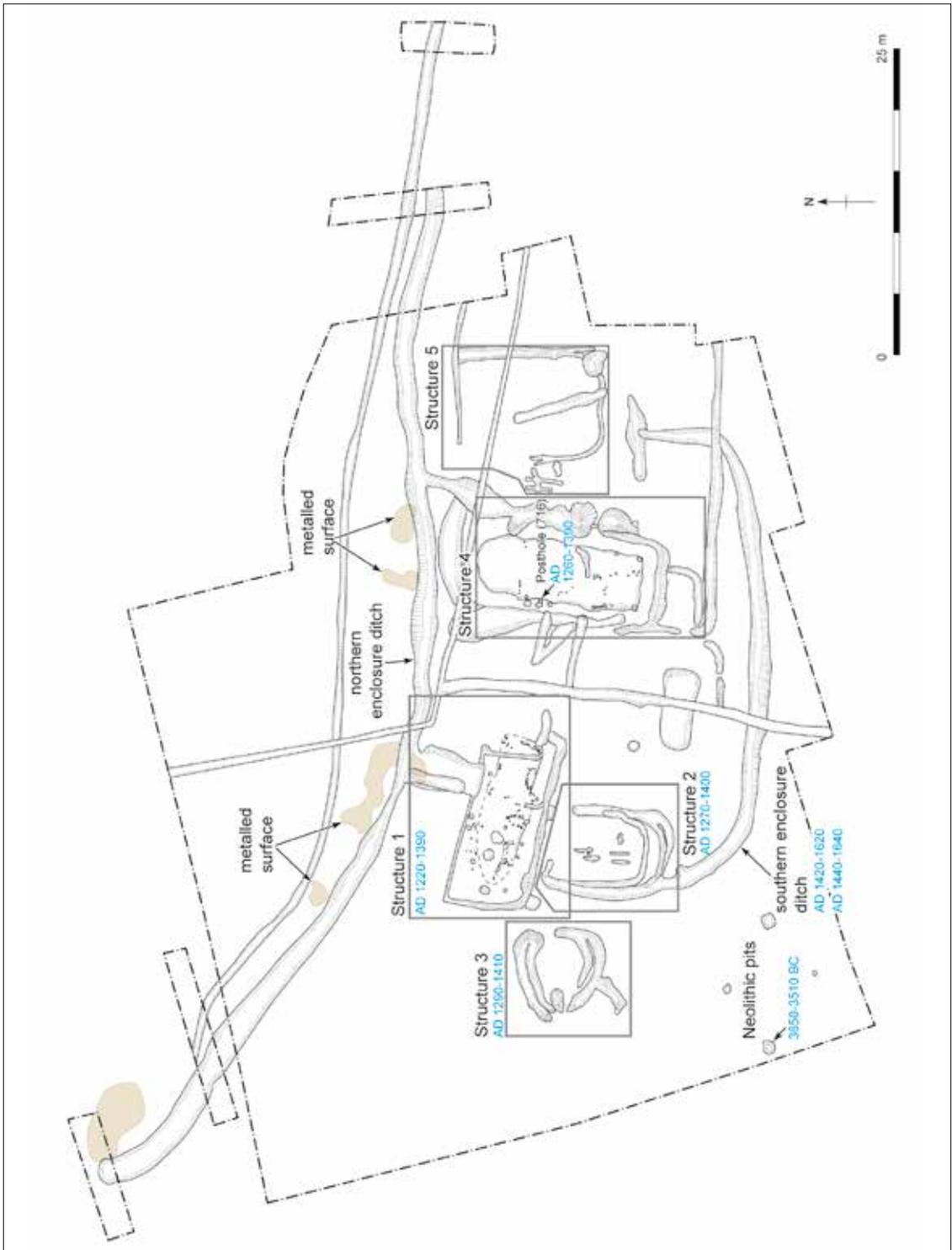
**Illus. 2.8** Landscape 2A site plan (Rubicon Heritage Services Ltd).

Illus. 2.9 Landscape 2A aerial view, facing east (StudioLab).

perpendicular to each other.

The first structure, a cottage (Structure 1), was located on the north-west side of the settlement (Illus. 2.10). The cottage shares characteristics associated with medieval byre-houses known from late medieval Britain and has been interpreted as the farmstead's main domestic building. These houses are typified by their long rectangular shape and by the fact that they housed both humans and livestock under one roof, albeit at opposite ends of the building. The outline of the clay/cob walls of the cottage was defined by a continuous linear drain or drip trench (0.16–0.99 m in width and 0.06–0.33 m in depth) that partially enclosed an area measuring 14 m (east–west) by 6 m.

There was no evidence for the continuation of the drip trench on the eastern side of the structure suggesting that the building may possibly have been open ended or of different design. It is also a possibility that the drip trench remains in this location did not survive. A probable doorway was noted at the central point of the northern or front wall of the structure, where two post-holes placed 0.50 m apart were identified; it is assumed that these post-holes held door jambs. There was no corresponding or opposing cross-entry point at the rear of the structure, but a second possible entrance was identified approximately 4.5 m from the south-west corner, where five large flat stones had been placed over the drip trench, maybe indicating
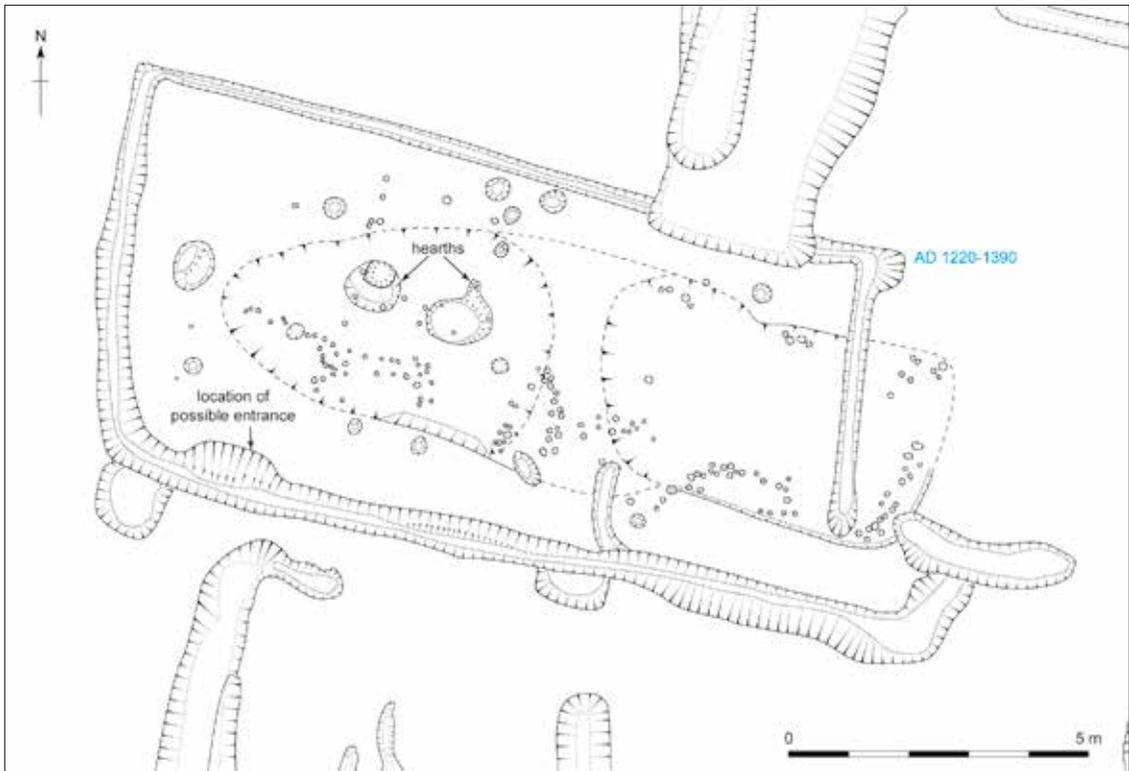
Illus. 2.10 Landscape 2A plan of the cottage (Structure 1) (Rubicon Heritage Services Ltd).

the location of an associated doorway in the adjacent wall. However, in the absence of other evidence, e.g. post-holes, the identification of a doorway at this location is conjectural. The drip trench contained sherds of domestic pottery (jugs, platters and jars) and an oil lamp. This kind of pottery is commonly recovered from late medieval sites and is classified as Wexford-type coarseware and Leinster Cooking Ware.

The interior of the building had been divided into two rooms—a living space and a byre—by another slot-trench (1.41 m long by 0.35 m wide by 0.22 m deep) that extended in a north–south direction from the southern wall. This feature produced charcoal, charred cereal grain in the form of oat, barley, club-bread wheat and rye along with weed seeds and hazelnut fragments which are all thought

to represent food debris. Stone inclusions, as well as further sherds of similar domestic pottery were also recovered. A large number of post- and stake-holes were also identified within the confines of the cottage; these likely represented additional internal roof supports and room divisions. They varied from circular to square in plan and had average dimensions of 0.09 m by 0.08 m by 0.11 m. Varying quantities of charcoal, charred cereal grain, wild taxa and pebbles, along with a flint blade and sherds of pottery, were recovered from their fills.

Two hearths were also identified towards the western end of the building. These features measured 0.76–1.09 m in length, 0.70–0.74 m in width and 0.08–0.18 m in depth and comprised sub-circular areas of oxidised natural subsoil overlain by charcoal-

rich deposits. They contained charred cereal grain (oat, hulled barley and rye) and wild taxa, along with sherds of pottery and a substantial *in situ* hearth stone. It is thought that the hearth stone functioned in a similar fashion to a griddle stone and may have been utilised in the cooking of medieval flat bread such as barley bread, which is known to have been part of the staple diet of medieval peasants in lowland Scotland, north-east England and parts of Wales and Cornwall (Murphy & Potterton 2010, 309). A radiocarbon date range of AD 1220–1390 (SUERC-35191) was obtained from charred hazelnut shell recovered from this building.

The second structure, an open-ended stable or storage area, was situated immediately south of the cottage. Contemporary stables and storage buildings have also been recognised on several other medieval farmsteads such as Killegland, Ashbourne, Co. Meath (Frazer 2009). It comprised a U-shaped ditch that measured 23.40 m in length by 1 m in width by 0.17 m in depth, defining an area measuring 7.50 m (north–south) by 5 m. The ditch fills contained inclusions of charcoal (oak), charred cereal grain (oat and barley), wild taxa and stones, along with sherds of domestic pottery (jugs, platters and jars identified as Leinster Cooking Ware) and numerous flint and chert artefacts. Charred grain from the ditch produced a radiocarbon date of AD 1270–1400 (SUERC-35940). A possible re-cut was located along the south-eastern end of this structure, while a limited number of features were identified internally, including two pits and a post-hole.

The third structure was located on the western side of Landscape 2A. Its function is somewhat obscure, but it may represent the location of a hayrick. Hay was a vital fodder crop that was primarily stored outdoors in tightly compacted open-air ricks. Their locations are often represented by opposing curvilinear ditches which ensured that surface water drained away from the central area keeping the crop dry. The example at Landscape 2A comprised two double-ditched features that formed a circular enclosure measuring approximately 4 m in diameter; a contemporary linear ditch was also located to the south-west (Illus. 2.11). The curvilinear ditches measured 6.26 m by 0.82 m by 0.37 m on average, while the linear ditch had maximum dimensions of 3.50 m long (NNE–SSW), 0.88 m wide and 0.46 m deep. These features contained varying quantities of charcoal, charred cereal grain, wild taxa, vitrified daub and stones; sherds of domestic pottery (Leinster Cooking Ware, Wexford-type ware and glazed red earthenware) and a second Leinster Cooking Ware oil lamp were also retrieved. Radiocarbon dating of alder charcoal recovered from the defining ditches returned a date range of AD 1290–1410 (SUERC-35192). A single pit was identified at the western extent of this structure.

Another possible interpretation is that the structure represented a possible poultry

Illus. 2.11 Landscape 2A view of hayrick or poultry house facing east (2 m scale) (StudioLab).

house. Although no direct comparable examples of medieval poultry houses have been identified within the Irish excavation database, the form of this structure resembles the reconstructed thatched circular poultry house such as that from the village of West Stow, Suffolk, England (Gies & Gies 1990, 21). However, it seems more likely that poultry would have been housed within the enclosed part of the farmstead.

A barn or grain store (Structure 4) was situated towards the centre of the site. The clay walls of this structure were defined by a sub-rectangular scarped depression measuring 12.50 m in length, 5 m in width and 0.24 m in depth that was bordered by a rectilinear drip trench that had maximum

dimensions of 16 m long (north–south) by 5 m wide by 0.35 m deep (Illus. 2.12). An ancillary annex, thought to be an animal pen, was identified to the south of the structure; this consisted of a curvilinear slot-trench that measured approximately 4.50 m (east–west) by 2.50 m. The entrance was defined by three large post-holes centrally positioned within the western wall of the structure. The post-holes would have held the jambs for a double door which fronted onto the internal yard space of the farmstead. A number of pits, post- and stake-holes were identified truncating the scarped depression; these are interpreted as internal roof supports and room divisions. They measured 0.15 m long, 0.12 m wide and 0.15 m deep on

Illus. 2.12 Landscape 2A view of the granary and animal pen, facing north (Rubicon Heritage Services Ltd).

average and were circular to sub-circular. A large quantity of palaeoenvironmental material and artefacts was recovered from the deposits associated with these features, including charcoal, high levels of charred cereal grain (oats and barley), wild taxa, sherds of domestic pottery (Leinster Cooking Ware and Wexford-type coarseware), tools and implements (iron nails and an iron knife fragment) and more personal items (what appears to be a barrel padlock key). The recovery of the padlock key during the excavation gives rise to the suggestion that one of the doors or a chest within the granary contained something of value that needed to be padlocked. The remnants of a loop, a C-shaped bit, survived at one end of the key suggesting it would have originally been suspended from the owner's belt by means of a cord slotted through the looped terminal. A radiocarbon date range of AD 1260–1390 (SUERC-35193) was also obtained from a sample of charred hazelnut shell from post-hole (716).

The fifth structure, a possible sheepfold, was located at the eastern extent of the site. The practice of sheep-folding as depicted in the Luttrell Psalter (Gies & Gies 1990, 59; Murphy & Potterton 2010, 335), whereby sheep were free to graze in the field systems surrounding the farm but folded or penned at night, was common during the medieval period. The sheepfold at Landscape 2A consisted of curvilinear and linear slot-trenches that formed a rectangular enclosure with a possible entrance located to the north-west. The curvilinear slot-trench measured 16 m in length, 0.40 m in width and 0.25 m in depth, while the linear slot-trenches had average dimensions of 11 m by 0.29 m by 0.13 m. Varying quantities of charcoal and charred cereal grain, as well as sherds of Leinster Cooking Ware and an iron nail were

recovered from these features.

The enclosure ditches defined the northern and southern boundaries of the medieval rural settlement. They were both curvilinear in plan, measuring 48 m and 75 m in length, 1.70–2 m in width and 0.40–0.50 m in depth. While the enclosing ditches may have been accompanied by a bank and/or substantial palisade, no evidence for this was found. It seems unlikely that these ditches served a defensive function or even contained livestock because the eastern and western extents of the settlement appear to have been open. It is possible that these features were part of a water management system; however, this is less likely in the case of the southern enclosure ditch as this would have directed water into the barn/storage area and the sheepfold.

The fills of the enclosing ditches contained inclusions of charcoal, charred cereal grain, wild taxa and stones, along with a flint flake and sherds of Leinster Cooking Ware and Wexford-type ware pottery. Charred cereal grain recovered from the southern enclosing ditch produced two radiocarbon date ranges of AD 1420–1620 (SUERC-35195) and AD 1440–1640 (SUERC-35196). A patchy metalled surface that was identified along the outside of the northern enclosure ditch, which bordered the area of wetland to the north of the site, is interpreted as the remains of a pathway or road.

Finds

Pottery
Clare McCutcheon

The ceramic assemblage comprised a single sherd of Middle Bronze Age pottery, 1,292 sherds of medieval pottery and five sherds of post-medieval pottery. The vast

Illus. 2.13 Leinster cooking ware ceramic cresset lamps (E4018:037:003, E4018:250:001) (Rubicon Heritage Services Ltd).

majority (98%) of the medieval assemblage consisted of Leinster Cooking Ware, with the remaining sherds identified as Wexford-type ware. Leinster Cooking Ware is generally dated from the late 12th–mid-14th centuries and is the most common medieval pottery type identified on archaeological sites within Leinster. A minimum of 17 vessels were identified from the assemblage, with five different forms present; these included standard cooking jars, platters, jugs and bunghole jars, as well as two cresset oil lamps (Illus. 2.13)—ceramic versions of the Irish cresset-stone lamps. Wexford-type ware is conventionally dated to the late 12th–early 13th centuries (McCutcheon 2012). The assemblage from Landscape 2A contained a minimum of three vessels, identified as globular jugs.

Metal
Miriam Carroll

A small assemblage of metal artefacts was also retrieved during the excavations; these can be divided into three main categories: tools, horse equipment and structural ironwork/building material. The tools comprised a barrel padlock key and an iron whittle-tang knife—a type commonly used throughout the medieval period in Ireland and Britain—while the horse equipment consisted of a horseshoe and nail of probable post-medieval date. The structural ironwork/building material was made up of 23 medieval nails and nail shafts recovered from contexts associated with Structures 1 and 4.

Miscellaneous small finds
Miriam Carroll

The ground-stone assemblage comprised two possible and one definite whetstone, a quern-stone fragment and a worked stone of unknown function. The whetstones were characterised by pieces of rectangular and sub-rectangular abrasive rock, used to sharpen metal objects; the quern-stone fragment contained a sub-circular handle hole and remnants of a central perforation that was identifiable as the upper stone of a rotary quern.

Lithics
Farina Sternke

The lithics assemblage comprised a total of 14 flint and chert artefacts including cores, blades, flakes, a convex end scraper, a classic slug knife and debitage. Although the assemblage was retrieved from features predominantly medieval in date, the date of the assemblage based on its typology and technology is prehistoric, possibly Bronze Age.

Discussion

The results of the excavation revealed a late medieval farmstead at Landscape 2A, consisting of a cottage, a stable or storage building, a barn or granary, a possible hayrick

or poultry house and a sheepfold.

Analysis of the recovered pottery (a moderate assemblage of Leinster Cooking Ware and small amounts of Wexford-type ware) indicated that the farmstead was of low status, with the five structures and enclosing ditches broadly contemporaneous. This was substantiated by the results of the radiocarbon dates, which established a core date range from the early 13th to mid-15th centuries AD. Later radiocarbon dates ranging from the early 15th to mid-17th centuries were obtained from the sheepfold and the southern enclosing ditch, which suggests the site may have continued to be occupied up until the 1640s. However, this is not borne out by the material culture, which points to a single period of occupancy dating to the 13th to mid-15th centuries AD. It is possible that the samples selected for dating represent material that accumulated in these features post abandonment.

The charred cereal grain assemblage from the granary was dominated by oats and hulled barley indicating they were the main crops grown, but the cultivation of legumes was also undertaken. Legumes had a dual purpose having been grown for consumption by humans and animals making them an important component in the diet of the lower levels of society across demesne lands and on small holdings. A wide range of wild taxa or weeds typically associated with agricultural fields that have been ploughed and harrowed during the medieval period was also present in the palaeoenvironmental assemblage. Bramble and sloe berry were identified in conjunction with woodland species such as hazelnut, which suggests that the inhabitants of the farm were gathering these readily available wild berries and nuts from the surrounding hedgerows to supplement their diet.

Overall, the palaeoenvironmental evidence supports a picture of the inhabitants of Landscape 2A farmstead being involved in arable farming while also accessing woodland resources in the vicinity. The historical research set out in Chapter 3 supports the findings from the excavation and goes further to suggest that the occupants of the site may have been involved in livestock husbandry.

The manor of Old Ross was held by William Marshall and later by the Bigod earls of Norfolk during the medieval period. Wool was a highly valued commodity in the medieval period and the port of New Ross was one of the primary points for the export of fleeces to the continent (Lydon 1993, 267). Accordingly, sheep rearing played a fundamental role in the economy of the manor of Old Ross and the other manorial estates in the hinterland of New Ross (Murphy 2008, 4–6). It would therefore seem likely that all tenant farmers on the manor of Old Ross were engaged in some form of sheep rearing. This supports the interpretation of the animal enclosure at Landscape 2A functioning as a sheepfold. One of the most efficient ways of improving the yield quality of land was through the practice of sheep-folding, which involved putting sheep out to graze and fertilise arable land during the day and returning them to enclosures or 'folds' at night (White 1970, 127–8).

In addition to livestock husbandry associated with the manorial economy, the inhabitants of the farmstead would also have had to pay rent to the manorial lord. A detailed description of the Bigod estates in Ireland survives, which details the various tenants on the estates and their annual rents. Included are free tenant lands and betagh settlements, and the 1307 Bigod extent also notes that 'there are at Ballydermod

and Conygrage certain *Betagii* whose work is worth 4*s*.2*d*.; their rented custom at Christmas is 19 hens worth 19*d*.' (Dryburgh & Smith 2007, 72).

The excavated remains, the environmental indicators and the documentary sources paint a picture of the inhabitants of Landscape 2A being a native Irish or betagh settlement living and working within the Anglo-Norman manorial system controlled from the manorial centre at Old Ross, specialising in livestock husbandry and paying an annual rent to the lord of the manor.

Camlin 1—Post-medieval hearth, pits and a curvilinear feature

Excavation Director: Liam Hackett
Report: Lyndsey Clark and Liam Hackett

Introduction

Camlin 1 was the location of short-lived post-medieval rural activity.[12] These types of sites and their occupants generally do not appear in the historical record, but they are often encountered during pre-development archaeological investigations of road projects. Camlin 1 comprised a post-medieval hearth, five associated pits and a curvilinear feature that may have functioned as a windbreak. Agricultural activity in the form of a possible field boundary and plough furrows were also identified (Illus. 2.14).

The site

Camlin 1 was located at the base of the south-facing slope of Camlin Hill on the

opposite bank of the Camlin Stream from Landscape 2A.
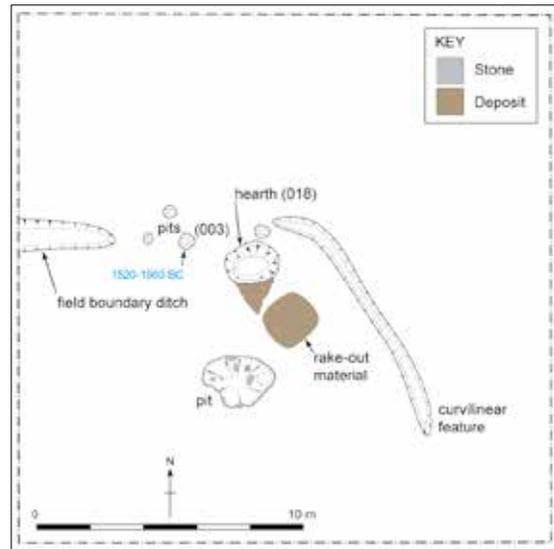
Illus. 2.14 Camlin 1 site plan (Rubicon Heritage Services Ltd).

The excavation

The hearth (018) was situated towards the centre of the excavation area. It was sub-oval in plan, measuring 2.10 m in length (east–west), 1.40 m in width and 0.20 m in depth (Illus. 2.15). Several of its fills showed evidence of oxidisation through *in situ* burning, with the majority containing varying quantities of charcoal, charred seeds (cereal grains, and wild taxa), burnt bone fragments and heat-shattered stone. A possible whetstone/hammerstone was also recovered. The most frequent grain identified in the charred seed assemblage was oat, although the species could not be determined. Grains of hulled barley, bread/club wheat and rye were also present in smaller quantities. The wild taxa included pale persicaria, wild radish, common

12 Excavation No. E4106; ITM 670954 624016; altitude 9 m OD; Oldross parish; Bantry barony; County Wexford.

Illus. 2.15 Mid-excavation view of hearth (018), facing north-east (2 m scale) (Rubicon Heritage Services Ltd).

fumitory and daises, along with hedgerow fruits such as brambles. These are typical segetal/ruderal species associated with agricultural fields and disturbed land. A sub-oval deposit of possible rake-out material, comprising sandy silt with frequent inclusions of charcoal, was situated approximately 0.50 m to the south-east of the hearth; this measured 1.56 m long (NW–SE), 1.50 m wide and 0.18 m deep.

A small sub-circular pit (003), measuring 0.72 m by 0.66 m by 0.18 m, was located approximately 1.20 m to the WNW of the hearth. Its fill contained a whittle-tanged iron knife and inclusions of charcoal and charred seeds (cereal grains and wild taxa), which suggest that it had a direct association with the hearth. Charred oat grain from this feature returned a date range of AD 1520–1960 (SUERC-35201), with the highest probability being a date between AD 1630 and 1690. Four other pits were situated nearby, including a large pit to the south of the hearth which measured 2.60 m by 1.80 m by 0.48 m. Their function is undetermined but based on their spatial association they are presumed to be contemporary with the hearth and pit

described above. They varied from circular to oval in plan and their fills were mainly archaeologically sterile, although flecks of charcoal were recovered from one.

Partially enclosing these features to the east was a curvilinear cut feature that may have acted as a windbreak for the hearth. It measured 10.60 m long (NW–SE), 0.50 m wide and 0.30 m deep, and had a single fill.

Located to the WNW of the hearth were the remains of a possible field boundary. This feature was orientated on an east–west axis and measured 1.08 m in width and 0.25 m in depth. A series of plough furrows were also evident throughout the site.

Finds

Pottery
Clare McCutcheon

Fifteen sherds of post-medieval pottery were recovered from the topsoil; they represent at least one North Devon gravel tempered ware jug and a glazed earthenware vessel, probably a bowl. Seventeenth-century sources document the export of large quantities of North Devon earthenware vessels to Irish ports, including New Ross (Grant 1983, 107–10). Glazed earthenware was produced from the later 17th century through to the 19th century (Dunlevy 1988, 24–5).

Metal
Miriam Carroll

A corroded iron knife, identified as a Type B whittle-tanged variety dating from the ninth to 14th centuries, was recovered from the sub-circular pit (003). As this feature was radiocarbon dated to the post-medieval period, it is suggested that this find is residual.

Ground-stone
Miriam Carroll

Two ground-stone artefacts—a whetstone and a possible whetstone/hammerstone—were recovered from the topsoil and the hearth respectively. Whetstones and sharpening stones have a long period of use that spans from the Iron Age through to the post-medieval period. Throughout this time, however, there is a notable lack of typological development which would assist in assigning particular forms of whetstone to specific date ranges.

Discussion

The hearth consisted of an unlined earth-cut pit. Analysis of the deposits present within the hearth suggests that it underwent multiple episodes of use, as evidenced by the presence of distinct oxidised layers followed by episodes of silting. The limited amounts of palaeoenvironmental material present imply that it was regularly cleaned after each use episode, including the last prior to its abandonment. The deposition of animal bone within the hearth is likely to have been the result of domestic debris being thrown into the fire.

The exact function of the pits identified on site remains uncertain. However, the palaeoenvironmental analysis does indicate that the sub-circular pit (003) was open during the period of hearth use, with the recovery of the cereal grain and charcoal suggesting that waste material from the hearth was being disposed of within this feature. The remaining pits excavated on the site, however, were notably devoid of palaeoenvironmental material. This may indicate that they had a structural function, although no pattern was identified that would suggest the presence of a structure. The curvilinear feature also contained a fill that was archaeologically sterile; however, based on its proximity to the hearth it is suggested that it functioned as a windbreak. While the pottery was not associated with any of the excavated features its dating aligns with the radiocarbon date. The presence of North Devon wares is indicative of the emergence of the early modern commodities trade carried out by New Ross merchants which was dependant on the export of agricultural merchandise produced in the town's hinterland.

Camlin 3—Early Bronze Age urn burial

Excavation Director: Liam Hackett
*Report: Lyndsey Clark and Liam Hackett*

Introduction

Camlin 3 was located in a pasture field on the south-facing slope of Camlin Hill; three separate cuttings were excavated (A–C).[13] The features excavated at Camlin 3 consisted of an urned cremation burial beside a large earth-fast glacial erratic boulder that may have functioned as a grave marker. The location of this boulder on the southern slopes of Camlin Hill means it could have been visible from the lower-lying areas to the west and may have acted as a focal point or natural landmark (Illus. 2.16).

The site

Camlin 3 was located on the lower south-

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13 Excavation No. E4104; ITM 671106 624117; altitude 20 m OD; Oldross parish; Bantry barony; County Wexford.
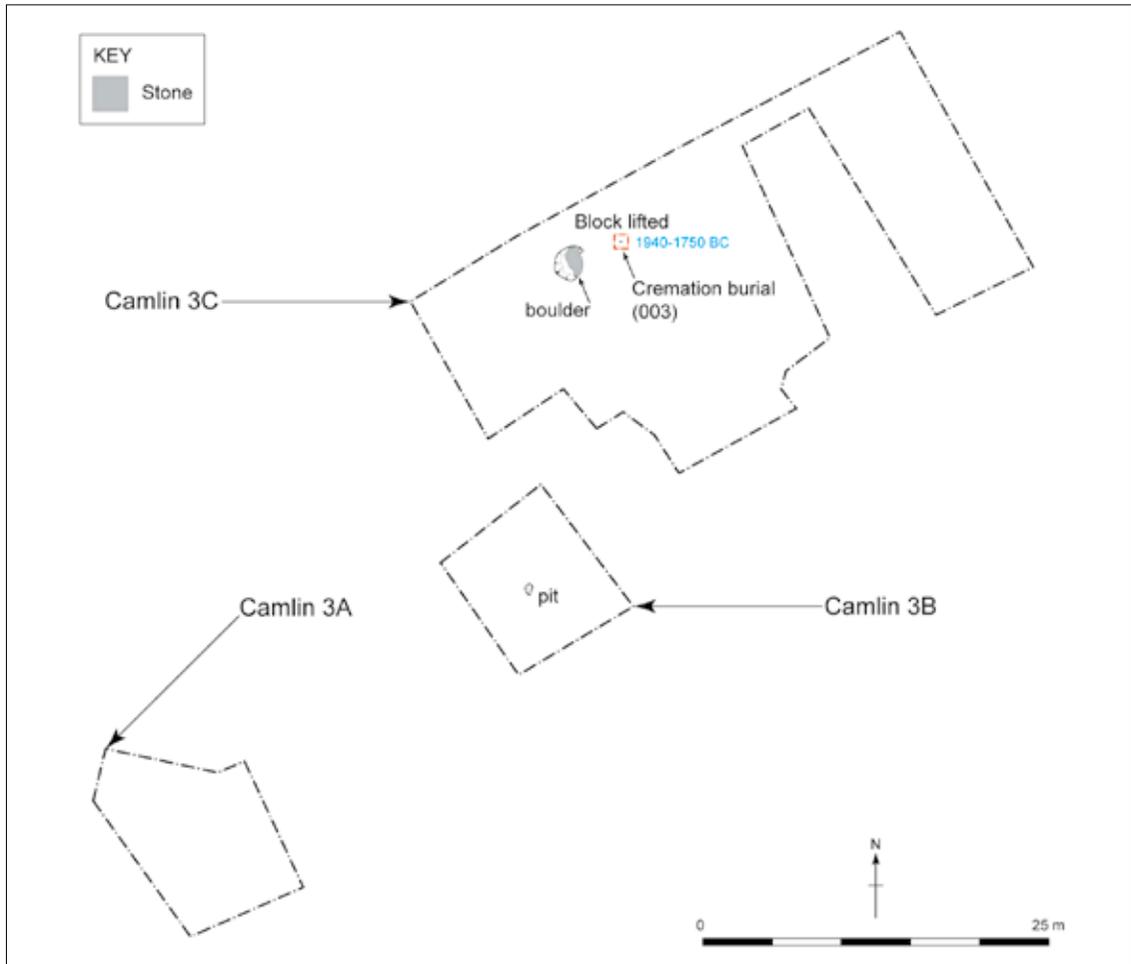
Illus. 2.16 Camlin 3 site plan (Rubicon Heritage Services Ltd).

west-facing slope of Camlin Hill to the north of Slievecoiltia Hill. The Camlin Stream flowed along the base of the hill to the south, towards its confluence with the River Barrow approximately half a kilometre to the northwest.

The excavation

The pit (003) contained the remains of an inverted urn (Illus. 2.17), which was block-lifted by conservator Susannah Kelly and excavated in the conservation lab. The cremation deposit contained within the urn consisted of silty clay with inclusions of cremated human bone, oak charcoal, a single grain of hulled barley and a quartz pebble. Analysis of the cremated bone revealed that the burial was that of a male who suffered from spinal joint disease and was probably aged between 35 and 45 years old at time of death. The presence of blue-green staining on a large number of bones in this burial suggests that the remains may have been accompanied by a copper-alloy object; however, no remains of metal artefacts survived. A sample of the bone returned an Early Bronze Age date of 1940–1750

63

Illus. 2.17 View of partially excavated inverted urn burial, facing north-west (0.3m scale) (Rubicon Heritage Services Ltd).

BC (SUERC-35165). The cremation pit was backfilled with a deposit that contained oak charcoal fragments possibly associated with the pyre waste.

The large earth-fast boulder was located approximately 0.75 m to the west of the burial pit. It measured 2 m by 1.10 m by 0.97 m high and had 19 parallel scratches or gouge marks on the upper lateral face, the result of modern plough strikes rather than a form of rock art or inscription (Illus. 2.18).

Illus. 2.18 Earth-fast boulder (011), facing south-west (1 m and 2 m scales) (Rubicon Heritage Services Ltd).

Finds

Pottery
Eoin Grogan and Helen Roche

The ceramic assemblage comprised the distorted mid-portion of an inverted Early Bronze Age collared or cordoned urn (Illus. 2.19). It measured 260 mm in diameter (maximum) and displayed evidence for decoration in the form of horizontal and oblique scored lines. The upper portion of this urn was missing, indicating that the vessel was broken prior to burial. The distribution of collared and cordoned urn burials is similar, with the majority concentrated in Ulster. This discovery is therefore a significant addition as few urn burials have so far been identified in the south-east.

Discussion

Analysis of the cremated remains indicated that those carrying out the cremation process were well versed in pyre technology, as nearly 87% of the recovered bone was completely oxidised. The exact location of the funerary pyre remains unknown; however, analysis of the charcoal from the cremation deposit showed that oak timbers were used as a fuel source. This dominance of oak in cremation pyre material has been seen at sites across Ireland, especially in the Bronze Age (O'Donnell 2007; 2009).

The Camlin 3 burial was placed beside a large earth-fast boulder which could have been a natural focal point or landmark visible from the lower-lying areas to the west. In the Bronze Age, when the River Barrow's estuarine wetlands were more extensive, it is possible that the natural routeway was not the line of the current R733 road cut into the
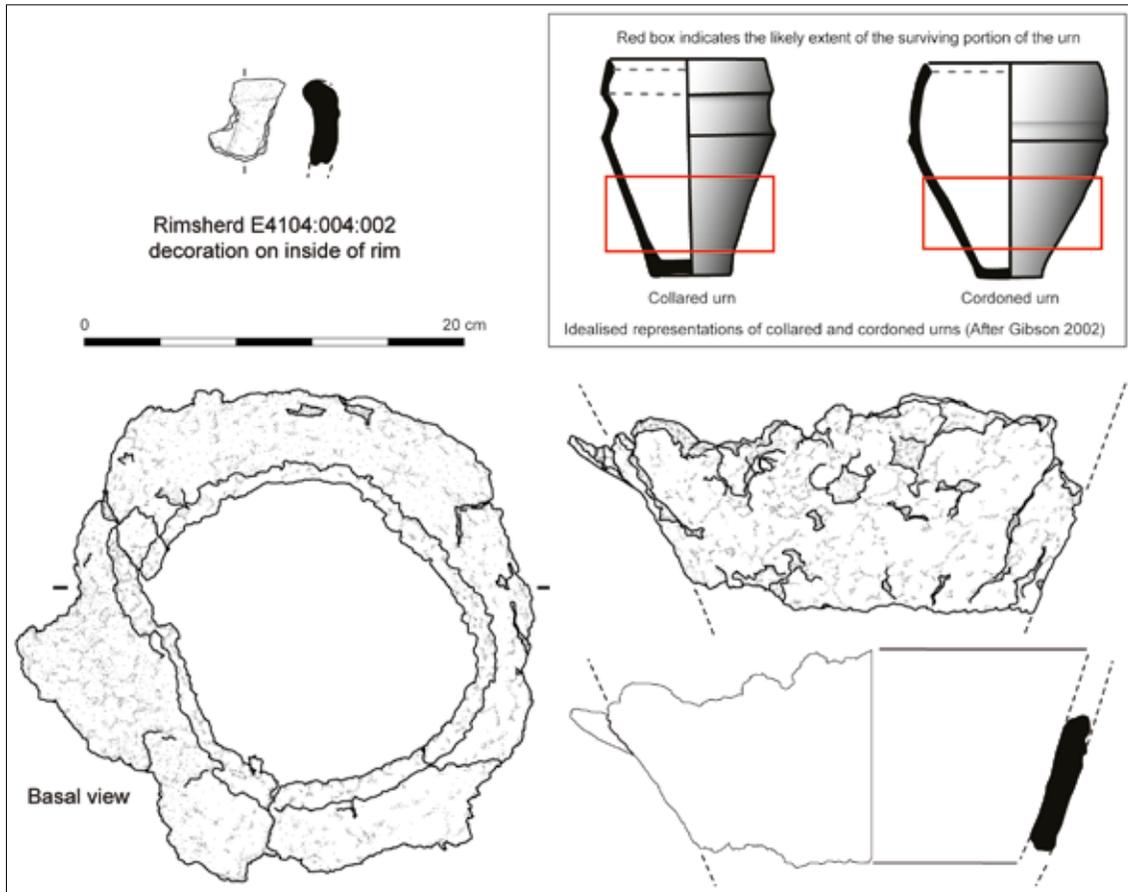
Illus. 2.19 Illustration of possible collared or cordoned urn (S Nylund).

west side of Camlin Hill but one that passed around the south and south-east side of the hill. If this was the case, Camlin 3 would have been located along this routeway.

There was no evidence for any enclosing features nor was there evidence that this burial was part of a larger cemetery. However, this site does form part of a larger Bronze Age landscape in the area, with the slightly earlier Stokestown 2 cemetery located 2 km to the west and the later Middle Bronze Age cemetery at Camlin 4, located approximately 100 m upslope to the north-east.

Camlin 4—Middle to Late Bronze Age cremation cemetery

Excavation Director: Liam Hackett
Report: Lyndsey Clark and Liam Hackett

Introduction

Camlin 4 was a cremation cemetery that was in use in the Middle and Late Bronze Age.[14] It contained a minimum of 14 deposits of cremated human bone interred in simple pits. Five pits also contained cremated bone that could not be definitively identified as

Illus. 2.20 Camlin 4 plan of cemetery (Rubicon Heritage Services Ltd).

human. A number of other pits and post-holes were also excavated at the site (Illus. 2.20).

The site

Camlin 4 was situated on a relatively level area on the south-west-facing slope of Camlin Hill overlooking Camlin 3 and the River Barrow valley.

The excavation

The cremation cemetery extended over an area measuring approximately 16 m (east–west) by 10 m (Illus. 2.21 and 2.22), with Middle and Late Bronze Age activity

identified. The earliest phase of activity was represented by three distinct stages of Middle Bronze Age burial activity (Phase 1a–Phase 1c). Phase 1a comprised two cremation pit burials (216) and (220), a pit, two post-holes and a stake-hole. The features were clustered, with the pits located approximately 5 m west of the post-holes and stake-hole. The cremation burials were contained within sub-circular pits that measured 0.47 m by 0.46 m by 0.22 m on average. They contained deposits of cremated bone, 371.7 g and 103.3 g respectively, and inclusions of mostly oak charcoal. Bone samples from each burial returned Middle Bronze Age date ranges of 1610–1440 BC (SUERC-35164) and 1500–1390 BC (SUERC-35970). Several burnt

Illus. 2.21 Post-excavation view of the burial area, facing south (1 m and 2 m scales) (Rubicon Heritage Services Ltd).
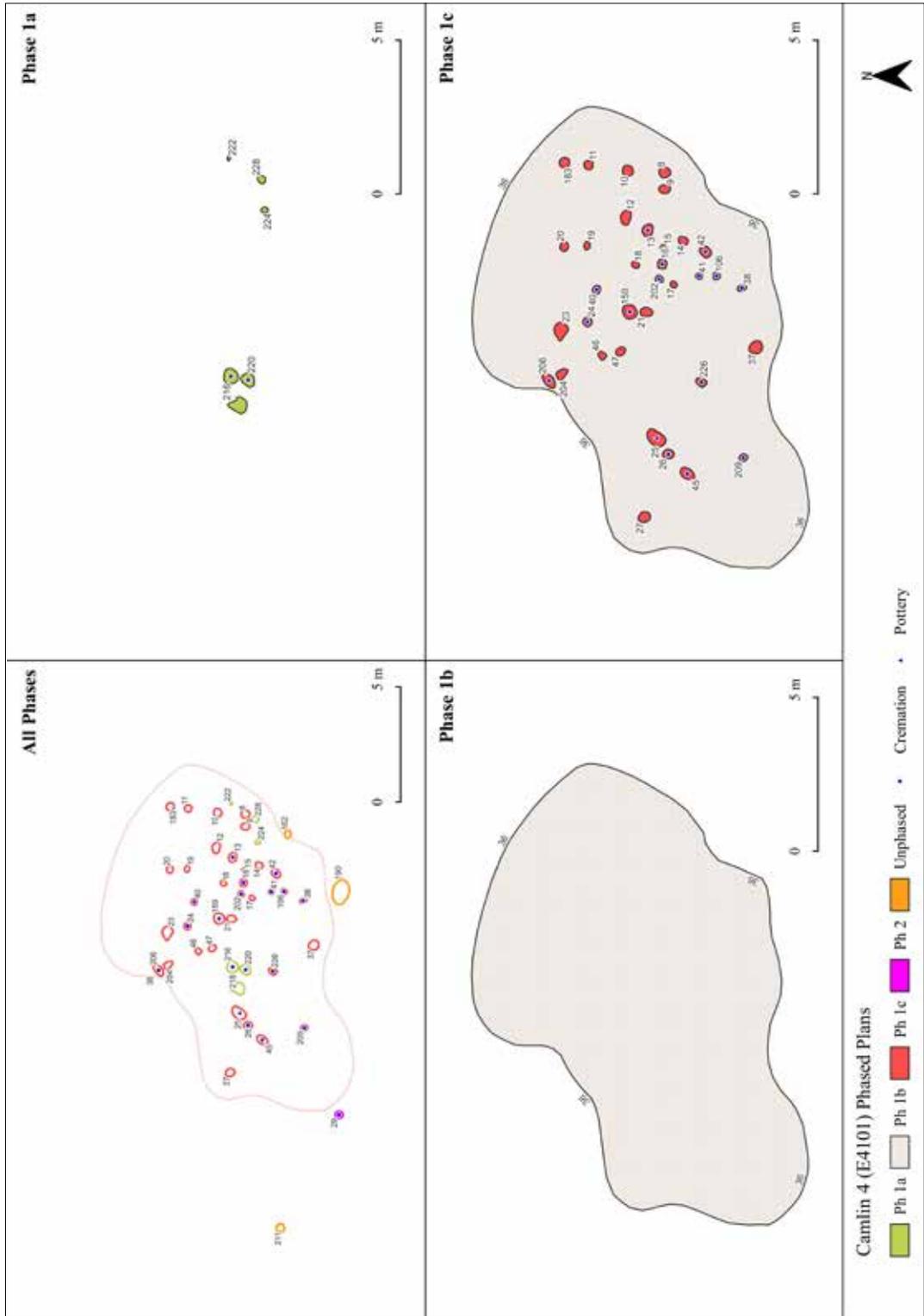
Illus. 2.22 Camlin 4 phased plan (J Eogan).

artefacts were also recovered from these burials: a fragment of chert debitage and a heat-fractured quartz pebble were found in pit burial (216), while a phyllite bead, a fragment of quartz crystal and a possible sandstone rubbing stone came from pit burial (220).

The second stage of Middle Bronze Age activity (Phase 1b) was represented by a deliberately laid spread of silty sand that sealed the earlier features. It measured approximately 106 m^2 (16.50 m long (ENE–WSW), 9.50 m wide), and varied in thickness from 0.01 m to 0.15 m. The edge of the spread was not demarcated in any fashion; however, the spread was roughly centred on the two Phase 1a burials.

The third stage of Middle Bronze Age activity consisted of numerous features cut into the Phase 1a sealing deposit. Phase 1c included at least four further burials. Two of the Phase 1c cremation burials—(209) and (206)—were contained within circular to sub-circular pits with average dimensions of 0.32 m by 0.31 m by 0.09 m. These burials contained cremated bone, 50.3 g and 99.6 g respectively, associated with mostly oak charcoal. Bone samples from both burials were radiocarbon dated and returned date ranges of 1610–1440 BC (SUERC-35163) and 1520–1410 BC (SUERC-35162) respectively. The other two Phase 1c burials—(045) and (042)—contained smaller amounts of cremated human bone, 8.1 g and 8.9 g respectively, along with inclusions of mostly oak charcoal and unidentified marine shell in burial (045). These were contained within oval pits, measuring 0.52 m by 0.38 m by 0.13 m on average, and samples of bone returned radiocarbon date ranges of 1500–1320 BC (SUERC-35160) and 1530–1410 BC (SUERC-35161) respectively. A pit (025) containing the basal portion

of an upright Middle Bronze Age domestic bucket- or barrel-shaped pottery vessel was also assigned to this phase. The base of the pit had been lined with a flat slab on which the pot had been placed; some stones were found around the base of the pit on its west side. The deposit within the Middle Bronze Age vessel contained mostly oak charcoal and small quantities of charred wild plant seeds and charred hazelnut shell. The deposit did not produce any identifiable human remains, though specks of white material found in the fill may be burnt bone.

The second phase of funerary activity at Camlin 4 dated to the Late Bronze Age. It consisted of a single possible cremation pit burial (029) located just beyond the south-western extent of the Phase 1a sealing deposit. This feature measured 0.40 m by 0.38 m by 0.08 m and was sub-circular in plan. It contained inclusions of mostly oak charcoal and 3.8 g of unidentifiable cremated bone, which returned a date range of 1090–900 BC (SUERC-35969).

The remaining features excavated at the site—all but two of which were inserted into the Phase 1a sealing deposit—were not radiocarbon dated; however, based on location and morphology it is likely that most of these features were associated with Phase 1c, though some could be associated with Phase 2. Human remains were identified in the fills of eight pits that had average dimensions of 0.38 m by 0.32 m by 0.12 m. The weight of cremated bone recovered from these burials was generally low, with five of them containing less than 20 g of bone and only one containing more than 50 g. Small quantities of burnt bone (1 g), unidentified to species, were identified in the fills of three other pits. The pits containing cremated bone and the pit containing the vessel inserted into the Phase 1b form a rough ring around

the centre of the Phase 1a sealing deposit.

Nine pits which did not contain any burnt bone were also cut into the Phase 1a sealing deposit. All but one of these features were located in the eastern half of the deposit and for the most part were near its periphery. Charred plant remains were identified in the fills of six of these pits. Small quantities of cereal grain were present in five, hulled barley being identified in two and unidentified cereals in the other three; wild plant seeds were identified in samples from three pits. Nine features interpreted as post-holes were also cut into the Phase 1a sealing deposit. All these features were located in the eastern half of the deposit. These included a full cremation and seven token cremation burials, 14 pits of uncertain function, 10 post-holes and two spreads. The full and token cremation burials had been interred within pits that were sub-circular to sub-oval. These contained a total of 189.2 g of cremated human bone, along with charcoal and small quantities of charred cereal grain; quartz debitage, a quern-stone fragment and two rubbing stones were also recovered from these features. Five of the pits also contained a small quantity of unidentifiable cremated bone, totalling 0.8 g; the inclusion of this material may suggest that the pits were related to the cremation activity, perhaps supporting grave markers or totems. Small quantities of charred cereal grain and wild taxa, as well as several lithic and ground-stone artefacts and a mica-schist bead were also retrieved from the pits and post-holes.

Finds

Pottery
Eoin Grogan and Helen Roche

The ceramic assemblage comprised the

Illus. 2.23 Selected sherds of Middle Bronze Age urn (E410:230:001) (Rubicon Heritage Services Ltd).

lower portion of a Middle Bronze Age plain domestic bucket- or barrel-shaped vessel (Illus. 2.23). Traces of carbonised residue on the interior surface of this vessel suggest that it had been used in a domestic context.

Lithics and ground-stone artefacts
Farina Sternke

A total of 31 lithic and ground-stone artefacts were retrieved from the site, including pieces of debitage, rubbing stones and stone beads. The majority survive in a burnt condition, suggesting that they were included in the cremation pyres. One possible burnt sandstone rubbing stone was associated with the cremation in the Phase 1c pit (220). Two were associated with the Phase 1c burial in pit (226), a fragment of a possible saddle quern was also found in this pit which also contained small amounts of charred hulled barley grain. Unidentified cereal remains were associated with a rubbing stone and a possible rubbing stone found in the fill of one of the Phase 1c non-funerary pits (012). The assemblage of stone tools from Camlin 4 is typologically and technologically undiagnostic but is not inconsistent with Middle Bronze Age activity.

The two stone beads recovered from the flat cremation cemetery at Camlin 4 most likely represent a largely unrecognised type of Middle Bronze Age ornament (Spillane 2019). Both beads were burnt and one was broken. The broken bead, associated with the cremation in the Phase 1a pit (220, E4101:221:002) was horseshoe shaped with an elongated perforation and likely made of phyllite. The other bead came from the fill of the Phase 1c post-hole (047, E4101:132:001), was roughly square and had an excentric hourglass perforation; it was probably made from mica-schist. Although the closest parallels for these beads are from Early Neolithic contexts at Tullahedy, Co. Tipperary (Cleary & Unitt 2011), and Knockadoon (Site C), Lough Gur, Co. Limerick (Ó Ríordáin 1954), it is likely that the stone beads from Camlin 4 date to the Middle Bronze Age. If so, they represent a previously unrecognised bead type between the jet, stone, ceramic and faience traditions of the Early to Middle Bronze Age and the glass and amber traditions of the Late Bronze Age. It can be suggested that the noticeable natural shine from the artefacts fits into this tradition of aesthetically pleasing raw materials used in bead manufacture throughout the Bronze Age, albeit utilising locally available resources in the vicinity of Camlin 4.

Discussion

The cremation burials at Camlin 4 were represented by both full and token deposits interred within simple pits. The majority of the remains were identified as those of adults, although more accurate age ranges and the sex of the individuals could not be determined from the recovered material. Similar to the other cemeteries excavated

along the route, the location of the site was an elevated position with views over the landscape.

Analysis of the remains indicate that those carrying out the cremation process were well versed in pyre technology, as nearly 95% of the recovered bone was completely oxidised; however, the location of the funerary pyres remains unknown. Analysis of the charcoal from the cremation deposits showed all but four of the fragments originated from oak, and most of this was large branch wood. This suggests that this species was purposefully selected for the cremation process. The remaining charcoal fragments were identified as ash and yew, possibly suggesting that different cultural values were placed on arboreal taxa or that other species were used to ignite the larger oak timbers—a technique that was also used in the Bronze Age during copper mining (e.g. O'Brien 1994).

The deliberately laid deposit—representing the second stage of Middle Bronze Age cremation activity at the site—could represent a symbolic sealing of the earlier burials, perhaps to mark the end of a family line or other specific group. It may also have formed a low mound which served to mark the location of the burials in the landscape. The non-burial features identified at the site may have been used to support totems or grave markers; it is notable that the Phase 1c pits and post-holes seem to respect the location of the Phase 1a burials. The placement of the presumed Late Bronze Age burial adjacent to the south-west edge of the Phase 1c spread suggests that the extent of the burial area was evident in some way two to three centuries after its use in the Middle Bronze Age.

One of the challenges in understanding burial in the Irish Middle Bronze Age is the

absence of clear stratigraphic sequences, apart from occasional intercutting burials, in cemeteries and, as a consequence, the lack of chronological definition. Camlin 4 is significant as the site has a clear stratigraphic sequence. As a result, it is possible to apply a Bayesian statistical approach to the radiocarbon dates to refine the cemetery's chronology (see Chapter 6). Bayesian modelling suggests that the Phase 1a burials were most likely interred in the mid-16th to early 15th centuries BC, the sealing layer was deposited in the late to early/mid-15th centuries, and the Phase 1c cremations were probably deposited between the mid-15th to mid-/late 14th centuries BC.

Interestingly, the final, Late Bronze Age, interment at Camlin 4 dates to a period when evidence for burial reduces but evidence for the votive deposition of special objects, possibly heirlooms, exemplified by the New Ross Hoard of gold bracelets and dress fasteners, becomes more common.

Ryleen 1—Neolithic activity

Excavation Director: James Hession
Report: Lyndsey Clark and James Hession

Introduction

Ryleen 1 contained a number of tree-throw holes that had been utilised as possible waste pits during the Early Neolithic period.[15] The re-use of tree-throw features has been recorded at numerous sites dating to the Early Neolithic period. The forest landscape would also have played an integral part in the daily lives of the Early Neolithic population.

Knowledge of the surrounding woodland, of pathways through it and clearings in it, was no doubt vital for navigation and as such the visual impact of uprooted trees within this context should not be underestimated. They could have acted as landmarks or as foci for temporary settlement camps. The root holes of windthrown trees would have provided natural shelters that Early Neolithic people may have taken advantage of in order to light fires for heat or cooking while hunting or foraging.

The site

Ryleen 1 was situated in a tillage field on the gradual south-facing slope of Lacken Hill.

The excavation

The features excavated at Ryleen 1 are interpreted as tree-throw holes, hollows in the subsoil created by the uprooting of the root balls of trees blown over by storms (Illus. 2.24). The recovery of charcoal and charred hazelnut shell fragments, along with Early Neolithic pottery sherds and a retouched lithic artefact, from the soils filling these naturally formed features suggest that at least four tree-throw holes—(003), (006), (010) and (012)—were utilised. These features varied from sub-oval to irregular in plan, with average dimensions of 1.29 m by 0.77 m by 0.28 m and some displayed evidence for slight *in situ* burning throughout the cut. The charcoal identified from the fills of these features was oak. Frequent charred hazelnut shell was recovered from hole (012); charred hazelnut shell was also identified in hole (003), a sample of which returned

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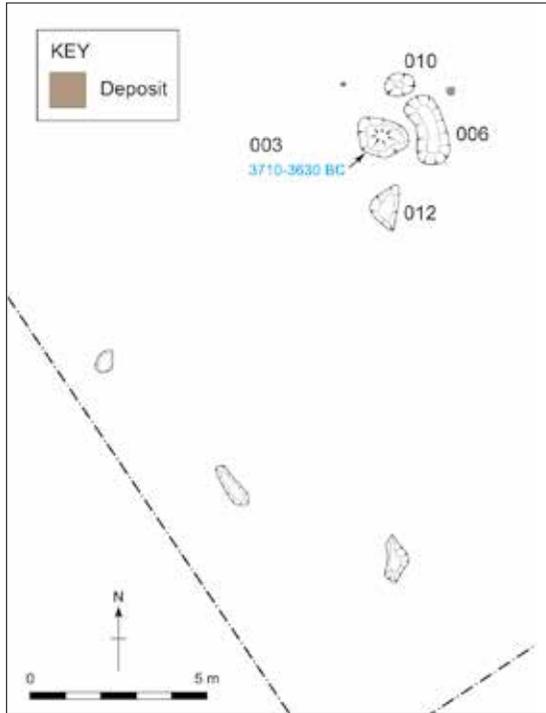
Illus. 2.24 Ryleen 1 site plan (Rubicon Heritage Services Ltd).

a radiocarbon date range of 3710–3630 BC (SUERC-35214).

Near these features were a single stake-hole and a small deposit, which are presumed to be contemporary. The stake-hole (008) was circular in plan, measuring 0.10 m in diameter and 0.10 m deep; its fill contained frequent inclusions of oak charcoal. The deposit, which measured 0.23 m in diameter and 0.05 m deep, was comprised of sandy loam and was also rich in charcoal.

Four further features were excavated at the site; however, these seemed to be of little archaeological significance. They were all irregularly shaped, measuring 0.77 m long, 0.56 m wide and 0.21 m deep on average, and contained charcoal and oxidised clay inclusions, possibly the result of 'slash and burn' clearance activities.

Finds

Pottery
Eoin Grogan and Helen Roche

The ceramic assemblage comprised 10 sherds and four fragments representing four Early Neolithic carinated bowls (Illus. 2.25); these were recovered from four of the tree-throw holes—(003), (006), (010) and (012). Early Neolithic carinated bowls are distinctive round-based pots which are named after the exaggerated shoulder or carination that these generally display. Broadly dating from c. 4000–3600 BC, these represent the earliest pottery made in Ireland, which was introduced here alongside a range of agricultural practices by the first farmers (Sheridan 1995). The vessels are relatively well made and fine-walled, with a thickness ranging from 5.2 mm to 7.5 mm. All showed a limited degree of wear and abrasion, with sherds from three of the bowls showing evidence for burnishing their outer surface.

Lithics
Farina Sternke

A single lithic artefact (Illus. 2.26)—categorised as a miscellaneous retouched artefact that was probably used as a scraper—was retrieved from one of the tree-throw holes (010) during the excavation. It was produced on a secondary flake that was struck off the edge of a smaller flint nodule and measures 26 mm in length, 38 mm in width and 7 mm in thickness. It most likely dates to the first half of the Neolithic period based on its technology and morphology.

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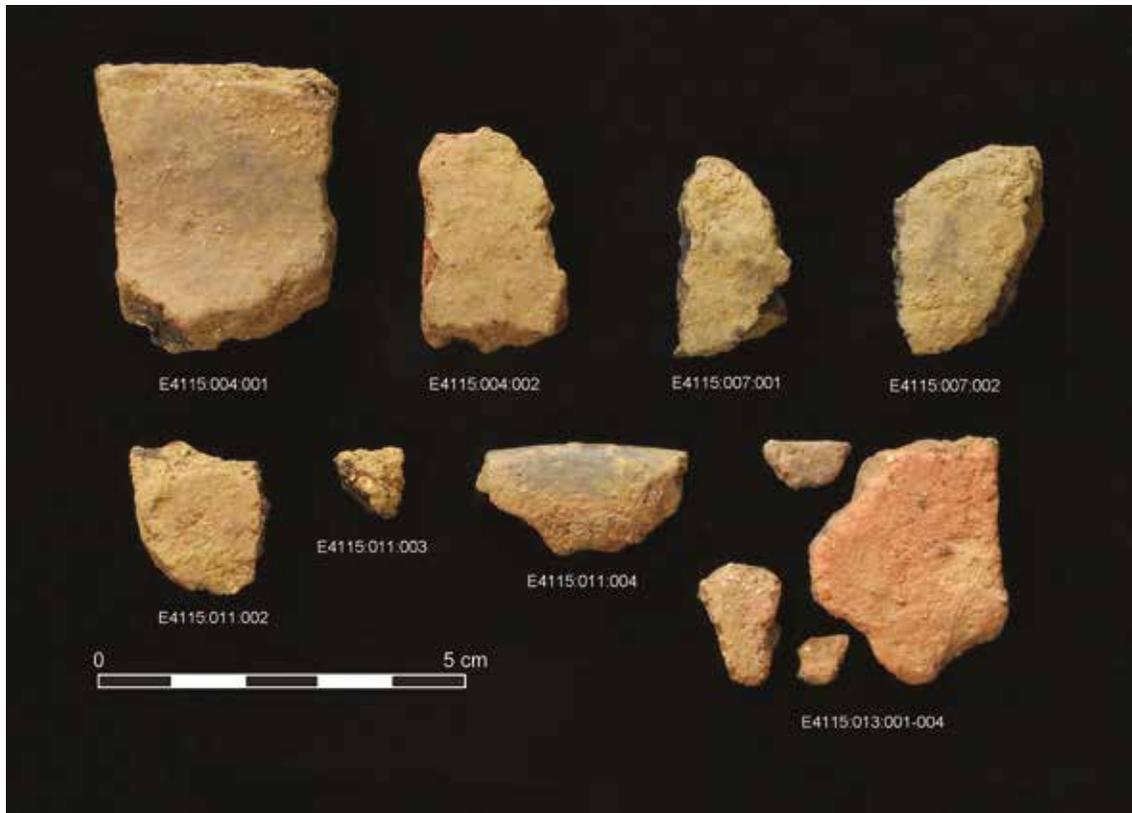
Illus. 2.25 Early Neolithic pottery sherds (Rubicon Heritage Services Ltd).
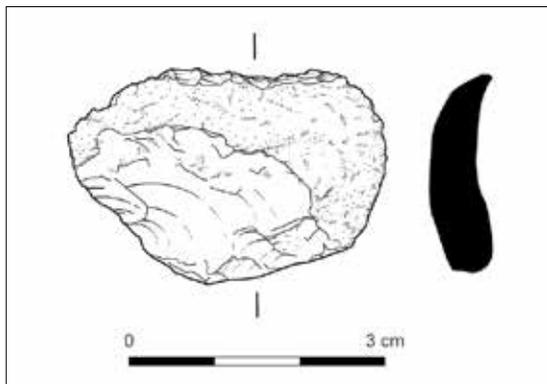
Illus. 2.26 Retouched flint artefact possibly used as a scraper (E4115:011:001) (S Nylund).

Discussion

The formation and infilling of the features excavated at Ryleen 1 are likely to be the result of the natural uprooting of a tree by strong winds followed by a combination of the deposition of cultural debris and gradual accretion. The high charcoal content, *in situ* burning and presence of a notable quantity of hazelnut shells recovered from Ryleen 1 suggest that hazelnuts were being roasted at this location—possibly after a foraging exercise in the surrounding area. The hazelnuts could either have been consumed on the spot or brought back to the permanent dwelling in a storable condition.

It is also a possibility that the root holes could have been enhanced to create a temporary shelter using posts and skins (Carver 2012). Only one stake-hole was identified in association with the tree-throws at Ryleen 1 suggesting that the natural

Illus. 2.27 A modern tree-throw close to the edge of woodland at Tintern, Co. Wexford (J Eogan).

shelter provided by the tree-throw hole may have been enhanced with lightweight structural additions. In the absence of any further structural features, the presence of a shelter that could have acted as a temporary dwelling cannot be confirmed.

The recovery of the Early Neolithic pottery and a lithic artefact are further indications of domestic activity at this location. The presence of artefacts among fire waste demonstrates that at least some of the features were used for rubbish disposal. The recovery of artefacts from the fills of tree-throw holes is an occurrence that has been recorded elsewhere in Ireland and Britain (see Smyth, J 2012; Evans et al. 1999; Carver 2012). Three such artefact-bearing hollows were found beside an Early Neolithic house at Corbally, Co. Kildare (Tobin 2004). Another example from excavations undertaken at a multi-period site at Lehaunstown, Co. Dublin, revealed a burnt oak tree-throw hole that contained a number of lithic artefacts. These were interpreted as being suggestive of specific tasks being carried out in a woodland area with tools being placed at the base of trees (Seaver 2004). Carver (2012, 111–18)

has suggested that that the deposition of such material can be interpreted as part of cycles of renewal that created links between the Early Neolithic population and the places they were living in.

Humphrey Case (1969, 13) used ethnographic analogy to suggest that Neolithic people deliberately deposited cultural debris as part of 'rites of sympathetic magic', to ensure the future productivity of the land and its resources. More recently, it has been observed that, through the burial of these fragments of 'domestic' life, the meanings and memories associated with these artefacts were recalled and reproduced. The process of backfilling pits or tree-throws served to presence the material being deposited and to physically locate a particular occasion or space in people's minds, thereby creating and sustaining their sense of belonging to a particular group and place (see Pryor 1995, 105; Thomas 1996, 197; 1999, 87; Pollard 1999).

Ryleen 2—multi-period site, including Early Neolithic house

*Excavation Director: James Hession*
Report: Lyndsey Clark, Neil Carlin and James Hession

Introduction

The Ryleen 2 excavation covered a large area which was subdivided into four areas (A–D).[16] Four main phases of activity were identified dating to the Early Mesolithic, the Early Neolithic, the Late Neolithic and the early to late medieval transitional period (Illus. 2.28). The most significant archaeological remains were located in Area A where the remains of

16 Excavation No. E4116; ITM 675290 626839; altitude 90 m OD; Saint Mary's parish; Bantry barony; County Wexford.

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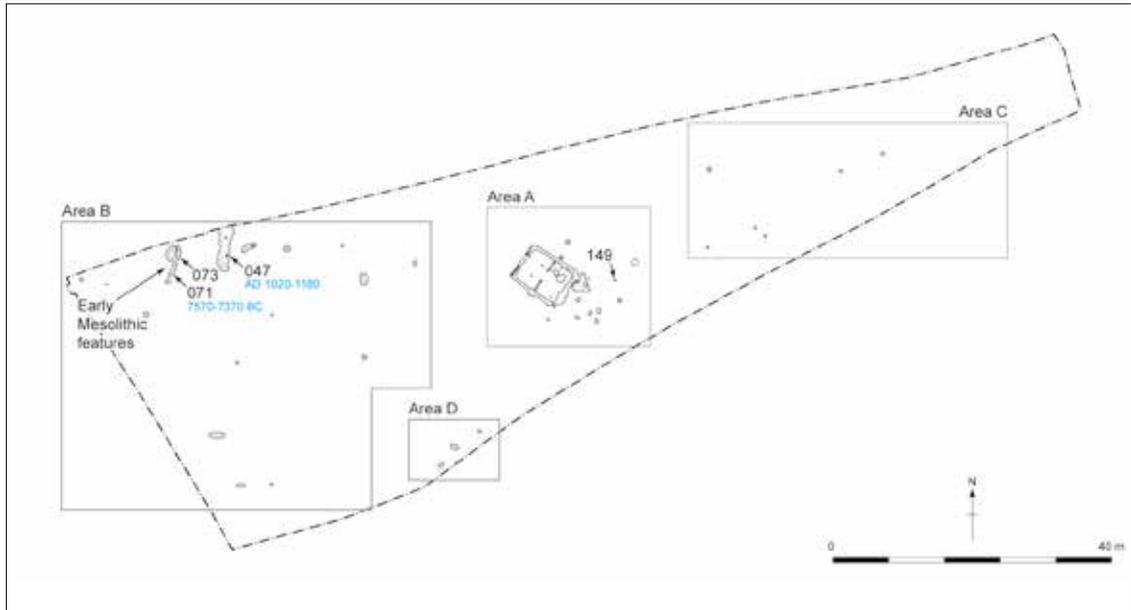
Illus. 2.28 Ryleen 2 site plan (Rubicon Heritage Services Ltd).

the first Early Neolithic house to be identified in County Wexford were uncovered.

The site

Ryleen 2 was positioned on an elevated tract of fertile ground upon the lower south-facing slopes of Lacken Hill, which provided extensive panoramic views of the surrounding area. To the west of the site the land sloped down to the valley of the Maudlins Stream.

The excavation

The Early Mesolithic activity occurred within Area B, towards the western end of the site. It was represented by two small curvilinear features (071 and 073) which varied between 1.02 m and 2.40 m in length, 0.26 m and 0.52 m in width and 0.26 m and 0.29 m in depth; their fills contained inclusions of charred hazelnut shell and stones. One of these nutshells was radiocarbon dated

to 7570–7370 BC (SUERC-35226). Both features shared the same orientation and one seems to be a continuation of the other, suggesting that they were contemporary. The only other evidence for Mesolithic activity is provided by a probable Late Mesolithic large chert blade (E4116:078:001), which had been reused in the Early Neolithic period, found in one of the slot-trenches of the adjacent Neolithic house. A Late Mesolithic butt-trimmed flint flake was found in topsoil at Arnestown 2, c. 1.45 km to the south-west of Ryleen 2. In the wider area, other Mesolithic sites, in the form of lithic scatters, have been identified at Camolin and along the eastern coastline near Carnsore (Stout 1987, 3). Evidence for Later Mesolithic activity has also been found within the catchment of the River Barrow (Green & Zvelebil 1990; Zvelebil et al. 1996). All of these discoveries fit within a broader pattern of the occurrence of Mesolithic artefacts scatters in river valleys or on nearby slopes (Woodman 1978; 2011, 202–3). This is probably reflective
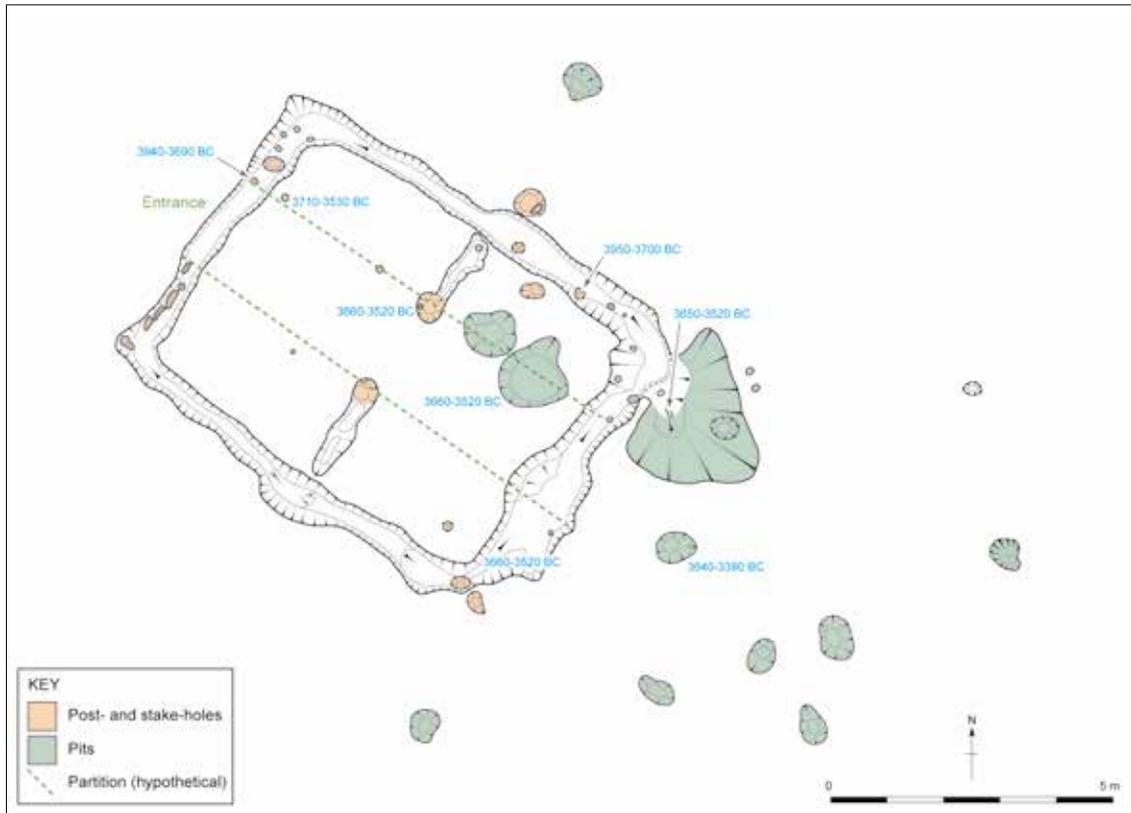
Illus. 2.29 Post-excavation plan of Early Neolithic house (Rubicon Heritage Services Ltd).

of the fact that such locations—including Ryleen which overlooks the Maudlins Stream, a tributary of the River Barrow—would have been particularly suitable for hunting and gathering activity because of the diverse range of ecological zones occurring nearby (Cooney & Grogan 1999, 14).

Early Neolithic activity was recorded within Area A where the sub-rectangular foundations of a house were identified (Illus. 2.29). The house had external dimensions of 8.50 m (NW–SE) by 6.25 m and comprised a slot-trench (0.50–1.50 m wide and 0.30–0.75 m deep) defining an internal area of 35.10 m². An entrance (1.40 m wide) appears to have been located at the north-western gable end. Several structural post- and stake-holes had been dug into the base of this

trench (Illus. 2.30). The post-holes (c. 0.26 m by 0.18 m by 0.20 m) ranged from circular to triangular in plan and contained charred

Illus. 2.30 Early Neolithic house mid-excavation view of post-holes (199) and (197) in the base of the north-western foundation trench, facing north-east (0.3 m scale) (Rubicon Heritage Services Ltd).

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hazelnut shells, charcoal, burnt clay and stone inclusions, as well as several lithics. The stake-holes (c. 0.04–0.09 m in diameter by 0.08–0.31 m deep) also contained inclusions of charred hazelnut shell and charcoal within their fills. Distinct deposits of packing stones were concentrated in the areas where these post- and stake-holes were recorded. They consisted of angular and sub-rounded granite stones (averaging 250 mm by 200 mm by 70 mm) (Illus. 2.31). The overlying fills of the slot-trench produced varying quantities of charred organic remains, including charcoal, hazelnut shell and cereal grain, and cultural materials including daub, pottery sherds and lithics. The north-western part of the slot-trench showed extensive evidence of *in situ* burning, suggesting that this section of the house had been burnt. Subsequently, the

Illus. 2.31 Early Neolithic house mid-excavation view of packing stones within slot-trench (012), facing north-west (1 m scale) (Rubicon Heritage Services Ltd).

structural elements from this and other parts of the house were dismantled, probably soon after its abandonment.

Highly compact surface deposits (c. 0.20–3.50 m long, c. 0.15–2.28 m wide and 0.06–0.25 m deep) containing inclusions of charcoal, charred hazelnut shell, stones and lithics were found inside the house. These deposits abutted the structural features and post-date the house foundations. As such they most likely represent the build-up of material (through trample) within the internal floor space of the house during its lifetime.

An internal wall dividing the house into two rooms was represented by two lateral slot-trenches (c. 0.89 m by 0.25 m by 0.14 m) which extended inwards from the outer walls. These terminated at a centrally located causeway which was defined by a pair of post-holes. These indicate the former location of a doorway between the front and back of the house. These slots and post-holes truncated the floor surface and contained sherds of Early Neolithic pottery and lithics. Numerous sub-oval pits and stake-holes were also recorded throughout the interior of the house. The stake-holes (c. 0.12 m by 0.09 m by 0.17 m) occurred in the north-western half of the house and contained inclusions of charcoal within their fills. They formed part of an axial alignment leading from the pair of post-holes at the entrance to the central pair of internal post-holes which appear to have partitioned the 'front room' into three equally sized spaces. The pits (c. 0.86 m by 0.73 m by 0.24 m) were in the south-eastern half of the house. Their fills contained charcoal, charred hazelnut shells, stones, Early Neolithic pottery sherds and lithics. The pits seem to post-date the occupation of the house.

A number of external features were identified around the house. Some of these contained sherds of Early Neolithic carinated bowls, suggesting that they were associated with occupation of the house. The majority, however, produced no artefacts, although their proximity to the building would suggest that they were contemporary. The pits were mainly sub-circular in plan (c. 0.61 m by 0.43 m and 0.20 m), containing varying quantities of charcoal, charred hazelnut shell, stones, pottery and lithics. The post-holes contained inclusions of charcoal and were circular in plan, measuring 0.12–0.20 m in diameter and 0.20–0.24 m in depth. The stake-holes were also circular in plan, with average dimensions of 0.08 m in diameter and 0.09 m in depth; they contained archaeologically sterile fills.

A total of nine radiocarbon dates were obtained from samples derived from features related to the structure of the building or features associated with it; these returned date ranges of 3950–3700 BC (SUERC-35216) and 3640–3380 BC (SUERC-35224). The samples dated included six charred hazelnut shells and two pieces of oak charcoal; the results of the dating accords well with the associated material culture.

The Late Neolithic activity at Ryleen 2 was represented by an oval pit (149), approximately 4 m south-east of the Early Neolithic house. It measured 0.34 m by 0.28 m and 0.21 m and contained inclusions of charcoal and stone; its function remains uncertain. A sample of hazel charcoal from its fill returned a radiocarbon date of 2840–2470 BC (SUERC-35231).

An early to late medieval ditch or field boundary (047), which extended beyond the northern limits of excavation, was uncovered in Area B. The excavated portion was 6.21 m long, 1.58 m wide and 0.64 m deep. Three post-holes (c. 0.22 m by 0.15 m by 0.06 m) were identified, cut into the base of the ditch, with an area of *in situ* burning located adjacent to two of the post-holes. The ditch fills contained varying quantities of charcoal, charred hazelnut shell, charred cereal grain and wild taxa, a sample of oat grain from its basal fill returned a radiocarbon date of AD 1020–1180 (SUERC-35225). Geophysical survey undertaken outside the road-take in the area adjoining Ryleen 2 to the north-west suggests that this ditch may be part of a larger complex of linear and curvilinear features in this area (Bonsall & Gimson 2010).

A large number of undated post-holes and pits were excavated across the site; these could not be attributed to a specific phase of activity and therefore remain undated. The sub-circular post-holes (c. 0.25 m by 0.21 m by 0.22 m) contained inclusions of charcoal and stone within their soil matrices; the pits, which varied from circular to sub-rectangular in plan (c. 0.62 m by 0.48 m and 0.18 m), contained charcoal, charred hazelnut shell, oxidised clay and stones.

Finds

Pottery
Eoin Grogan and Helen Roche

The ceramic assemblage comprised 144 sherds and 17 crumbs representing 13 Early Neolithic carinated bowls (Illus. 2.32). The vessels were well made, exhibiting a limited degree of wear or weathering. Six displayed evidence for burnishing, while traces of carbonised residue—indicating the vessels had probably been used in a domestic
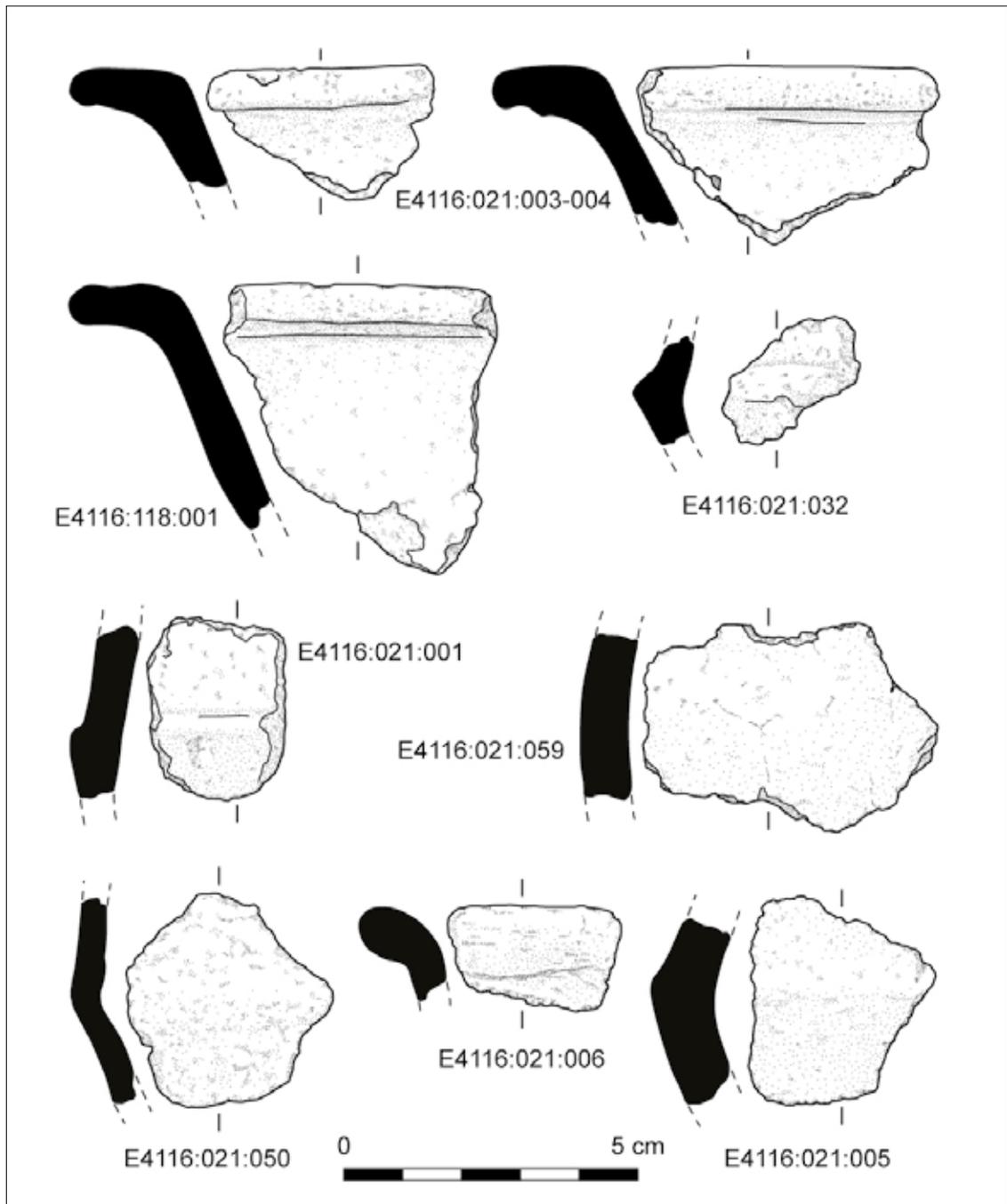
Illus. 2.32 Selected sherds of Early Neolithic carinated bowl pottery (S Nylund).

context—were identified on four. Decoration consisting of wide, slightly oblique scores closely arranged in a radial pattern were also identified on one vessel.
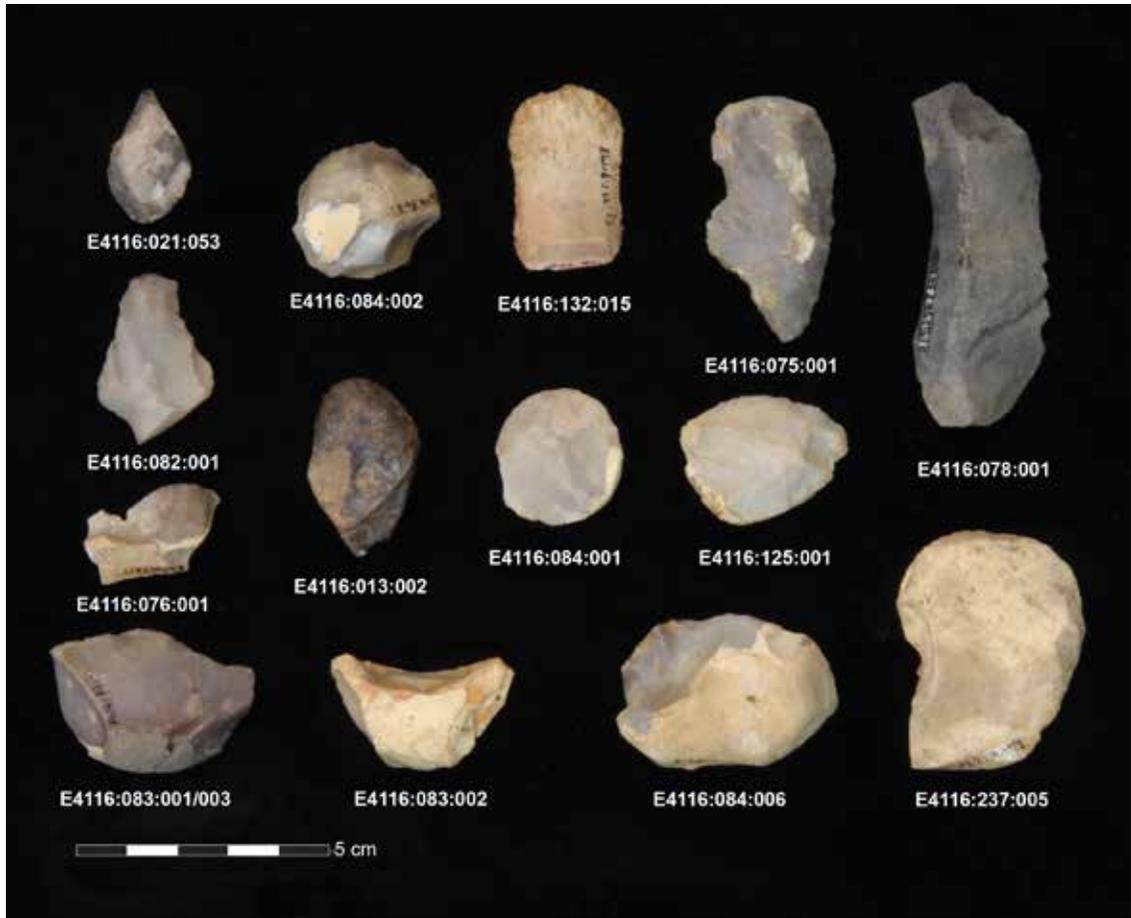
Illus. 2.33 Selection of worked lithics associated with the Early Neolithic activity in Area A (Rubicon Heritage Services Ltd): 021:053 leaf/lozenge-shaped arrowhead; 084:001 and 002 disc scrapers; 132:015 retouched artefact; 075:001, 013:002 (chert), 076:001 and 237:005 convex end scrapers; 078:001 reused Late Mesolithic chert blade; 082:001 utilised flake possible strike-a-light; 125:001 possible side scraper; 083:001/003 informal scraper; 083:002 utilised flake; 084:006 retouched core.

Lithics

Farina Sternke

A total of 55 struck-stone artefacts were also retrieved from the excavation (Illus. 2.33). These were produced from flint, chert and quartz crystal and comprised 22 flakes—including one possibly reutilised as a strike-a-light, two as natural hollow scrapers and one as a natural convex end scraper; four blades; 13 retouched artefacts—including three convex end scrapers, two disc scrapers and six informal scrapers, a leaf/lozenge-shaped arrowhead and a miscellaneous retouched artefact; and four macro tools comprising a portion of a polished stone axe and three rubbing stones. They survived in variable conditions, with lustre—a result of heat exposure—observed on 13 of the artefacts. The assemblage is typologically and technologically diagnostic, with the majority dating to the Early/Middle Neolithic period;

the exception is a large chert blade, which appears to represent Neolithic reuse of a Late Mesolithic object.

Discussion

The most significant archaeological feature at Ryleen 2 was the Early Neolithic structure that is typical of the houses built by Irish Early Neolithic agriculturalists (Illus. 2.34). Over the last 20 years, approximately 80 Neolithic houses have been identified throughout Ireland (Smyth 2010, 4). The Ryleen example was the first to be identified in County Wexford. A second Neolithic house was subsequently discovered during pre-construction archaeological investigations on the M11 Gorey to Enniscorthy project at Dunsinane, south-west of Enniscorthy in 2010 (Gallagher et al. 2015)

While there is considerable variation in the size and shape of these buildings, most seem to share a number of common characteristics, including a substantial rectangular or square foundation trench and dimensions of 6–8 m by 4–7 m. This can be seen at Ryleen 2 where the ground plan of the house is similar to previously excavated
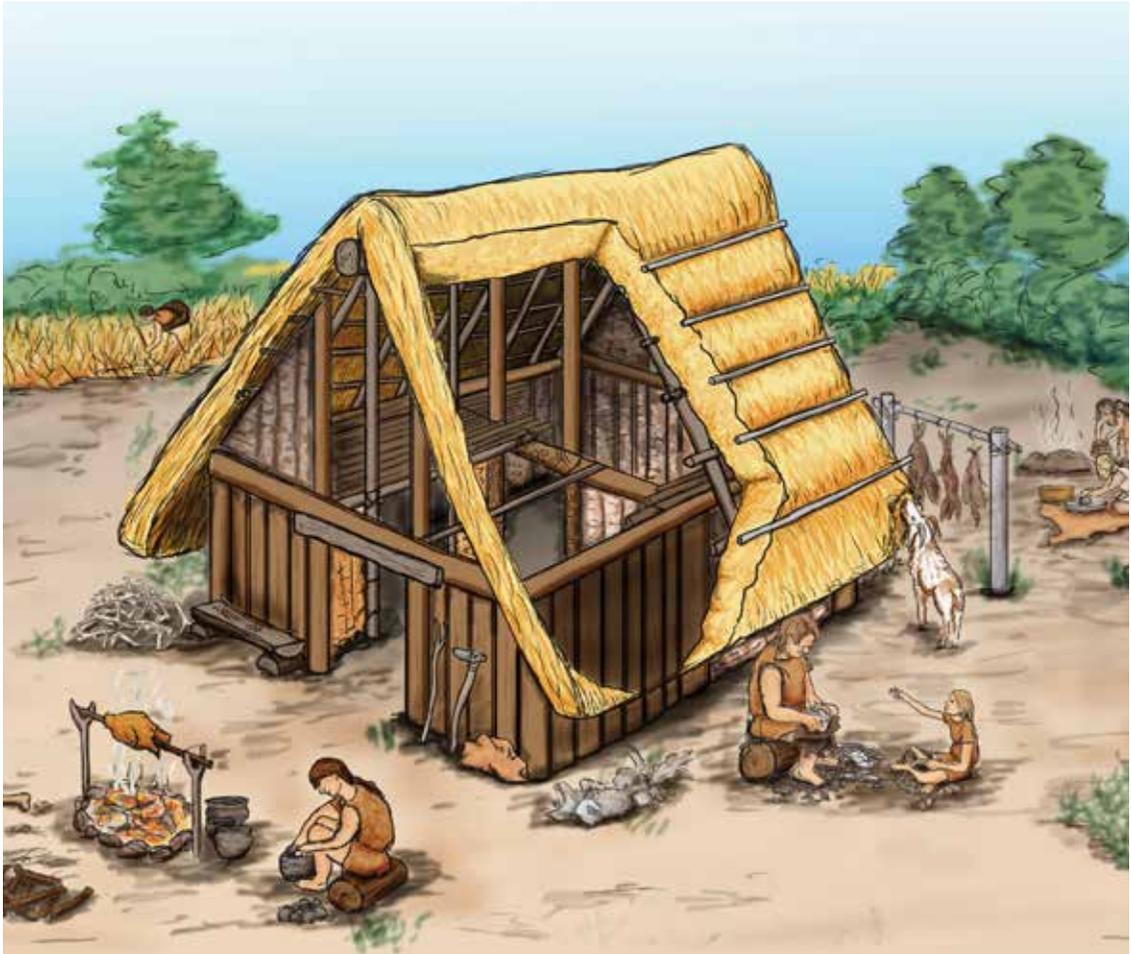
Illus. 2.34 Reconstruction drawing of Early Neolithic house uncovered at Ryleen 2 (S Nylund).

examples, such as those at Ballyglass 1, Co. Mayo (Ó Nualláin 1972; Smyth et al. forthcoming), and Newtown, Co. Meath (Gowen & Halpin 1992).

The majority of houses dating to this period were built using a combination of planks, posts and wattle walling (Smyth 2006, 237). This was also evident in the Ryleen example, with a series of elongated post or plank-holes found at the north-west end of the structure strongly suggesting that this section of the building was predominantly plank built. The wall construction of the remaining part of the house was not as easily discernable, although the presence of numerous stake- and post-holes at the eastern corner suggests that a combination of posts and wattle-and-daub screens were used. The internal division also seems to highlight the difference in this wall construction between the north-west and south-east ends of the building. This characteristic was also noted in a house excavated at Kishoge, Co. Dublin, where the change from plank to post construction corresponded with the alignment of the internal partition wall and roof support (O'Donovan 2003/2004). A large quantity of burnt hazelnut shells, along with small amounts of charred naked barley and emmer wheat, were also recovered from a number of the internal features located in the south-eastern room of the house. This would suggest that this area was the focal point for food preparation, with the north-west room being utilised for other purposes, for instance sleeping quarters or storage.

The *in situ* burning identified at the western corner of the Ryleen house has also been previously recorded at several sites in Ireland, including Houses 1, 3, 4 and 6 at Corbally, Co. Kildare (Purcell 2002a;

Tobin 2003). The evidence of houses being burnt has been interpreted in several ways, such as catching fire accidentally or as a result of intentional attacks on the houses. Based on ethnographic analogy and recent experimental archaeology research, Jessica Smyth (2006, 245) has hypothesised that the burning episodes observed at Irish Early Neolithic houses can best be understood as reflecting the lifecycles of the buildings and those of their inhabitants or the communities who constructed and used them.

Berkeley 3—Middle Bronze Age cremation cemetery

Excavation Director: Liam Hackett
Report: Lyndsey Clark and Liam Hackett

Introduction

Berkeley 3 comprised a Middle Bronze Age unenclosed flat cremation cemetery containing a total of 14 cremation burials within 11 sub-circular cremation pits.[17] A large number of pits, post-holes and stake-holes of uncertain date and function were also excavated at the site (Illus. 2.35).

The site

Berkeley 3 was located in pastureland on a gentle north-east-facing slope with views to the north-east and the Blackstairs Mountains to the north. It overlooks poorly drained land to the east that is drained by the Gataniska Stream, a tributary of the Ballyanne Stream, which flows into the River Barrow at Macmurroughsisland to the north-west.

17 Excavation No. E4122; ITM 677342 630038; altitude 109 m OD; Ballyanne parish; Bantry barony; County Wexford.
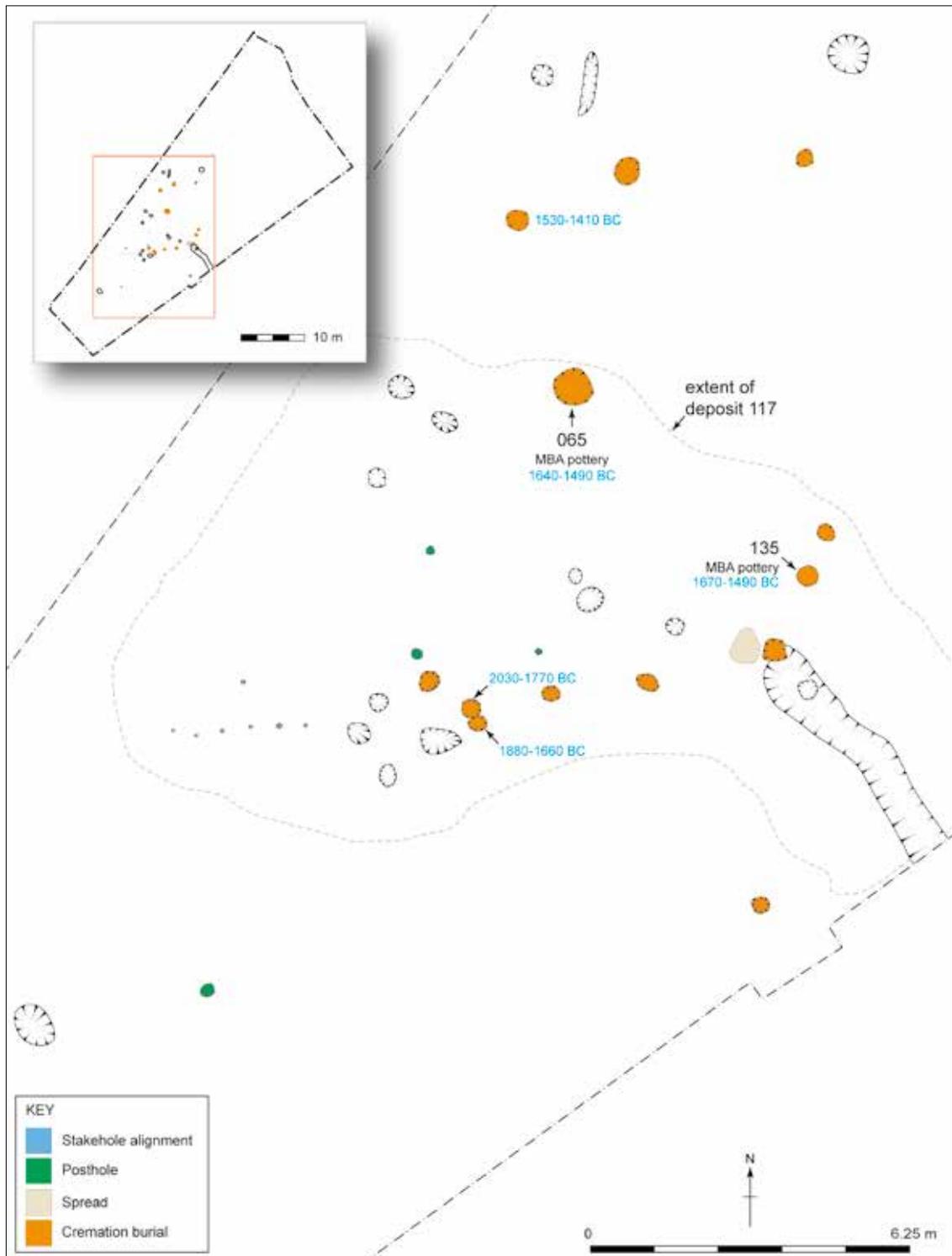
Illus. 2.35 Berkeley 3 site plan (Rubicon Heritage Services Ltd).
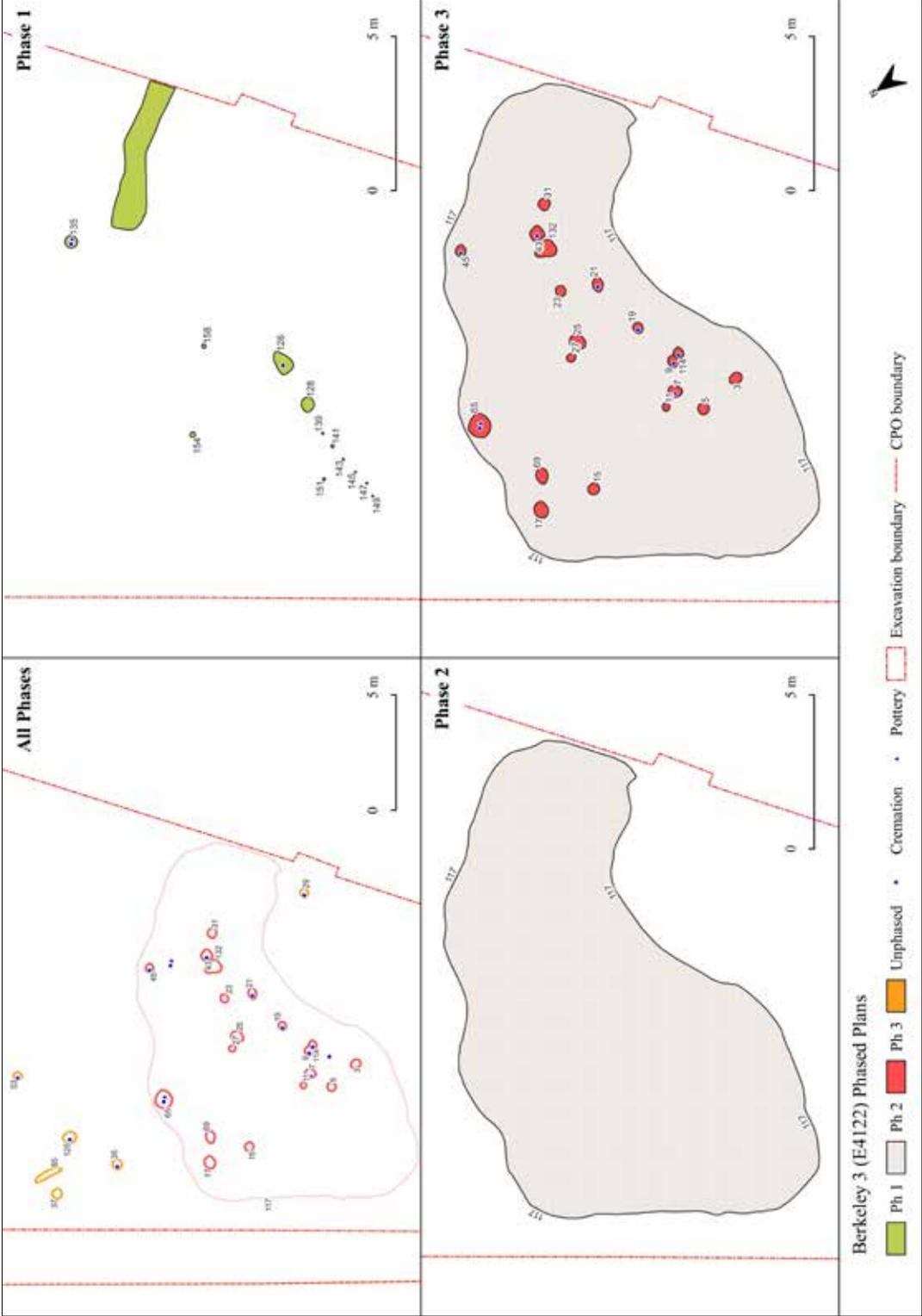
Illus. **2.36** Berkeley 3 phased plan (J Eogan).

The excavation

The cremation cemetery extended over an area measuring approximately 17 m (east–west) by 15 m (north–south) (Illus. 2.36). Burnt bone was retrieved from 13 features, fragments of possible burnt bone were identified during excavation of one other feature but no bone was identified during the post-excavation analysis of the samples. The majority of the burials were contained within sub-circular pits that measured on average 0.42 m in length, 0.38 m in width and 0.15 m in depth. At least two episodes of burial occurred at this site in the Middle Bronze Age. As at Camlin 4, the burial events were separated stratigraphically by a layer of soil which sealed the earliest burial and later burial pits were subsequently cut into it. Several features were identified beyond the extent of the soil deposit; some contained cremated human bone and appear to be contemporary with the main burial focus.

The first phase of burial at Berkeley 3 appears to be represented by a pit burial (135) located towards the eastern side of the excavated area. It was a flat-based circular pit, approximately 0.36 m diameter and 0.21 m deep. It had two fills, both of which contained cremated human remains (aggregate weight 315.4 g) associated with oak charcoal. The main (secondary) fill contained most of the cremated bone, which was identified as belonging to an adult; some charred cereal grains and a fragment of pottery, most likely from a cordoned urn, were deposited with the burnt bone. A bone sample from the burial returned a Middle Bronze Age date range of 1670–1490 BC (SUERC-35173). A shallow gully (156) was located approximately 1.5 m south-west of the grave; it extended in a south-easterly direction for almost 5 m to the limit of excavation, where it was truncated

by the modern field boundary. The gully was 0.65 m wide and up to 0.20 m deep. The terminal close to the burial was rounded in plan and contained four fills; apart from oak charcoal, no cultural material was associated with this feature. An almost 6 m-long line of features was located 6 m west of the gully. The feature closest to the gully was an oval pit (126) which was 0.69 m along its long axis (east–west) and 0.23 m deep. It had a single fill which contained oak charcoal and some charred hazelnut shells; occasional flecks of burnt bone were noted during excavation but no bone was identified following post-excavation specialist analysis. A sub-circular pit (158) was located 1 m west of pit (126). It was approximately 0.43 m in diameter and 0.21 m deep and its single fill contained occasional charred hulled barley grains and oak charcoal. A line of six stake-holes, spaced on average 0.51 m apart, extended over a distance of 2.6 m in an east–west direction from a point approximately 0.80 m west of pit (158). Three further stake-holes were identified in the area north of the line of pits and stake-holes. These features were covered by a roughly kidney-shaped layer of reddish-brown clay (117); this Phase 2 deposit was approximately 117 m^2 (16 m east–west by 9 m) and was 0.15 m in maximum thickness.

Eighteen features (one post-hole and 17 pits), assigned to Phase 3, were cut into the clay layer. Eight of the pits contained burnt bone; the deposits of burnt bone ranged in weight from 0.8 g to 181.5 g. Cremated human remains were identified in seven of the deposits, five of which were found to contain the remains of adult individuals. The largest pit grave (065) was cut into the northern side of the clay spread; it was sub-circular, 0.85 m long and 0.67 m wide, and had a flat base. The main fill (120) contained mostly oak charcoal, six fragments of pottery

from a single vessel most likely to be a cordoned urn and 24.5 g of cremated bone, some of which could be identified as human. The secondary fill (066) was confined to the centre of the feature; it also contained oak charcoal and 156 g of cremated bone, some of which could be identified as an adult human. A sample of bone from the secondary fill returned a radiocarbon date with a range of 1640–1490 BC (SUERC-35168). A flat stone appeared to have been placed on the top of the secondary fill. It did not fully cover the deposit and it is not clear if it is the last remnant of a truncated capping deposit or grave marker. A group of three sub-circular or oval pits (015, 017 and 069) was located almost 2 m west of the largest pit grave (065); these pits were all flat based and of similar size (average diameter 0.47 m). Their fills contained mostly oak charcoal. The secondary fill of one of the pits (017) contained charred cereal grains as well as charred seeds of a plant from the goosefoot family (*Chenopodium* sp.), which may have been a food source in the past.

The other 14 features (13 pits and a post-hole) cut into the clay spread were distributed in a broad east–west band across the southern portion of the deposit. The pits were generally sub-circular or oval in plan and smaller than the examples cut into the northern part of the spread, averaging 0.40 m in length and 0.35 m wide. Burnt bone was identified in the fills of seven of the pits. The pits containing burnt bone give the appearance of being reasonably evenly spaced; one pit (114) partially truncated another (009) indicating that the burials may have been interred at different times (Illus. 2.37). The weight of burnt bone deposited ranged from 0.8 g to 134.6 g; all but one of the deposits were confirmed to contain human bones and four of them were found

to contain adult remains. The burnt bone was associated with charcoal which was identified as being mostly oak. Samples of burnt bone from the two intercutting burials returned radiocarbon dates ranging from 2030–1770 BC (SUERC-35166, 009) and 1880–1660 BC (SUERC-35167, 114). Very small quantities of charred plant remains were identified in samples from four pits which contained burnt bone. Charred hulled barley grains were associated with two deposits of burnt bone. Two other deposits contained unidentified cereal grains; a charred pea seed (*Pisum/Lathyrus* sp.) associated with the human remains in pit (043) could have been from a cultivated or wild variety. Seeds of wild taxa, bed straws (*Galium* sp.) and ribwort plantain (*Plantago lanceolata*) were also associated with the human remains in pit (043); these are ruderals often associated with arable agriculture. Charred oat grain in the secondary fill of this pit may indicate intrusion of later material into this context and demonstrates that caution should be exercised in interpreting the significance of the association of small quantities of charred plant remains with cremation burials.

Illus. 2.37 Mid-excavation view of Phase 3 cremation pits (009) and (114), facing south (0.3 m scale) (Rubicon Heritage Services Ltd).

Four pits containing burnt bone were identified in the area surrounding the clay spread. Three (035, 053 and 125) were found between 2.5 m and 6 m from the northern edge; they were arranged in a linear fashion with an east–west alignment. The weight of burnt bone deposited ranged from 0.2 g to 504.8 g. The smallest deposit, in pit (053), could not be confirmed to species while the others were found to contain adult human remains. The largest deposit of cremated bone came from a sub-circular pit (035) which was 0.50 m long, 0.40 m wide and 0.16 m deep. This pit was located 2.9 m north of the largest Phase 3 burial. The burnt bone from these pits was associated with charcoal which was identified as being mostly oak. A sample of bone from pit (035) returned a radiocarbon date of 1530–1410 BC (SUERC-35172). Very small quantities of charred unidentified cereal grains and common nettle (*Urtica dioca*) were identified in samples from pit (053). A fourth pit (029) located 1m from the south-east side of the clay spread contained a small quantity (2.3 g) of human bone. Four pits, a short linear cut, a post-hole and three stake-holes were found to the north and south-west of the clay spread. One of the pits (037) contained unidentified charred cereal grains and a second (103) contained charred hazelnut shell. Charcoal was found in the fills of seven features and oak was identified in the fill of two of the pits, (037) and (107), and one of the stake-holes (099). The relationship of these features to the adjacent funerary activity is unclear. The estimated maximum extent of the area used for funerary activity is 156 m^2.

Finds

Pottery
Eoin Grogan and Helen Roche

The ceramic assemblage comprised six sherds of Middle Bronze Age pottery. The fabric was hard and compact, with a slight chalky texture and moderate dolerite content. The sherds measured up to 2.90 mm in length, ranging between 6.20 mm and 7.20 mm in thickness. The sherds from Berkeley 3 are consistent with a Middle Bronze Age variant of the cordoned urn which developed at the end of the Early Bronze Age, c. 1600 BC. Another emerging feature of this period is the deposition of broken pottery sherds, instead of complete pots, in simple cremation pits as at Berkeley 3 and further afield at Mitchelstowndown North, Co. Limerick, Killoran, Co. Tipperary, and Mounthawk, Co. Kerry (Gowen 1988; Stevens 2005; Dunne 1998).

Discussion

The majority of the human remains were identified as those of adults, although more accurate age ranges and the sex of the individuals could not be determined. Analysis of the bone indicated that those carrying out the cremation process were well versed in pyre technology, as nearly 98% of it was completely oxidised. The dominance of oak charcoal in the cremation deposits has previously been recognised at sites across Ireland, especially in the Bronze Age (O'Donnell 2007; 2009). Its use as the main fuel in cremations is frequently cited as being due to its high burning temperatures (e.g. O'Donnell 2007).

Other than the sherds of Middle Bronze Age pottery recovered from two of the

burials, no further finds or grave goods were recovered. Some unusual blue-green colouration on the bone in five of the burials may indicate that copper-alloy objects were deposited with the cremated remains.

There was little difference in size and shape between the cremation burials and the other pits excavated at the site and due to the general lack of palaeoenvironmental, osteological and artefactual evidence from the latter, their function remains uncertain. It is possible that the large number of stake- and post-holes located in close proximity to the burials were used as totems or grave markers, although no packing stones were noted in their fills. It is also possible that the graves were covered with some form of structure such as that identified at Adamstown, Co. Limerick (Cooney & Grogan 1999, 130).

This site forms part of a wider Bronze Age funerary landscape in this part of the River Barrow catchment, that included Early Bronze Age burials at Dunganstown, Stokestown 2 and Camlin 3, and a contemporary Middle Bronze Age cemetery at Camlin 4. The sequence of funerary activity at Berkeley 3 bears a remarkable similarity to that revealed at Camlin 4. The initial interment of one or two individuals associated with a small number of cut features was followed by the spreading of a layer of clay. Subsequently, a greater number of burials were inserted into the clay spread; these too were associated with non-burial pits. One of the factors that complicates interpretation of the burial activity at Berkely 3 is the Early Bronze Age dates returned from samples of bone from burials cut into the clay spread that sealed a burial that returned a Middle Bronze Age date. Given that the burial rite at Berkeley 3 is best paralleled by Middle Bronze Age

practices, these dates are anomalous. Two different explanations can be advanced to account for these stratigraphically late burials having anomalously early dates. Research on Chalcolithic and Early Bronze Age burial practices in Britain has identified evidence for the curation of human remains for up to two centuries after death before burial (Booth & Brück 2020). It may be that the two burials that returned early dates were the remains of ancestors of the people who used the cemetery and that the remains had been retained by the family or community for a period before burial. Alternatively, research has shown that during the cremation process bone can take up carbon-14 from the fuel used in the pyre (Snoeck et al. 2014). Where the pyre fuel included heartwood from long-lived tree species, such as oak, this can result in radiocarbon dates on samples of burnt bone being affected by an 'old wood effect', meaning that dates from bone samples could be centuries older than the date of death of the cremated person. Bayesian statistical modelling of the radiocarbon dates from Berkely 3 in OxCal, utilising an outlier model parameter function which takes account of potential offsets resulting from the 'old wood effect', produces a chronological model which accords with the stratigraphy and indicates that all the burials are likely to have been interred in the Middle Bronze Age (see Chapter 6). In this model, burial activity commenced at Berkeley 3 in the mid-16th century BC, the clay spread was deposited in the early 16th to late 15th centuries and the burials that cut into the clay spread were interred between the late 15th and mid-14th centuries.

Margaret Murphy and James A Galloway

The early and late medieval historical context

This chapter provides general historical context for the N25 New Ross Bypass and more specific context for the medieval site excavated at Landscape 2A, Co Wexford. It consists of a brief overview of settlement in the area in the early medieval period followed by a more detailed exploration of the later medieval period. This charts the arrival of the Anglo-Normans, the sub-infeudation process and the formation of the manor of Old Ross. A discussion of rural society, settlement and economy in the later medieval period follows. The foundation of New Ross and the development of the town into one of Ireland's major medieval ports are examined along with a consideration of the town's relationship with its rural hinterland. The general historical narrative closes with an account of the fortunes of the New Ross area in the 14th and 15th centuries. Attention then turns to the townland of Landscape with a focus on a reconstruction of the medieval territorial boundaries and a discussion of the probable ownership profile and function of the excavated site in the 13th century.

The New Ross area in the early medieval period AD 400–c. 1169

At the beginning of the historic period, the present County Wexford was divided into eight or nine different population groups or *tuatha* who, over time, gave their names to the territories they occupied (Culleton 1999, 16). The most powerful grouping at the start of the fifth century was the Uí Bairrche, a sub-sept of the Laigin who were in control of large parts of Wexford and Carlow (Byrne 1973, 137). The septs who occupied the south-western part of the country, the Síl mBriain and the Benntraige, who gave their names to the baronies of Shelburne and Bantry respectively, were subject to the Uí Bairrche.

The Uí Bairrche remained powerful in south Wexford up to the second half of the sixth century when they gave way to increasing pressure from the Uí Cheinnselaigh, a sept which, at the start of the historic period, had expanded and migrated down the valley of the River Slaney from their home territory in the vicinity of Rathvilly, Co. Carlow (Smyth 1982, 62–3). There were several different branches of the Uí Cheinnselaigh including the Síl Chormaic, Síl nOnchon, Síl Máeluidir and Uí Felmada and, over the following centuries, they came to dominate Wexford (Illus. 3.1). By the end of the eighth century, they were in control of Ferns which became their headquarters. The Uí Bairrche retained a small territory in south Wexford, while the Síl mBriain and Benntraige managed to hold onto their territories, presumably by

Chapter title image Sculpted head in the south transept of the 13th-century St Mary's Church, New Ross. The medieval townspeople derived much of their prosperity from trade in agricultural produce from the hinterland. People in the hinterland also supplied materials such as timber and stone that was used in construction of the church and other buildings (J Eogan).

aligning themselves to one or other branch of the Uí Cheinnselaigh (Culleton 1999, 51). The Uí Cheinnselaigh continued to increase their dominance, with a member of the Síl nOnchon branch eventually seizing the kingship of Leinster and Norse Dublin in the eleventh century (Ó Corráin 1972, 7–39). Their most successful king was Diarmait mac Máel na mBó (reigned 1036–1072), the progenitor of the MacMurrough kings of Leinster and great-grandfather of Diarmait Mac Murchada.

The church also played a vital role in early medieval settlement and society. Wexford's first contact with Christianity may have pre-dated the Patrician mission and probably came via trading links with Wales (Smyth 1982, 9). The biggest influence on the spread of Christianity in Wexford was the work of the early saints who established churches and schools. In the sixth century, St Máedóc established an important monastery at Ferns becoming the patron saint of the Uí Chennselaig whose dynastic centre was located at Ferns from at least the end of the eighth century (Culleton 1999, 102–7). St Munna founded another important church at Teach Munna (Taghmon) in the sixth century while St Ibar was responsible for the monastic settlement at Begerin (later Wexford Harbour) (Colfer 2002, 9). Ibar's nephew, St Abbán, founded monasteries at Magh Árnaidhe (Adamstown) and Ros Meic Treoin (in the vicinity of New Ross) in the late sixth or early seventh century (Culleton 1999, 98–9).

The monastic foundation by the River Barrow at Ros Meic Treoin is the first documented evidence for settlement in the New Ross area, but it does not appear to have been a very important site (Sharpe 1991, 350–1). There is considerable debate about its location with some authorities arguing that it
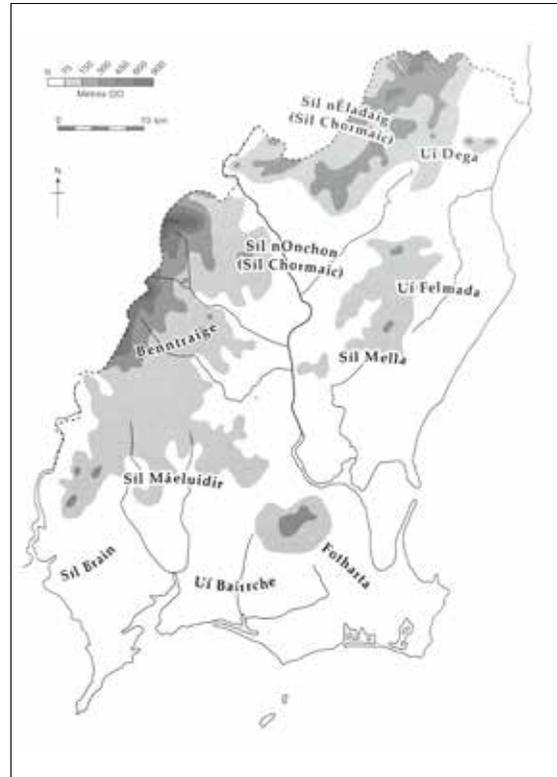
Illus. 3.1 Principal political divisions in County Wexford c. AD 900 (Culleton 1997, Map 6).

was at the present site of St Stephen's chapel and cemetery at Morrisseysland outside New Ross and others opting for the more traditional location near the River Barrow in the John Street area (Moore 1996, 118; Hore 1900, 42; Doran 2008, 6–7). Wherever it was precisely situated, the monastery was at or near the junction of a number of important routeways, most significantly the Slighe Chualann, one of the main roads of early medieval Ireland which came down the Barrow Valley to the New Ross area before heading west to Waterford (O'Lochlainn 1940, 473).

There is no evidence linking the monastery at Ros Meic Treoin to any ruling family and no other significant church sites are known to have existed in the area. A

cross-inscribed pillarstone at Millquarter, Old Ross, may point to the existence of an early church there and the dedication of the medieval parish church at Whitechurch to St Abbán could also indicate the presence of an ecclesiastical foundation linked to Ros Meic Treoin (Culleton 1999, 101, 161). Nothing is known of the later history of the monastery at Ros Meic Treoin but its proximity to the River Barrow and to the Viking settlements at Waterford and St Mullins suggests that it is unlikely to have escaped Scandinavian raids. There were extensive riverside marshes to the south of New Ross and the heavily wooded nature of the landscape to the east is mentioned in 13th-century documents, so it is likely that the area was not densely populated before the arrival of the Anglo-Normans at the end of the twelfth century.

Apart from bequeathing their names to the later baronies of Shelburne and Bantry, there is no evidence that the Síl mBriain or Benntraige played any significant role in the politics of Wexford in the period leading up to the arrival of the Anglo-Normans in 1169. In a charter dated between 1162 and 1165, Diarmait Mac Murchada granted land in Benntraige (probably the parish of Killanne, barony of Bantry) to Felix Abbot of Osraige, demonstrating his overlordship of the region (Flanagan 2005, 265–6). A witness to this charter, one Kekach Huacoscraygh, has been identified by Flanagan as Cellach Ua Coscraig (ibid., 265). A lineage, Uí Choscraig, who occur as lords of Benntraige in 12th- and 14th-century sources, are described in one pedigree as *Rig Benntraige* (MacCotter 2008, 252). It seems likely, therefore, that Cellach Ua Coscraig was ruling as king of Benntraige when Diarmait Mac Murchada sought the aid of Henry II on his expulsion from Ireland in 1166.

The arrival of the Anglo-Normans

The first Anglo-Norman mercenaries in the service of Diarmait Mac Murchada landed at Bannow Bay, Co. Wexford, in August 1169. South-west Wexford was thus directly involved in the initial phases of Anglo-Norman activity in Ireland and saw the earliest land grants to the new arrivals. The practice by which the old Gaelic land units were divided up is known as sub-infeudation and in Wexford this process saw the division of the kingdom of Uí Chennselaig into nine principal regions or cantreds (Colfer 2002, 91). These cantreds were closely related to the Gaelic *trícha cét* divisions and bore some similarity to the later baronies. This was not true in every case; for example, the cantred of Shelburne comprised the land of the Síl mBriain (the barony of Shelburne) and part of the land of Benntraige including the parishes of New and Old Ross (MacCotter 2008, 252). The barony of Bantry, which takes its name from the Benntraige, was a later creation which incorporated parts of the cantreds of Shelburne, Duffry and possibly Shelmalier (Colfer 2002, 91).

Following the successful taking of Wexford in 1169, Diarmait Mac Murchada granted the territories of Uí Bairrche and Síl mBriain to Hervey de Montmorency, Strongbow's paternal uncle (Mullally 2002, 131; Scott & Martin 1978, 32) (Illus. 3.2). These territories were described in 1177 as lying 'between Wexford and the water of Waterford' and appear to equate to the modern baronies of Bargy and Shelburne (Colfer 2002, 30). Hervey founded Dunbrody Abbey for the Cistercians and endowed the church with extensive lands in the barony of Shelburne, before dying c. 1189 as a monk of Christ Church, Canterbury (Beresford 2009b). He left no legitimate heirs and his
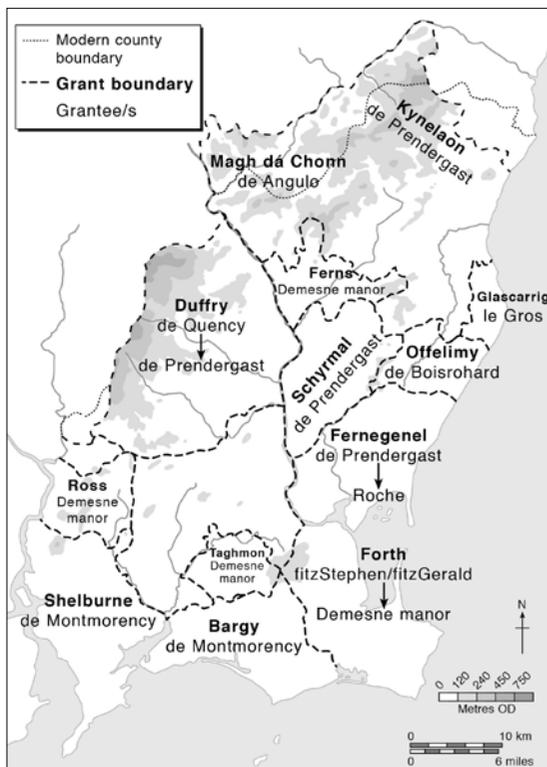
Illus. 3.2 Initial Anglo-Norman land grants in County Wexford (Colfer 2002, fig. 17).

lands reverted back to the lord of Leinster.

Strongbow, who became lord of Leinster following Diarmait Mac Murchada's death in 1171, confirmed Hervey's lands but retained control of the northern part of the cantred of Shelburne where he set up a demesne manor at Old Ross (Orpen 2005, 141). The surviving motte at Old Ross may represent Strongbow's early castle and it was the focus for a nucleated borough settlement (Colfer 2002, 40; Marshall & McMorran 2016, 243). Following Strongbow's death, the lordship of Leinster, including the demesne manor and borough of Old Ross, passed into the hands of William Marshal who married Strongbow's heiress Isabella de Clare. Marshal overlooked the land-locked borough at Old Ross and c. 1200 founded a new town on the River Barrow—New Ross—carving off a chunk of

manorial lands to give to the burgesses of the new settlement and forming the parish of St Mary's (Doran 2008, 6).

At this time a very large part of Old Ross was legally defined as 'forest', giving the lord of the manor extensive hunting rights but limiting its use for agriculture and settlement. William Marshal's son Richard decreased the manorial area subject to forest law c. 1233 in return for a large payment from the men dwelling in the forest who wished to clear, enclose and cultivate their lands (Orpen & Brooks 1934, 57). The charter issued at the time allows the approximate extent of the original forest to be reconstructed (Illus.3.7 and discussion below). According to Orpen's map the forest of Ross encompassed the large parish of Old Ross and the northern part of the parish of Whitechurch, in other words the townland of Stokestown, which was subsequently incorporated into the barony of Bantry.

In 1247, following the deaths of Richard Marshal and his sons, the extensive lordship of Leinster was partitioned between the five daughters of William Marshal and the manor and borough of Old Ross, together with the borough of New Ross, were detached from the jurisdiction of County Wexford and attached to the liberty of Carlow as the portion of Maud Marshal (Murphy 2007, 75–7). At this time, they formed some of the most valuable holdings in the entire lordship of Leinster. On Maud's death these lands passed to her son Roger Bigod, the earl of Norfolk and they remained in the hands of the Bigods until the family died out in 1306.

Rural settlement and agriculture

A series of manorial and borough records for Old and New Ross survives from the

1280s allowing a uniquely detailed picture of settlement, agriculture and economic activity to be reconstructed (Lyons 1981; 1982). The demesne accounts, supplemented by separate accounts rendered by the manorial shepherd, show that the manor was a large centre for sheep rearing (Murphy 2008, 4–6). Plotting the numbers of sheep present on the manor at the end of each accounting year reveals a steady rise in numbers throughout the decade from 821 in 1281 to 2,423 in 1289. This rise was accompanied by a significant increase in manorial income from wool and cheese. These sales were important components of the manorial receipts which averaged around £70 each year; most of the produce was exported through the burgeoning port of New Ross. The manor also maintained a large cow herd (38 cows in 1289) used for breeding replacement oxen and for dairying.

At the start of the 1280s most of the demesne arable land was sown with oats but wheat, rye and a small amount of barley were also grown. During the course of the decade, the area of land under arable cultivation increased substantially and the balance between the crops sown changed. Oats remained the largest crop but more land was devoted to wheat, the most valuable and commercial grain. The acreage under wheat increased over four-fold in the period covered by the accounts. Much of this new land was acquired by clearing woodland by burning and demesne accounts record sums of money expended on land clearance (Lyons 1981, 35). New granges were set up outside the core demesne areas. A new farm with a moated site was established at Ballyconnor, identified by Colfer (1996) as Mylerspark, south of Old Ross. The demesne accounts for 1283–4 record expenditure on the construction of a moat and palisade at Ballyconnor (Hore

1900, 26–34). Local trees supplied the stakes for the palisade and 18 carpenters were employed on the work. In this case the principal function of the moat appears to have been to protect the demesne oxen who ploughed the lands of this out-farm. In clearing woodland for agriculture and building moated sites the manorial officials were following an established pattern. Barry (1977, 98) identified a large number of moated sites situated in the area covered by the forest of Ross and proposed that they were built and occupied by free tenants in the decades after the deforestation charter of 1233. Recent analysis of the dating and function of moated sites concludes that most were built in the later thirteenth century by entrepreneurial individuals who were either descendants of the Welsh and English settlers who came to live in manorial centres at the beginning of the century or possibly new emigrants from England (Gardiner & O'Conor 2017, 137–40). Moated sites are therefore indicative of population mobility and prosperity.

During the 1280s the manor of Old Ross experienced a period of expansion and economic prosperity largely fuelled by buoyant prices for agrarian products. The productivity of the manor can be clearly seen in 1282 when it supplied large quantities of wheat, oats, cheese and mutton to the household of Roger Bigod while the earl of Norfolk was campaigning in Wales (Murphy 2007, 90–1). Labour on the manor was provided by a substantial number of paid retainers augmented by daily paid labourers and customary services rendered by tenants. It is clear that many English and Welsh settlers had flooded into the area through the gateway ports of New Ross and Wexford. Initially, these settlers may have been based in the manorial borough where they could

benefit from the protection of the castle. Over time, however, their descendants probably spread out into the surrounding countryside. Some of the larger landholders may have built the moated sites, mentioned above, while others farmed from smaller undefended settlements. Landscape 2 is one example of such a settlement whose forms and functions have been the subject of recent commentary (Eogan & Kelly 2016, 218–22; Gardiner & O'Conor 2017, 141–5).

There were also a significant number of betaghs (unfree Irish tenants) attached to the manor of Old Ross. Some held lands for money rents and/or in return for performing labour services (Colfer 2002, 122–4). A family of betaghs called O'Dermot occupied the district known as Ballydermot paying a rent of 16s. 2d. (Hore 1900, 12). The exact location of Ballydermot is uncertain but Brooks (1950, 18–9) places it in Finshoge where the tenants included several with Irish names. In 1307 the combined value of betagh rents was £17 5s. 3d. covering land in 11 locations. Some Irish names also occur among the free tenants and in 1286 an Irishman, Donewith O'Hony, held the office of provost of the manor (Hore 1900, 157). Much remains to be discovered about the settlement types associated with Gaelic tenants of Anglo-Norman manors and whether they differed in any respect from those of 'English' tenants (Gardiner & O'Conor 2017, 146–8). Betagh settlements were often associated with the peripheries of manors and, as suggested below, the site at Landscape 2 may have been occupied by Gaelic tenants of Old Ross.

The economic boom of the late 13th century did not last and decay set in by the early 14th century. The extent or description of the manor made in 1307 shows that the manorial buildings were run down, and

the amount of arable land had declined (Dryburgh & Smith 2007, 71). The outgrange of Ballyconnor was no longer part of the demesne arable holding and was occupied by betaghs. The contraction of the demesne arable was probably a response to the declining grain market although it may also have been a result of declining fertility of some of the more marginal land (Lyons 1981, 36). It is probable that rural settlements started to be abandoned in this period, a trend which was to become more marked as the 14th century progressed.

New Ross and its hinterland

The borough founded by William Marshal in the early years of the 13th century rapidly became a major trading centre and prosperous urban settlement. Marshal was quick to recognise the potential of the sheltered harbour later described as 'one of the best for shipping in the kingdom' (Hore 1900, 289). His aim was to provide the manors and boroughs of his lordship, particularly those in Carlow and Kilkenny, with a port town capable of involvement in international trade (Doran 2008, 6). The town lay one kilometre south of the confluence of the navigable Nore and Barrow rivers and from 1207 a bridge was in existence across the River Barrow (Orpen 1911, 7). A ferry also plied across the river from New Ross to what later became the borough of Rosbercon. Under the patronage of the Marshals and later the Bigods, the town thrived, in spite of continuous attempts by the royal port of Waterford to restrict the number of ships using New Ross (McEneaney 1979, 16–24; Doran 2012, 83–4). The volume of trade at New Ross in the 13th century can be measured by the high level of great

custom levied there on hides, fleeces and wool (MacNiocaill 1964, ii, 528). The town had three marketplaces and held four 'Great Fairs' each year in March, May, October and December (Doran 2012, 87). In 1293–4 New Ross paid £93 18*s*. 10d. into the Carlow exchequer, a sum which reflected its pre-eminent position in the financial hierarchy of the lordship of Carlow (Murphy 2007, 87–8). The sum was comprised of rents, farms of mills, profits of the fairs and the ferry, as well as proceeds of the hundred court.

The town, along with its lands, comprised one large parish of just under 5,000 statute acres (Colfer 2002, 17). This parish was administered from the impressive parish church of St Mary's, one of the largest medieval parish churches in Ireland. New Ross also had a number of religious houses including houses of Crutched, Augustinian and Franciscan Friars. These are all indicators of a sizeable urban population. The burgesses at New Ross paid an annual fixed rent of £25 6*s*. 8d. throughout the 1280s at a rate of one shilling per burgage plot (Murphy 2007, 88). This suggests that there were 500 burgess households at this time with a combined population of perhaps 2–3,000. In addition, there would have been a large number of non-burgess households. *The Walling of New Ross,* a unique poem which celebrated the building of the town wall in 1265, claims that there were 4,667 men in the town who bore arms, leading some to the unlikely suggestion that the population was as large as 10,000 (Shields 1975–6, 26). Colfer (2002, 176) proposed that the population of the town in the late 13th century was in the region of 4,500 to 5,000 based on a calculation 100 to 120 persons per hectare.

The poem celebrates the maritime ethos of New Ross and states that there were 600 seamen in the town with more than 500 more at sea. It also mentions many craftsmen and tradesmen including merchants, drapers, vintners, tailors, saddlers, butchers, bakers, carpenters, smiths, masons and priests. The burgesses owned lands outside the town walls in the parish of St Mary's and some also had holdings in the manor of Old Ross. This would have strengthened ties between New Ross and its rural hinterland. The port drew in supplies to support its export trade and also to feed, house and fuel its large population. A later murage roll lists the diverse foodstuffs, fuels and industrial products on which tolls were levied at Ross (Hore 1900, 202–4). Smiths, potters, masons and other craftsmen required raw materials for their industries as well as wood and charcoal for their kilns and braziers. The extensive woodlands to the east and south were no doubt drawn on for fuel and building materials while the arable lands supplied wheat, oats, rye and barley. Charred grains of all these crops were recovered during the excavation at Landscape 2 site, with oats being the most numerous (see Chapter 7). The large numbers of sheep on the demesne of Old Ross produced wool for export and also cheese and mutton for urban tables. New Ross also had access to an extensive rural hinterland across the bridge into County Kilkenny while the river system enabled water-borne trade both to the north and south.

The walling of New Ross is in many ways a confident statement of urban prosperity yet the very fact that a wall was being built is a reminder that the town was beginning to feel the need for defensive security. By the late 13th century there was already considerable strife as the Gaelic revival got underway in parts of Carlow and Wexford (Doran 2008, 3). The status of the town was also weakened by the death of Roger Bigod and the reversion

of his lands to the crown in 1306. In 1313 a meeting was held at Ross to organise the suppression of the growing threat from Irish rebels (Hore 1900, 177–8). The efforts of the townsmen were largely unsuccessful and the 14th century was to prove a challenge to the town's survival.

Later Middle Ages

The walling of New Ross in the 1260s was one of the first signs of the disturbances which were to characterise the later Middle Ages, as the resurgent native Irish made increasing inroads into the town's Wexford hinterland. By 1349 the Sovereign and Community of New Ross could assert that their town was 'situated on the borders of the enemy' and subject to 'frequent hostile invasions' (Hore 1900, 190). An extent of the earl of Pembroke's lands, compiled in 1376, describes the town of Old Ross as being worthless 'as it has been devastated by the King's Irish enemies', while a memorandum appended to the same document describes the 'barony' of Old Ross in similar terms (Dryburgh & Smith 2007, 201–2). Two years later the burgesses of New Ross, in a petition relating to their long-running trade dispute with Waterford, claimed that 'the Irish enemies have destroyed the neighbouring parts up to the walls, and killed the greater part of the gentry of the said town' (Hore 1900, 208). In 1380 the Sovereign and Community of the town complained that the town's wall and towers were in disrepair and that 'the country for four miles on all sides is wasted and destroyed by the Irish, so that no one dares to go to the town unless with a great force or by water' (Crooks 2012, CR 4 Richard II). Even allowing for considerable exaggeration, it is clear that New Ross and its

hinterland were by the third quarter of the 14th century experiencing severe disruption, and that the manorial system established during the 13th century was in retreat. Worse was to follow when in 1394, according to the *Annals of the Four Masters,* New Ross was burnt 'with its houses and castles' by Art Mac Murchada (O'Donovan 1856, 731). The military success of Richard II's first expedition in 1394–5 forced the temporary submission of Mac Murchada and other Irish chiefs, but they soon returned to hostilities. After the defeat of Richard's second expeditionary force in 1399 a *realpolitik* approach prevailed, and in 1403 Henry IV permitted New Ross to trade with its 'Irish enemies' and to pay an annual tribute of 10 marks to Mac Murchada (Colfer 2002, 238). The hinterland was effectively under the control of the Irish, but economic interests continued to link town and country. This is likely to have continued into the fifteenth century during which the town continued to rely on its hinterland for day-to-day basics as well as products for overseas trade which saw something of a recovery from the lows of the 14th century (Doran 2012, 92–3). Little is known of the organisation of agriculture and settlement in the Ross hinterland in the 15th century, but it is probable that the centrally organised Old Ross manor devolved into discrete farms, some tenanted by the Irish, and some by remaining Old English families. Given the continuing demand from the urban inhabitants of New Ross, it is likely that arable agriculture continued to be important in parts of the hinterland. The evidence from the site at Lacken 3A suggests a continuous process of land improvement from the late medieval period to the post-medieval period (see Chapter 7). There would, however, have been an overall retreat from arable as exports were refocused on the products of

pastoral farming. There may also have been an increase in the area under wood and scrub. Charcoal samples from Landscape 2A point to the presence of hazel, willow and alder in the later Middle Ages, species associated with underwood or secondary woodland and, in the case of alder and willow, with wet soils (see Chapter 7). The Ross hinterland was known by the 16th century as the *fasaghe Bentry*, the forest or wilderness of Bantry (Hore 1900, 254).

Historical evidence relating to the Landscape 2 site

The rest of this chapter addresses three key questions regarding the site at Landscape 2:

- Within what territorial unit or units did the site and its vicinity fall in the medieval period?
- What can be said about the structures of lordship within which it was located?
- What can we say about its inhabitants in the medieval period, and about their environment and way of making a living? These questions have to be approached using a variety of types of evidence, including later (16th- and 17th-century) documentation, placenames and maps. Because of uncertainty over the name of the settlement in the Anglo-Norman period, it is necessary to work backwards from later evidence in order to arrive at the most plausible identification of the site, its inhabitants and the territorial and tenurial structures within which it developed.

Territorial units and boundaries

The townland of Landscape appears to be a relatively modern creation. The name is not found before the early 19th century, when John Ussher, a member of the Waterford branch of that family, built Landscape House at or around the time of his marriage in 1811 (Wright 1889, 245). It seems that Ussher chose this location because of its proximity to his wife's family home at Pilltown near Whitechurch. Lewis, writing in 1837, says that the property 'derives its name from the beautiful view it embraces of the river and the ornamental grounds of Castle Annaghs on the opposite bank', while Landscape House itself was surrounded by 'a fine plantation of fir, sycamore, beech and oak trees' (Lewis 1837, 715). The *Parliamentary Gazetteer of Ireland 1844–1845* describes Landscape House as one of three seats within 'Stokestown demesne', the other two being Stokestown Castle and Stokestown House (Anon. 1846, 551). This seems to imply that Landscape was considered part of the lands of Stokestown, and indeed there is strong evidence to show that Landscape townland had been carved out of a formerly more extensive Stokestown. Stokestown and Landscape are the only townlands of Whitechurch parish falling within the barony of Bantry, the rest of the parish being within Shelburne Barony. In terms of shape, the 19th-century townland of Landscape resembles a roughly square 'chunk' taken from Stokestown, which would have originally had a more regular, rectangular shape, albeit with a southerly extension to the west of Oldcourt, along the line of Stokestown Pill (Illus. 3.3). Comparison with the mid-17th-century Down Survey map largely confirms this speculation, as Stokestown is shown to be broadly the shape of the later Stokestown and Landscape townlands, perhaps with some limited change on the eastern boundary (Illus. 3.4).

In the Civil Survey, compiled in 1659 but looking back to the situation in 1641

Illus. 3.3 Ordnance Survey, Co. Wexford. Six-inch to one mile, extract from sheet 34, surveyed 1839 (© National Mapping Division of Tailte Éireann CYAL50344207).
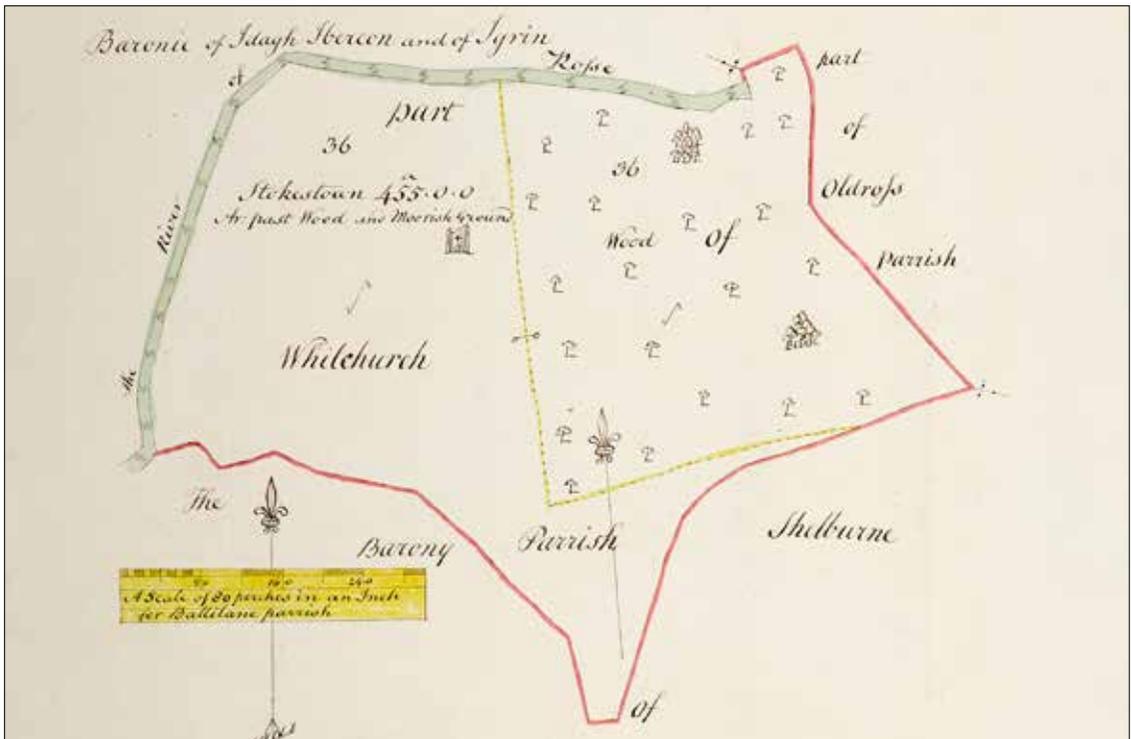
Illus. 3.4 Down Survey, extract from Whitechurch, Ballyland and Carnagh parish map (The Down Survey of Ireland project: https://downsurvey.tchpc.tcd.ie/down-survey-maps.php#bm=Bantry&c=Wexford&p=White church+Ballyland+and+Carnagh

before the outbreak of the Confederate Wars, Stokestown is said to have extended to 500 acres (Simington 1953, 203). This looks very like a rounded approximation, and when converted from the plantation acres of the survey into modern statute acres would approximate to 800 acres. The modern townland of Stokestown contains 604 statute acres, significantly less, but if the 160 acres of Landscape townland are added a total of 764 acres results, much closer to the Civil Survey figure. Furthermore, close examination of the 19th-century boundaries suggests the possibility that a strip containing about 15 statute acres, lying between the Camlin Pill and a ditch forming the Camlin–Stokestown boundary, formerly belonged to Stokestown. If so, this would give a total of around 780 statute acres for Stokestown, very close to the probably rounded Civil Survey figure of c. 800 acres. It would also produce an eastern boundary very similar to that depicted on the Down Survey map (Illus. 3.4).

Ownership in the 16th and 17th centuries

Although there had obviously been a number of changes in the detail of boundaries, it thus seems that prior to the 19th century the area of the Landscape 2 site lay on the north-east fringes of Stokestown townland, bounding the lands of Camlin and Creakan in the parish of Old Ross. The 16th- and 17th-century evidence suggests a strong interconnection with these latter townlands, which were under common ownership with Stokestown. In the Civil Survey, the proprietor of Stokestown, Camlin and Creakan was Nicholas Dormer, a Catholic. In

the west of Stokestown, Dormer had 'a fair castle' in 1641, while at Camlin 'a good castle' was situated where 'a little brook' flowed into the Barrow (Simington 1953, 203, 206). This appears to mean the mouth of the Camlin Pill, approximately 500 m north of the Landscape 2 site. The Down Survey map of Bantry barony shows a structure at Camlin which is presumably intended to represent this castle, on the boundaries of Whitechurch and Old Ross parishes (Illus. 3.5). Nicholas Dormer evidently preferred this 'good castle' at Camlin, if it is to be identified with the 'howsse of Camlinne' described as 'his residence' at the outbreak of the Confederate War, and from which he removed into New Ross for safety.[18]

The Dormer family, who had strong involvement in the running of New Ross borough, had acquired these lands by two grants from James Prendergast of 'Ballifernocke' (Ballyfarnoge) in the 1580s. In 1582 Prendergast had granted George Dormer of New Ross, gentleman, 'the towne and villadge of Stockestowne *alias* Ballinstoky' on a 65-year lease, while five years later he mortgaged to George and Marcus Dormer, merchant, 'all the townes, hamlettes, and landes of the Grages, Yoltowne, and Kreker alias Krecan', subject to a redemption after 21 years which was evidently never exercised (Erck 1846, 152). The bounds narrated for these lands are of great interest and contain important information regarding the vicinity of Landscape 2. Stokestown is described as being 'meared from the lands of the Old-Court and the crosse streame of the Grages on the east' and by the Barrow on the west, by the lands of Dunganstown on the south

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Illus. 3.5 Down Survey, extract from Bantry barony map (The Down Survey of Ireland project https://downsurvey.tchpc.tcd.ie/down-survey-maps.php#bm=Bantry&c=Wexford

and 'the streame of the Grages, the small meadow called Cowlemone-ne-Graige and the channel of the said river Barowe on the north' (ibid.). The 'streame of the Grages' seems likely to be the inlet or pill of Camlin, which winds south-east from the Barrow and is bounded by low-lying marshy fields, immediately to the north of the Landscape 2 site and which may have formed the meadow of Cowlemone-ne-Graige. The cross-stream of the Grages may thus be the southward and then south-eastern stretch of this watercourse, which in the 19th century flowed under Camlin Bridge and then formed the boundary between Landscape and Camlin townlands. The boundaries of 'the Grages, Yoltowne and Kreker alias Krecan' are not narrated, but the 1587 deed states that these lands were to be held as two moities

or halves, the one 'west unto Stokestown' and the other 'next to Arnestowne and Ballcellane [Ballylane]' showing that they all lay immediately to the east and north-east of Landscape 2 (Illus. 3.6).

One striking feature of the places named in these 16th-century deeds is the number whose names contain the element graig- or graigue-. To these can be added 'Ballycally Graige in Bantry', which the Civil Survey identifies as lands which bounded and lay to the north of Oldcourt (Simington 1953, 184). As Oldcourt lies immediately to the south of the 19th-century townland of Landscape, this opens the possibility that 'Ballycally Graige' may have been the name for the settlement at Landscape 2. Ballycally itself—today Ballykelly—lies to the south of Oldcourt, which suggests that
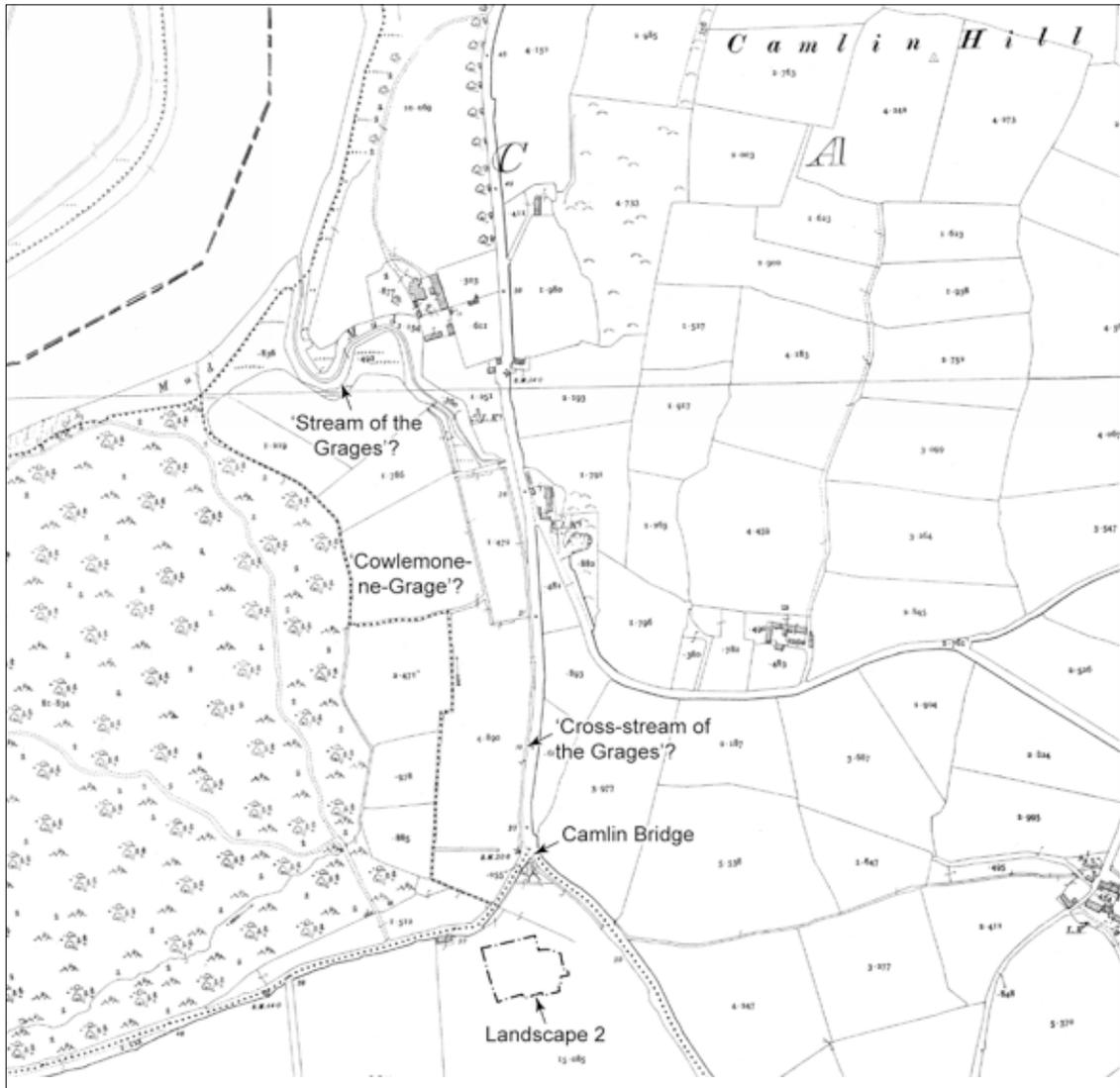
Illus. 3.6 Suggested location of 16th-century placenames associated with the Camlin/Stokestown boundary. Basemap Ordnance Survey, Co. Wexford, 25-inch to one mile, sheets 34-02 and 34-06, surveyed 1902 (© National Mapping Division of Tailte Éireann CYAL50344207).

'Ballycally Graige' was a detached part of this townland. Nicholls (1982, 380–1) has argued that graig- as a placename element is strongly associated with Anglo-Norman manorial settlement but that, rather than indicating a 'grange' as some earlier writers supposed, it was used to denote a settlement or farm occupied by betaghs, native Irish tenants. Moreover, Nicholls considers it probable that these graig- settlements were primarily stock-farms or cattle-steadings rather than tillage establishments. It thus seems likely that the 16th- and 17th-century instances of graig- placenames in the vicinity of Landscape 2 derived from late 12th- and 13th-century betagh settlements, which were

probably based around pastoral farming. The archaeological evidence neither supports nor contradicts this hypothesis. The absence of personal items from the material culture excavated at Landscape implies a materially poor community but does not allow any conclusions to be drawn on the ethnicity of the inhabitants (see Chapter 7; Eogan & Kelly 2016, 237).

Anglo-Norman landscape: lordship and land-use

The evidence reviewed so far suggests that the vicinity of the Landscape 2 site was an area of betagh settlement in the Anglo-Norman period, or of mixed Irish and English peasant settlement (the name 'Yoltowne' may point to a settlement of *Yola* in an otherwise Irish area), probably based around pastoral farming. The area to the north of Landscape 2 consisted of meadowland around the Camlin Pill, while much land in the vicinity is likely to have been wooded. In the early 13th century, it lay within the forest of Ross (see below), while the 17th-century Down Survey map depicts the eastern half of Stokestown townland, including all or most of the later Landscape townland, as constituting a wood, apparently with defined boundaries, extending south from the Barrow (Illus. 3.4 above). The depiction appears to show areas of open woodland with two denser clusters of trees and may be intended to represent managed coppice woodland interspersed with areas of mature timber. The probability is that the Landscape area contained woods which by the 17th century had been closely managed for several centuries. Such woodland would have provided materials for charcoal manufacture and fuel for metal-working or other industrial processes, as well structural timber and wood fuel for

domestic fireplaces. Charcoal-production pits, containing oak charcoal, which have been identified at Landscape 1 and Camlin 5 and 7, may have been associated with late 12th- and 13th- century exploitation of the woodlands (see Chapter 7; Eogan & Kelly 2016, 234). It seems likely that some of the charcoal manufactured in the vicinity of Landscape may have been consumed by smiths and others within the borough of New Ross during the medieval period.

The rest of this section reviews early grants of the area and shows that the strongest probability is that the settlement at Landscape 2 was an appendage of Old Ross manor. As mentioned above, a deforestation charter from the early 1230s allowed the probable bounds of the manor to be reconstructed and mapped by Orpen (Orpen & Brooks 1934; Illus. 3.7).

According to Orpen's map, the forest of Ross encompassed the large parish of Old Ross and the northern part of the parish of Whitechurch, in other words the townland of Stokestown, which was subsequently incorporated into the barony of Bantry and which contained the site of Landscape 2. The southern part of Whitechurch parish, known as Slievecoiltia had been granted to a branch of the Keating family and thus lay outside the manor of Old Ross (Colfer 2002, 50; Brooks 1950, 10–12). The deforestation charter shows that the Keating lands at Slievecoiltia bounded with those of Marshal's Old Ross manor, south of Stokestown, probably corresponding to the later boundary between the baronies of Shelburne and Bantry. The northern boundary of the forest met the Barrow at a stream forming the boundary between Old Ross and New Ross St Mary's parishes, the southern boundary being 'the stream...that runs down and enters the Barrow between my land and the land of

MAP SHOWING THE APPROXIMATE BOUNDARIES OF THE FORESTS OF
ROSS AND TAGHMON.
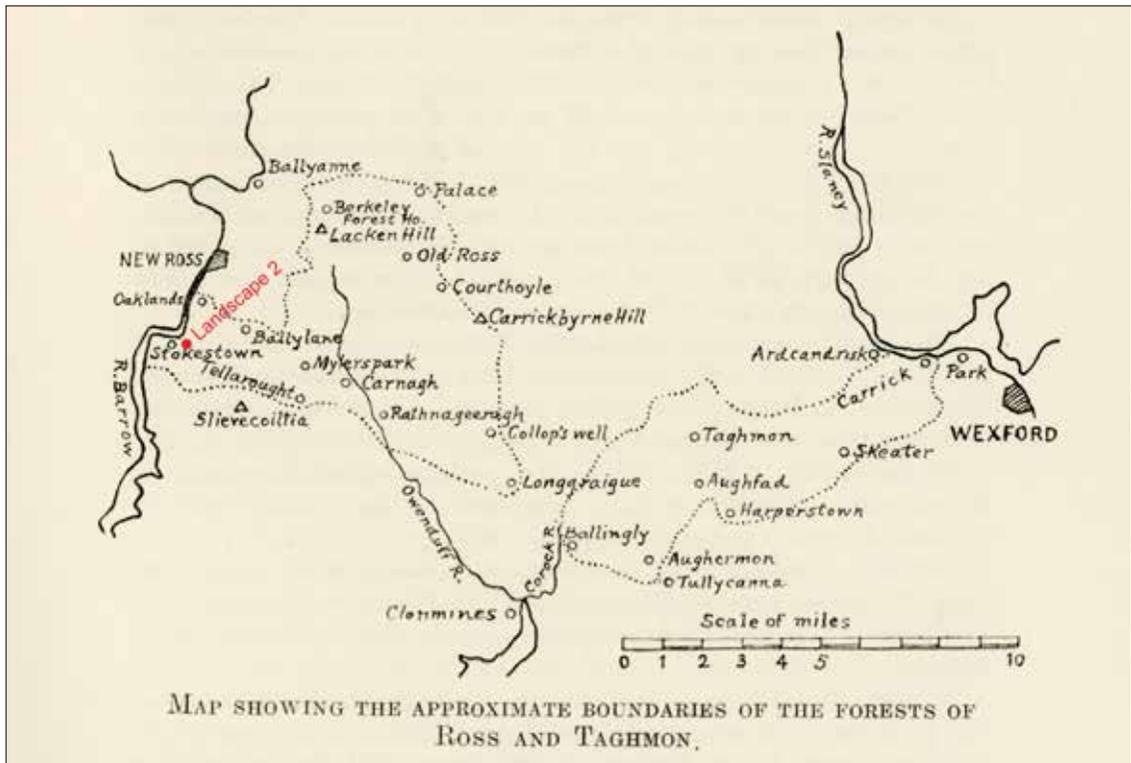
Illus. 3.7 Reconstructed extents of the forest of Ross and forest of Taghmon (Orpen & Brooks 1934) (copyright Royal Society of Antiquaries of Ireland).

Philip Keting, who holds of Adam Keting', which Brooks identifies as the stream south of Stokestown which forms the baronial boundary (Orpen & Brooks 1934, 61). In other words, Stokestown and the Landscape 2 area were part of the earl Marshal's lands and formed part of, or were closely associated with, the manor of Old Ross in the 1230s.

A detailed description of the Bigod estates in Ireland survives from 60 years later when, at the death of the then earl (also named Roger Bigod) extents were drawn up (Dryburgh & Smith 2007, 71–3). Included are free tenant lands at Creuker, where Richard Russel held three carucates, and 30 acres of betagh land at Crochan; both of these names probably relate to Creakan townland, adjoining Landscape and Camlin.

A figure of 140 acres of land is also listed at 'Graggenscannog'; as these are recorded in the extent just before the Russel holding at Crochan/Creakan this may be another placename incorporating *graig-* in the vicinity of Landscape 2. Moreover, the 1307 Bigod extent also notes that 'there are at Ballydermod and Conygrage certain Betagii whose work is worth 4*s*.2d.; their rented custom at Christmas is 19 hens worth 19d.' (ibid., 72). Ballydermot, as noted above, was likely in Finshoge, parish of Old Ross (Brooks 1950, 18), which adjoins Creakan and Ballilane to the east. Conygrage was presumably somewhere in the same vicinity. There were also betaghs holding land at Ballyconnor (Mylerspark) in 1307. These references strengthen the supposition that

settlements of betaghs were established in the Landscape area, on the southern fringes of Old Ross manor, and that the settlement at Landscape 2 may have been related to, or may perhaps have been, one of these settlements.

Summary

The Landscape 2 site lay within the historic townland of Stokestown, Landscape townland being a modern creation. Stokestown was closely related to the lands of Camlin and Creakan to the north-east and was held jointly with them in the early modern period. This appears also to be true of earlier periods, Stokestown (including Landscape 2) forming part of the earl Marshal's lands in the 1230s, associated with or constituting a peripheral part of the manor of Ross. The abundance of placenames containing the element 'graig-' in the vicinity of the site indicates that this was an area of Irish settlement within the Anglo-Norman manorial system, probably specialising in livestock husbandry. The area appears to have been significantly wooded and therefore suited to charcoal manufacture and other wood fuel based industrial processes.

As an apparently undefended settlement, Landscape 2 may be associated primarily with the prosperous and relatively peaceful conditions of the early Anglo-Norman colony and with the early success of the borough of New Ross. The town's hinterland began to be disturbed, however, by civil strife among Anglo-Norman magnates and by a resurgent threat from the native Irish from as early as the 1260s, and the 14th century was one of considerable difficulty. The walling of New Ross may have had a counterpart in a movement towards more defensible rural sites in the hinterland. Interactions between New Ross and an increasingly Irish-dominated hinterland became more difficult in the later Middle Ages, but the borough's economic revival in the 15th century, based increasingly upon the export of pastoral products, suggests a continuing and dynamic interdependence of town and country associated with a reconfiguration of land-use and settlement.

Scott Timpany

An ever-changing landscape

A total of 27 radiocarbon-dated sites produced ecofacts (e.g. charred cereal grains, charcoal and pollen) ranging from the Mesolithic period to the post-medieval period; a period of over 9,000 years. This chapter focuses on these plant remains and what they can tell us about landscape change, human-environmental interaction and diet and economy in the past. The data presented here summarise the results of the analyses undertaken on the individual sites by a number of specialists; full details of the analyses are contained in the final excavation reports.

The Mesolithic period: 8000–4000 BC

Only one site produced ecofacts dating to the Early Mesolithic period; this was at Ryleen 2 where charred hazel (*Corylus avellana*) nutshell fragments were recovered from the fill of a curvilinear cut feature, one of two seemingly associated curvilinear cuts of unknown function, which was dated to 7570–7370 BC (SUERC-35226). In general, palaeoenvironmental evidence for the presence of Mesolithic people in the south-east of Ireland is sparse with few dated ecofacts (Timpany 2011a). Pollen evidence for human-environmental interaction within the Mesolithic from this region of Ireland is similarly scarce, despite the presence of

Mesolithic communities in this area having been confirmed from lithic evidence (e.g. Green & Zvelebil 1990; Woodman 2011). The small number of studies that have been carried out have had a mainly Late Glacial vegetation change focus (e.g. Craig 1978; Mitchell & Watts 1993) and there have been limited studies covering the Mesolithic period (e.g. Farrell & Coxon 2004). This is in contrast with the south-west of Ireland, where evidence for the impact of Mesolithic people on the landscape has been discerned in pollen studies (e.g. Buzer 1980: Mighall et al. 2008). Therefore, although the nutshell fragments are the only dated Mesolithic material produced from this part of the N25 road scheme, they are still significant in showing an early presence of people in this area of Ireland.

It is thought the hazelnut shell from Ryleen 2 represents food waste debris. Hazelnuts are a ubiquitous find at Mesolithic sites in Ireland (e.g. McComb & Simpson 1999) and are a foodstuff that would have been plentiful as shown by the high values of hazel pollen in studies from south-east Ireland (e.g. Craig 1978; Farrell & Coxon 2004). Thus, the nuts could be easily collected from local trees, stored and cooked (roasted), providing a good source of fats, protein, carbohydrates and vitamins, particularly vitamin E in the diet of Mesolithic people (McComb & Simpson 1999; Monk 2000; Mithen et al. 2001).

Chapter title image The River Barrow at Stokestown. This landscape provided a rich variety of natural resources which were exploited by the communities who lived here from the Mesolithic to the early modern period (J Eogan).

The Neolithic period: 4000–2500 BC

Five sites were discovered dating to the Neolithic period on the road scheme. The most substantial evidence was found at Ryleen 2 where a rectangular building was uncovered together with a series of pit features. The building offers evidence of one of the first periods of sedentism in this part of south-east Ireland. Radiocarbon dates from hazelnut shell and oak (*Quercus* sp.) charcoal indicate the building was in use during the Early Neolithic between 3950–3700 BC (SUERC-35216) and 3660–3520 BC (SUERC-35222). These dates compare well to other rectangular buildings discovered in recent years in this part of Ireland as discussed in Chapter 5 of this volume.

A small quantity of cultivated foodstuffs was recovered from features within this building including charred cereal grains of naked barley (*Hordeum vulgare var nudum*) and emmer wheat (*Triticum dicoccum*) together with indeterminate cereal grains. Although small, the assemblage recovered from Ryleen 2 indicates the crops grown were the same as those recovered from other Neolithic rectangular buildings (e.g. Purcell 2002b; Hughes 2006; Walsh 2006) and appear to have been the dominant cereal types grown across Ireland during the Neolithic period, particularly emmer wheat (Monk 1985/86; 2000; McClatchie et al. 2009; 2014; 2022). The most abundant foodstuff recovered from the building was charred hazelnut shell fragments, showing the continued use of this wild foodstuff. The presence of both cultivated and wild foodstuffs informs us of how Neolithic people were not only cultivating cereals but also gathering wild foods in the surrounding landscape.

Charcoal fragments recovered from internal features of the building are likely to represent a mixture of construction timbers (slot-trench and post-hole fills) and fuel debris (pit fill), with the building itself suggested to have been deliberately burnt down. Identifications of the charcoal showed only three tree types were present: oak (*Quercus robur*), hazel and apple-type (*Maloideae* sp.). Oak was the dominant taxon found, with ring curvature showing the majority of these fragments represented large timbers such as trunk wood and large branch wood. These large (and medium-sized) oak timbers are likely to represent the linear planking suggested to have been used in the construction of the building. Post-built/wattle walls were also likely to have been present and these may be represented by the medium-sized and small hazel timbers recovered in the slot-trench.

The presence of fungal hyphae on some of the charcoal fragments is of interest as it suggests building timbers may have been suffering from fungal decay. It is largely unknown as to why buildings were abandoned and, in many cases, deliberately destroyed (Sheridan 2013; Smyth 2013), although explanations involving ritual activity have been put forward (e.g. Ó Drisceoil 2003). However, the fungi present provide tentative evidence that the building may have been suffering from decay such as rot. The decay of any significant structural timbers may have meant they would have been difficult to replace and thus may have led to the abandonment and subsequent destruction of the building. It is likely that during its lifetime timbers from the building would have been replaced or modified, such as was seen at Corbally House 1, County Kildare (Purcell 2002b). Indeed, the timber plank and slot-trench construction of

the buildings may have allowed for easier replacement of (oak plank) timbers.

Pit features containing ecofacts were also present at Ryleen 2, as well as at other sites including Ryleen 1, Landscape 2A and Arnestown 2. Two further Early Neolithic pits were identified at Camlin 9, which contained three sherds of an Early Neolithic carinated bowl but no ecofacts. Plant remains recovered from these features included food remains such as hazelnut shell, charred cereal grain and charcoal fragments, suggesting pits were mainly used to dispose of domestic refuse. Cereal remains were present at Ryleen 2 where a small number of barley sp. (*Hordeum* sp.) grains were identified. Unfortunately, due to the poor condition of the grain it was not possible to determine whether it represents the naked or hulled variety of barley.

Charcoal fragment evidence from these pits shows the use of oak, hazel, apple-type, alder (*Alnus glutinosa*), blackthorn (*Prunus*

spinosa) and holly (*Ilex aquifolium*) (see Illus. 4.1). The presence of holly in the assemblage is of interest as pollen records from Newrath, Co. Kilkenny, have suggested that holly may have played a more prominent role in woodland composition in this area than previously thought (Timpany 2011a). Holly can become locally prominent as understorey or coppice-underwood within oak woodland (Rodwell 1991) and thus through clearing tracts of woodland in this area people may have helped promote the growth of holly in the landscape.

Overall, the environmental evidence from the Neolithic suggests that a mosaic landscape was present with mixed woodland types of large trees such as oak and a mixture of scrub-type trees such as hazel and blackthorn, together with open areas cleared for settlement and cultivation, while the keeping of livestock was also likely (e.g. McCormick 2007; McClatchie et al. 2022) requiring areas of pastoral land for grazing.
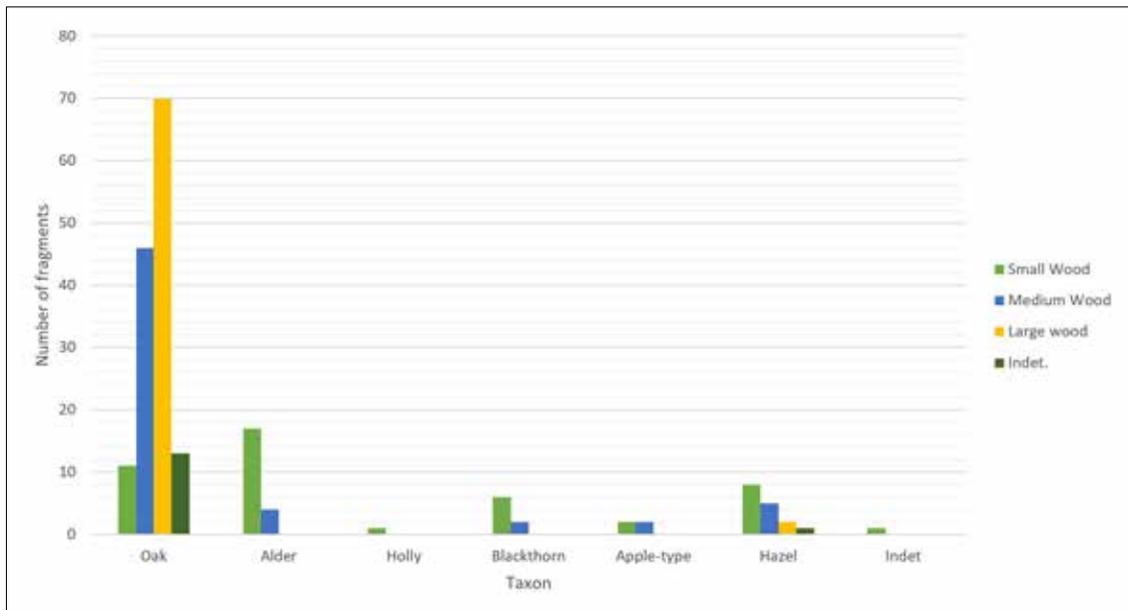
Illus. 4.1 Total charcoal identifications from Neolithic features (Rubicon Heritage Services Ltd).

The Bronze Age period: 2200–800 BC

The Bronze Age period has the highest number of sites with dated material, with 20 sites having material dated to this period. Sites from this period comprise mainly burnt mound and pit features.

Burnt mound activity commences at sites such as Lacken 4 where a pit sealed by the burnt mound returned a date of 1945–1771 BC (UBA-37706). The intense phase of burnt mound construction and use commenced at the transition from the Early to the Middle Bronze Age represented at sites such as Arnestown 2, where two separate troughs produced dates of 1690–1520 BC (SUERC-35210) from alder charcoal and 1680–1510 BC (SUERC-35213) from hazel charcoal. Other sites containing burnt mounds of Bronze Age date include Arnestown 4, Berkeley 1, Berkeley 2, Camlin 2, Lacken 4, Landscape 3, Rathgaroge 1 and Ryleen 3. This last showed reuse in the Late Bronze Age/Early Iron Age period with a date of 770–410 BC (SUERC-35234) from alder charcoal. A small number of charred hazelnut shell fragments were also recovered from Arnestown 2 indicating the continued gathering and consumption of wild foodstuffs. Charcoal of alder, hazel, oak, holly, ash, willow and blackthorn indicates dryland while marginal woodland together with wetland woodland were utilised for fuel wood. The charcoal fragments analysed from these sites indicate that the wood used for fuel was mainly small and medium-sized branches suggesting deliberate selection of these sized timbers (Illus. 4.2). The presence of a number of roundwood fragments coupled with the patterns in ring-size (cf. Wheeler 2011) observed in fragments from sites such as Ryleen 3 suggest that coppicing

was being practised in order to control and manage the source of the burnt mound fuel. Such local woodland coppicing practices have also been observed from waterlogged worked wood, such as at Lisheen, Co. Tipperary (Stuijts 2005).

Sites consisting of pit features were also present such as at Camlin 8, Arnestown 2, Ballyverneen 2, Lacken 1 and Lacken 4. Pits were found to contain a mixture of material including charred hazelnut shell and charcoal fragments and may have been used for a range of functions. Identified charcoal fragments show the use of tree types including oak, hazel and alder being used as fuels; these wood types were also present in the burnt mound assemblages (see above).

Oak would have been an important tree in this period and was favoured as wood fuel for numerous activities. At Camlin 8 this use is likely to have been industrial with a pit from this location observed to contain oak charcoal fragments representative of large timbers, signifying the use of trunk wood and the felling of oak trees. This pit may have been used for charcoal production, with oak a valuable fuel for heating materials to high temperatures. The presence of such pits would suggest there may have been more industrial activities such as metal-working taking place in this landscape, though no direct evidence was found.

The use of oak as a domestic fuel, along with hazel and apple-type was identified from charcoal fragments within a hearth feature at Stokestown 1, dated to 1727–1517 BC (SUERC-34293). Single charred cereal grains of hulled barley and oat were recovered from the upper fill of this hearth feature; however, the presence of only two cereal grains raises the potential that they represent later intrusive material. Hulled barley has been recovered from Bronze Age grain assemblages
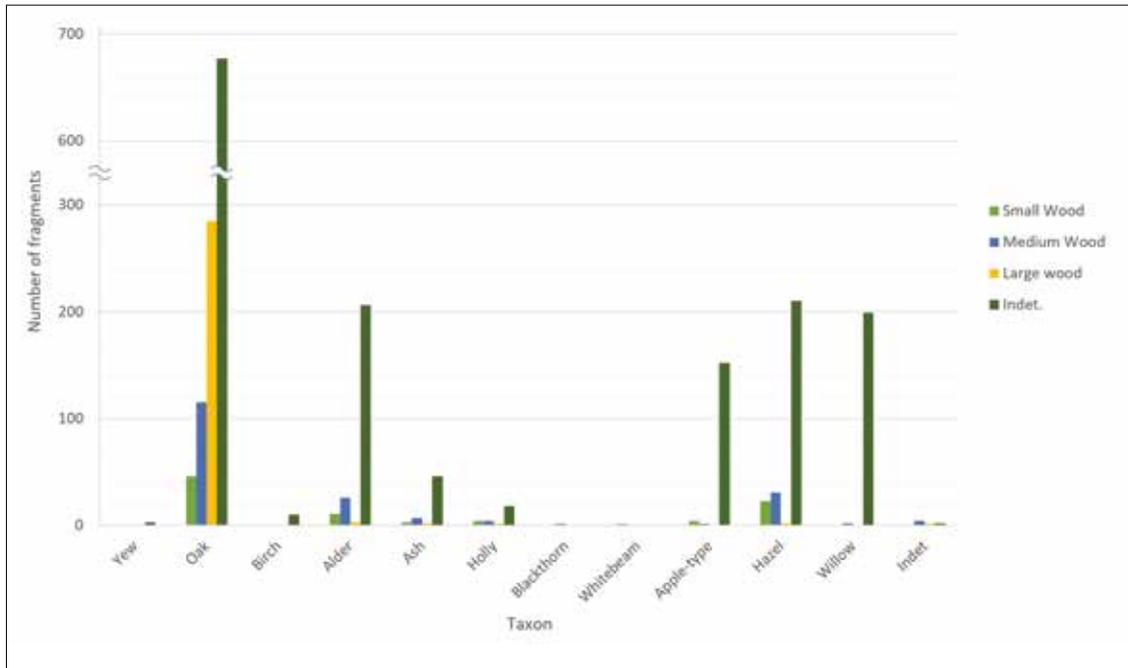
Illus. 4.2 Total charcoal identifications from Bronze Age features (Rubicon Heritage Services Ltd).

in Ireland (Monk 2013) but the presence of oat is more unusual, with this cultivar more readily associated with medieval assemblages (e.g. McClatchie et al. 2015).

Evidence for oak being used as a ceremonial fuelwood comes from charcoal associated with Early Bronze Age cremation burials at Stokestown 2 and Camlin 3 and the Middle Bronze Age pit burials interred at Camlin 4 and Berkeley 3. Together with oak, ash was also identified as being used in the construction of cremation pyres at Stokestown 2, with growth ring curvature showing they were built mainly using trunk and large branch wood. Hazel charcoal was also observed within a pit feature potentially associated with the cremations. The person interred in the urn burial at Camlin 3 was cremated using mostly large and medium-sized oak timbers. Oak was the predominant charcoal associated with the burials in the Middle Bronze Age flat cemeteries at Camlin

4 and Berkeley 3; analysis revealed that 70% of the charcoal samples associated with human remains at these sites derived from large oak timbers. This dominance of oak in cremation pyre material has been seen at sites across Ireland, especially in the Bronze Age (O'Donnell 2007; 2009). The results suggest deliberate selection of oak timbers for pyre fuel. The use of oak wood as the main fuel in cremations is frequently cited as being due to its high burning temperatures (e.g. O'Donnell 2007).

Small quantities of charred cereal grain—the majority of which were poorly preserved indeterminate grain—were associated with a number of burial and non-burial contexts at Berkeley 3 and Camlin 4. It has been suggested that charred plant remains, such as grain and hazelnut shell (also identified at both sites) recovered from Bronze Age burials and associated ritual deposits could represent deliberate inclusion of foodstuffs

in the funerary pyre or may be evidence for the ritual consumption of food as part of the funerary rites (Johnston 2007).

Unworked timbers were identified during monitoring of construction works in deeply stratified organic-rich peat-like sediments in the small wetland associated with the Graiguenakill Stream in Ballyverneen, Co. Kilkenny. Two timbers were recovered; one with 40 annual growth rings was identified as elm (*Ulmus* sp.), the other timber was oak (*Quercus* sp.) and had 332 annual growth rings. Radiocarbon dating of a sub-sample of wood from rings 11 to 20 (sapwood) from the oak timber was radiocarbon dated and returned a date of 838–767 BC (UBA-35525) indicating that this tree started growing around the transition from the Middle to the Late Bronze Age (O Carroll 2021).

Evidence for the vegetation history of the Camlin and Landscape area was revealed by the analysis of pollen and other remains preserved in organic sediments which accumulated in the Landscape Wetland (Illus. 4.3). The pollen data from Landscape Wetland covering the Bronze Age period show oak woodland to have existed on drier areas outside of the immediate wetland, with trees such as hazel and elm and holly. Local to Landscape Wetland, as may be expected from the site's name, pollen evidence indicates the presence of wet carr-woodland, consisting predominantly of alder together with birch and willow, while grasses and sedges would have been present in the field layer (Wheeler et al. 2012). A similar picture of woodland in this area has also been provided from pollen analysis of peats associated with the Landscape 3 burnt mound. Plant macrofossils from this site, also demonstrate that burnt mound activity took place at the margins of this woodland on damp boggy

Illus. 4.3 Extraction of the pollen core from Landscape Wetland (Rubicon Heritage Services Ltd).

ground, signalled by the remains of plants such as bramble (*Rubus fructicosus*), sedges (*Carex* sp.) and cinquefoils (*Potentilla* sp.). The woodland was also exploited for wood fuel for the burnt mound activity and for the construction of an associated wooden trough, with oak and alder the main trees utilised. Other trees such as willow, birch and holly were resourced mainly for wood fuel, while ash was used as both a fuel and in trough building. As part of the analysis of the trough wood, tool marks were recorded suggesting the use of metal tools including a small-bladed axe and adze.

Interestingly, fluctuations seen in the pollen curve for alder during periods of burnt mound activity in the Landscape area have been suggested to represent potential cyclical cutting of local alder trees, such as through coppicing (Wheeler et al. 2012). Alder charcoal was identified as being used as wood fuel in burnt mound activity taking place near to Landscape Wetland during this period. This aligns with the charcoal analysis which revealed the presence of small to medium-sized roundwoods suggestive of coppicing taking place to provide fuel for burnt mounds (Illus. 4.2). This combined dataset indicates that people were managing local woodland resources in order to keep a regular supply of suitably sized wood for fuel in burnt mound and other burning activities; alder charcoal was also recovered from pit assemblages. Although not evidenced in the pollen diagram, it is likely that hazel was similarly managed as it responds well to coppicing practices (Rackham 2003).

Burning activity taking place in the landscape during this period, such as at *fulachtaí fia,* is evidenced through elevated microscopic charcoal values. One particular event evident in the pollen sequence is a rise in microscopic charcoal accompanied by an increase in minerogenic sediments indicating a marked soil erosion event (Wheeler et al. 2012). This event, which probably occurred in the later part of the Bronze Age, is suggested to represent minerogenic inwash following the use of fire to maintain areas of previously cleared land (pre-dating the pollen sequence). The presence of open areas of rough grassland, such as pastoral land, is shown in the pollen assemblage with the presence of a suite of herbaceous pollen including meadowsweet (*Filipendula ulmaris*), dandelions (*Taraxacum* sp.), buttercups (*Ranunculus* sp.) and milk parsley-type (*Peucedanum palustre*). There is some limited evidence for the presence of animals close to the site through the appearance of fungal spores, HdV-112 (*Cercophora* sp.), HdV-55A and HdV-55B (*Sordaria* sp.), which have been linked to animal dung, together with rotting wood (van Geel et al. 2003). Peaks in bracken (*Pteridium* sp.) spores may also represent responses to grazing (Behre 1981). Following this activity, the pollen information from Landscape Wetland suggests there is a lull in activity during the Iron Age period with a decline in any indications of people affecting the vegetation accompanied by a noticeable decrease in burning activity, signalled by the microscopic charcoal record (Wheeler et al. 2012). This Iron Age lull is reflected by a dearth in activity across all sites in the road scheme.

The early medieval period: AD 400–1169

Eight sites including charcoal-production pits and a linear ditch feature produced radiocarbon dates from the early medieval period.

Charcoal-production pits were found

at Camlin 5, Camlin 7, Camlin 8, Creakan Lower 1, Landscape 1 and Landscape 2D, which were all found to contain abundant oak charcoal fragments, similar to those pits found from earlier periods (see above). Analysis of the fragments at Camlin 5, Camlin 8 and Creakan Lower 1 showed a mix of medium-sized and large oak timbers were being converted to charcoal (Illus. 4.4). This wide-scale use of oak suggests that some form of woodland management would have been necessary during the medieval period in order to safeguard the resource for future use (Tierney 1998). Oak is the most common, and often sole, taxon identified within charcoal-production pits across Ireland (e.g. O'Donnell 2009; Scott 2010; Scott & Timpany 2010; Timpany 2011b). Due to its properties, oak can reach high burning temperatures and maintain this heat for long periods of time, which makes it an ideal fuel for activities requiring a lot of heat (e.g. smelting), therefore charcoal-production pits have been associated with industrial activities such as metal-working (O'Donnell 2007). Radial cracks observed in oak charcoal fragments from these sites indicate that fresh (greenwood) timbers were being burnt, suggesting that oak wood was being turned into charcoal soon after felling (Théry-Parisot & Henry 2012).

There is some evidence for cereal cultivation occurring in the landscape, through a small quantity of charred oat (*Avena* sp.) grain dating to AD 1020–1180 (SUERC-35225), accompanied by barley sp. and indeterminate grain from a linear ditch feature at Ryleen 2. A small number of wild taxa were also recovered from this feature with pale persicaria (*Persicaria lapithifolia*) seeds and hazelnut shell representing a mixture of food waste and probable arable weeds in with the grain. The material within
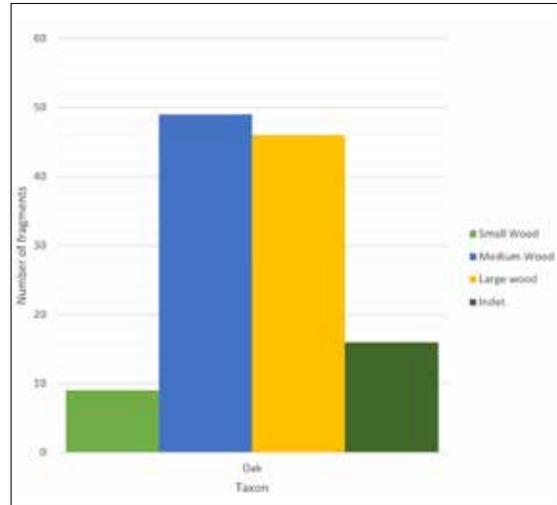
Illus. 4.4 Total charcoal identifications from early medieval features (Rubicon Heritage Services Ltd).

the ditch could represent domestic grain processing waste from activities elsewhere, with both weed taxa and grain present in the assemblage and/or domestic refuse, which is also signalled by the presence of burnt bone fragments within the assemblage.

Pollen evidence from Landscape Wetland shows that there is a fall in arboreal pollen during this period, in particular that for alder, indicating woodland clearance taking place in the immediate area (Wheeler et al. 2012). There is also a slight decline in the pollen curve of oak, which may be linked to its use in charcoal production (see above). A rise in grass pollen corresponds with the loss of woodland and there is also an increase in the diversity of herbaceous pollen with the appearance of taxa including ribwort plantain (*Plantago lanceolata*), nettles (*Urtica* sp.), and dandelions as conditions become more open. Alongside the rise in herbaceous pollen is the continued occurrence of probable dung fungi HdV-55A and HdV-55B (van Geel et al. 2003). The herbaceous pollen assemblage together with the non-pollen palynomorph assemblage indicates that woodland around

Landscape Wetland had been removed and replaced with pastoral land likely for the use of grazing cattle (Wheeler et al. 2012). The occurrence of cereal-type pollen within the upper levels of the early medieval sequence indicates cultivation was taking place, which is also suggested from the charred plant remains evidence from Ryleen 2.

The late medieval period: AD 1169–1540

Three sites contain palaeoenvironmental material dating to this period, with one (Creakan Lower 1) spanning the early and late medieval period, as mentioned in the above section. By far the most abundant range of dated material comes from the large medieval settlement site of Landscape 2A. The charred plant remains from this site provide an extremely valuable and informative dataset regarding the economy and the lives of the people.

A large number of charred cereal grains were recovered from Landscape 2A and produced an assemblage dominated by oat and hulled barley (*Hordeum vulgare*), with lesser quantities of bread/club wheat (*Triticum aestivo-compactum*), spelt wheat (*Triticum spelta*), rye (*Secale cereale*) and indeterminate grain also recovered. A small quantity of pulse seeds was identified as field peas (*Pisum sativum*) and broad/horse bean (*Vicia faba*) indicating cultivation of crops other than cereals was being undertaken to produce a range of food types. Documentary sources indicate that legumes formed an important part of the late medieval agricultural economy in the Dublin region. Peas and beans were cultivated for both human and animal consumption (Murphy & Potterton 2010, 314–15).

Together with the cereal grain and legumes recovered from the site, a range of wild taxa were present mainly occurring in samples with large concentrations of cereal remains. The wild taxa are mainly typical ruderal/segetal species of Ireland, that is, species associated with agricultural fields and disturbed ground including common fumitory (*Fumaria officinalis*), wild radish (*Raphanus raphanistrum L.*), pea/vetch (*Vicia/ Lathyrus*), ribwort plantain, corn marigold (*Chrysanthemum segetum*) and spiked sedge (*Carex spicata*). Also of interest are a number of possible hedge bank species such as bramble, blackthorn, hazel and beech (*Fagus sylvatica*). Together with providing potential evidence for the use of hedge banks as field boundaries these remains might also suggest small-scale utilisation of the berries and nuts as wild foodstuffs.

The charred plant remains from the analysed samples indicate a crop regime dominated by oat and barley, which is in keeping with the evidence from other excavated late medieval sites in Ireland with oats and hulled barley as the main cultivars, while rye, spelt wheat and club-bread wheat were also grown but probably as secondary crops (Monk 1985/86; Monk 2013, 366–71). Hulled barley was grown during the medieval period for both human and animal food and also for the production of ale, the chief beverage of the period (Dickson & Dickson 2000). Rye, which tolerates poor soils and climatic conditions (Boyd 1988), may have been cultivated as part of a mixed crop or maslin crop with the oat or wheat. The main uses of rye were as a fodder crop rather than for making bread and its long straw was particularly valued for thatching (Bell & Watson 1986; Holden 2006). Late 13th- and 14th-century documentary sources from the Dublin region indicate that on the manorial
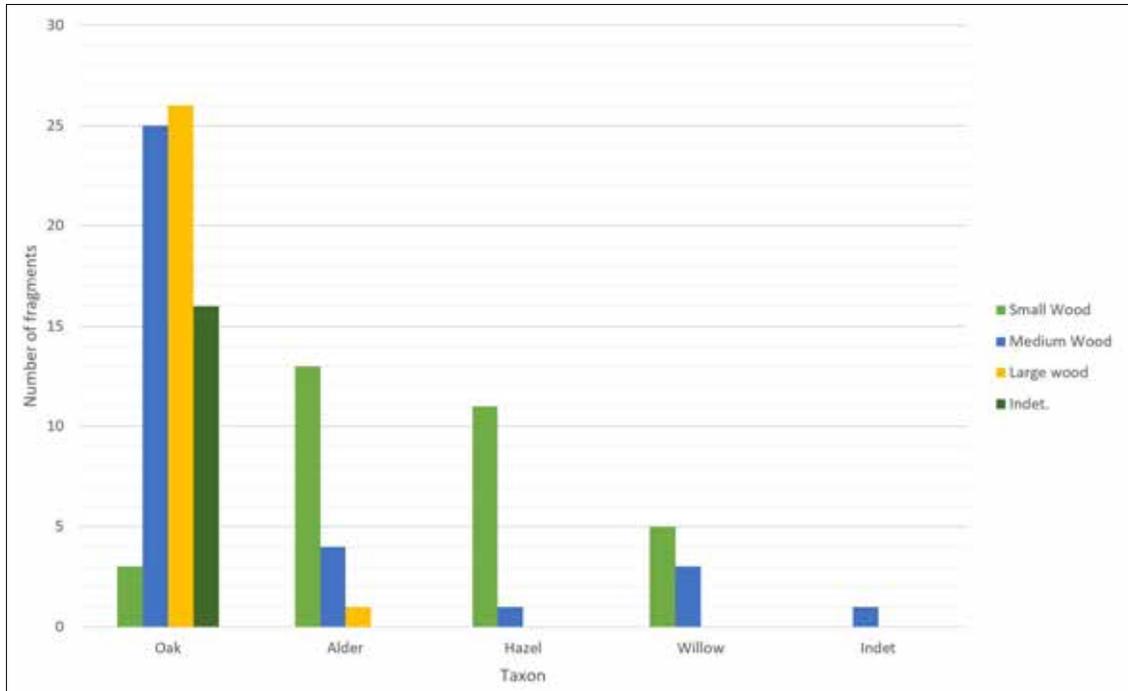
Illus. 4.5 Total charcoal identifications from late medieval features (Rubicon Heritage Services Ltd).

demesne lands the cultivation of wheat and oats dominated. Contemporary manorial accounts indicate that this was also the case on the manor of Ross (see Chapter 3; Murphy & Potterton 2010, 303–5). However, the Dublin region historical sources reveal a greater diversity of arable crops, including legumes, being grown by smaller farmers on non-demesne lands.

The charcoal fragments identified from Landscape 2A provide an insight into the wood types used for fuel, which consisted of alder, hazel and willow. Analysis of the fragments showed that small to medium-sized timbers were being used with only a small number of fragments showing the use of large timbers. The charcoal consisted mostly of small diameter round wood and twig fragments, the main species present being alder, hazel and willow. All species would have been available in local woodland or scrubby areas near to the site (Wheeler

et al. 2012). Alder, hazel and willow are all suitable for coppicing and are known to have been used in the medieval period for the building of wattle-and-daub structures. There is, however, no evidence that any of the structures were destroyed by fire, and therefore the wood charcoal recovered is more likely to be associated with fuel woods.

Pollen evidence from the late medieval period from Landscape Wetland shows that arboreal pollen continued to fall during this period for alder; however, oak and hazel pollen values remain stable indicating these woodlands are likely to have been managed in order to produce fuel wood, though it would appear alder was not managed in the same way (Wheeler et al. 2012). The management of oak would have been needed to ensure a supply of oak wood for charcoal production, which continued in this period. This is evidenced at Forestalstown 1, where a charcoal-production pit filled

with oak charcoal, dating to AD 1206–1288 (SUERC-34295) was discovered. The different wood types used for fuel in this period is shown from the charcoal assemblage (see Illus. 4.5). The presence of more open canopied woodland is signalled by the increased representation of holly. This decrease in woodland canopy also allows the presence of taxa from further away to be recorded, reflected by the appearance of trees such as pine (*Pinus* sp.) and lime (*Tilia* sp.). Grass pollen continues to rise in this period and there is also a continued presence of pastoral land indicator species such as ribwort plantain, dandelions, lettuce family (*Lactuceae* sp.), milk parsley-type and daisy family (*Asteraceae* sp.). There is a large increase in Sphagnum during this period indicating increasingly wet ground conditions, which together with an increase in fungal spores HdV-55A and HdV-55B may reflect puddling from livestock grazing on the adjacent land.

The post-medieval period: AD 1540–1700

Only one site produced a post-medieval date; at Camlin 1 charred oat grain from the fill of a pit was dated to AD 1520–1960 (SUERC-35201). The main feature at the site was a hearth, which produced a small number of charred cereal grains. The evidence suggests that oat and hulled barley were the main cultivars, with rye and bread wheat also grown but probably as secondary crops. The absence of any cereal chaff and weed seeds from the hearth assemblage indicates that a 'clean crop' was used, probably in a domestic context for baking, cooking etc. and that the cereals were processed or cleaned elsewhere, away from the site. The assemblage is then the accidental inclusion of stray grain that had fallen into the hearth during routine domestic tasks.

Charcoal analysis of fragments from the upper fill of the hearth showed that small branches and twigs of ash, hazel and oak were being used as fuel. All species present could have grown locally within the area and suggest that local woodland was being exploited. The charcoal assemblage is fairly limited and could again point to the regular cleaning out of the hearth or point to the deliberate dumping of fire waste material. The hearth deposits were also found to contain evidence of cooking activities with small quantities of burnt animal bone present.

Conclusions

Much of the evidence presented in this chapter is the result of a combination of accidental and deliberate actions; from cereal grains inadvertently dropped into hearths during the preparation of meals to the intentional destruction of buildings. It is this evidence which allows us to catch a glimpse of the daily lives of people who settled in this area over a period of 9,000 years. When combined with naturally accumulated materials, such as pollen grains from the wetland sediments, we can also begin to construct a picture of the landscape these people inhabited and how, like their daily activities, it changed over time. The construction of the new road and the work of the archaeologists and specialists have allowed this story to be revealed and significantly increase our understanding of the past not just in the area of New Ross but for the whole of south-east Ireland.

CHAPTER 5

Neolithic settlement in the Lower Barrow Valley

Neil Carlin

Neolithic settlement in the Lower Barrow Valley

A major shift in people's way of life occurred within the Lower Barrow Valley during the first half of the fourth millennium BC. A suite of new objects, ideas and customs were brought to Ireland by newcomers from Britain or the continent, who played a key role in the introduction of agriculture during the early stages of the Irish Neolithic (Cassidy et al. 2020; Carlin & Cooney 2020). The advent of farming on this island saw a radical transition from the hunter-gathering lifestyle of the Mesolithic to a more sedentary existence, whereby people created more permanent or semi-permanent settlements across the island (Cooney 2000). Open areas were cleared in the woodlands, substantial wooden rectangular houses were built, arable crops were cultivated, domesticated animals were kept and pottery began to be produced and used (Cooney 2007; McClatchie et al. 2016; Smyth 2014). Known as carinated bowls, this round-based pottery represents the earliest ceramics made in Ireland; their design and the technologies to produce them were also introduced (Sheridan 1995; Grogan & Roche 2010). While the processes and timescales involved in this transition from the Mesolithic to the Neolithic remain matters of debate, most of these cultural innovations were widely adopted by c. 3750 BC (Cooney et al. 2011, 668; Carlin & Cooney 2017).

In tandem with these developments, the ways in which people interacted with and perceived their environment changed greatly. People developed a heightened sense of place and a greater attachment to particular locales, as is aptly illustrated by the use of large (megalithic) stones to construct ceremonial and mortuary monuments at this time. Many of these substantial chambered tombs, known by archaeologists as court and portal tombs, remain visible within the landscape as testimonies of the relationships of Ireland's early farming communities to these places and to each other, as well as the wider world.

Until relatively recently, these megalithic tombs provided the best evidence for Early Neolithic activity in the south-east of Ireland. Indeed, prior to the 1990s, the only Early Neolithic pottery known from this region came from the court tomb at Ballynamona Lower (Powell 1938) and Kilgreany Cave (Tratman 1928; Movius 1935; Molleson 1985–6; Dowd 2002), both in south-west Waterford. The presence of early farmers around the Barrow Estuary has long been indicated by the portal tombs at Glencloghlea, Co. Kilkenny, Newbawn, near Carrickbyrne Hill (Illus. 5.1), and slightly further afield by the Ballybrittas tomb on the lower slopes of Bree Hill. Yet few traces of the everyday lives of those tomb builders had been identified and little was known about Wexford during the fourth millennium BC.

Thankfully, this scenario has been changed greatly by a number of new discoveries,

Chapter title image View of Ryleen and Lacken from Creakan Hill. The Early Neolithic house (Ryleen 2) was located below the centre of the photograph, to the right of the cattle (J Eogan).

including those made during the excavations conducted in advance of the construction of the New Ross Bypass and the M11 Gorey to Enniscorthy motorway. Investigations along the N25 revealed a diverse range of earlier Neolithic activity at five sites within four townlands—Ryleen, Arnestown, Camlin and Landscape—where no prehistoric remains were previously known (Table 1.1; Illus. 5.1). These sites provide new evidence for the Early Neolithic settlement of this area, most notably at Ryleen 2, where the first Early Neolithic house identified in County Wexford was found. This was complemented by the discovery of deposits of Early Neolithic pottery within tree-throw holes at Ryleen 1 and within an isolated pit at Camlin 9 (Area

3). While no artefacts from the period were uncovered at Landscape 2 or Arnestown 2, broadly contemporary activity was reflected by the radiocarbon dating of features on these sites. These newly discovered sites add considerably to our understanding of the settlement of this locale and provide new insights into the lives of Neolithic people in the area. This chapter seeks to discuss and integrate all the Neolithic discoveries from this road scheme, to consider these against their local and regional background and place them in their wider context. There will be a particular focus on the house and the contribution made by its excavation to our knowledge of the Early Neolithic in the south-east of Ireland.

Illus. 5.1 Early Neolithic sites on and in proximity to the bypass (Rubicon Heritage Services Ltd).

The Early Neolithic house at Ryleen 2

Investigations at Ryleen 2 revealed the footprint of an Early Neolithic house with internal spatial divisions characteristic of the homes of early farmers that have been found elsewhere in Ireland (Illus. 5.2). Over the last 20 years, approximately 80 Early Neolithic rectilinear houses have been identified throughout the island (Smyth 2014), though the example from Ryleen represents the first to be found in County Wexford. Subsequently, a second Neolithic house was excavated, just 23 km to the north-east in the Slaney Valley, at Dunsinane, Co. Wexford (Gallagher et al. 2015).

The Ryleen house was located in an elevated position (90 m OD) upon the lower south-eastern slopes of Lacken Hill with extensive panoramic views of the surrounding landscape and in close proximity to the Maudlins Stream, a tributary of the River Barrow. Its setting is highly characteristic of previously excavated examples; these generally display a marked preference for slightly elevated settings on south-facing slopes, in areas of good soils, with access to a water source (Cooney & Grogan 1999, 42–7; Cooney 2000, 74). Like the majority of these examples, it occurred in apparent isolation (Smyth 2006, 237; 2010), in so far as no other buildings were identified within the limits of the excavation.

Illus. 5.2 The Early Neolithic house during excavation, facing north-west (StudioLab).

Layout of the house

While there is considerable variation in the size, shape and orientation of Early Neolithic houses (Grogan 2002; Smyth 2014), most seem to share a number of common features including a highly characteristic rectangular or square foundation trench suggesting that a common template for house design was used across the island at this time (Grogan 2004a). This house was represented by a rectilinear NW–SE foundation trench with rounded corners and a north-western entrance. The building had external dimensions of 8.50 m by 6.2 m and an internal area of 35.10 m^2 (Illus. 5.3).

Twenty post-holes and stake-holes representing the external walls of the house were found to have been dug into the bottom of the foundation trench. Early Neolithic pottery, lithics, a polished stone axe and cereal grains were all recovered from the features associated with this building including two large internal pits and a triangular pit which adjoined the eastern corner. Features identified immediately outside included pits, post-holes and stake-holes, whose proximity to the building suggests that they were contemporary. While the majority produced no dating evidence, some contained sherds from Early Neolithic carinated bowls, suggesting that they represent activity directly related to the house.

This is highly comparable to the previously excavated houses, the majority of which are 6–12 m long and 4–8 m wide (Smyth 2010, 5). However, the Ryleen house differs
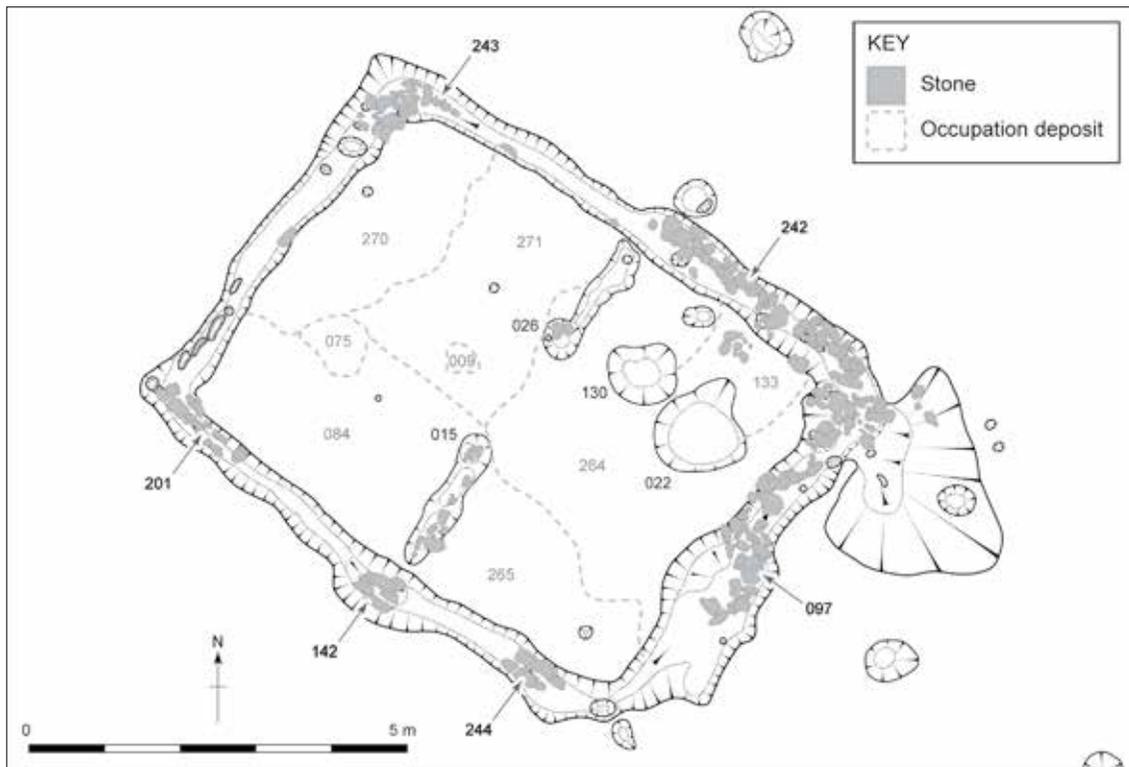
Illus. 5.3 Mid-excavation plan of the Early Neolithic house at Ryleen 2 (Rubicon Heritage Services Ltd).

Illus. 5.4 Post-excavation view of the Early Neolithic house, facing north-east with Lacken Hill on the skyline (2 m scale) (Rubicon Heritage Services Ltd).

slightly from the preferred NE–SW alignment displayed by many of these other buildings (Smyth 2006, 237).

Highly compact surface deposits found inside the house abutted several structural features and are thought to represent material compacted by repeated footfall (trample).

The house's external foundation trench was dug as a deep continuous circuit with steep sides (0.50–0.75 m wide and 0.30 m deep) and an undulating base (Illus. 5.4). Packing stones occurred along the base and sides of much of this trench. These were used to keep the posts and planks forming the outer wall upright. Clay packing

deposits had been placed over and among these boulders to provide further structural support. Overlying these was a series of charcoal-rich deposits which probably relate to activity associated with the destruction or abandonment of the building (see below). These deposits contained varying quantities of artefactual and ecofactual materials including charcoal, charred hazelnut shells and cereal grains, daub, sherds of Early Neolithic pottery and stone tools.

Distinct concentrations of packing stones occurred at each of the four corners of the foundation trench (Illus. 5.5). Post-holes were identified in these locations, as well as at the junction between the internal and

Illus. 5.5 Post-holes and packing stones in the foundation trench of the north-western wall of the house, facing south-east (2 m scale) (Rubicon Heritage Services Ltd).

external walls. These represent the remains of a substantial post-framed building, which in combination with the central pair of post-holes would have been capable of supporting a heavy roof. In the north-west end of the foundation trench, a single line of 13 post-holes with a central entrance gap (1.40 m wide) representing the location of the doorway into the house was recorded. These post-holes indicate that this side of the house was built of vertical post and plank walls. Numerous stake- and post-holes occur throughout the south-eastern and north-eastern ends of the slot-trench suggesting that a combination of posts with wattle-and-daub screens were used in these locations.

The presence of packing stones in parts of the south-west and north-east foundation trench where post-holes were absent implies that vertical plank-built walls would have been positioned between these stones. The construction of the house with a combination of split oak planks, posts and wattle is testified by the types of charcoal identified within the foundation trench and associated structural features. Most of this charcoal was derived from large and medium-sized oak timbers, but small and medium-sized hazel timbers, which probably represent the remains of post and wattle walls, were also identified. Fragments of daub-like clay material was recovered from the upper levels of the foundation trench, suggesting that the building was plastered with a mixture of wet clay and organic material that would have protected and insulated the building. No evidence for the method of roof construction was found; it could have been thatched or covered in hide (Illus. 5.6).

Clear evidence was uncovered for the division of space within the house. The post-defined entrance gap occurred in the middle of the north-western wall which was the most well-built part of the house. A second entrance may have been located at the opposite end of the building, where a pair of equidistant stake-holes occurs in the south-eastern foundation trench, but the presence of packing stones in this location suggests that no breaks occurred in that wall. The front of the house seems to have been specifically designed to have a particularly solid appearance.

An internal wall divided the house into two equally sized rooms. This partition was represented by a pair of opposing slot-trenches that extended laterally from the side walls; the inner end of each slot trench was defined by a post-hole. The gap between the slot-trenches is interpreted as the location of an internal doorway (1.40 m wide) between

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Illus. 5.6 Visualisation of the interior of the Early Neolithic house excavated at Ryleen 2 (H Sims).

the north-western and south-eastern rooms of the house.

The footprint of this building is very similar to other Early Neolithic houses which also display a centrally positioned pair of internal post-holes and whose interiors seem to have been divided in half to form two separate rooms (Illus. 5.6). These include Corbally House 3, Co. Kildare (Purcell 2002a); Newtown, Co. Meath (Halpin 1995); Kishoge and Kilgobbin, both in Co. Dublin (O'Donovan 2003/2004; Hagen 2005); Barnagore, Co. Cork (Danaher 2009); House 1 at Tankardstown South, Co. Limerick (Gowen 1988) and Drummenny Lower, Co. Donegal (Dunne 2003). Slot-trenches for internal partition walls such as those

at Ryleen have been recorded at Newtown and Corbally House 3. Smyth (2010, 8) has observed that such ground plans would have accentuated the length of the building and created a sense of distance between either room, as well as the front and the back.

Pairs of features within the house seem to have formed a central axial alignment including the pair of entrance post-holes, the pair of post-holes associated with the lateral slot-trenches and the pair of stake-holes in the south-east end wall, each of which were spaced a similar distance apart either side of the house's long axis. Three stake-holes within the north-western room seem to respect this alignment. These appear to have divided the front room into three equally

sized spaces with the central part forming a corridor leading from the north-western entrance to the doorway into the south-west room, thereby emphasising the difference between the front and back of the house (Illus. 5.6). Similar internal divisions have been recognised at the front of other houses including those at Dunsinane, Co. Wexford, and Ballyglass, Co. Mayo (Gallagher et al. 2015; Smyth et al. forthcoming; Grogan 2004a, 107).

The extra posts within the north-western half of the Ryleen house probably supported an upper floor that could have provided extra storage space or sleeping quarters. This has been suggested for other houses such as Ballyglass and Corbally (Smyth et al. forthcoming; Purcell 2002a; Grogan 2004a, 107). Interestingly, the different methods of construction employed to build the walls of the front and back rooms at Ryleen was also noted in the house excavated at Kishoge, Co. Dublin, where a change from plank to post and wattle construction also corresponded with the location of an internal partition wall (O'Donovan 2003/2004).

Transformation, decay and destruction

The house at Ryleen seems to have undergone a number of transformations towards the latter stages of its use-life, most likely after it had ceased to be occupied. Significantly, it was only after the removal of the deposits filling the foundation trench that most of the post- and stake-holes that had been dug into its base became visible. No evidence was identified for the *in situ* decomposition of posts in the form of post-pipes within the deposits filling the slot-trench or any of the other structural features. Most, if not all of these posts seem to have been deliberately extracted from their sockets at a late stage in the use-life of the house, while others were apparently destroyed by fire.

Clear evidence of extensive *in situ* burning was recorded throughout the north-west end of the external wall slot. The deposits filling the slot-trench and the post-holes at its base, as well as the natural subsoil had all been heat-reddened in this location. Fragments of charcoal from this part of the house showed high levels of vitrification indicating rapid combustion at very hot temperatures. The remains of a charred oak post were discovered within one of the post-holes in this part of the trench. No other burnt timbers were found nearby because these were almost certainly extracted after this burning event. This and other parts of the north-western and north-eastern external foundation trench displayed evidence for having been redug in those locations where structural posts had previously been present. This redigging activity must be related to the removal of the remains of posts from the foundations.

Evidence for fungal decay was detected on some of the oak charcoal within the slot-trench. This suggests that at least some of the structural timbers had rotted before being dug out. Radial cracks were also found on some of the oak charcoal indicating that it was wet when it was burnt. All of this suggests that the house may have been uninhabited for quite some time and in a poor state of repair when it was partially burnt and deliberately dismantled.

The partial burning of the structure at Ryleen has been noted at many other Early Neolithic houses (Smyth 2006, 246–9). A particularly clear example of this was recorded at Monanny, Co. Monaghan, where burnt and charred posts were identified among the structural remains of the three houses uncovered at that site. While one of

these houses was totally burnt (House C), only the gable wall of another (House A) displayed signs of heat-damage (Walsh 2006). Based on experimental work by Bankoff & Winter (1979), which demonstrated that accidental fire would have caused little or no structural damage and left few discernible archaeological traces, Smyth (2006, 246–9) has convincingly argued that the destruction of all or part of an Early Neolithic house by fire required sustained effort and represented a deliberate act. This was probably the case at Ryleen, where the burnt timbers forming the front at the north-western gable wall of the house were deliberately extracted, presumably after the house had ceased to be occupied. Such decommissioning acts may have been conducted to mark the demise of the house and may have been brought about by the death of a member of the household. Indeed, the burning and dismantling of parts of the building towards the end of its lifecycle echoes the cremation and fragmentation of human bone during the mortuary rites of the Early Neolithic period (ibid., 245).

Finds from the house

A total of 142 sherds from 12 Early Neolithic carinated bowls and 50 stone artefacts including convex and concave scrapers, a leaf-shaped arrowhead and a polished stone axe, as well as four cereal grains and multiple charred hazelnut fragments were found in features associated with the Early Neolithic house. Most of these artefacts and ecofacts occurred in the uppermost fills of the internal and external slot-trenches forming the back room and seem to have been deliberately deposited at a late stage in the lifecycle of the Ryleen house. Some lithics seem to have been intentionally placed in the foundations of the house during its erection.

For example, a distinct concentration of stone tools including two disc scrapers, a retouched informal scraper, two flint flakes, a flint core and a quartz crystal flake were all discovered in the floor surfaces within the north-western room, midway between the entranceway and the central pair of internal posts. It seems likely that these stone artefacts may have been deliberately deposited here to mark the beginning of the life of the house. In contrast, most of the lithics came from secondary contexts within the upper levels of the south-eastern foundation trench including a sandstone rubbing stone, two natural hollow scrapers, three retouched informal flint scrapers, two convex end scrapers, an unfinished leaf/lozenge-shaped flint arrowhead, two blades, eight flint flakes and two pieces of flint debitage (Illus. 5.7).

Similarly, the majority of the ceramics (99 out of 142 sherds) were also found in an upper fill of the south-eastern wall slot. The concentration of so much of the ceramic assemblage within just one part of the slot-trench suggests that it was deliberately deposited after the house had ceased to be inhabited, probably after the posts had been extracted. Sherds were also found in the tops of the central pair of post-holes and in both of the large pits near the middle of the south-eastern room (Illus. 5.8). These pits contained partial assemblages of burnt and unburnt occupational debris including 159 charred hazelnut shells, 24 sherds of pottery from six Early Neolithic carinated bowls as well as a flint flake, a flint scraper-like tool, and two pieces of quartz crystal debitage. These materials had almost certainly been collected from the vicinity of the house and placed inside these pits, but this does not seem to have occurred while the house was still occupied. The large size and awkward

E4116:084:001
disc scraper

E4116:083:002
utilised flint flake

E4116:125:001
poss side scraper

E4116:021:053
leaf/lozenge shape
arrowhead

E4116:078:001
reused Late Mesolithic chert blade

E4116:237:005
convex end scraper

0   5 cm
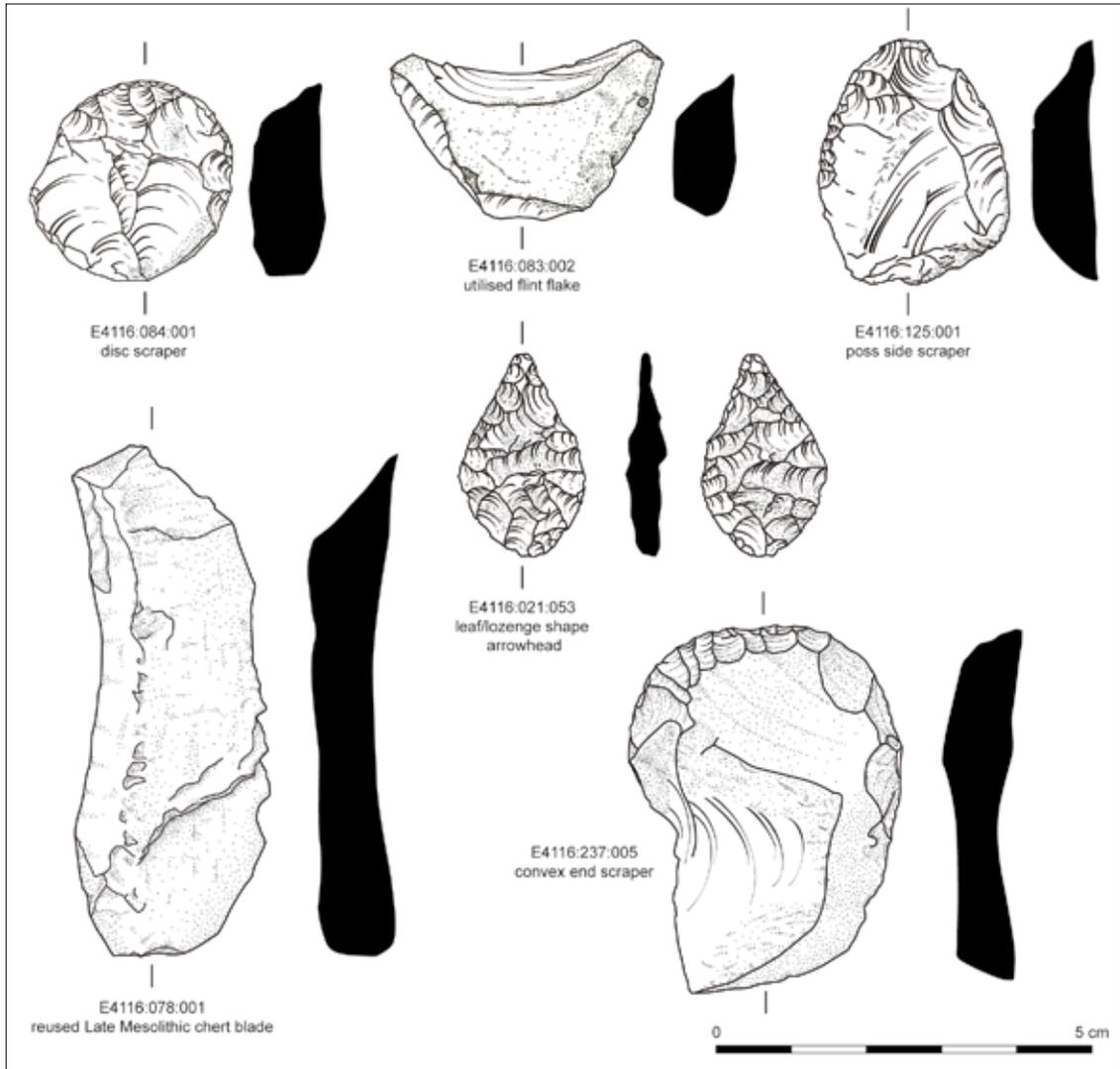
Illus. 5.7 Ryleen 2, selection of Early Neolithic lithics (Rubicon Heritage Services Ltd).

location of these pits suggest this would have happened at a later stage. This is supported by the discovery of sherds within these pits which belong to the vessels occurring in the uppermost fills of the slot-trenches.

All of these culturally rich deposits seem to represent the deliberate destruction and deposition of the household's material assemblage at the end of the structure's use. The biographies of the house and its contents would have been closely interlinked with each other and the people who lived there. These fragmentary remains of the lives of the occupants may have been deposited when one of them died or perhaps, during ritualised acts of abandonment that commemorated the past history of the household. A portion (butt) of a dolerite or gabbro polished stone axe was found in the shallow triangular pit adjoining the

131
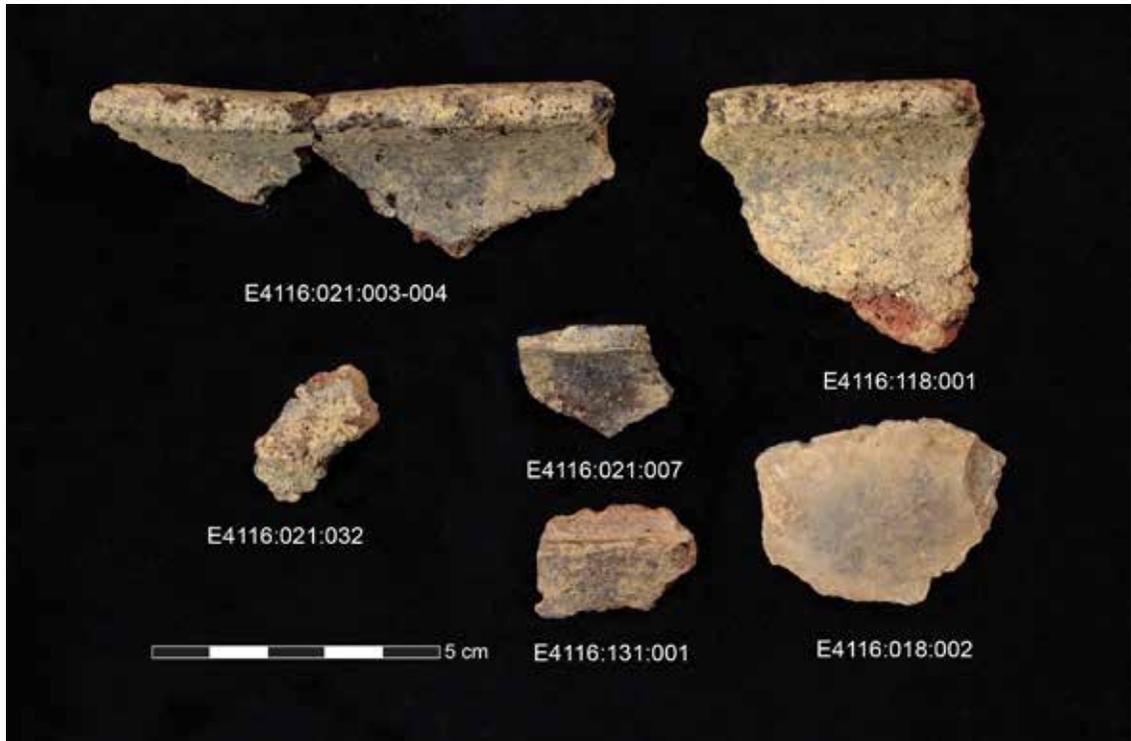
Illus. 5.8 Ryleen 2, selection of sherds of Early Neolithic carinated bowl pottery (Rubicon Heritage Services Ltd).

back of the house. Igneous rocks such as dolerites and gabbros occur in many parts across Ireland, the UK and further afield. The Ryleen axe is a very well-made example with similarities to other axes found in Ireland (Type F03, see Cooney & Mandal 1998) (Illus. 5.9). While the stratigraphic relationship between the house and the pit could not be discerned, it may be speculated that this axe also represents a closing deposit that was placed there to mark the conclusion of this structure's life.

Abandonment deposits like those at Ryleen are known from a host of other Early Neolithic houses including Ballygalley, Co. Antrim (Simpson 1996a), and Monanny, Co. Monaghan (Walsh 2009). At the latter site, habitation debris had been backfilled into the slot-trench of House B, after the removal

of its structural elements. The evidence from Ryleen also corresponds with Smyth's suggestion (2010, 13) that abandonment deposits tend to occur towards the rear of these buildings, while foundation deposits display an association with the entrance or the front portion of houses.

Although many of the artefacts and ecofacts seem to have been deposited after the house was destroyed, these materials were almost certainly directly related to its inhabitation and inform us about daily life at Ryleen during the Early Neolithic. The pottery vessels were well made and thin-walled with good quality fabric, all of which displayed a limited degree of wear or weathering (Illus. 5.8). Evidence for burnishing and/or traces of carbonised residue were identified on some of the

Illus. 5.9 Ryleen 2, rock crystal flake (top); butt of broken Early Neolithic dolerite axe (bottom) (Rubicon Heritage Services Ltd).

pots indicating that they were used for everyday purposes including the cooking and consumption of food.

A range of macro tools and struck-stone artefacts made from flint, chert and quartz crystal were retrieved from the house. These comprised a polished stone axe, rubbing and pounding stones, three bipolar cores, nine pieces of flint debitage, 22 flakes (including one possibly reutilised as a strike-a-light, two as natural hollow scrapers and one as a natural convex end scraper), four blades and 13 retouched artefacts, three convex end scrapers, two disc scrapers, six informal scrapers, a miscellaneous retouched scraper

and a leaf/lozenge-shaped arrowhead (Illus. 5.7; Illus. 5.9). Beach flint pebbles which had been collected from the Wexford coastline were reduced near the house to produce these stone tools for domestic activities such as food and plant processing as well as hide, wood and antler working. The discovery of such a wide range of modified artefacts, which also represent a high proportion (13 out of 51) of the total chipped stone assemblage, suggests that a substantial amount of energy and time was invested there.

The cultivation and the processing of cereals at Ryleen are suggested by the recovery of single grains of charred naked barley, emmer wheat and two cereal grains (species indeterminate) within the penultimate fill of the south-eastern foundation trench. There is widespread evidence for Irish Early Neolithic cereal assemblages at houses like this, which are dominated by emmer wheat, though other species also occur, and were cultivated in longer term fixed plots or gardens (McClatchie et al. 2014). The charred hazelnut shell fragments indicate the gathering and consumption of wild food stuffs. Hazelnuts were an important part of prehistoric diets and their shell is commonly preserved on sites as a result of being discarded into domestic fires after kernel extraction (Monk 2000, 75). No bone of any kind was found during the excavation, nor was any evidence identified for animal husbandry. This may be due to an absence of suitable conditions for bone preservation or alternatively may indicate that there were strict rules regarding the treatment of the remains of these animals which prevented their deposition near the house.

The function of the house

Early Neolithic rectangular buildings are normally interpreted as dwellings (Smyth 2006; 2010; Grogan 1996; 2002; 2004a) and the cumulative evidence for habitation at Ryleen indicates that this was almost certainly a residence. The Ryleen building could have comfortably housed as many as eight people (based on Grogan's (2004a) allocation of 4 m^2 per person), while also providing storage for cereals and tools, room for various domestic activities and maybe even shelter for animals (Grogan 2002, 521). This is supported by the large material assemblage found in association with this building, though much of this activity may have been conducted outside where more suitable lighting was available. It is increasingly recognised that the sacred and profane were inextricably interlinked at this time; civil ceremonies, secular rites and religious rituals were probably part of everyday Neolithic life and it is not possible to make clear distinctions between ritual and domestic activity (e.g. Brück 1999, 325–7; Bradley 2003; 2005). These buildings were probably used as meeting places or for activities such as ritual feasting (Topping 1996; Cross 2001), while also functioning as homes.

The north-western and south-eastern rooms are of equal size and it is difficult to identify one or other as being the main living quarters, though the differences in their construction suggests that they served different purposes. It is not possible to use the location of occupational debris within the house to ascribe specific functions to either of these. Most of these materials were only deposited after the house had been abandoned and may even have been specially selected for this purpose, so cannot be seen as reflecting specific activity zones inside different parts of the building. As is often the case with Early Neolithic houses (Smyth 2006, 241), no hearths or fireplaces were identified inside (or outside) the house that might help to identify the main living areas. It is likely that centuries of tillage agriculture have completely removed all evidence of such features.

The rectangular house and the associated artefacts at Ryleen are all highly characteristic of the first half of the fourth millennium BC. The type of pottery found dates broadly from c. 3800–3600 BC and has a wide variety of parallels on other Early Neolithic sites, including those with rectangular houses, as well as court and portal tombs (Sheridan 1995; Grogan & Roche 2010). However, the Ryleen ceramic assemblage displays a variety of characteristics including sharply everted rims, pronounced shoulders and decoration associated with more developed styles of carinated bowls known as 'Lyles Hill/Lough Gur Style' (Case 1961) and 'slightly modified carinated bowls' (Sheridan 1995). Similar decoration has previously been identified on Early Neolithic carinated bowls from Lough Gur, Site D, Co. Limerick, and Curraghprevin, Co. Cork (Ó Ríordáin 1954; fig. 33; Grogan & Roche 2010, fig. 1). Grogan and Roche suggest that the Ryleen bowls reflect an early stage in the modification of carinated bowls dating to c. 3700 BC. The presence of the small leaf/lozenge-shaped arrowhead, the large convex end scrapers and the disc scrapers, as well as the natural hollow scrapers and the predominance of bipolar reduction strategies in the lithics assemblage is considered by Farina Sternke (see Chapter 2) to indicate that activity at the house dates from the transition between the Early and Middle Neolithic (c. 3700–3600 BC).

Chronology of the house

A date range of c. 3700–3600 BC is supported by six of the eight radiocarbon dates obtained from features associated with the house. A charred hazelnut shell fragment from the stratigraphically earliest deposits associated with the house, namely the floor-levelling material, produced a radiocarbon date of 3710–3530 BC (SUERC-35220). Oak charcoal from the fill of a post-hole within the base of the north-eastern wall slot produced a radiocarbon date of 3950–3700 BC (SUERC-35216). A radiocarbon determination of 3700–3520 BC (SUERC-35221) was obtained from a charred hazelnut within a secondary fill of the south-eastern wall slot. Another charred hazelnut shell produced a date of 3660–3520 BC (SUERC-35222) from the upper fill of one of the central pair of post-holes. A hazelnut shell from the triangular pit containing the polished stone axe which adjoined the eastern corner of the house returned a date of 3650–3520 BC (SUERC-35215). Oak charcoal from a re-cut of the north-western wall slot produced a radiocarbon date of 3940–3690 BC (SUERC-35230).

All of the radiocarbon determinations obtained from samples of charred hazelnut shell were broadly contemporary, ranging from 3710–3520 BC. The two oak charcoal determinations produced earlier dates even though they came from stratigraphically later contexts. These are derived from oak trees of unknown age that might have been as old as 300 to 400 years before being felled (see Warner 1987), thus, it is necessary to consider that these could be from contexts with a slightly more recent date. The date range of 3710–3520 BC indicated by the other radiocarbon determinations seems to reflect the currency of the house, though

recent statistical analyses of the radiocarbon dates from Irish Early Neolithic houses has demonstrated that the construction and use of these buildings may be associated with a tight timeframe of 40 to 100 years between 3720 BC and 3620 BC (McSparron 2008; Smyth 2014, 44–9; Whitehouse et al. 2014). In light of this, the combined radiocarbon dating and the artefactual evidence from the Ryleen house suggests that it belongs within the later part of this date range.

Two other Early Neolithic radiocarbon dates were obtained from features inside and outside the house. Charred hazelnut shell from the large circular pit inside the house produced a determination of 3660–3520 BC (SUERC-35223). A charred hazelnut shell fragment from a pit located approximately 2 m east of the house returned a date of 3640–3380 BC (SUERC-35224). The range of this latter date extends beyond that of all the other dates associated with the house, suggesting that it represents a slightly later phase of activity at this location.

Early Neolithic pits and tree root hollows at Ryleen 1 and Camlin 9

Approximately 760 m to the south-west of the Early Neolithic house at Ryleen 2, excavations at Ryleen 1 on the lower southern slopes of Lacken Hill revealed a cluster of four Early Neolithic pit-like features. Varying from sub-oval to amorphous in shape, these were slightly irregular with uneven sides and bases suggesting that they represent hollows left by fallen trees known as tree-throw holes (see Chapter 2). All four hollows contained highly comparable deposits of occupational debris comprising charred hazelnut shells, oak charcoal and 10 sherds from Early Neolithic

carinated bowls. One of these features was sub-oval (1.63 m by 1.15 m by 0.22 m) and contained two charcoal-rich deposits. The uppermost part of this produced oak charcoal, two carinated bowl sherds and charred hazelnut shells, one of which returned a radiocarbon date of 3710–3630 BC (SUERC-35214). Immediately beside this was another hollow (0.86 m by 0.65 m by 0.36 m) containing three sherds from an Early Neolithic carinated bowl and a retouched flint tool, which was probably used as an end or side scraper.

The content of these hollows is very reminiscent of the deposits of habitation debris that were often placed into pits and it seems that these natural features were backfilled in a similar manner. The deposition of Neolithic artefacts into tree-throw holes has been noted at other sites in Ireland and Britain (see Smyth 2012; Evans et al. 1999), including three such hollows which were found beside an Early Neolithic house at Corbally, Co. Kildare (Tobin 2004). A similar deposit of occupational materials was found within an isolated pit during investigations near Camlin Hill at Camlin 9 (Area 3), just 4 km south-west of Ryleen 1. This sub-oval feature (0.80 m by 0.70 m by 0.06 m) was filled by a single deposit containing three sherds from an Early Neolithic carinated bowl.

Unlike the tree-throws, this hole seemed to have been dug specifically to receive its contents. However, both types of feature seem to represent different aspects of the same practice of placing occupational by-products such as pottery, lithics and other tools, as well as food remains including cereal grains and charred hazelnuts into the ground (Smyth 2012).

Such Early Neolithic pits are commonly found in Ireland both as isolated discoveries or in association with houses, as was the case at Ryleen 2 (see above), as well as megalithic tombs (ibid.). Many of these pits seem to have been backfilled very soon after being dug and their contents seem to be derived from larger aggregations of occupational debris such as middens. So, although these features are generally indicative of habitation, it can be difficult to understand their exact function or their relationship to settlement, particularly when found on sites with little other evidence for occupation (Garrow 2006; Pollard 2000, 365; Case 1995, 10–11). Traditionally, prehistoric pits have been interpreted as simple rubbish or storage pits; however, routine activities such as digging and filling often acquire ritual characteristics that enable a connection to be made between the everyday and the ceremonial (Carlin 2018, 90–2).

Case (1969, 13; 1973) suggested that Neolithic people deliberately deposited cultural debris in a meaningful manner as part of their ritual practices, possibly to fertilise the ground and ensure a positive future for themselves. More recently, it has been observed that through the burial of these fragments of 'domestic' life, the meanings and memories associated with these artefacts were recalled and reproduced. The process of backfilling pits or tree-throws served to presence the material being deposited and to physically locate a particular occasion or space in people's minds, thereby creating and sustaining their sense of belonging to a particular group and place (see Pryor 1995, 105; Thomas 1996, 197; 1999, 87; Pollard 1999). It is likely that the pits and tree-throw holes along the New Ross Bypass relate directly to settlement practices and indicate occupational activities of varying duration at or near the sites excavated along this road scheme that probably had a ceremonial aspect.

Other evidence for the Early Neolithic inhabitation of this area

Other more ephemeral hints of the Early Neolithic inhabitation of this area were also uncovered on the New Ross Bypass at Landscape 2 and Arnestown 2. The former site was discovered on a slight south-facing slope, just off the floodplains of the River Barrow at Landscape 2 (300 m west of Camlin). A deposit containing oak charcoal was found filling a sinuous gully (2.90 m by 0.54 m by 0.24 m) with steep sides and a flat base (see Chapter 2). An Early Neolithic radiocarbon date of 3930–3660 BC (SUERC-35945) was obtained from the oak charcoal. The shape of this feature, particularly its steep sides, suggests that it represents the foundations of a structure. No other features were found in the immediate vicinity, so it is difficult to understand the appearance or function of such a building.

On the same site, a group of five cooking or roasting pits (c. 0.32–1.15 m long by 0.32–1 m wide by 0.09–0.30 m deep) were found approximately 90 m west of this (see Chapter 2). Each of these was filled with broadly similar charcoal-rich deposits consisting mainly of heat-shattered quartz and shale stones. No artefacts were recovered from these to aid interpretation. Most of the charcoal was derived from small branches and twigs of alder as well as blackthorn and apple-type species. This seems to represent the collection of small and medium-sized timbers for firewood from scrub or marginal woodlands that were growing locally. Apple charcoal from the fill of one of these pits produced an Early–Middle Neolithic date of 3650–3380 BC (SUERC-35190). The similar character of the deposits within each of these pits suggests that they were all broadly contemporary.

A comparable feature was also excavated at Arnestown 2, where an isolated irregular-shaped pit with straight sides and a flat base (1.30 m by 1.30 m by 0.31 m) was found in an area prone to waterlogging. This had been truncated by a post-medieval field boundary. A possible lining comprising compacted silt with occasional alder charcoal was identified along the base of the pit. This charcoal returned an Early to Middle Neolithic radiocarbon date of 3640–3380 BC (SUERC-35212). The main fill was a dark charcoal-rich sand containing frequent large stones (c. 0.30 m by 0.20 m by 0.10 m) and smaller heat-shattered stones. The charcoal was identified as alder and hazel branch wood.

The heat-shattered stone within the pits at Landscape 2 and Arnestown 2 resembles the pyrolithic debris which is generated by the use of heated stones to boil water and is usually found as a component of features known as *fulachtaí fia* (see Hawkes 2015; 2018). These types of site generally comprise a ploughed-down mound of heat-affected stones overlying a number of features, including a trough, traces of fires and pits. However, no evidence for any of these was found during this excavation. Therefore, these pits seem to represent a different application of hot stone technology for some other purpose, possibly involving the roasting of food.

The Early Neolithic discoveries in context

The exact function of some of the earlier Neolithic features found along the New Ross Bypass remains elusive. However, the discoveries of Early Neolithic carinated bowls and broadly contemporary radiocarbon

dates at these sites indicate that this locale was inhabited by people during the first half of the fourth millennium BC and that they conducted activities of varying scale and duration at different locations within this area. These ranged from apparently isolated one-off acts within the landscape to the construction, occupation, abandonment and destruction of the house at Ryleen. Undoubtedly, this permanent settlement provided a major focus for domestic life around the Barrow Estuary. The activity at the house is connected to the shorter-term occupation sites at Ryleen 1 and Camlin 9 by the practice of depositing pottery along with other habitation materials. These deposits, which occurred in foundation trenches, pits and tree-throws, all seem to represent ideologically significant acts that were conducted at important occasions or stages in the lifecycle of these people, places and things (Carlin & Cooney 2017; Brück 2006a, 299–303). Clearly, the addition of the Ryleen house and the other Early Neolithic sites from the bypass to the archaeological record of the Lower Barrow Valley indicates a much greater degree of inhabitation of this landscape than hitherto evident.

At a wider regional level, similar new discoveries have radically altered our knowledge of the degree of settlement activity within this part of the country during the fourth millennium BC (Illus. 5.10). Other excavations to the north of the New Ross Bypass revealed another Early Neolithic house in the Slaney Valley at Dunsinane, Co. Wexford (Gallagher et al. 2015). Early Neolithic carinated bowls have also been found in other settlement contexts within the catchment of the Slaney at Harristown Big, Kerloge and Courtlands East, in south County Wexford (Tierney & Johnston 2006a; McLoughlin 2002a; 2002b;

Roche 2004; Purcell 2002b), and along the coastal plain in the north-east of the county at Raheenagureen West and Moneylawn Lower (Breen 2007; McKinstry 2008; Grogan & Roche 2008).

Early Neolithic carinated bowls featured at a dense cluster of sites in the Lower Suir Valley c. 19 km west of Ryleen including Butlerstown North 2 and Knockhouse Lower, Co. Waterford; Newrath 35, and the houses at Granny 27 and Newrath 37, Co. Kilkenny (McQuade 2006; Hughes et al. 2011; O'Hara & Ginn 2011; Wren & Price 2011a; Hughes & Price 2011). This Early Neolithic pottery was also found at Ahanaglogh and Graigueshoneen in the Kilmacthomas area (Johnston et al. 2008; Roche 2008), approximately 40 km south-west of the New Ross Bypass.

Approximately 17 km west of Ryleen, carinated bowls were discovered between the Nore and Suir valleys, along the upland fringes of south-eastern County Kilkenny at Baysrath and Scart, and in association with three Early Neolithic houses at Earlsrath and Kilkeasy (Channing 2012; Monteith 2010; 2011; Laidlaw 2010; McKinstry 2010). The nearby Farnoge court tomb on the eastern slopes of Tory Hill was also constructed during the Early Neolithic. A cluster of portal tombs including the well-known example at Kilmogue/Harristown, Co. Kilkenny, occur further west in the foothills of the Walsh Mountains. Early Neolithic ceramics were recovered c. 20 km north-west of Ryleen within the Nore Valley at Knockadrina 2, Ennisnag 1 and Danesfort 5 (Kyle 2009; Jennings 2009; Devine & Zimny 2008). Further north along the Barrow Valley, this pottery was identified at Paulstown, Co. Kilkenny (Elliot 2008), which is located close to a cluster of four portal tombs on the foothills of the Blackstairs Mountains, Co.
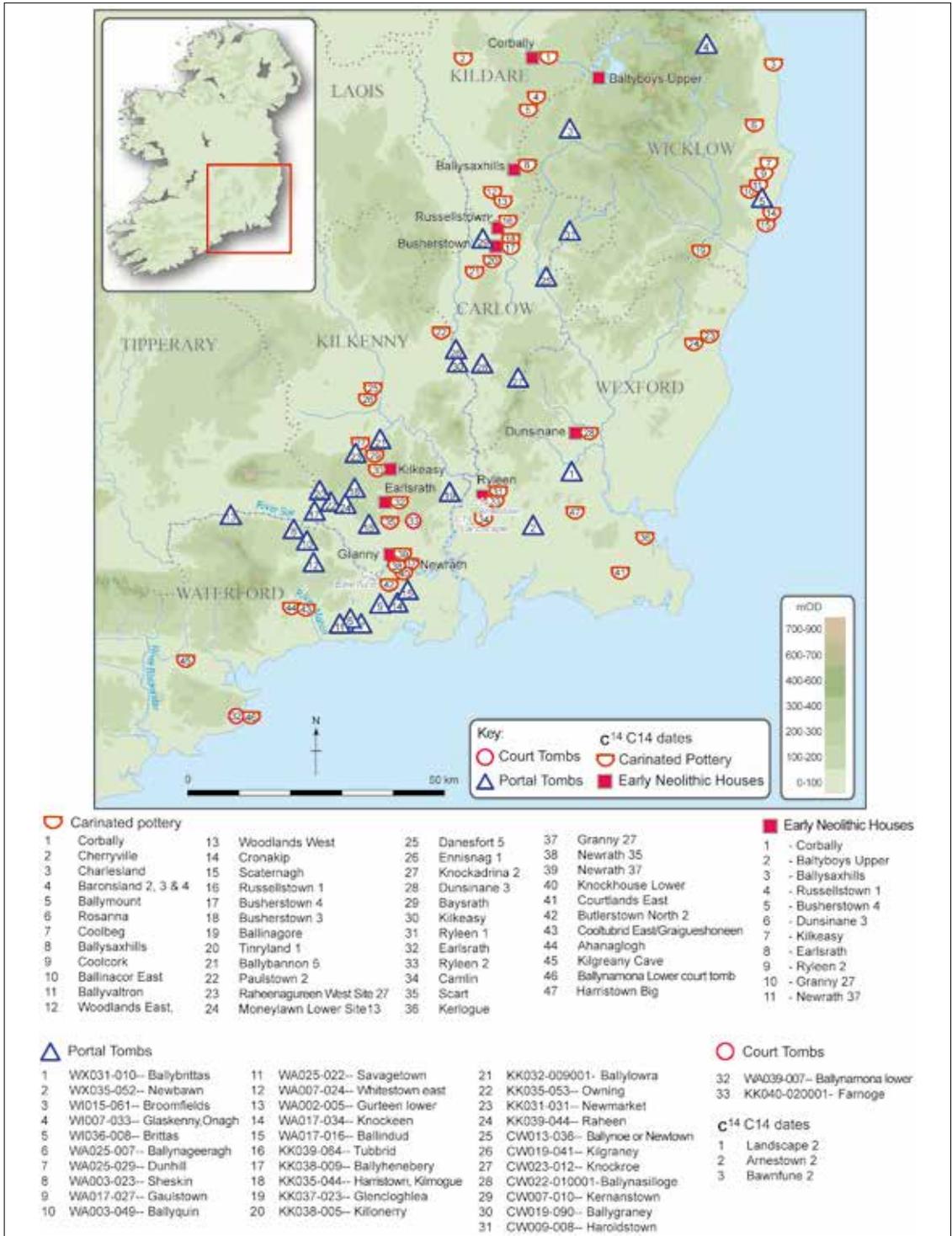
Illus. 5.10 Distribution map of Early Neolithic sites in the south-east of Ireland (Rubicon Heritage Services Ltd).

Carlow. Even further north along this river valley, another cluster of Early Neolithic settlement sites including the houses at Russellstown and Busherstown 4 were uncovered on the Carlow Bypass (Carlin et al. 2015).

The Early Neolithic sites on the New Ross Bypass represent a significant addition to this body of new discoveries which now indicate quite an extensive settlement pattern in the south-eastern region during the Early Neolithic. These sites display a riverine distribution along the major valleys of the Barrow, Nore and Suir, suggesting that these places were preferentially selected as locations for settlement, perhaps to facilitate interaction with other communities. While settlements appear to have been widely dispersed, the many commonalities in material culture and social practices associated with these sites indicate that the people who occupied these places shared an interconnected world (Carlin & Cooney 2017). Movement by water was a major mode of travel in prehistory (e.g. Condit & O'Sullivan 1999) and these rivers would have been major prehistoric routeways that served as communication arteries at this time (Grogan 2005b, 27–8). Like many of these previously unknown discoveries, the excavations in the Lower Barrow Valley

confirm the existence of a strong association between Early Neolithic rectangular houses and megalithic tombs, while also expanding our knowledge of the inhabitation of the area around present-day New Ross beyond these monuments and offering new insights into the everyday lives of the people who may have built or used them.

Conclusions

Despite the presence of megalithic monuments, little was known prior to the archaeological investigations along the New Ross Bypass about settlement in this area during the fourth millennium BC. The newly discovered Early Neolithic sites add considerably to our understanding of the early prehistory of Wexford by providing fresh insights into the everyday lives of people in this area. This is especially true of the house at Ryleen which makes an important contribution towards our understanding of the Neolithic settlement of the area. While confirming much of what is already known about these buildings, the findings from this excavation add to our knowledge of their layout and of the final stages of their use-life.

CHAPTER 6

The Bronze Age in the Lower Barrow Valley

Carmelita Troy, Neil Carlin and Colm Moloney
(with a contribution by Ben Spillane)

The Bronze Age in the Lower Barrow Valley

Introduction

The Bronze Age (c. 2200–800 BC) was a period of dramatic social and economic change which saw the widespread adoption of bronze metallurgy in Ireland. This led to increased inter-regional contact as ideas and objects, as well as raw materials such as copper and tin, were exchanged with communities in other places. Agricultural and craft production both intensified in tandem with the technological advances enabled by metal tools. The emergence of defended hilltop enclosures alongside developments in weaponry including the invention of the sword in the Late Bronze Age suggest that society became increasingly stratified and hierarchical. However, despite the many innovations and changes of this period, there was much continuity with the Neolithic. For example, many of the locations that had served as burial places or settlements in the fourth or third millennium BC continued to be used for similar purposes and the tradition of cremating the dead persisted.

The archaeological investigations conducted along the route of the New Ross Bypass uncovered a wide variety of previously unknown Bronze Age sites which add considerably to our knowledge of the lives of people in the Lower Barrow Valley during the second millennium BC (Illus. 6.1). Notably, at least 32 burials were discovered at four sites. These comprised an apparently isolated

Early Bronze Age cremation at Camlin 3; clusters of cremation pits dating from the Middle to Late Bronze Age at Camlin 4, and to the Middle Bronze Age at Berkeley 3; and a cremation pit and two cist burials dating to the Early Bronze Age at Stokestown 2. The last three sites all seem to represent flat cemeteries (as no evidence for an enclosure or an overlying cairn or mound was identified). While no Bronze Age houses were found along the route, Early–Middle Bronze Age occupational activity was represented by pits at six sites: Ballyverneen 2, Camlin 8, Lacken 1, Landscape 2, Rathgaroge 2 and Stokestown 1. *Fulachtaí fia* of Middle–Late Bronze Age date were found at nine sites in the townlands of Arnestown, Berkeley, Camlin, Lacken, Landscape and Ryleen. This chapter examines this new evidence for Bronze Age activity uncovered along the bypass to elucidate how this informs us about settlement in the Lower Barrow Valley at this time and the social practices of the people who lived there. Particular attention will be given to the cremation burials and the ways in which the treatment of the dead reflects the contemporary worldview of the mourners.

The Bronze Age in County Wexford has received very little scholarly attention and is poorly understood. Although sites and discoveries of this period have featured in wider studies such as those by Mount (1997) and Waddell (1990), no general synthesis has

Chapter title image The possible natural routeway between Camlin Hill and Creakan Hill which was the focus of Early, Middle and Later Bronze Age burial activity, viewed from Landscape (J Eogan).
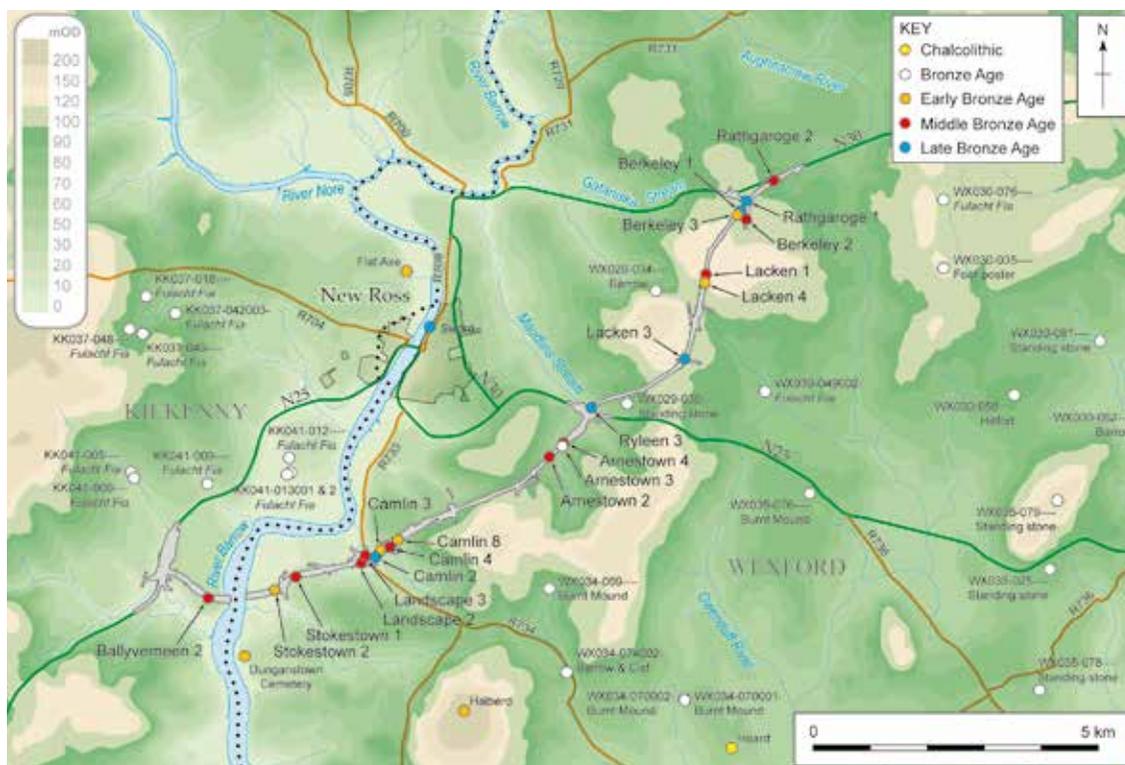
Illus. 6.1 Chalcolithic and Bronze Age sites on and in proximity to the bypass (Rubicon Heritage Services Ltd).

been conducted since Stout's (1987) overview of the archaeology of the county and the publication of the *Archaeological Inventory of County Wexford* (Moore 1996). The settlement of this area during the third and second millennia BC has long been indicated by the concentrations of Early Bronze Age burials—mostly from the north of the county (Stout 1987, Mount 1997)—including 37 Early Bronze Age cist graves, some of which were found in flat cemeteries (Illus. 1.18; Table 6.1). Yet, evidence of how and where people lived at this time has been lacking.

Traditionally, some of the best evidence for Bronze Age activity in Wexford was represented by chance discoveries of objects including copper or bronze tools and gold ornaments in natural places, particularly rivers and other wet locations (Illus. 1.12). The Early Bronze Age gold sun discs found

near Kilmuckridge, in north-east Wexford, are a well-known instance of this (Cahill 1994a). Early Bronze Age examples from the vicinity of the New Ross Bypass include the hoard of axes found with a copper cake in a cave at Nash, Carrickshedoge, just 8 km to the south-east of Camlin (Harbison 1968, 44; Stout 1987, 9–10, 22) and the halberd discovered near Slievecoiltia (O'Flaherty 2002, 10; Illus. 6.1).

Late Bronze Age examples include a sword found near New Ross (Eogan 1965, 161) and a hoard of bracelets and dress fasteners which are recorded as coming from a small river near New Ross. At a broader scale, a number of important and unusual Late Bronze Age sheet gold ornaments have been found in the county, such as the earspools in the hoards from Enniscorthy and Ballinesker (Cahill 1994b; 2010), which indicate links with

Table 6.1—Bronze Age cemeteries in County Wexford

Site	Burial type	No. burials	Grave type	Associated ceramics	References
Cummer	—	2	Cists	Unclassified 'urns'	Kinahan 1879–88, 156; Waddell 1990, 155
	—	1		Unclassified 'urn' and miniature vessel	
Dunganstown	Cremation	2	Pits	Encrusted urns	Anon. 1854–5; Waddell 1990, 155
Ferns Upper	Cremation	6	Pit	Undecorated coarseware vessels	Kavanagh 2007
Killincooly More	Cremation	1		Vase Urn	Grattan Esmonde 1902; Ó Ríordáin 1936, 187–90; Brindley 2007, 349
	Cremation(?)	1	Cist	Bowl food vessel	
	Inhumation	1	Cist(?)	Bowl food vessel	
Loggan Lower	—	4	Cists	Unclassified 'urns'	Kinahan 1879–88, 154–5; Waddell 1990, 157
Loggan Lower	—	2	Cists	Unclassified 'urns' containing 'smaller vessels'	Kinahan 1879–88, 155; Westropp 1904, 320–1; Waddell 1990, 157
Misterin	—	2	Cists	—	Ffrench 1889; Waddell 1990, 157; Brindley 2007, 349–50
	Cremation	1	Cist	Vase urn	
	Cremation	1	Cist	2 miniature vessels	
Scarawalsh	Cremation	1	Cist	Encrusted urn	Rynne 1966; Waddell 1990, 158; Brindley 2007, 350
	Cremation	1	Pit	Encrusted urn and tripartite vase	
	Cremation	4	Pits	2 collared urns and a vase urn	

North Munster, where this style of goldwork is most commonly found (Grogan 2005a, 145). A rare British type of Late Bronze Age gold bracelet was found in the catchment of the Lower Barrow at Dunbrody, Co. Wexford, just 10 km south of Camlin. This is very similar to one of two bracelets found at Ballymaclode, Co. Waterford, overlooking the Suir Estuary (Pollock 2009). The discovery of two of these in the south-east indicates interactions with people in southern Britain at this time (see Cahill 2010).

The most common archaeological monument dating from the Bronze Age in the region, and indeed nationally, is the *fulacht fia*. Sixty-seven of these monuments were documented in the *Archaeological Inventory of County Wexford* including examples at

Bergerin (Lloyd) and Rathgaroge, in proximity to the bypass (Moore 1996). Many more have been subsequently discovered during recent excavations such as those conducted in advance of the construction of the N11 Gorey Bypass.

At least 47 standing stones are known in Wexford, some of which are concentrated on the east bank of the Barrow Estuary. They are believed to have served as navigational or territorial markers (Stout 1987, 17); an outlier of these occurs at Ryleen adjacent to the bypass. While these monuments are often regarded as later Bronze Age, they may date from almost any period. Also of potential later Bronze Age date is a stone four-post monument at Robinstown Great, 9 km north-east of New Ross, a stone row at Whitechurch and a possible stone circle at Carrickbyrne Hill (ibid.).

Prior to this project, very little evidence for later Bronze Age funerary activity was known in any part of the county, reflecting the fact that the character of the burials from this period was first recognised relatively lately (Gowen 1988). Until recently, Middle or Late Bronze Age pottery had rarely been found in the south-east of Ireland and this is particularly true of Wexford, where few Bronze Age settlements are known (Grogan & Roche 2011a). A Late Bronze Age hillfort is located at Courthoyle New, 9 km east of Camlin (Illus. 6.1); this is one of only two such sites in the county, the other is located in the Slaney Valley at Ballybuckley. The exact function of these hilltop enclosures remains a matter of debate. Some are considered to be fortifications because of their naturally defensible locations, as well as the number and nature of their enclosing elements. Others, such as Mooghaun, Co. Clare, Rathgall, Co. Wicklow and Dún Aonghasa, Co. Galway, are seen as residential sites, an

interpretation supported by the discovery of houses and settlement debris including Late Bronze Age pottery and animal bones within the interior of most of the excavated examples (Grogan 2005b, 121–3).

In combination, the range of known sites and artefacts from south Wexford suggested the presence of a significant Bronze Age population in the area, but little direct evidence has been found for this until very lately. For example, recent excavations have uncovered a Bronze Age roundhouse at Strandfield (MacManus 2008), and another roundhouse which produced Middle Bronze Age radiocarbon dates and pottery at Moneytucker (Ó Maoldúin 2009). The discoveries from the New Ross Bypass add a significant new dimension to our existing knowledge of life in the surrounding area at this time.

The funerary activity

A number of trends can be observed in an overview of burial in the Irish Bronze Age. At the beginning of the Early Bronze Age both traditions (cremation and inhumation) were in use and often the burials were accompanied by pottery and located in stone-lined cists. Cremation became the more dominant rite from approximately 2000 BC onwards, with individuals contained in an urn and placed in cists. At the beginning of the Middle Bronze Age we see a further change. The burials begin to be placed in simple earth-cut pits. Interment within complete vessels is rare and the quantity of cremated bone within each burial is reduced (Waddell 1990; Ó Ríordáin & Waddell 1993; Eogan 2011b). These trends were reflected in the Bronze Age burials uncovered on the New Ross Bypass (Table 6.2).

Table 6.2—Summary of Bronze Age cremation burials identified on the project.

Note that the modelled date probabilities are italicised (see below)

Site	Context	Feature	Period	Calibrated radiocarbon date BC/AD	Weight (g)	Age	Sex	MNI
Stokestown 2	005	Vase in pit 004	EBA	1899–1695 BC	99.2	Adult	—	1
	008		EBA	—	0.6	—	—	
	040	Urn in cist 010	EBA	1956–1751 BC	1971.1	Adult	Male?	1
	047	Cist 015	EBA	1951–1751 BC	20.4	Adult	—	1
	103		EBA	—	1.0	—	—	
Camlin 3	019	Urn in pit 019	EBA	1940–1750 BC	1903.5	Adult	Male?	1
Camlin 4	094	Pit 026	—	—	71.6	Adult	—	1
	096	Pit 038	—	—	10.8	—	—	1
	097	Pit 045	MBA	1500–1320 BC	8.1	—	—	1
	107	Pit 106	—	—	8.1	—	—	1
	115	Pit 226	—	—	43.0	—	—	1
	135	Pit 013	—	—	10.8	—	—	1
	160		—	—	0.8	—	—	
	185	Pit 159	—	—	9.9	—	—	1
	198	Pit 024	—	—	12.0	—	—	1
	199	Pit 042	MBA	1530–1410 BC	8.9	—	—	1
	201	Pit 040	—	—	21.4	—	—	1
	207	Pit 206	MBA	1520–1410 BC	99.6	Adult	—	1
	210	Pit 209	MBA	1610–1440 BC	50.3	Adult	—	1
	217	Pit 216	MBA	1610–1440 BC	371.7	Adult	—	1
	221	Pit 220	MBA	1500–1390 BC	103.3	Adult	—	1
	165	Pit 029	LBA	1090–900 BC	3.8	—	—	—
Berkeley 3	008	Pit 007	—	—	88.3	Adult	—	1
	010	Pit 009	MBA	2030–1770 BC *1530–1190 BC*	92.1	Adult	—	1
	020	Pit 019	—	—	134.6	Adult	—	1
	030	Pit 029	—	—	2.3	–	—	1
	036	Pit 035	MBA	1530–1410 BC	504.8	Adult	—	1
	044		—	—	0.5	—	—	1
	113	Pit 043	—	—	0.3	—	—	1
	046	Pit 045	—	—	61.6	Adult	—	1
	066	Pit 065	MBA	1640–1490 BC	156.0	Adult	—	1
	115	Pit 114	MBA	1880–1660 BC *1530–1170 BC*	31.1	—	—	1
	120	Pit 065	MBA	—	24.5	—	—	1
	124	Pit 125	—	—	182.2	Adult	—	1
	153	Pit 135	MBA	—	14.8	–	—	1
	136		MBA	1640–1490 BC	300.6	Adult	—	1

Period key: EBA Early Bronze Age; MBA Middle Bronze Age; LBA Late Bronze Age
MNI = minimum number of individuals

The burial site at Stokestown 2 was situated on the west-facing terrace of a low-lying field (11 m OD) overlooking the River Barrow. Some 2 km to the east, Camlin 3 and 4 were also found in a similar relatively low-lying location (20 m and 35 m OD respectively) just 150 m apart on the south-west-facing slope of Camlin Hill, with views towards the River Barrow which was c. 600 m away. Approximately 9 km to the north-east of these, the cemetery at Berkeley 3 occurred in a slightly elevated position (115 m OD) on a gentle north-east-facing slope, north-east of Lacken Hill (Illus. 6.1).

At Stokestown 2, three cremation burials were identified, comprising one cremation in a simple earth pit and two stone-lined cist burials (Illus. 6.2). The pit, which truncated the possible remains of a possible ring-ditch, contained an inverted bipartite vase. A rectangular stone slab discovered in the pit may have originally overlain the base of the vessel (Illus. 6.3). Cremated remains and oak charcoal were present both around the vase and contained within it. A total of 99.8 g of human bone was recovered, producing a radiocarbon date of 1899–1695 BC (SUERC-53821).

To the east of the cremation pit and 0.70 m from it was one of two stone-lined cists. It consisted of a sub-circular pit excavated into a naturally occurring shale outcrop that was lined with a base slab and four side slabs. Within the cist was an inverted encrusted urn which contained cremated bone and oak charcoal (Illus. 2.5 and 6.2). A total of 1,971.1 g of human bone was recovered, representing the remains of a possible male adult, that returned a radiocarbon date of 1956–1751 BC (SUERC-53820). The second cist was 2.20 m south of the first and was cut into natural subsoil and shale. Also circular in plan, it
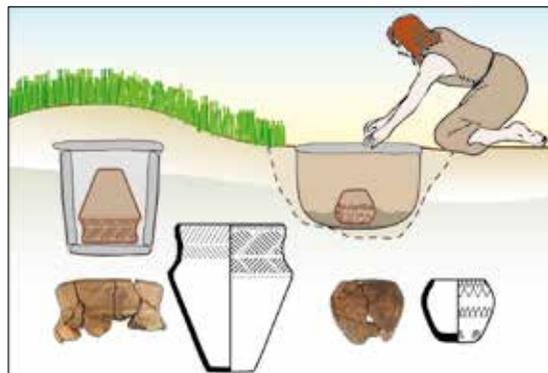
Illus. 6.2 Visualisation of Early Bronze Age burials accompanied by pottery at Stokestown 2 (H Sims).
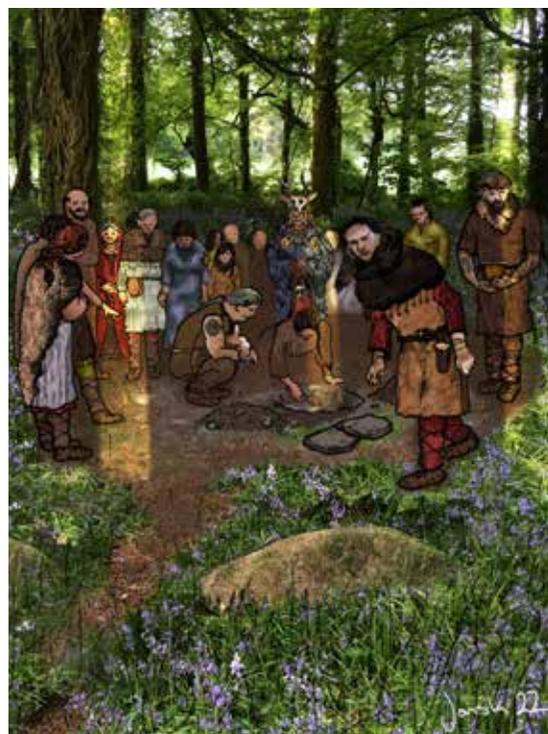
Illus. 6.3 Visualisation of an Early Bronze Age burial ceremony at Stokestown 2 (J Millar).

had a base slab and six side slabs. Unlike the other two burials no pottery was present, with the cremation burial apparently placed directly into the cist. Fragments of quartz were noted along with the cremated bone and fragments of oak charcoal. The 21.4 g of human bone returned a radiocarbon date of

1951–1751 BC (SUERC-53819).

At Camlin 3, the mid-portion of an upside-down Early Bronze Age urn was found in a pit. Its base, which had been uppermost, had presumably been removed by modern agricultural activity such as ploughing (see Chapter 2). The upper part was also missing, suggesting that the vessel was already broken before it was placed in the grave. This vessel contained cremated human bone (1,903.5 g) representing the remains of a probable male adult, as well as oak charcoal, a single grain of hulled barley and a quartz pebble. The bone returned a radiocarbon date of 1940–1750 BC (SUERC-35165). Due to the absence of the upper part of the vessel, it cannot be determined if this vessel was a collared or cordoned urn, both of which were in use in Ireland when this burial occurred (Grogan & Roche 2010, 41). The pit was backfilled with a dark charcoal-rich deposit probably representing pyre debris. The burial was placed beside a large earth-fast boulder which may have served as a natural grave marker (Illus. 6.4).

The Middle to Late Bronze Age flat cremation cemetery at Camlin 4 was located on the mid-slope of Camlin Hill overlooking Camlin 3 and the river valley. The site contained a total of five full and nine 'token'

Illus. 6.4 Visualisation of the urn burial beside the natural boulder at Camlin 3 (H Sims).

cremation burials interred within simple pits. In addition to these burials, six pits also contained cremated bone which could not be definitively identified as human, but there is a strong possibility that these features were also token cremation burials. The excavation revealed some rare examples of grave goods including lithics, ground-stone objects and previously undocumented forms of stone beads manufactured from phyllite and mica-schist.

The burials were clustered together in a dense concentration, with numerous other pits and post-holes of uncertain date and/or function also found among this cluster, some of which may represent the remains of grave markers. Amongst the first phase of activity (designated Phase 1a) were two cremation burials, a pit, two post-holes and a stake-hole. The first burial was filled by a dark deposit containing cremated human bone (371.7 g) dating from 1610–1440 BC (SUERC-35164), oak charcoal, a fragment of chert debitage, a quartz flake and a heat-fractured quartz pebble. The other burial pit was filled by a similar deposit comprising cremated human bone (103 g), a possible burnt sandstone rubbing stone, quartz crystal debitage, and a broken, horseshoe-shaped, sub-angular stone bead or toggle (7.63 mm by 8.42 mm) with an elongated central perforation that seems to be made of phyllite (Illus. 6.5). The bone returned a radiocarbon date of 1500–1390 BC (SUERC-35970).

Deposition of a spread (16.50 m by 9.50 m by 0.01–0.15 m) of silty sand sealed this initial activity and represents the second phase of activity (designated Phase 1b). The third phase of funerary activity (designated Phase 1c) is represented by an additional 15 cremation pits containing small quantities of human bone (8–100 g) dug into this sealing layer. Although stratigraphically later,

Illus. 6.5 Stone beads from Camlin 4 E4101:132:001 and 221:002 (Rubicon Heritage Services Ltd).

four of these burials also returned Middle Bronze Age dates ranging from 1610–1320 BC suggesting that they are broadly contemporary with the stratigraphically earlier burials. One of these graves contained a small amount of cremated human bone (8.1 g) dating from 1500–1320 BC (SUERC-35160) and occasional marine shell fragments. Another burial pit was filled by a single dark charcoal-rich deposit containing cremated human bone (43 g), a few charred hulled barley grains, a burnt sandstone object possibly representing a saddle quern fragment, as well as a burnt sandstone rubbing stone and a burnt fragment of another. The heat-affected nature of all of these objects suggests that they had been placed on a funerary pyre alongside the human remains as gifts from the living before being collected and deposited in this grave. A similarly burnt rubbing stone was also found in another pit along with a tiny amount (0.1 g) of cremated bone which was too small and fragmentary to be conclusively identified as human. An unidentifiable charred cereal grain and a few oat grains (though these may be intrusive) were also found with cremated human bone (10.8 g) in another pit.

One of the undated cremation pits contained cremated human bone (71.6 g), oak charcoal, two pieces of quartz debitage and an intrusive shard of modern glass. Immediately beside this was a stone-lined pit that contained the poorly preserved remains of a Middle Bronze Age plain domestic bucket- or barrel-shaped vessel, a type of pottery dating to c. 1500 BC (Grogan & Roche 2009). Although only the lower portion survived, this vessel seems to have been placed intact in an upright position on a small slab which lined the base of the pit (Illus. 6.6 and 6.7). The pit and the pot were both filled with a black deposit containing oak charcoal and a few charred ribwort plantain seeds which may represent material from a pyre. While no human remains were identified, the context of this vessel suggests that it represents a disturbed burial.

A second stone bead made from mica-schist (5.90 mm by 6.49 mm) was recovered from a post-hole to the north of the burial that contained the first bead (Illus. 6.5). It consisted of a sub-angular perforated stone object damaged along one side. The perforation was off-centre and on the damaged side the remains of what appears to be another perforation was evident, suggesting it formed part of a multiperforated artefact. The beads are of a previously unknown type and represent rare examples of grave goods from the artefactually scant 'token' cremation traditions of the Middle Bronze Age (Spillane 2019).

A phase of Late Bronze Age funerary activity was identified through radiocarbon dating. One of the pits that was located on the periphery of the cluster of burials, beyond the extent of the surface deposit, contained a small quantity of unidentified cremated bone (3.8 g) that returned a Late Bronze Age radiocarbon date of 1090–900 BC

Illus. 6.6 Camlin 4, examination by the conservator of pit (025) containing the upright Middle Bronze Age vessel prior to block-lift (Rubicon Heritage Services Ltd).
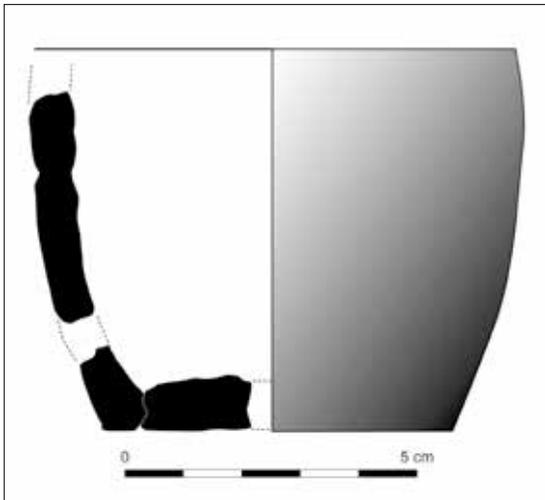
Illus. 6.7 Reconstruction of the Middle Bronze Age plain domestic bucket- or barrel-shaped vessel (S Nylund).

(SUERC-35969). Although the cremated bone could not be definitively identified to type it is believed that this most likely represents a human burial. It is therefore possible that some of the undated cremation burials cut onto the sealing layer are also of Late Bronze Age date, with funerary activity continuing at the site long after the Middle Bronze Age period.

Evidence for a sequence of Middle Bronze Age burials was also identified at the flat cremation cemetery at Berkeley 3. Eleven sub-circular cremation pits (containing 14 cremation deposits) were found among a large number of other pits, post-holes and stake-holes, some of which may have represented grave markers or some form of

funerary activity. At this site the funerary activity extended over an area approximately 156 m^2. The cremation pits were filled with deposits containing varying quantities of oak charcoal, cremated human bone (0.3–504.8 g), cereal grains and weed seeds. Thirteen sub-circular pits contained burnt bone and human remains were identified in 11 of the burials. Many of the burials comprised token deposits of cremated bone; only five of the burials were represented by more than 100 g of cremated bone. In contrast with Camlin 4, two of the burials were accompanied by sherds of pottery, most likely from cordoned urns; however, none of Berkely 3 burials were accompanied by the diversity of stone objects interred with the dead at Camlin 4. As at Camlin 4 the burials

were clustered and were associated with numerous other pits, post-holes and stake-holes of uncertain function.

Three phases of funerary activity have been identified at Berkeley 3. Phase 1 comprises a single adult burial in a flat-based pit (Illus. 6.8). The cremated remains were accompanied by a sherd of probable cordoned urn and some charred cereal grains. A bone sample returned a Middle Bronze Age date of 1640–1490 BC (SUERC-35173). A shallow south-easterly oriented gully had been dug a short distance from the burial; its fills contained oak charcoal but did not contain any human remains or other finds. A 6 m-long east–west oriented line of features—two pits and six stake-holes—was located 6 m west of the gully. Three other

Illus. 6.8 Berkeley 3, osteoarchaeologist excavating the Phase 1 burial (135) (0.3 m scale) (Rubicon Heritage Services Ltd).

stake-holes are also assigned to this phase. These features and an area around them were sealed beneath a spread of reddish-brown clay, with a maximum thickness of 0.15 m, representing the second phase of funerary activity at Berkeley 3. The third phase of funerary activity comprised 17 pits and a post-hole cut into the Phase 2 clay spread. Eight of the pits contained burnt bone, which in seven instances could be identified as human. Only two of the deposits contained more than 100 g of cremated bone. The burial containing the largest deposit of cremated bone (181.5 g) was contained in a pit cut into the northern side of the Phase 2 spread, which may have been covered by a flat slab. Cremated bone was found in the two deposits filling the pit; that in the upper fill was identified as being the remains of an adult and was associated with six fragments of probable cordoned urn. An associated bone sample returned a Middle Bronze Age date of 1640–1490 BC (SUERC-35168). A broad east–west oriented band of 13 pits and a single post-hole were cut into the clay spread approximately 4.5 m south of the burial. Seven of these pits contained burnt bone. The bone in four of the pits was identified as the remains of adults. The weight of burnt bone deposited ranged from 0.8 g to 134.6 g and only one of these burials contained more than 100 g of bone. The burials appeared to be quite evenly spaced, though two of the pits were intercut suggesting that not all the burials were interred at the same time. Charred hulled barley grains were associated with one of the adult burials; they were also identified in the fill of a pit containing unidentified burnt bone. Unidentified charred cereal grains were associated with two of the burials and were also found in

one of the pits that did not contain any burnt bone. Charred wild plant remains were associated with one of the burials and two of the other pits. The wild plant remains included raspberry seeds and seeds of a plant from the goosefoot family (*Chenopodium* sp.) which may have been consumed as food. Samples of burnt bone from the two intercutting burials returned radiocarbon dates of 2030–1770 BC (SUERC-35166) and 1880–1660 BC (SUERC-35170).

A line of three pits containing burnt bone was identified between 2.5 m and 6 m north of the Phase 2 spread. Human remains were identified in two of these pits, one of which contained the largest amount of cremated bone (504.8 g) of any of the Berkeley 3 burials. A sample of bone from this burial returned a radiocarbon date which ranged from 1530–1410 BC (SUERC-35172). A single burial with a token cremation deposit was identified 1 m from the south-east edge of the Phase 2 spread. Four pits, a short linear cut, a post-hole and three stake-holes were found to the north and south-west of the Phase 2 spread. One of the pits contained unidentified charred cereal grains and charred hazelnut shell was found in another. Charcoal was found in the fills of seven features, oak being identified in three instances. The relationship of these features to the funerary activity is unclear. However, it can be observed that in comparison with the Phase 1 and 3 features they are morphologically similar, and the range of associated charred plant remains is also similar, so it seems highly probable that they are related to the Middle Bronze Age funerary activity that took place at Berkeley 3.

Dating the Berkeley 3 and Camlin 4 cremation cemeteries
Ben Spillane

The flat cremation cemeteries at Berkeley 3 and Camlin 4 have clear stratigraphic sequences of deposition, which is unusual for this site type. Both site sequences include initial cremation deposits in pits cut into the subsoil (Berkeley 3: Phase 1, Camlin 4: Phase 1a), deposition of a layer of sediment over the initial deposits (Berkeley 3: Phase 2, Camlin 4: Phase 1b), followed by further cremation deposits in pits cut into the sediment layers (Berkeley 3: Phase 3, Camlin 4: Phase 1c). Because of this informative stratigraphy and the availability of multiple radiocarbon dates, the sites were ideal for Bayesian chronological modelling. This method, carried out using OxCal software, involves combining standardised likelihoods (the radiocarbon dates) with prior information (the stratigraphic sequence uncovered by excavation) in order to produce new chronological information about the date, sequence and duration of events at a site (*posterior estimates*) (Bayes 1763; Bayliss et al. 2007, 4–5; Hamilton and Krus 2018, 189–92). The OxCal online manual[19] and other publications (Bronk Ramsey 1995; 1998; 2001; 2009b) provide details of the algorithms used in OxCal and the mathematical processes carried out by the software.

Table 6.3—The radiocarbon dates from Berkeley 3 and Camlin 4. The modelled date probabilities are *italicised* (note: the unmodelled date ranges were calibrated using OxCal ver. 4.4.4)

Lab no.	Context	δ^{13}C ‰	Radiocarbon age (BP)	Unmodelled date (95% probability)	Outlier modelled dates (95% probability)
Berkeley 3					
SUERC-35173	Phase 1: Pre-Clay Cremation Pit C135; Fill C136	-25.4	3295 ± 30	1625–1501 cal BC	*1580–1290 cal BC*
SUERC-35166	Phase 3: Post-Clay Cremation Pit C9; Fill C10	-25.6	3570 ± 30	2023–1778 cal BC	*1530–1190 cal BC*
SUERC-35170	Phase 3: Post-Clay Cremation Pit C114; Fill C115	-25.6	3435 ± 30	1876–1629 cal BC	*1530–1170 cal BC*
SUERC-35171	Phase 3: Post-Clay Cremation Pit C65; Fill C66	-25.9	3290 ± 30	1622–1501 cal BC	*1530–1180 cal BC*
SUERC-35172	Phase 3: Post-Clay Cremation Pit C35; Fill C36	-25.9	3200 ± 30	1513–1417 cal BC	*1490–1180 cal BC*

19 OxCal (version 4.4.4) https://c14.arch.ox.ac.uk/oxcalhelp/hlp_contents.html

Table 6.3—The radiocarbon dates from Berkeley 3 and Camlin 4. The modelled date probabilities are *italicised* (note: the unmodelled date ranges were calibrated using OxCal ver. 4.4.4) *cont'd*

Lab no.	Context	δ¹³C ‰	Radiocarbon age (BP)	Unmodelled date (95% probability)	Outlier modelled dates (95% probability)
Camlin 4					
SUERC-35164	Phase 1a: Pre-Sand Cremation Pit C216; Fill C217	-21.7	3245 ± 30	1610–1440 cal BC	*1510–1410 cal BC*
SUERC-35970	Phase 1a: Pre-Sand Cremation Pit C220; Fill C221	-23.2	3170 ± 30	1505–1400 cal BC	*1500–1415 cal BC*
SUERC-35160	Phase 1c Post-Sand Cremation Pit C45; Fill C97	-24.8	3150 ± 30	1500–1315 cal BC	*1490–1380 cal BC*
SUERC-35163	Phase 1c: Post-Sand Cremation Pit C209; Fill C210	-25.9	3250 ± 30	1615–1445 cal BC	*1490–1385 cal BC*
SUERC-35161	Phase 1c: Post-Sand Cremation Pit C42; Fill C199	-25.9	3210 ± 30	1520–1425 cal BC	*1490–1390 cal BC*
SUERC-35162	Phase 1c: Post-Sand Cremation Pit C206; Fill C207	-21.7	3195 ± 28	1510–1420 cal BC	*1490–1385 cal BC*
SUERC-35969	Phase 2: Cremation Pit C29; Fill C165	-24.2	2830 ± 30	1090–900 cal BC	Excluded from the model as it was stratigraphically unrelated to the spread

All the radiocarbon dates were derived from cremated human bone and have a secure connection between the *dated event* (the death of the individual) and the *target event* (the date of the deposition) (Table 6.3). The only caveat is that cremated bone can be affected by carbon transfer from the fuel wood used in the pyre, meaning that a radiocarbon date result from a cremated bone sample can be significantly older than the actual cremation event (Snoeck et al. 2014, 600). The effects of this offset vary from negligible to significant and can be most clearly observed at Berkeley 3, where two dates from Phase 3 were significantly older than dates from other samples belonging to that phase, and older than the stratigraphically earlier Phase 1 cremation. Analysis of the charcoal associated with the cremations from Camlin 4 and Berkeley 3 has indicated that 70% of the charcoal samples associated with human remains at these sites derived from large oak timbers, so the potential for carbon transfer from much older wood used as fuel is high.

To account for this, a cremation outlier model was utilised which assumes that an old wood offset of uncertain age affected the dated samples and makes allowance for the effects of these outliers caused by the old wood offset (Bronk Ramsey 2009a; Rose et al. 2020, 395–6). The resulting models (Illus. 6.9 and 6.10) and the calculated *posterior density estimates* (chronological estimates for specific events) (Tables 6.4 and 6.5) are described below. The wide date spans of the 95% probabilities are a result of the low number of dates included; nonetheless they are robust, and the 68% probabilities are considered the most likely estimates for the events that took place at these cemeteries (Noble & Brophy 2017, 226).
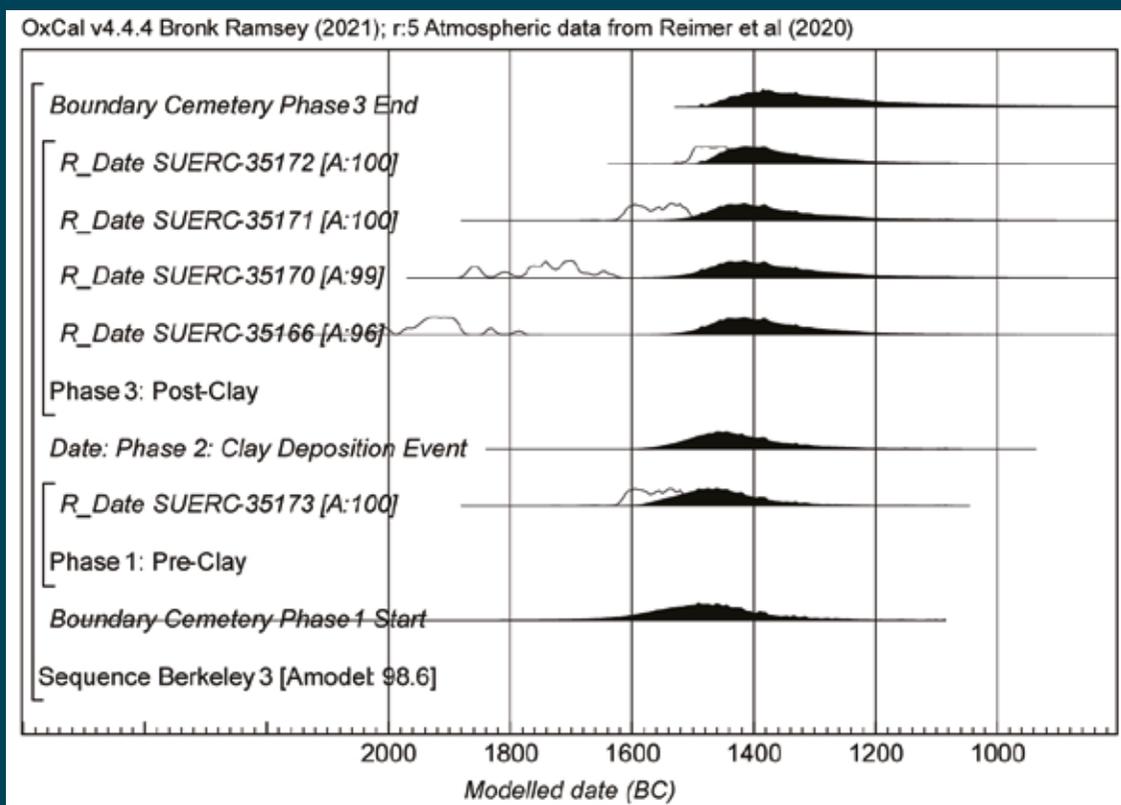
Illus. 6.9 Berkeley 3, plot of OxCal cremation outlier model (B Spillane).

Table 6.4—Results of the Cremation Outlier Model for Berkeley 3

Event	*Posterior density estimate (68.3% probability)*	*Posterior density estimate (95.4% probability)*	Span of dated activity (68% probability)	Span of dated activity (95% probability)
Phase 1 start	*1580–1380 BC*	*1740–1070 BC*	*0–5 years*	*0–5 years*
Phase 2 deposition	*1520–1370 BC*	*1580–1220 BC*	N/A	N/A
Phase 3 end	*1450–1360 BC*	*1490–910 BC*	*0–84 years*	*0–215 years*
Model	A*model = 98.4%*	Old Wood Offset	*20–341 years*	*15–611 years*
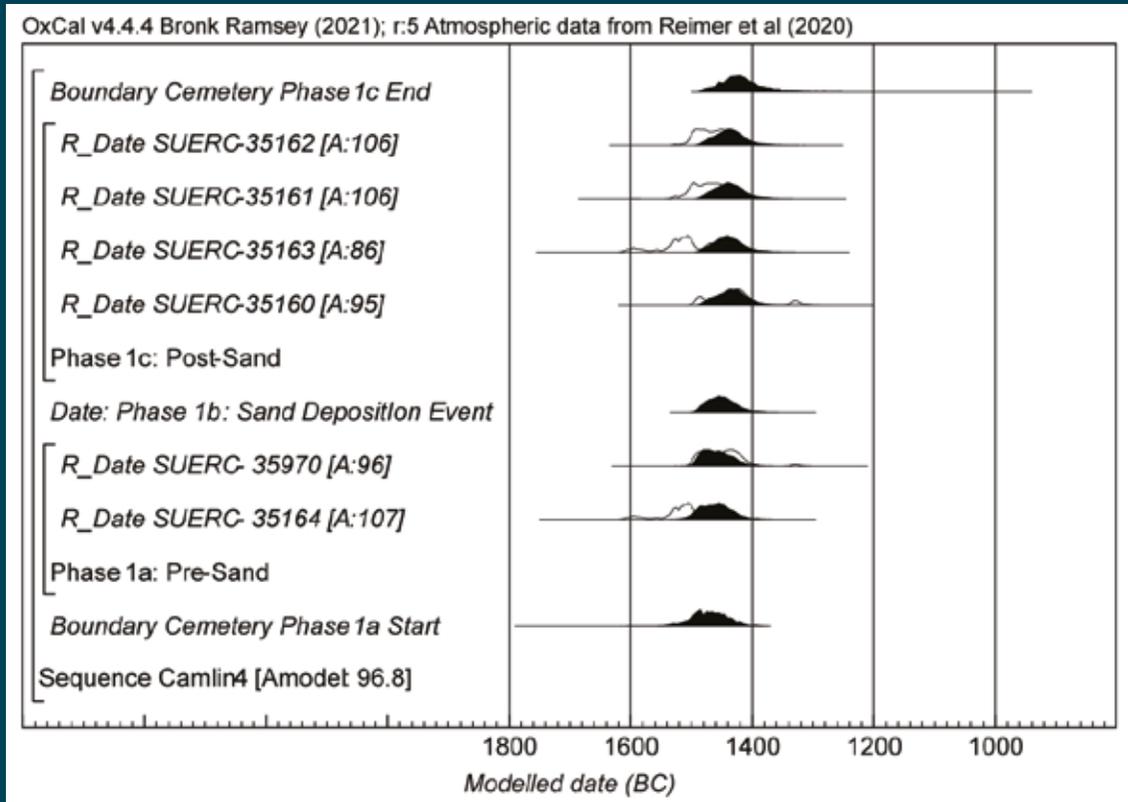
Illus. 6.10 Camlin 4, plot of OxCal cremation outlier model (B Spillane).

Table 6.5—Results of the Cremation Outlier Model for Camlin 4

Event	Posterior density estimate (68.3% probability)	Posterior density estimate (95.4% probability)	Span of dated activity (68% probability)	Span of dated activity (95% probability)
Phase 1a start	1510–1440 BC	1540–1410 BC	0–10 years	0–30 years
Phase 1b deposition	1480–1430 BC	1500–1400 BC	N/A	N/A
Phase 1c end	1460–1390 BC	1490–1330 BC	0–24 years	0–58 years
Model	^{A}model = 98.4%·	Old Wood Offset	20–341 years	15–611 years

The results of the Bayesian chronological modelling indicate that the first funerary activity at both sites was very short lived, probably occurring between the early/late 16th century BC and the late 15th/early 14th centuries BC. An order function in OxCal (Table 6.6) shows a 55% probability that the first burial at Berkeley 3 occurred before that at Camlin 4. This low probability suggests that the first burials at both sites may have occurred around the same time. The sealing of the Phase 1a/Phase 1 burials with the Phase 1b/Phase 2 sediments at both sites probably occurred in the late 16th to early 14th centuries BC and the early to late 15th century BC. The insertion of the Phase 1c/Phase 3 secondary burials into the sealing deposits began after the late 16th to early 14th centuries BC and continued until the late 15th to early/mid-14th centuries BC, at which point Middle Bronze Age funerary activity ended at both sites.

Table 6.6—Percentage probabilities for the relative order of the posteriors from Berkeley 3 and Camlin 4. This is expressed as the probability of the 'event' in the left-hand column (t_1) occurring prior to the 'event' in the top row (t_2). Figures closer to 100% indicate the likelihood that the left-hand 'event' occurred prior to the top event

Probability $t_1 < t_2$						
t_1	t_2					
	Berkeley 3: Ph. 1 Start	*Berkeley 3: Ph. 2 Spread*	Berkeley 3: Ph. 3 End	Camlin 4: Ph. 1a Start	Camlin 4: Ph. 1b Spread	Camlin 4: Ph. 1c End
Berkeley 3: Ph. 1 Start	0%	68%	90%	55%	64%	75%
Berkeley 3: Ph. 2 Spread	32%	0%	82%	30%	41%	57%
Berkeley 3: Ph. 3 End	10%	18%	0%	3%	4%	14%
Camlin 4: Ph. 1a Start	45%	70%	100%	0%	70%	88%
Camlin 4: Ph. 1b Spread	36%	59%	95%	30%	0%	79%
Camlin 4: Ph. 1c End	25%	43%	86%	12%	21%	0%

Bayesian chronological modelling of these sites provides useful insights for the future understanding of Middle Bronze Age cremation cemeteries. At Berkeley 3, we can observe the effects of carbon transfer on dates derived from cremated bone, and how it could skew our understanding of the site's chronology, as without modelling, it could be assumed that burial activity at the site began in the Early Bronze Age. At Camlin 4, we can see how modelling the dates provides a much tighter chronological resolution than would be possible by assessing the dates independently of the stratigraphic data.

The human remains and their treatment

The Bronze Age human remains from these four burial places consisted exclusively of cremated bone, most of which was deposited into pits, though at Stokestown 2 and Camlin 3, some were placed into an urn and/or cist beforehand. Despite the brief floruit of inhumation at the start of the Early Bronze Age (2200–1900 BC), cremation was the most frequent funerary rite of the Irish Bronze Age, just as it had been during the preceding Neolithic. The various steps involved in the cremation process from pyre preparation through to final interment of the burnt human remains were complex and time consuming, yet this tradition endured, suggesting that it represented a highly important aspect of mortuary activity on this island.

A total of 28 pits (32 pit/urn deposits)

and two cists containing cremated human bone were excavated. The small size and fragmentary nature of the cremations from most graves (see Tables 6.2 and 6.8; Illus. 6.11) constrained the recording of more information about age, pathologies, as well as the detailed examination of the minimum number of individuals (MNI) and their sex. While the lack of recoverable information from these burials is frustrating, this appears to be a direct consequence of the characteristic ways of treating human remains during the Bronze Age (discussed below) and so is in itself highly informative of ceremonial and funerary practices at this time. The MNI for cremation burials on this project is 32: just one individual was identified in each burial (see Table 6.2), as is typical of the Bronze Age (Grogan 2005b; Grogan et al. 2007). In many instances it was only possible to determine that the remains were human in origin, though 16 adults were recognised. Eight of these came from the flat cemetery at Berkeley 3, five from Camlin 4, two from Stokestown 2, while the Early Bronze Age urn burial at Camlin 3 contained the remains of an adult male who suffered from spinal joint disease caused by constant

stress being placed on his spine. This was the only burial to provide information about pathology.

The amount of bone in these burials varied greatly from 0.3–1,971.1 g (Table 6.2), the average weight being 192.1 g. The weight of a modern adult cremation averages 2,430 g, ranging from 876–3,784 g (Warren & Maples 1997). There is a very wide variation in the quantity of bone recovered from archaeological cremations, but on average, only 40–60% (350.4–2,270.4 g) of the expected bone weight is recovered from these burials (McKinley 1997, 137). By McKinley's (1997) criteria, only two (6.5%) of the cremation pit burials and two inurned burials from this project represent whole cremations (Table 6.7). The largest of these was the Early Bronze Age urn burial at Stokestown 2 which comprised 1,971.1 g of bone and was identified as the remains of an adult, possibly a male. Irish burial practices at this time show a concern with burying the 'whole person' as it was common for only parts of the entire body to be retrieved from the pyre remains (Grogan 2005b, 67). However, it must be noted that two of the Early Bronze Age burials at Stokestown 2 consisted of much lesser amounts of human bone (see Table 6.2). These seem to be a precursor to later Bronze Age burial practices, which saw a dramatic reduction in the amount of human remains that were placed in graves (Grogan 2005b; Grogan et al. 2007). However, it also forms part of a growing body of evidence indicating that partial burials were being deposited before the Middle Bronze Age (e.g. Troy 2015, 137; Eogan 2011b, 276).

The weight of the human bone deposit from the majority of the cremation pit deposits is very low. Only nine out of 32 burials exceed 100 g in weight, most of which range between 100 g and 500 g. It appears
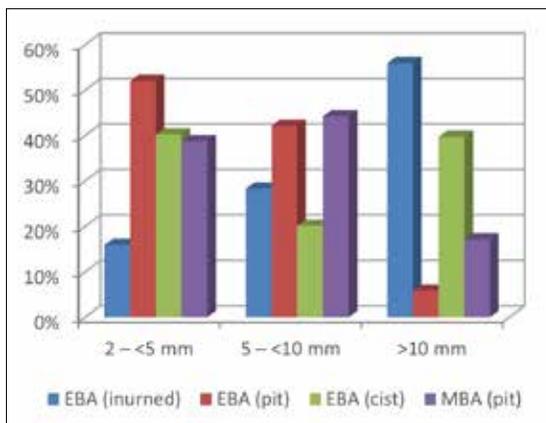
Illus. 6.11 Degree of fragmentation in cremation burials per period (Rubicon Heritage Services Ltd).

Table 6.7—Preservation of cremated bone in substantial urn and pit burials

Site	Context	Feature	Period	Weight (g)	>10 mm (%)	Max. fragment size (mm)
Stokestown 2	040	Urn 010	EBA	1971.1	50.1	89.25
Camlin 3	019	Urn 019	EBA	1903.5	62.9	118.62
Camlin 4	217	Pit 216	MBA	371.7	13.1	39.45
Berkley 3	036	Pit 035	MBA	504.8	17.5	49.18

that the Middle Bronze Age pit graves on this project generally contained a much lower average quantity of bone per burial in comparison to the Early Bronze Age examples (Table 6.8), though a few contained large amounts for this period. The low quantities of cremated bone in most of the graves suggest that only a small selection of the cremated human remains was extracted from the pyre for final burial, though the effects of truncation on the features by ploughing or other activities cannot be quantified.

The majority of the identifiable elements of the human body within the cremated remains from the two flat cemeteries were skull fragments, perhaps suggesting that

these were specially selected for deposition. Such a preference for the burial of bones from the head during the Bronze Age has been noted elsewhere (see Lynch & O'Donnell 2007; Buckley 2005, 328; Ó Donnabháin 1988, 193–4). However, this trend may simply reflect the fact that these were the largest as well as densest of the human bones, thereby making them the most visually striking and easiest to extract from the pyre.

These partial deposits of human bone are known as 'token' burials and are thought to have served as a representation of the whole individual (Cooney & Grogan 1999, 136). Unlike the Early Bronze Age practices,

Table 6.8—Quantification of dated burials per site

Site	Period	No. dated burials	Smallest burial (g)	Largest burial (g)	Total dated burial (g)	Average burial (g)
Stokestown 2	EBA	3	21.4	1971.1	2,092.3	697.4
Camlin 3	EBA	1	—	—	1,903.5	1,903.5
	Sub Total	*4*			*3,995.8*	*999.0*
Camlin 4	MBA	6	8.1	371.7	641.9	106.9
Berkeley 3	MBA	7	14.8	504.8	1,123.9	160.6.1
	Sub Total	*13*			*1,765.8*	*135.8*
	Total	*17*			*5,761.6*	*338.9*

it was less important to deposit the whole body or maintain its physical integrity. It appears that a greater emphasis was placed on the various processes involved in these potentially extended funerary rituals, rather than on the final interment (ibid.). The later stages of funerary rites seem to have involved the deliberate fragmentation and acquisition of the cremated bones by mourners who may have kept them as tokens of the deceased (Brück 2006a; 2006b; 2009). This exchange, retention and deposition of the human remains from pyres in a variety of contexts is indicated by the discovery of cremated human bone in Bronze Age houses among other settlement settings (see Cleary 2005).

On this project, there is little variation in the degree of fragmentation displayed by most of the Early and Middle Bronze Age cremation simple pit burials (Illus. 6.11; Table 6.7) with only 17% of all the bone measuring greater than 10 mm in fragment size. However, the contents of the Early Bronze Age inurned burials provide a notable contrast to this, with over half (55.9%) of these bone fragments larger than 10 mm, indicating no intentional crushing (Illus. 6.11; Table 6.7). Doubtless, the difference between this and the pit burials is due to the additional post-depositional protection offered to the burial by placing it in an urn (McKinley 1994a) but may also be reflective of variations in Bronze Age burial practices.

It has often been argued that cremated bones were intentionally crushed or pounded prior to deposition (Buckley 2005; Ó Donnabháin 1988). However, there appears to be a lack of conclusive osteological evidence that deliberate pre-burial fragmentation of cremated bone was a practice employed in the Bronze Age. Fragmentation can be caused naturally by a large number of factors, including shrinkage,

fissuring and warping of bone from the oxidation process on the pyre; the raking of the remains during the cremation process; the collection and the subsequent interment of the remains; and post-depositional processes (see McKinley 1994a; also see discussion in Geber 2009, 228–30). In an examination of British cremation burials which found no evidence for deliberate post-cremation crushing, over half of all the bone fragments were greater than 10 mm in size (McKinley 1994a, 340). Based on this, it has been argued that if more than 50% of the fragments are less than 10 mm, then it is quite probable that the bone was deliberately reduced (Lynch & O'Donnell 2007, 112). As is so often the case (Grogan 2005b, 67), most of the Bronze Age burials on this project are highly fragmented; only 18% of the bone is greater than 10 mm, while 75% of it is less than 5 mm (Illus. 6.11; Table 6.7). These uniformly high levels of fragmentation suggest that the buried bone has been intentionally crushed.

The cremated human remains from all four burial sites displayed dehydration such as horizontal, longitudinal and U-shaped fissuring characteristic of intense burning. This also indicates that the corpse was fleshed when burnt, with fat still attached to the bone, probably soon after death as opposed to the burning of drier de-fleshed (excarnated) bones (McKinley 1994b, 78). The colour of the majority of cremated bone from the burials at Stokestown 2 (98% white), the Camlin 3 urn burial (97.3% white) and from the pit burials (96.8% white) at the Camlin 4 and Berkeley 3 cemeteries indicates that the bone was completely oxidised at temperatures of over 800°C (Illus. 6.12). This indicates that there was expert knowledge of pyre technology during the Early and Middle Bronze Age, relating to the quantity
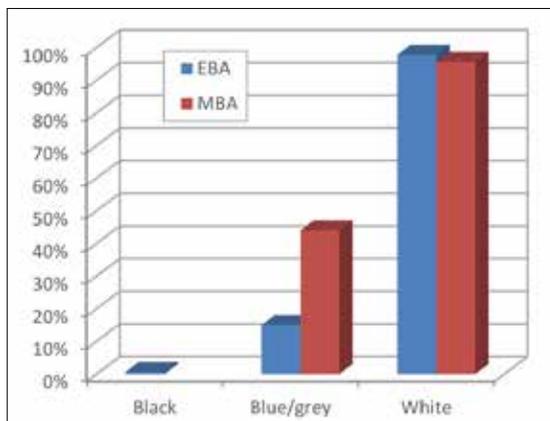
Illus. 6.12 Efficiency in cremation burials per period (Rubicon Heritage Services Ltd).

and type of fuel used to build the pyre (see below), temperature attained in various parts of the pyre, length of time over which the cremation was undertaken and the oxidising/reducing conditions in various parts of the pyre (McKinley 2006).

Almost all of the charcoal from the burials at all four sites was identified as medium to large timbers of oak representing large branch and trunk wood. At Stokestown 2 and at both of the flat cemeteries, much lesser amounts of small hazel, ash and yew branches were also present. The oak seemed to have been deliberately selected as fuel for the cremation pyre, while the branches of other species may have been used as kindling. The consistent predominance of oak charcoal in Bronze Age cremation pits has recently been recognised and it is now considered to have been specially chosen as the main fuel for funerary pyres because of its widespread availability and its ability to produce the very high temperatures required for successful cremation (O'Donnell 2007; 2009).

No evidence for funerary pyres was detected at any of the four burial sites, so it is possible that these were located beyond the limits of the excavation or that the human remains were burnt some distance from where they were finally deposited. However, questions remain about whether or not pyres from this period always left a clearly recognisable archaeological trace (Parker Pearson 1981, 7; Grogan et al. 2007, 110; Geber 2009, 222–4) and only a few such sites have been found on Bronze Age burial sites in Ireland (see Grogan 2005b, 67).

Discussion of the graves and cemeteries

The mid-portion of an upside-down urn containing the cremated remains of an Early Bronze Age adult male was found at Camlin 3 and this was decorated with scored horizontal and oblique lines (Grogan & Roche 2011b). At Stokestown 2, two of the burials were interred in stone-lined cists, one of which was found with an encrusted urn with an open chevron ornamentation around the neck. The third cremation was uncovered in an earth-cut pit in association with an unusual bipartite vase with simple chevron ornamentation around the neck. The Early Bronze Age burial of cremated human remains in an inverted vessel within a pit became the dominant funerary rite towards the end of this period (Grogan 2005b; Brindley 2007). While the pit grave at Camlin 3 was discovered in apparent isolation, contrasting with the cemetery identified at Stokestown 2, burials of this period can occur both singly or in cemeteries and so the possibility remains that Camlin 3 may be an outlier of an Early Bronze Age cemetery which is beyond the boundary of the land-take for the bypass.

The upper part of the Camlin 3 urn had broken off some time before it was buried, thus it is unknown if this had been decorated

with either a collar or cordon. Both collared and cordoned urns were current in Ireland when this burial occurred (Grogan & Roche 2010, 41). Collared urns were used from 1900–1650 BC, while cordoned urns date from c. 1880–1500 BC (Brindley 2007, 140, 152). Both types of urn are predominantly found in funerary contexts, though these types of pots are relatively uncommon in the south-east of Ireland compared to other regions, particularly the north-east (Grogan 2005b; Brindley 2007, fig. 34, 38). In Wexford the current distribution of these vessels is confined to the eastern part of the county; however, burials in collared or cordoned urns have been found in the adjacent parts of counties Waterford and Kilkenny. A quartz pebble had been placed with the cremation inside this urn; stones of this kind have occasionally been found with other Early Bronze Age burials in Ireland, such as Rathpatrick 38–39, Co. Kilkenny (Wren & Price 2011b), and Edmondstown, Co. Dublin (Mount et al. 1993). The large boulder beside the Early Bronze Age burial at Camlin 3 may have acted as a natural grave marker. This resembles the clustering of Early Bronze Age Vase Tradition burials adjacent to bedrock outcrops at Carmanhall, Co. Dublin, and Cloghskelt, Co. Down (Reilly 2005; Waddell 1990, 76, 78).

The Stokestown 2 bipartite vase survived *in situ* but had been shattered, most probably as a result of agricultural activity. The pot was made of poor-quality fabric and the exterior was worn, obscuring some of the simple decoration. Such vessels are occasional occurrences in the Early Bronze Age Irish tradition, such as the three bipartite vases at Blanchfieldsbog, Co. Kilkenny; the chevron pattern on Blanchfieldsbog (Ó Ríordáin & Waddell 1993, no. 534) is particularly reminiscent of the Stokestown example

(Waddell 1990, 101). The Stokestown 2 encrusted urn, also found *in situ*, had been similarly damaged by agricultural activity. This large, well-made vessel had a slightly everted rim and a form that can be widely paralleled with examples such as those from Brownstown, Co. Kildare, and Clonshannon, Co. Wicklow (Kavanagh 1973). It can be dated to the period 1900–1830 BC (Brindley 2007, 195–7). Both of the Stokestown 2 vessels belong to the Vase Tradition. The distribution of contemporary burials in south Wexford is scattered; Stokestown 2 can be compared with burials at Ballyvelig, Dunganstown, Misterin and Oldcourt which form part of the same Early Bronze Age tradition. Burials of the same tradition also occur in south Kilkenny and east Waterford (Waddell 1990).

A number of the New Ross Bypass cremations were interred in simple pits that appeared to have been unmarked. These were small sub-circular bowl-shaped features generally 0.35–0.48 m in diameter and less than 0.22 m deep. Three pits—one at Camlin 4 and two at Stokestown 2—were stone lined. The former contained an upright Middle Bronze Age pot which may represent a disturbed burial; the latter contained the Early Bronze Age encrusted urn. A shallow deposit of sandy soil was found overlying the earliest burials at Camlin 4 and Berkeley 3. Rather than demarcating these burials, this seems to have acted as a sealing layer in a similar manner to the clay capping found overlying individual pits at other cemeteries such as Killoran 10, Co. Tipperary (Stevens 2005; Grogan et al. 2007). At Berkeley 3, a flat stone partly overlay one of the Middle Bronze Age burial pits; pit burials with small capstones have been observed at comparable sites (Grogan 2004b, 67). While post-holes were found among the clusters of burials

at both sites, which could be compared to the timber marker posts known from other cemeteries of similar date (e.g. Stevens 2005; McQuade et al. 2009, 142), the location of these post-holes seemed quite sporadic and did not display direct associations with many of the burials.

The Middle Bronze Age cremation pits at Camlin 4 and Berkeley 3 are paralleled by many other similar discoveries of the same date from across the country. They are generally found in unenclosed flat pit cemeteries (Grogan 2004b; Grogan et al. 2007), though they have also been discovered as isolated pit burials, or in ring-ditches and barrows, as well as within secondary contexts in earlier megalithic tombs (ibid.). The numbers of burials occurring in these later Bronze Age cemeteries range from small clusters of two or three pits up to as many as 50 or 60, as was the case at Mitchelstowndown, Co. Limerick, and Templenoe, Co. Tipperary (Grogan 2005b, 185; McQuade et al. 2009, 142). The flat cemeteries at Camlin and Berkeley comprised 14 and 11 pit graves, respectively; however, clustered among the burials on both sites were an additional 18–20 pits that did not appear to have contained human remains. Eight of these produced small quantities of burnt bone, but the quantity and fragment size of this bone was too small to conclusively establish whether it derived from an animal or human.

Significantly, there was very little morphological difference between these pits and the cremation burials. The same artefactual and ecofactual materials such as lithics and rubbing stones that were retrieved from the cremations were also found in these other pits. For example, their fills contained charcoal from large oak timbers just like that found in association with the human bone, thereby suggesting that all of these pits were filled with pyre debris (see above). While those pits with minute quantities of unidentifiable cremated bone may represent token burials comprising a tiny percentage of highly comminuted human bone from the pyre (see above), many of these features never received any such deposit. Bone that has been burnt survives quite well within the ground, even in acidic soils (Mays 1998, 314; contra Knight 1985), so it would almost certainly have been identified during excavation if it had been deposited. The complete absence of cremated bone from some of these pits raises interesting questions, perhaps suggesting that people intentionally excluded it from some of these deposits (see discussion in Grogan et al. 2007, 118). Non-burial pits have been identified at later Bronze Age flat cemeteries such as Killoran, Co. Tipperary, and Kiltenan South, Co. Limerick (Stevens 2005; Grogan et al. 2007). It has been suggested that these represent cenotaphs or bodyless burials which served some role in the funerary ritual that did not require the inclusion of human remains (Grogan 2004b, 67).

Non-ceramic grave goods are only occasionally found with Middle Bronze Age burials (Grogan 2004b, 62; 2005b, 184), but an unusual range of objects was associated with the burials in the Camlin 4 cemetery. One burial contained a fragment of chert debitage, a quartz flake and a heat-fractured quartz pebble, all of which are known from Early Bronze Age burials, but not from later examples. Another Middle Bronze Age cremation dating from 1500–1390 BC (SUERC-35970) was found with a possible burnt sandstone rubbing stone, quartz crystal debitage, and a previously unrecognised type of stone bead or toggle (Illus. 6.5). This personal ornament

represents an atypical discovery in a Middle Bronze Age context. Beads were deposited as grave goods at the end of the Early Bronze Age and the beginning of the Middle Bronze Age (c. 1700–1500 BC), when there is a noticeable increase in the small numbers of so-called 'wealthy burials' containing grave goods. These include beads made of various materials ranging from those of stone found at Caltragh, Co. Sligo (Danaher 2007, 71–3), to faience examples such as that recently found with a burial at Moyle Big, Co. Carlow (Troy 2015). Many of these finds are associated with graves of the Cordoned Urn Tradition (Grogan 2004b, 69; Brindley 2007, 370–1). The date from the burial at Camlin 4 suggests that it represents the tail-end of this tradition of depositing personal ornaments with the dead.

Another cremation pit at this cemetery contained a range of heat-affected sandstone objects, including rubbing stones or pounders and a possible saddle quern fragment that was highly worn and smoothened on all sides, which seem to have been burnt on the funerary pyre. Grinding equipment has occasionally been found with Bronze Age burials in Ireland. At Caltragh, Co. Sligo, fragments of a quern-stone were found with a cremation thought to be of Middle Bronze Age date (Danaher 2007). At Ballyveelish, Co. Tipperary, a quern was used to cover the top of an Early Bronze Age cist burial (Doody 1987), while another quern was found in close proximity to cremation burials and pyre sites in Ballyvelly, Co. Kerry (Dunne 1999). While these objects were used to grind grain, it is also possible that they played some role in funerary rituals including the crushing of bone.

Quern-stones seem to have been regarded as highly symbolic objects; they are often found to form part of special deposits in significant locations. The deposition of grinding equipment in Middle Bronze Age burials has also been noted in Britain (Brück 2006a, 302–5), where it has been argued that these may have been seen as metaphorical representations of the human body, its lifecycle and associated qualities. Interestingly, the fragmentation, burning and deposition of the possible quern fragment at Camlin 4 echoes the treatment of the human remains that it accompanied.

Small quantities of charred cereal grains were found in cremation pits at three of the four burial sites. At Camlin 3, a single grain of hulled barley was found with the Early Bronze Age cremation. At Camlin 4, charred hulled barley grains were found with one burial, while an unidentifiable charred cereal grain and a few oat grains were found with another, presumably both of later Bronze Age date. At Berkeley 3, charred cereal grains were found with two Middle Bronze Age cremations; the species of these could not be identified due to their poor condition. Barley represents one of the most common crop types found in Irish later Bronze Age contexts (Johnston 2007, 70). The oat grains are likely to be weeds, unless they are intrusive, as this crop was not cultivated in Ireland until the early medieval period (Monk 1985/86). Although no cereal grains were recovered from the cremations at Stokestown 2, a small quantity of hazelnut shell was retrieved from one of the pits.

The discovery of these charred grains within pyre debris in burial pits suggests that these had also been burnt during the cremation process. It has been argued that the presence of large quantities of charred grains in cremation pits may reflect the deliberate addition of foodstuffs to the funerary pyre (Johnston 2007). While the small amounts of the grains with these

burials may suggest that their inclusion was accidental, their occurrence with burials at three of the sites suggests the possibility that these were deliberately selected for this purpose. Cereals may have been seen as potent symbols of regeneration because of their perennial lifecycle. The heating and grinding of cereals to transform them into edible food mirrors the treatment of cremated human remains, and a conceptual link may have existed between them (Brück 2006b, 304–5). These rituals may have served to portray the cyclical nature of existence, namely that life comes from death, and to remind mourners that death represented the beginning of another life-stage, rather than the end (Bloch & Parry 1982).

At Camlin 4, the partial remains of a Middle Bronze Age plain domestic bucket- or barrel-shaped vessel of a type dating from c. 1500 BC (Grogan & Roche 2009; 2010) was found in an upright position within a stone-lined pit (Illus. 6.7). It clearly contained pyre debris, but no human bone was identified. Although the pot was probably deposited intact, only the lower portion survived as the upper part appears to have been truncated by ploughing. This probably represents a disturbed burial, as it seems to mirror a broader trend towards placing cremations in upright rather than inverted pots at this time in Ireland (see Grogan 2004b, 64). It is also possible that this is a bodyless burial known as a cenotaph (see above). Pottery was also uncovered at the Berkeley cemetery, where six sherds were found accompanying two Middle Bronze Age cremation burials. The sherds were most likely from domestic variants of the cordoned urn dating from c. 1600 BC (Grogan & Roche 2009; 2010, 42). The deposition of fragmentary sherds of coarse ceramics with cremations represents another feature of later Bronze Age funerary

practices in Ireland (Grogan 2004b, 65; Grogan et al. 2007, 120; Grogan & Roche 2010, 41).

In contrast to the Early Bronze Age urns, both types of pottery from the Middle Bronze Age cemeteries are regularly found in domestic contexts and only occasionally in a funerary setting (see Grogan & Roche 2009), as it is more common for later Bronze Age cremations to be unaccompanied by any ceramics (Grogan 2004b). Interestingly, carbonised residue was identified on the interior surface of the Middle Bronze Age vessel from Camlin 4, indicating that it had previously been used for cooking. While this is typical of the period (Grogan & Roche 2009; 2010), the selection of vessels that had been used for everyday activities for inclusion with burials offers insights into people's belief systems at this time. These pots may have been chosen to represent or highlight the shared links between the living and the dead by depicting previous collective activities such as the preparation and consumption of food (see Brück 2006a; 2006b). The broken nature of the sherds associated with one of the Berkeley 3 burials may have symbolised the end of the life cycle of the deceased.

Blue-green staining was noted on cremated bones from the Early Bronze Age inurned burial at Camlin 3 and from five of the Middle Bronze Age burials at Berkeley 3. Although no metal artefacts were found within any of the deposits, the discolouration possibly indicates that copper or bronze objects were deposited in the grave but have subsequently corroded. Alternatively, this may simply represent natural mineral staining, and this latter scenario seems more likely for the later Bronze Age burials due to the fact that metal objects almost completely ceased to be deposited with the dead after

Illus. 6.13 Artistic depiction of Bronze Age funerary practices showing that interment of the remains at an ancestral burial ground is the last of a series of social actions (J Millar).

the Early–Middle Bronze Age transition.

Unfortunately, in the absence of suitable demographic information, it is difficult to interpret the nature of these cemeteries. However, we know from other cemeteries that only a small proportion of the population received a formal burial that left a recognisable archaeological trace within the landscape (Cooney & Grogan 1999, 132). The cemetery at Stokestown 2 possibly represents a focal point for the prehistoric community that once occupied this locale. The same can be said for the hillside at Camlin, given that the Middle Bronze Age cemetery at Camlin 4 was located just 150 m away from the Early Bronze Age cremation at Camlin 3 suggesting that this was deemed a particularly suitable place for funerary activity. It is open to question whether the cemeteries at Camlin and Berkeley represent familial or household burial grounds or places where specially selected representatives of the local corporate group were interred (see Fontijn 2008, 94) (Illus. 6.13).

Those burials associated with objects such as pottery or a stone bead on this project need not be seen as wealthy or high-status graves, despite the rarity of grave goods in the later Bronze Age, nor should too much be made of the absence of such items from most of the burials (see Grogan 2004b). Grave goods represent interactions with the dead that fulfil the requirements of the mourners and need not be considered as personal possessions; instead, they depict the relationship between the living and the deceased (see Barrett 1990, 182; 1994, 116–19, 121–3). While the burials appear to have been deposited singly, their occurrence together within a flat cemetery suggests a particular concern with locating specific people within a broader arrangement of social relationships including both the

recently dead and those long-departed, perhaps indicating a particular form of communal tie between them (Bradley 2007, 162–8). This may have served to establish or maintain the shared identity of a local community and their sense of belonging to a specific place (Cooney & Grogan 1999, 132).

Settlement and occupational activity

Although no Bronze Age houses were found on the bypass, six sites produced varied evidence for occupation (Illus. 6.1). They comprised both clusters of pits and isolated examples and were widely dispersed along the route of the road scheme. None of these sites represent actual settlements, but they clearly testify to the inhabitation of this area during the second millennium BC. An Early Bronze Age pit occurred at Camlin 8, on the lower southern slopes of Camlin Hill, north of Slievecoiltia and overlooking the River Barrow. Just 500 m west of this, a Middle Bronze Age pit was discovered close to the Barrow's estuarine wetland at Landscape 2. An Early–Middle Bronze Age hearth and pits were excavated at Stokestown 1, while a cluster of pits of broadly the same date were excavated on the southern lower slope of Lacken Hill at Lacken 1. More Middle Bronze Age pits were found at Rathgaroge 2 on an elevated tract of fertile flat ground immediately to the north of this hill. At Ballyverneen 2 on the County Kilkenny side of the River Barrow three small pits were uncovered, one of which produced a Middle–Late Bronze Age date.

At Camlin 8, two small pits were uncovered. One of these (0.30 m by 0.29 m by 0.09 m) was filled by a dark deposit with inclusions of pink heat-affected clay and

charcoal fragments from both oak and non-oak species. The oak charcoal returned an Early Bronze Age radiocarbon date of 1880–1630 BC (SUERC-35206). A large stone was found in the middle of the adjacent pit, but no indications of its function or date were uncovered.

The investigations at Landscape 2D revealed a sub-rectangular Middle Bronze Age pit (0.90 m by 0.55 m by 0.35 m). It had stone lining along one side and was filled by a deposit containing charcoal, a hulled barley grain and a sherd from a Middle Bronze Age plain domestic bucket- or barrel-shaped vessel. The interior surface of this ceramic displayed traces of carbonised residue indicating that it had been used to cook food. Another pit was found nearby, but no evidence was found to suggest that they were contemporary. The pottery indicates that the activity at this site could have been contemporary with the use of the *fulacht fia* at Landscape 3 approximately 0.20 km to the north-east and would have

been contemporary with the first phase of funerary activity at Camlin 4, approximately 0.65 km to the north-east.

At Stokestown 1, a sub-circular hearth (1.6 m by 1.04 m by 0.28 m) was discovered in the eastern part of the site. Scorched at the base, it contained a basal deposit rich in oak charcoal with a single charred oat grain also identified. The uppermost hearth deposit produced oak, hazel and fruit-wood charcoal, along with a single grain of charred hulled barely, some unburnt mammal bone and evidence of wild taxa. A piece of hazel charcoal from the upper fill produced a radiocarbon date of 1727–1517 BC (SUERC-53863), placing the activity in the Early/Middle Bronze Age maybe a century or two after the interment of the burials in the Stokestown 2 flat cemetery approximately 0.45 km to the south-west. An additional six pits were identified across the remainder of the site, though all contained relatively sterile fills.

Excavations at Lacken 1 revealed the

Illus. 6.14 Rathgaroge 2 post-excavation view facing north-east (Rubicon Heritage Services Ltd).

presence of five widely spaced pits and a post-hole, mostly containing archaeologically sterile deposits. However, an oval pit (0.74 m by 0.46 m by 0.12 m) contained frequent oak and non-oak charcoal and occasional charred hazelnut shell inclusions, radiocarbon dated to the Middle Bronze Age 1420–1260 BC (SUERC-35235).

A dense cluster of seven closely spaced sub-circular pits (c. 0.50 m by 0.44 m by 0.11 m) was excavated at Rathgaroge 2 (Illus. 6.14). The shallowness of these features suggests that their uppermost levels may have been removed by agricultural activity. These were all filled with dark deposits incorporating frequent pieces of oak charcoal. The ring curvature of the charred fragments indicated that large timbers had been specially selected, probably for fuel. One of the pits produced a small quantity of charred hazelnut shell fragments, while another contained occasional fragments of highly fragmented burnt bone which lacked any identifiably human elements and could represent burnt animal remains. This bone produced a Middle Bronze Age radiocarbon date range of 1440–1290 BC (SUERC-35174). Based on the similarities in the shape, sizes and contents of the other pits, as well as their occurrence in close spatial proximity, it is thought that all of these form part of a broadly contemporary pit group.

Three small pits were identified at Ballyverneen 2. A circular pit (0.66 m in diameter, 0.20 m deep) was heavily oxidised and contained oak and non-oak charcoal as well as a single charred oat grain and some burnt bone and stone inclusions. A fragment of apple/pear/hawthorn charcoal from the fill produced a Middle/Late Bronze Age radiocarbon date of 1193–933 BC (SUERC-53860). A second sub-circular pit (0.70 m in diameter, 0.11 m deep) contained a charcoal-rich fill, the charcoal being mostly oak. The third pit contained well-fired clay fragments which appeared to be the remains of a fired clay lining from another feature. Based on the fabric a post-medieval date for the feature is considered likely.

The paucity of artefacts and ecofacts within the pits from these sites limits our ability to understand the function of the pits or to relate them to other activity in the area. Most of these sites were situated on fertile well-drained sloping land with easy access to the River Barrow, suggesting that they were well located for settlement. The presence of a sherd from a pot used for cooking, as well as a charred barley grain and hazelnut shells in various pits, indicates that at least some of these contain occupational debris. It is possible that these features may have been part of settlements located immediately beyond the bypass land-take boundary; however, the dispersed nature of these pits and the small quantities of artefactual and ecofactual materials imply that these features represent short-term or episodic activity occurring in the vicinity of much more densely settled areas.

In the case of the pit-cluster at Rathgaroge 2, it is tempting to interpret the pit containing the unidentifiable cremated bone as a token burial. The fragmentary and partial nature of Middle to Late Bronze Age burials often makes it difficult to identify cremated bone as definitively human. Indeed, the charcoal-rich contents of this pit and those adjacent to it greatly resemble the pyre debris found in the cemeteries at Camlin and Berkeley, as at those sites, the charcoal originated from large oak timbers. However, the complete absence of any bone from any of the other pits suggests that the activity at Rathgaroge was probably not of a funerary nature.

One of the few consistent aspects of the pits from the various sites is that many of them contain burnt materials, most often charcoal, but yet display no evidence for *in situ* burning. This indicates that the deposits within the features originated elsewhere, presumably nearby and were then gathered up before being placed into a pit. It may even be the case that some of these pits were dug for the specific purpose of receiving the debris. Just like the Neolithic pits (discussed in Chapter 5), settlement detritus may have been deliberately deposited into these pits as part of ritual practices, perhaps to mark the end of whatever events had been conducted in each place.

Fulachtaí fia

Fulachtaí fia are the most common prehistoric monument in the country; it has been estimated that over 7,000 examples have been identified (Power 1997; Hawkes 2018). While the classic *fulacht fia* comprises a relatively low grassy mound of crescent or U-shaped plan, these are most often revealed during excavation as a ploughed-out spread of burnt stone and charcoal in the plough-soil with a number of consistent features: a trough—usually a steep sided, flat-based pit which has been lined with wood, stone or wicker—and traces of fires, sometimes represented by a formal hearth.

The exact function of *fulachtaí fia* remains unknown, but it can be stated that these monuments are associated with debris from the use of hot stone (pyrolithic) technology to heat water. Stones were gathered and heated in a fire before being dropped into a trough containing cold water, thereby causing the water to boil and the stone to shatter (see Hawkes 2018 for full discussion

of possible uses). It has been suggested that these could represent cooking places which may have been utilised for communal feasting (O'Kelly 1954; Hawkes 2018). Other interpretations of these sites include bathing places or saunas (Barfield & Hodder 1987; Eogan 2007), as well as textile-processing or leather working (e.g. Jeffrey 1991; Brown et al. 2016) and beer brewing sites (Quinn & Moore 2009). The widespread distribution and apparently regular use of the sites implies that these may have fulfilled a range of functions, rather than any one specific purpose.

Seven *fulachtaí fia* were uncovered during the advance archaeological works in the townlands of Arnestown, Berkeley, Camlin, Rathgaroge and Ryleen. A further three *fulachtaí fia* were identified and excavated during the construction stage in Arnestown, Lacken and Landscape (Illus. 6.1).

The full extent of each *fulacht fia* was excavated, except for that at Camlin 2, which continued beyond the limits of investigation. They were all located in relatively low-lying areas or in close proximity to a water source. Camlin 2 and Landscape 3 were located either side of the Camlin Stream, where it flowed around the base of Camlin Hill, upstream from its confluence with the River Barrow. Components representing activity (troughs, pits and stake-holes) often associated with the use of *fulachtaí fia* were recorded at three widely spaced areas at Arnestown 2 (Areas A, B and E) and at Arnestown 4. These were located on poorly drained land in the valley of the Maudlins Stream. The *fulacht fia* at Ryleen 3 was in the lower terrain (50 m OD) to the south of Lacken Hill beside the Maudlins Stream. The example at Lacken 4 was found in a slightly more elevated position (110 m OD) on the south-east-facing slope of Lacken Hill. Just north of this, three *fulachtaí fia*—

Illus. 6.15 Histogram showing the distribution of radiocarbon dates from *fulachtaí fia* on the project (J Eogan).

Berkeley 1 and 2 and Rathgaroge 1—were found just 200 m apart on a slightly elevated tract of flat ground (90–110 m OD) drained by the Gataniska Stream which drains into the River Barrow at Macmurroughsisland to the north-west. It has been noted that *fulachtaí fia* are often found in clusters in areas that were suitable for their use (Hawkes 2018, 143–4). For example, in County Clare *fulachtaí fia* usually occur in groups of up to four sites within 0.5 km of each other (Grogan 2005a, 43).

A total of 24 radiocarbon determinations were obtained from contexts associated with the use of the 10 excavated *fulachtaí fia,* though it should be noted that activity at four of the sites is dated based on single radiocarbon dates. The calibrated ranges of the dates cover a period extending from

the Early Bronze Age to the Early Iron Age (Illus. 6.15). Alan Hawkes (2018, 118–19) in his analysis of the chronology of burnt mounds stressed the need to evaluate the dating of these sites based on the certainty of association of dated samples with the use of the site. When the contexts of the dated samples are examined, it can be seen that one is from the fill of a stake-hole in a trough and eight are associated with trough fills. The calibrated ranges of these dates, which have a high probability of being related to the use of these sites, span the period from the end of the Early Bronze Age (17th century BC) to the middle of the Late Bronze Age (ninth century BC). The majority of dates straddled the Middle and Late Bronze Age periods (early 13th to mid-ninth centuries BC). Radiocarbon dating suggests that multiple phases of activity, from the Early to the Late Bronze Age occurred at Lacken 4; however, it seems that this is more likely to have been episodic use of this site over approximately 1,200 years rather than continuous activity.

The results from the dating of the *fulachtaí fia* largely conform with previous dating programmes which found that many of these sites date from the Middle to Late Bronze Age (Brindley & Lanting 1990, 55–6; Grogan et al. 2007, 96; Hawkes 2018). More recent research has identified a significant number of Early Bronze Age *fulachtaí fia* (e.g. Carlin et al. 2008; Grogan et al. 2007; Danaher 2007; Hawkes 2018). Lacken 4 is the only site excavated on the New Ross Bypass at which burnt mound activity commenced in the Early Bronze Age.

Troughs were identified at eight out of the 10 sites. A number of large cut features were identified Lacken 4, which was used from the Early to Late Bronze Age; however, none of them could be definitively interpreted as a trough. Each *fulacht fia* had a single

Table 6.9—Details of troughs identified at *fulachtaí fia*

Site name	Shape	Dimensions (m, l x w x d)	Estimated capacity (l)	Stake-holes/post-holes
Arnestown 2 – Area A	Rectangular	1.80 x 0.90 x 0.37	599	N/A
Arnestown 2 – Area E	Rectangular	1.20 x 0.90 x 0.20	216	N/A
	Rectangular	1.20 x 0.90 x 0.15	162	N/A
	Sub-rectangular	1.50 x 1.00 x 0.25	375	N/A
	Sub-circular	1.32 x 1.26 x 0.18	299	N/A
Berkeley 1	Sub-rectangular	2.67 x 1.73 x 0.28	1,293	3 post-holes truncated the northern side
Berkeley 2	Rectangular	2.70 x 2.10 x 0.50	2,835	52 stake-holes in and around the cut
Camlin 2	Sub-rectangular	2.20 x 1.40 x 0.27	831	N/A
Lacken 3	Sub-rectangular	2.74 x 1.68 x 0.52	2,393	59 stake-holes truncated the base and sides of the cut
Landscape 3	Sub-rectangular	2.16 x 1.36 x 0.56	1,645	N/A
Rathgaroge 1	Sub-rectangular	2.50 x 1.90 x 0.70	3,325	5 stake-holes truncated the base of the cut
Ryleen 3	Rectangular	3.10 x 2.00 x 0.40	2,480	6 stake-holes truncated the base of the cut

Illus. 6.16 Berkeley 2 trough during excavation showing stones in fill that may be associated with its final use (1 m scales) (Rubicon Heritage Services Ltd).

trough, except for Arnestown 2, where three sequential troughs were identified at one *fulacht fia*. All 12 of the troughs excavated on this project were of either rectangular or sub-rectangular shape, except for a single sub-circular example (Table 6.9). These ranged in length from 1.2 m to 3.1 m, from 0.90 m to 2.1 m in width and from 0.15 m to 0.70 m in depth, with estimated capacity varying from 162 litres to 3,325 litres. While not all of these features were sealed beneath mounds of burnt stone, none of them show obvious signs of truncation and the variations in size most likely reflect the different functions that the troughs may have served.
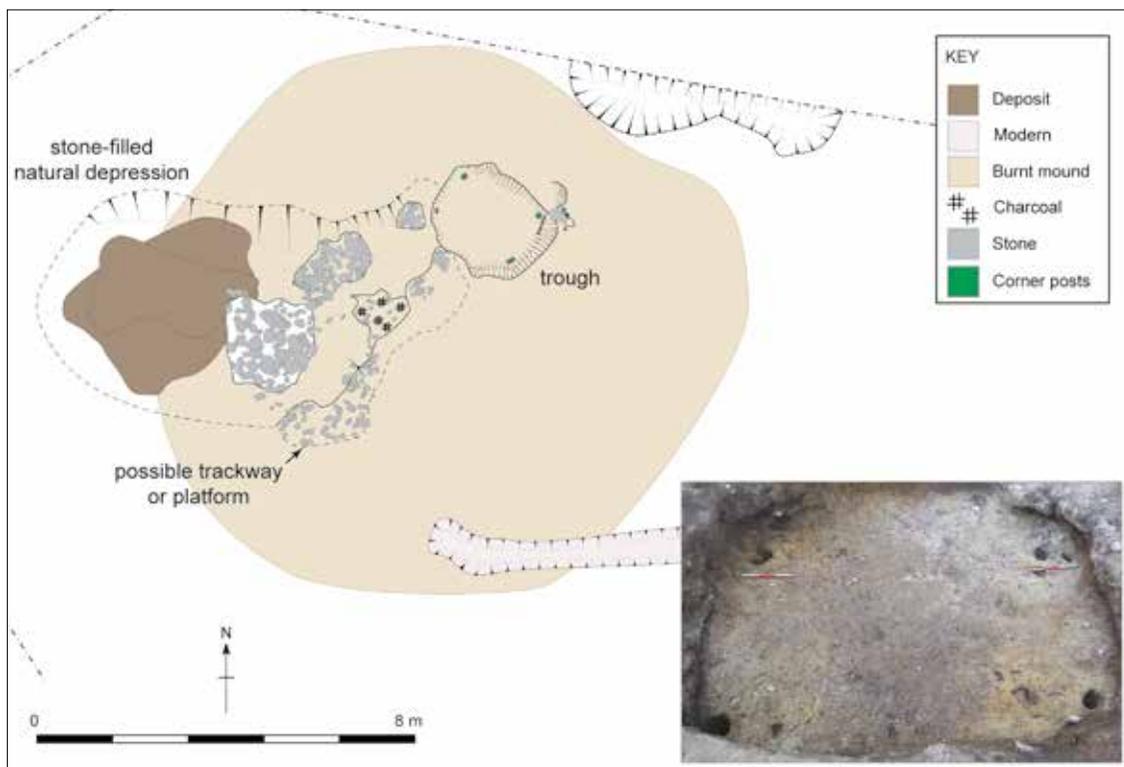
Illus. 6.17 Top: Rathgaroge 1 plan of *fulachtaí fia* with possible stone trackway or platform leading to the rectangular trough. Bottom: trough with post-holes in each corner (0.3 m scales) (Rubicon Heritage Services Ltd).

Between two and four deposits were found in all the troughs and each of these features contained heat-shattered stones, probably representing their last use (Illus. 6.16). Evidence for timber lining was identified at two troughs. At Berkeley 1 and Landscape 3, wooden fragments believed to represent the decayed remnants of a timber lining were found at the base of the troughs. Deposits of clay and moss were identified beneath the timbers at Landscape 3. While no lining survived in any of the other excavated troughs, four examples displayed evidence of its former presence. At Rathgaroge 1, a post-hole was present in each corner of the trough representing the location of posts which would have held a wooden lining in place (Illus. 6.17). The troughs at Berkeley 2 and Lacken 3 displayed evidence for the use of a wicker lining in the form of numerous stake-holes that were present around the perimeter of their bases (Illus. 6.18). Comparison with better preserved examples found elsewhere suggests that these may have had a plank-lined base. The lack of evidence of organic linings within these features may simply reflect the absence of suitable conditions for the preservation of organic remains like timber, though the possibility that linings were removed from these troughs at the end of their use should also be considered.

A variety of other features were identified which were associated with the use of the *fulachtaí fia* (Table 6.10).

Apart from post/stake-holes, the most

Table 6.10—Features identified at *fulachtaí fia*

Site name	No. of burnt spreads	Dimensions of surviving spread (m, l x w x d)	Estimated volume of spread (m³)	No. of troughs	No. of hearths	No. of pits	No. other post/stake-holes
Arnestown 2 – Area A	1	5.20 x 3.00 x 0.17	2.65	1	0	0	0
Arnestown 2 – Area B	0	None	0	0	0	1	1
Arnestown 2 – Area E	1	3.00 x 2.00 x 0.05	0.30	4	0	0	0
Arnestown 4	1	5.75 x 3.00 x 0.10	1.73	0	0	2	0
Berkeley 1	1	7.40 x 6.60 x 0.12	5.86	1	0	0	1
Berkeley 2	1	4.50 x 2.00 x 0.10	0.90	1	0	2	0
Camlin 2	0	None	0	1	0	0	1
	1	4.60 x 3.14 x 0.22	3.17	0	1	0	0
Lacken 3	1	2.25 x 1.10 x 0.30	0.74	1	0	1	2
Lacken 4	1	20 x 15 x 0.30	90.00	0	1	9	79
Landscape 3	2	6.40 x 5.60 x 0.16	5.74	1	0	1	0
		4.10 x 2.79 x 0.16	1.83	1	0	0	1
Rathgaroge 1	1	8.80 x 6.40 x 0.19	10.70	1	0	0	6
Ryleen 3	1	11.90 x 4.30 x 0.45	25.00	1	0	4	5

common features identified were pits containing heat-shattered stone. These occurred at Arnestown 2, Arnestown 4, Berkeley 2, Lacken 3, Lacken 4, Landscape 3 and Ryleen 3. A heat-scorched oval pit containing heat-shattered stone was found beside the burnt mound spread at Camlin 2; this may have been the hearth used to heat stones. At Lacken 4, a sub-circular area of oxidised subsoil, adjacent to a large pear-shaped pit sealed beneath the burnt mound may indicate the location of a hearth. Fourteen stake-holes were cut into the base of the pear-shaped pit and arrangements of stake-holes were also identified on either side of the cut suggesting that this feature may have been covered by a lightweight structure, possibly made of wicker. At Berkeley 2, a large sub-oval pit (3 m by 2.80 m by 0.54 m) adjoined a trough and contained a series of fills with charcoal and heat-affected stones. During excavation, this was observed to fill naturally with water, even when the trough remained dry, and is thought to represent a well or cistern (Illus. 6.18). Two lines of closely spaced stake-holes were found immediately beside one of the shorter ends of the Berkeley 2 trough where they were clustered around two of its corners (Illus. 6.18). These represent the remains of some kind of furniture, such as a rack, whose function was clearly related to the use of
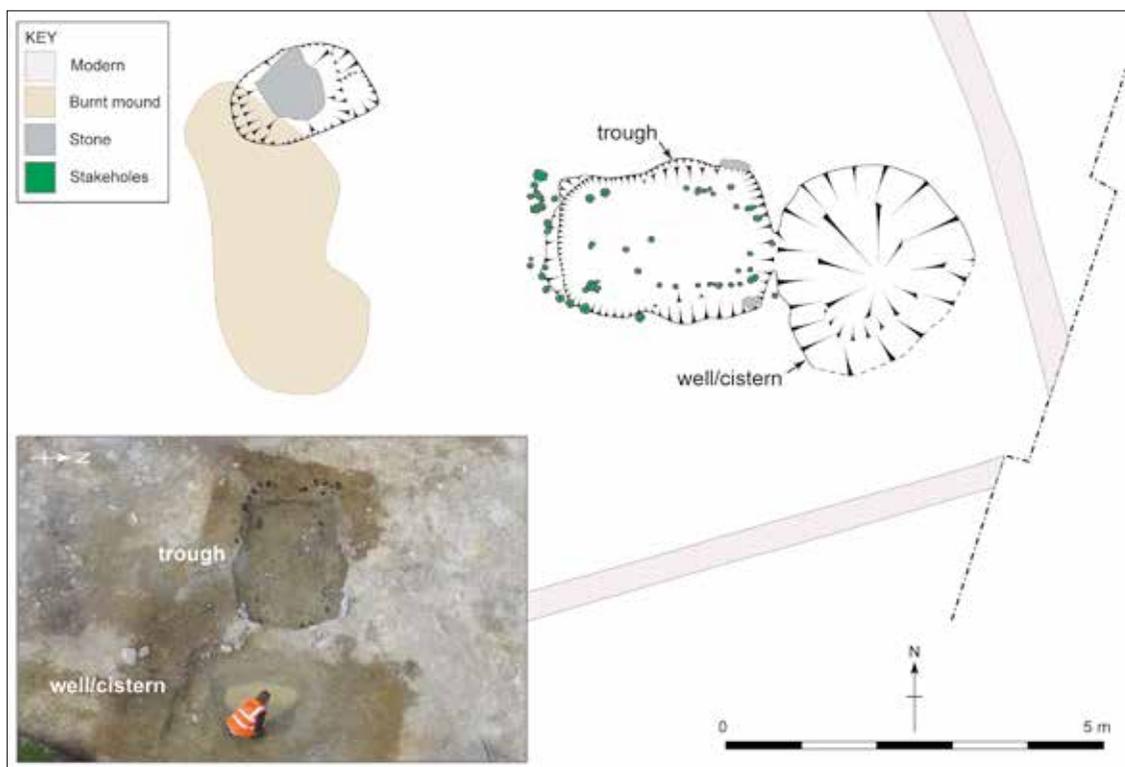
Illus. 6.18 Top: Berkeley 2 plan of the trough and well/cistern. Bottom: the features after excavation; the lines of stake-holes in the base of the trough are clearly visible as are the clusters of stake-holes associated with the trough's western end (Rubicon Heritage Services Ltd).

the trough. Similar arrangements of post-holes were identified at Lacken 4 and seem to be a recurrent aspect of this site type (see discussion of this in Eogan 2011b, 267).

A stockpile of unburnt stones was found beside the trough at Ryleen 3, which seems to have been intended for future use in the heating of the trough (Illus. 6.19). Removal of the burnt mound at Rathgaroge 1 revealed a natural hollow (8.80 m by 4.80 m by 0.40 m) and a trough. A concentration of medium to large rocks was found overlying deposits of firing debris within the hollow. While it is possible that these may represent another stockpile of stones, the large area covered by them suggests that they represent the remains of a stone platform or trackway which was created to facilitate access across

Illus. 6.19 Ryleen 3, the stockpile of stones deposited beside the trough (1 m scales) (Rubicon Heritage Services Ltd).

the hollow to the trough and provide a drier working area.

A burnt mound or spread (which

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represents heat-shattered stones accumulated from the repeated emptying of troughs after each use) was identified at all 10 sites. The main stone types identified within the deposits were granite and shale, both of which are plentiful locally. Many of these mounds seem to have been degraded or truncated by agricultural activity such as ploughing or land clearance, as well as by modern drainage features and field boundaries. In a few cases, such as at Camlin 2 and Berkeley 2, no surviving trace of any spread or mound was associated with the troughs. The different levels of disturbance of these features partly accounts for their varying size and shape. Most of the spreads were sub-oval, though a crescent-shaped example was excavated at Arnestown 2. They ranged in length from 2.25 m to 20 m, in width from 1.10 m to 15 m and in depth from 0.05 m to 0.45 m (see Table 6.10). A large spread of heat-shattered stone (8.80 m by 6.40 m by 0.19 m) with an estimated volume of 10 m^3 was identified at Rathgaroge 1. The large volume (estimated 25 m^3) of burnt stone at Ryleen 3 (Illus. 6.20) suggests either intensive use of this *fulacht fia* over a short time or use episodically over an

Illus. 6.20 Ryleen 3, the mound of heat-shattered stones during excavation (2 m scale) (Rubicon Heritage Services Ltd).

extended period. Significantly, only one phase of activity could be stratigraphically identified at both of these *fulachtaí fia*, perhaps indicating a prolonged single use. In contrast, one of the *fulachtaí fia* at Arnestown 2 comprised three intercutting troughs indicating that this had been revisited on successive occasions, yet the surviving mound was quite small (2.65 m^3). The large volume (estimated 90 m^3) of the mound at Lacken 4 probably reflects its extended period of use from the Early to Late Bronze Age. The variability of the evidence suggests that we should exercise caution in terms of attempting to read the use-history of these sites based on highly fragmentary and equivocal evidence from their associated mounds.

No artefacts were recovered from any of the *fulachtaí fia*, but this is unsurprising given that archaeological objects have only been found at about one quarter of excavated burnt mounds. Of these, just over 70% of sites produced lithics which are not always clearly associated with their use (Hawkes 2018, 115–17). Charred hazelnut shells were found in the troughs at Arnestown 2 Area A and Lacken 3 which may reflect the consumption of wild food stuffs at these sites; however, these shells may also have been accidentally incorporated into these contexts through the use of hazel wood for fuel. The charcoal from the *fulachtaí fia* predominantly comprised medium-sized branches or smaller timbers, some of which seem to be collected from woodland floors. A wide variety of taxa were identified including those from a damp setting, such as alder and willow, as well as ash, oak, holly and apple-type that are usually found in drier locations. The quantities of each varied from site to site and no particular species could be said to have been specially selected. Alder was

dominant at Camlin and Arnestown, hazel was the principal species at Lacken, while oak was foremost at Ryleen, Berkeley 1, and Rathgaroge 1. Large quantities of wood would have been required for the heating processes involved in the functioning of *fulachtaí fia* and thus they are often situated in the immediate vicinity of woodland. It is likely that the charcoal assemblage from the sites on this project reflects their location near wooded areas with easy access to water, on the margins between wetlands and drylands and possibly on the boundaries between the cultural and the natural landscape.

The *fulachtaí fia* excavated on this project represent a significant increase in the number of such sites recorded in the New Ross area and contribute much to our understanding of the Bronze Age in the Lower Barrow Valley. The construction and use of *fulachtaí fia* required considerable investments of time and resources. This suggests that they represent communal places that were created and maintained by groups who probably lived locally. As such, they are indicative of settlement in the wider area (see below).

Discussion

The excavation of the Early Bronze Age burials and the two Middle Bronze Age cemeteries provides valuable new insights about burial practices in the south-east of the country, as very little evidence for later Bronze Age burials was previously known in this region. A small number of Early Bronze Age burials occur to the south along the Lower Barrow Valley at Dunganstown and Ballyvelig, c. 5 km south-west and 10 km south of the bypass, as well as Oldcourt,

Misterin, Newtown and Tomfarney, c. 10 km to the east (Waddell 1990, 155, 157; Stout 1987, 12–13, 37; Sikora & Reilly 2011; see Illus. 1.18 and 6.1). The excavation of the Early Bronze Age cemetery at Stokestown 2 that included the bipartite vase and encrusted urn burials and the recovery of the Early Bronze Age cordoned or collared urn from Camlin 3 are significant additions to the archaeological record because of the small number of urn burials which have been discovered in south-eastern Ireland (Brindley 2007, fig. 34, 38). Collared urns are known from burials at Newtown and Scarawalsh, Co. Wexford, Ballon, Co. Carlow, and Ballyvool and Rathpatrick, Co. Kilkenny (Brindley 2007, 132; Stout 1987, 37; Waddell 1990, 52, 158; Wren & Price 2011b), while cordoned urns come from graves at Ask, Ballyvelig and Ballintubbrid, Co. Wexford, Harristown, Co. Waterford, Newrath 36, Co. Kilkenny and Ballon, Co. Carlow (Wren & Price 2011c; Stevens 2007; Waddell 1990, 52, 145, 154–5).

Prior to this project, later Bronze Age pottery had rarely been found in Wexford and very little definitive evidence for Middle or Late Bronze Age burials had been identified. An undated flat cemetery which appears to have been created in the later Bronze Age was excavated at Bricketstown, Co. Wexford (Elder & Johnston 2009a). Other mortuary sites of potential Bronze Age date are possibly represented by the barrows at Lacken and Coolaught (c. 2 km SSE and 10 km ENE of Berkeley) and a cairn on top of Carrickbyrne Hill (c. 10 km east of Camlin) (Illus. 6.1). The excavation of the two Middle Bronze Age flat cemeteries at Camlin and Berkeley in tandem with the recently discovered burials of the same date at Ask, in north County Wexford (Stevens 2007; Troy 2011a), considerably alters our knowledge of

funerary practices in this region and shows that local Bronze Age communities were practising the same funerary rites as those in other parts of Ireland. The discovery of these pit burials in flat cemeteries in sites with no above-ground expression suggests that many similar cemeteries may exist in those areas of the region where few barrows or ring-ditches are known. The identification of a sealing layer overlying a primary phase of burial at both Camlin 4 and Berkeley 3 has led to the recognition of the multi-phase character of the deposition of human remains over a 200–400-year duration at both places. This provides new insights into the temporal sequence of Middle Bronze Age burial practices and the ways in which burial at flat cemeteries commenced and developed that it has not been possible to identify at sites where such sealing deposits are absent.

Cremation was the dominant Bronze Age funerary rite in this region, just as it was elsewhere in Ireland at this time. This technology was expertly understood as evidenced by the successful oxidisation of the vast majority of cremated bone. Analysis of the burials reveals that the dead were treated according to a set of structured and selective practices which comprised careful and deliberate patterns of exclusion and inclusion. The choices made by Bronze Age mourners are reflected in the surviving excavated remains. This evidence is difficult to understand from a modern perspective, but it sheds light on the beliefs of people in this region at the time. For example, the prevalence of token burials testifies to the representation of people through fragmented and burnt parts rather than the whole body. These burial practices are highly consistent with those known from the rest of the country and it is clear that there was a strong concern with abiding by a wider set of norms

at this time.

The Bronze Age sites excavated along the New Ross Bypass reveal much about the social organisation of the cultural landscape in the Lower Barrow Valley during the second millennium BC. Early Bronze Age activity was represented by a burial at Camlin 3, a pit at Camlin 8, the commencement of burnt mound activity at Lacken 4 and the cemetery at Stokestown 2. These discoveries are consistent with the known archaeology of this period, which is largely dominated by funerary sites. Given the previous discoveries of Early Bronze Age burials in the wider hinterland, it is perhaps surprising that greater evidence for activity of this date was not uncovered on this project. The excavations revealed considerably more evidence for the occupation of this area during the Middle Bronze Age including the cemeteries at Camlin 4 and Berkeley 3, pits indicating broadly contemporary occupational activity from Landscape, Lacken and Rathgaroge, as well as activity at all 10 *fulachtaí fia*. The Late Bronze Age evidence is dominated by activity at *fulachtaí fia* in Camlin, Ryleen, Lacken, Berkeley and Rathgaroge, though a probable cremation burial in the cemetery at Camlin 4 also dates to this period.

The occurrence of the Early Bronze Age urn burial in close proximity to the two-phase Middle Bronze Age cemetery at Camlin, which also yielded evidence for Late Bronze Age activity, indicates a considerable level of continuity of place. This is echoed by the occurrence of two phases of Middle Bronze Age burial at the Berkeley flat cemetery. Both locations were clearly seen as appropriate places to bury multiple generations of deceased members of the local community. Significantly, both the Camlin and Berkeley cemeteries form part

of larger clusters of higher density Bronze Age activity. The former belongs to a node of Early, Middle and Late Bronze Age activity occurring along the lower southern slopes of Camlin Hill, which includes a mix of pits (Camlin 8 and Landscape 2) and *fulachtaí fia* (Camlin 2). The latter forms part of an almost identical (chronological and functional) range of sites, bunched together on the slightly elevated land north-east of Lacken Hill. This clustering of sites at both locations suggests that these locales were a focus for settlement throughout the Bronze Age. However, one of the most striking aspects of the Bronze Age discoveries from this project is the absence of direct evidence for habitation such as the remains of houses or obvious settlements.

This absence of houses is particularly puzzling, given the evidence for other types of Middle Bronze Age activity from sites on the project. It was at the start of this period that, for the first time since the demise of Early Neolithic rectilinear structures, domestic architecture became substantial enough to leave a readily recognisable archaeological trace. The location of prehistoric settlements elsewhere in Ireland indicates a preference for well-drained soils and topography suitable for arable agriculture, proximity to fresh water and timber for building or fuel (Grogan 1996, 48; O'Sullivan 1998, 70; Cooney & Grogan 1999, 103–5). This locale in the Lower Barrow Valley seems to meet many of these requirements and was clearly attractive to early farmers, as is confirmed by the discovery of the Neolithic habitation at Ryleen (see Chapter 4). Furthermore, both Camlin and Lacken Hill with their panoramic views over the surrounding countryside and the River Barrow, which would have been a major communication artery, would seem to have been prime locations, given that

elevated settings overlooking important routeways were favoured areas for Bronze Age settlement (Grogan 2005b, 27).

Previous landscape studies throughout Ireland have observed that Middle to Late Bronze Age settlement, burial and ritual sites were generally clustered together to form compact and integrated landscapes that were highly structured in their organisation (Gowen et al. 2005; Grogan 2005a; 2005b; Grogan et al. 2007, 131–62). The settlements tend to occur along the higher ground such as the ridges of river valleys, while the lower-lying parts are often utilised for burial sites (Cooney & Grogan 1999, 103; Grogan 2005a; 2005b). Indeed, this was borne out by the recent excavation of multiple components of a Bronze Age landscape in County Tipperary in advance of the construction of the M8 (McQuade et al. 2009, 141, 360).

In the case of the burials, pits and *fulachtaí fia* discovered along the New Ross Bypass, it seems unlikely that these represent isolated sites; instead, the clustering of these at Camlin and Berkeley suggests that they form components of integrated local landscapes. It is highly probable that broadly contemporary settlements will be identified on the slightly more elevated and better drained slopes overlooking the locations of the *fulachtaí fia* and the cemeteries. It is likely that the proliferation of Middle to Late Bronze Age *fulachtaí fia* reflects an expansion of settlement from the drier and higher slopes into slightly wetter or lower areas at this time. While no Bronze Age settlements are currently known in the area, it would be highly unusual for an above-surface trace of these to be identifiable in such an agriculturally active landscape. Overall, the discoveries along this road corridor are largely a reflection of the route selected through this topographically varied, but

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mainly elevated landscape, which like most linear infrastructural projects avoided upland or steep terrain.

Conclusions

A range of regionally significant Bronze Age discoveries was made along the route of the New Ross Bypass, consisting principally of funerary activity but also including *fulachtaí fia* and pit sites that confirm the presence of a vibrant population during the Bronze Age in the Lower Barrow Valley. Similar evidence of significant Bronze Age communities has recently been uncovered in the Upper Barrow Valley (Bolger, Moloney & Shiels 2015), as well as the Lower and Upper Suir Valley (Eogan 2011b; McQuade et al. 2009), all of which indicate the continuing importance of these major river valleys for local populations. Although the findings from this project can be easily accommodated within previously recognised developments in Bronze Age social practices from elsewhere in Ireland, they make a very important contribution to our understanding of the inhabitation of the Lower Barrow Valley during the second millennium BC. The presence of Bronze Age communities in this area has long been hinted at by the discovery of Early Bronze Age burials and chance finds of metal objects. We can now

say that this locale was settled throughout the Bronze Age and was populated by communities who created a very ordered cultural landscape comprising a range of different places that were deemed suitable for burial, the deposition of metalwork, the activities associated with *fulachtaí fia* and for settlements. The location of some of these sites, such as the Early and Middle Bronze Age burials at Camlin, shows a clear awareness of the occupation history of this landscape.

While the people who inhabited this area had clearly constructed their own local world with a strong sense of place, they did not exist in isolation. The results of the excavations indicate that these local communities remained abreast of the latest trends, both in terms of material culture such as pottery, as well as social practices. In conjunction with the various chance discoveries of metalwork from the immediately surrounding area, such as the British-style gold bracelets from Dunbrody and Ballymaclode, this confirms these groups formed part of numerous social networks with links to groups as far away as southern Britain. Doubtless, these contacts would have been facilitated by proximity to the River Barrow, with its connections to the rivers Nore and Suir, and to the south coast and maritime routes via Waterford Harbour.

CHAPTER 7

Medieval settlement in the hinterland of New Ross

James Hession and Teresa Bolger

Medieval settlement in the hinterland of New Ross

Introduction

Medieval activity was mostly focussed on the area to the south-west of Camlin Hill towards the western end of the route. The most significant of these sites was the later medieval farmstead at Landscape 2A, although some evidence was also uncovered for activity in the preceding early medieval period.

Over the last two decades, archaeological investigations prior to construction of large-scale development projects have substantially increased the evidence for medieval rural settlement across Ireland (Opie 2010; Baker 2008; 2009a; Corlett & Potterton 2009; Martin 2009; Moriarty 2011). The excavations undertaken during these two decades have examined a variety of different settlement types within Anglo-Norman controlled areas and expanded our understanding of moated sites (Cotter 2009; Fegan 2009), villages or nucleated settlements (Opie 2010; Moriarty 2011; Bolger 2017) and farmsteads (Foley 1989; McCarthy 2008; Stevens 2010; Baker 2009a, 46–53; 2009b; Clutterbuck 2009; Martin 2009). The late medieval farmstead at Landscape 2A represents a significant discovery that adds to our knowledge of rural settlement during this period.

The documentary and placename evidence presented in Chapter 3 indicates that the Landscape 2A farmstead was located in an area of mixed Irish and English peasant settlement, with a high number of betagh or native Irish settlements present. The betaghs were the lowest class in Irish late medieval society; however, they made up a substantial portion of the population on manorial holdings and were usually found on separate townlands on the periphery of the manorial lands (Mills 1894; Ball 1906; Foley 2011; O'Conor 1998). Evidence of their presence has been very difficult to identify (Foley 2011, 204), with only a handful of excavated sites considered as potential betagh settlements (e.g. Eogan 2009). The location and setting of the farmstead at Landscape 2A on the edge of a wetland on the perimeter of the manor of Old Ross, considered in conjunction with the documentary evidence, raises the possibility that we could be looking at one of the hidden aspects of medieval rural settlement—the remnants of a betagh farmstead. However, the planned nature of the farmstead, in terms of its layout and the quantity of buildings excavated, is more reminiscent of that encountered on British sites dating to the high Middle Ages, suggesting that it was an English peasant settlement. In addition, the closest parallels to the farmstead at Landscape 2A from other Irish excavations have been interpreted as reflecting immigrant settlements. Looked at from this perspective, it seems more likely that this was an English or Welsh settlement established during the prosperous

Chapter title image The landscape of the early medieval territories of Síl mBriain and Benntraige and the late medieval manor of Old Ross viewed from the summit of Slievecoiltia looking north towards the Blackstairs Mountains (J Eogan).

and relatively peaceful conditions of the early Anglo-Norman colony associated with the early success of the borough of New Ross. The evidence for these contrasting hypotheses will be explored further in this chapter; however, irrespective of whether the inhabitants were Irish-speaking or English-speaking, the quality and quantity of the structures excavated at Landscape 2A are unique and they have the potential to add greatly to our understanding of rural settlement in later medieval Ireland.

Early medieval activity

Activity of early medieval date was identified at eight sites—Ryleen 2, Camlin 5, Camlin 6, Camlin 7, Camlin 8, Creakan Lower 1, Landscape 1 and Landscape 2D (Illus. 7.1). All of these sites were located to the south and south-west of Camlin Hill, with the exception of Ryleen 2 which was located to the north-west of Camlin Hill. At Ryleen 2 the terminal of a ditch returned an early medieval radiocarbon date of AD 1020–1180 (SUERC-35225) (see Chapter 2). Although its purpose remains uncertain, the ditch may well reflect a landscape division, perhaps forming part of an agricultural field system. It extended north, beyond the limits of the land-take; geophysical survey suggests that this feature is part of a complex of linear and curvilinear features in this area (Bonsall & Gimson 2010, 12–13).

A total of nine intercutting sub-circular
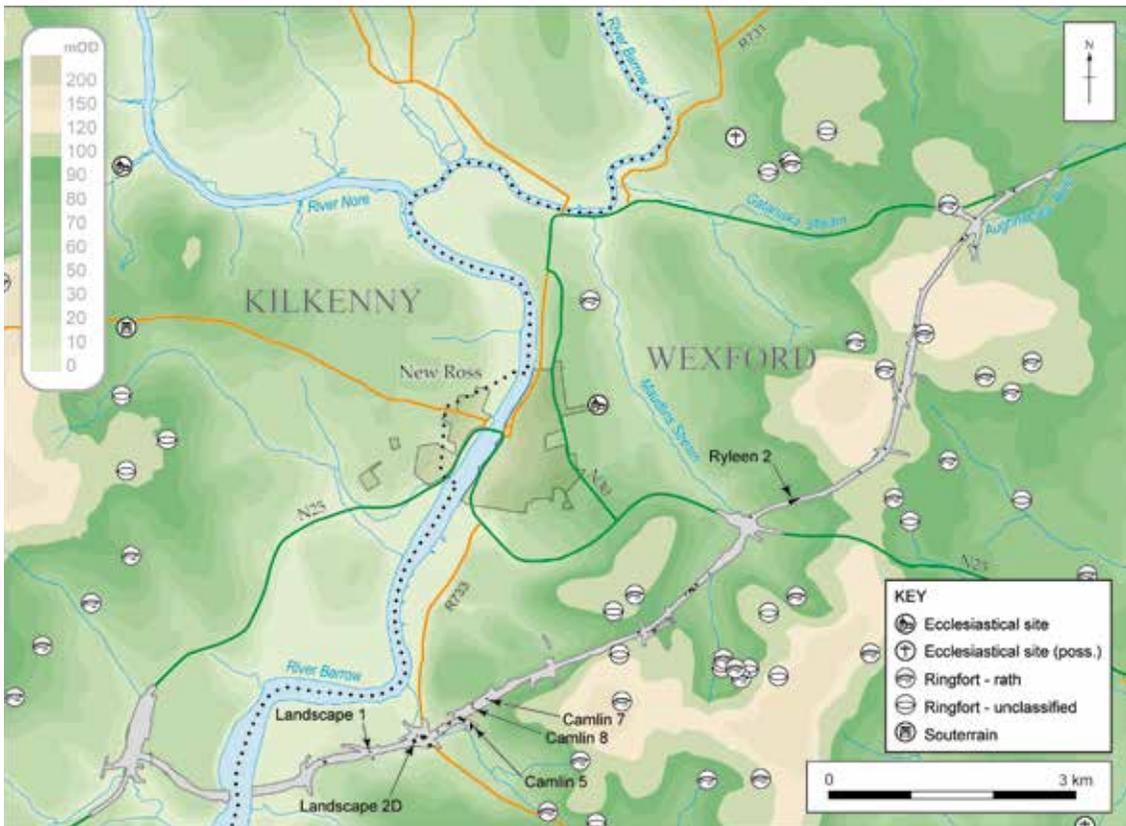
Illus. 7.1 Early medieval sites on and in proximity to the bypass (Rubicon Heritage Services Ltd).

pits represented the earliest phase of activity at Camlin 5. They contained varying quantities of charcoal, oxidised clay and stones and one of the pits produced an early medieval radiocarbon date range of AD 870–1020 (SUERC-35203). Five pits and a curvilinear slot-trench were identified at Camlin 6. The features contained varying quantities of charcoal, stone and animal bone. A sample of oak charcoal from the middle fill of one of the pits was radiocarbon dated to the early medieval period AD 773–970 (SUERC-53862). The exact function of the pits found at these sites is unclear, but the presence of oak charcoal within the fills and oxidisation of the natural subsoil suggests that burning *in situ* took place. However, the absence of charred cereal grains and metallurgical waste means that they cannot be linked to cereal-processing or metal-working activities. The presence of animal bone in the Camlin 6 pits suggests that they may have been associated with the disposal of food waste.

Charcoal production

The five remaining early medieval sites— Creakan Lower 1, Camlin 7, Camlin 8, Landscape 1 and Landscape 2D—were characterised by evidence relating to charcoal production. Charcoal was a very important and highly valued commodity in antiquity as it was one of three primary fuel sources, the other two being wood and peat. Charcoal was used in all aspects of ancient daily life so the importance of wood, woodlands and the management thereof cannot be overstressed (Gillespie & Kerrigan 2010). Charcoal played a major role in industrial activity, specifically within metallurgy, as it was vital to all stages of the metal-working process where very high temperatures needed to be maintained

(Kenny 2009, 7; 2010, 108). Although a wide variety of different wood types such as oak, ash, willow, alder and hazel have been identified from excavating charcoal-production pits, there seems to have been a preference for hardwoods, particularly oak and ash. This was due to their compact nature which meant they burned at higher temperatures over a longer time period making them the ideal fuel for metallurgical activities such as smelting, bloomsmithing and forging (Kenny 2009, 33).

The process of making charcoal involves burning wood in controlled conditions whereby the flow of oxygen is limited, thereby carbonising the wood but preventing its complete combustion (Kenny 2010, 100). Two main types of charcoal-production pit—mound kilns and pit kilns—have been identified from the analysis of excavated sites, but the firing process associated with each is the same. Mound kilns consist of uniformly stacked piles of wood placed on the ground surface sealed by a layer of vegetation and then covered by soil. In pit kilns layers of wood were stacked in a pit. The kiln was then set alight and once it was burning well it was firstly sealed by a layer of vegetation and subsequently covered by a layer of soil. Excavated charcoal-production pits containing a basal fill of charcoal and an upper fill of soil are believed to represent traditional pit kilns. The larger mound kilns were constructed somewhat differently, having an open space in the centre of the stack usually created by a central post, with the stack positioned around it. This post was removed prior to firing, the void left by its removal was filled with flammable material and the stack set alight. After the combustion process had started the pit was covered with successive layers of vegetation and soil. The firing process lasted anything from five days

to over a month depending on the size of the mound (Gillespie & Kerrigan 2010).

A charcoal-production pit and three possible waste pits were identified at Creakan Lower 1. The charcoal-production pit is thought to be a pit kiln as the sides and base were heavily oxidised and the basal fill consisted of a layer of charcoal. A sample of the oak charcoal from this deposit was radiocarbon dated to the early–late medieval period AD 1022–1182 (SUERC-53861).

The sub-circular charcoal-production pit uncovered at Camlin 7 was also a pit kiln as there was evidence for *in situ* burning along the base and sides of the cut and the fills of the pit contained frequent inclusion of oak charcoal as well as patches of redeposited natural. A sample of the oak charcoal taken from this pit returned a radiocarbon date range of AD 1020–1160 (SUERC-35204), placing this activity towards the end of the early medieval period.

A third charcoal-production pit kiln, which was oval, was found at Camlin 8 Area A. Evidence of *in situ* burning was noted on the sides and base of the cut and the fill contained inclusions of oak charcoal. The oak charcoal from the production pit was radiocarbon dated to AD 1020–1160 (SUERC-35205), indicating that this activity was broadly contemporary with that at Camlin 7.

At Landscape 1, a single charcoal-production pit kiln was uncovered. It was oval and its fill contained frequent inclusions of oak charcoal. Oak charcoal from the production pit produced a date range of AD 710–950 (SUERC-35186), placing the activity firmly in the early medieval period.

Two charcoal-production pit kilns and a third pit of uncertain function were identified at Landscape 2D, approximately 70 m west of the later medieval farmstead

Illus. 7.2 Landscape 2D, the early medieval charcoal-production pit mid-excavation (1 m scale) (Rubicon Heritage Services Ltd).

(Illus. 7.2). A radiocarbon date range of AD 1020–1160 (SUERC-35946) obtained from the fill of one of these pits places this activity towards the end of the early medieval period.

It has been noted in Chapter 3 that the historical evidence points to extensive woodlands in and around the Camlin Hill area in the late medieval period. The evidence for charcoal production at these four sites is consistent with this and suggests that these were 'ancient' woodlands stretching back through the early medieval period into prehistory. Proximity to the source woodland was an important factor in siting charcoal production (Kenny 2010, 110), so it is likely that these sites were located close to wooded areas, or maybe even within the woodlands. However, it is not expected that such sites would be necessarily located close to the dwelling sites of those who used them. The production pits identified on the route occur singly and in relative isolation from each other, which suggests that they reflect activities by individual households rather than any kind of organised large-scale production which is in keeping with the evidence from elsewhere (ibid., 113–14).

The early medieval settlement landscape

The characteristic that links all the early medieval sites found during these investigations is that they represent outlying settlement activity—that is, activities normally carried out on the periphery of the main settlement.

Looking at the wider landscape surrounding the bypass, the most obvious evidence for settlement during this period is the distribution of ringforts—enclosed farmsteads dating to the early medieval period and generally associated with the middle and upper strata of society. Though a number of ringforts are located close to the bypass route— for example at Lacken,

Creakan Upper and Rathgaroge—there are none located close to the section running past Camlin Hill or in the Ryleen area where early medieval activity was also identified at Ryleen 2. That said, the bypass is located in the area of Wexford with the highest density of ringforts. The ringforts are mainly located up on higher ground to the south of the road scheme, with the bypass route passing through an apparent 'void' in the distribution that correlates to the lowlands of the Barrow Valley. This avoidance of very low-lying areas has been noted in previous studies of ringfort distributions in County Wexford (Bennett 1989; Culleton 1999, 61). The fact that non-settlement activity was identified in the investigations along the bypass route supports the idea that these lowlands were
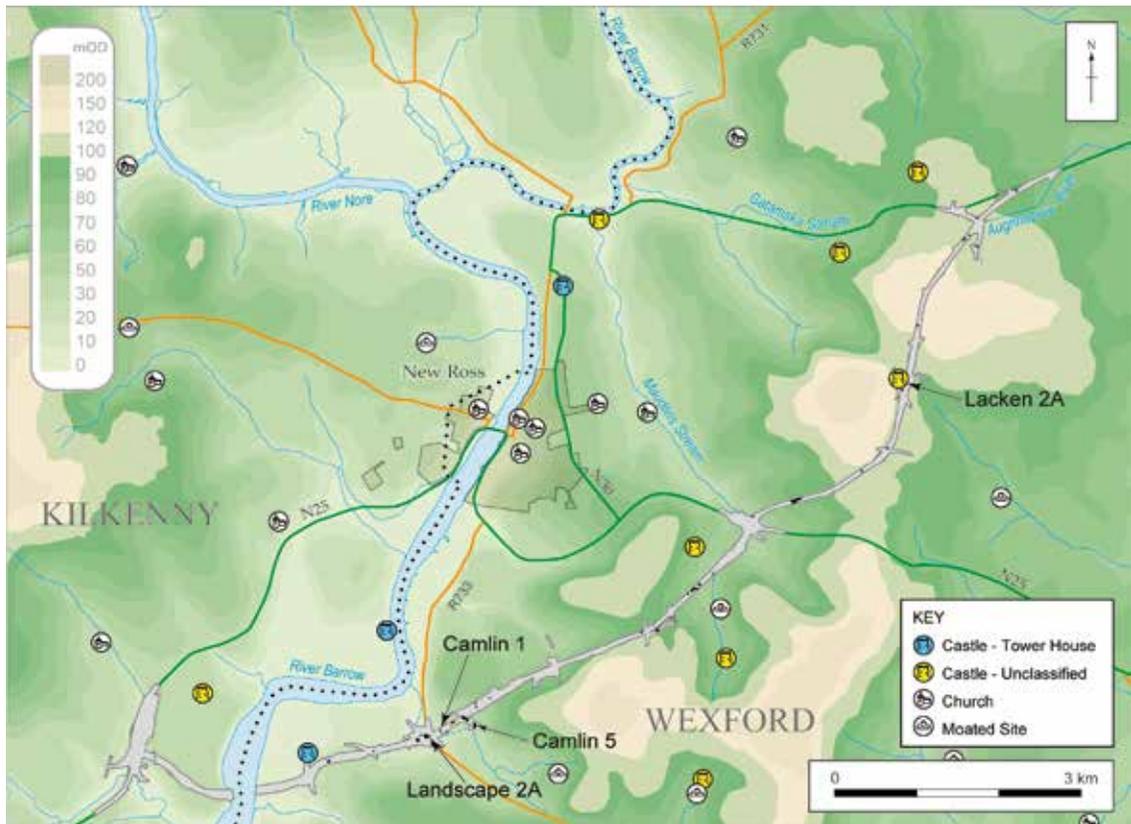
Illus. 7.3 Late medieval sites in proximity to the bypass (Rubicon Heritage Services Ltd).

not considered prime locations for habitation during this period, though they were used for other purposes. The charcoal-production pits at Creakan Lower 1, Camlin 7, Camlin 8, Landscape 1 and Landscape 2D suggest that families or households most likely living on the higher ground took advantage of the woodland resources in the lowlands to manufacture fuel for activities such as metal-working. These lowland areas may also have been used for the seasonal grazing of cattle herds in the early medieval period.

Late medieval activity

Late medieval activity was identified at five sites along the bypass route (Illus. 7.3). The most significant late medieval site was Landscape 2A where an enclosed but undefended farmstead within the manorial lands of Old Ross was excavated. The site represents an important discovery and is unique in terms of the quality and quantity of identified buildings. Given that examples of enclosed but undefended farmsteads within Anglo-Norman controlled areas are quite limited in the archaeological record, the findings from Landscape 2A may provide us with an opportunity to re-evaluate the findings from similar medieval sites across Ireland.

Elsewhere, a late medieval charcoal-production pit was identified at Forestalstown 1, a pit at Camlin 5 was dated to this period based on the assemblage of sherds of Wexford-type ware it contained, and a medieval-type iron knife was found in a post-medieval pit at Camlin 1. Traces of a relict field system adjacent to the site of Lacken Castle were revealed by geophysical survey (Bonsall & Gimson 2010, 13–14). Test excavation led to the identification of a

series of boundary ditches, drains, gullies and plough furrows criss-crossing the road-take in this area. One ditch produced sherds of late medieval Leinster Cooking Ware, while sherds of glazed post-medieval earthenware were found in the fills of another ditch; it is not certain that the medieval pottery can be used to date the creation of these boundaries.

The farmstead at Landscape 2A

The farmstead at Landscape 2A comprised an enclosed and seemingly undefended settlement (Illus. 2.9 and Illus. 7.4). A total of nine radiocarbon dates were obtained from the farm buildings and enclosing ditches associated with the farmstead ranging from the early 13th to mid-17th centuries. The dates form two clusters or phases: one centred on the 13th and 14th centuries and the second on the 15th to mid-17th centuries. The first set of dates relates to the core late medieval occupation of the site, with dates deriving from features associated with the cottage, the workshop, the hayrick, the barn and the northern enclosure ditch. This would indicate that these buildings were, by and large, contemporary, which is consistent with their common orientation.

The radiocarbon date range for the main settlement (13th to 14th centuries) is consistent with the artefact assemblage from the site. The large assemblage of pottery mainly comprised Leinster Cooking Ware (late 12th–mid-14th centuries in date) and also included some Wexford-type wares (late 12th–early 13th centuries in date).

The set of later dates spanning the late medieval/post-medieval period was recovered from the possible livestock pen and the southern enclosing ditch, which indicates a later period of use at the site after the main

settlement had gone out of use. However, it must be pointed out that these dates are not supported by the recovered material culture from the site.

The farmstead's layout

The core settlement comprised five distinct buildings or structures that were closely clustered together and delimited to the north by a roughly east–west ditch, bordered by an external metalled path or roadway, and a broad U-shaped/curvilinear ditch to the south. The structures consisted of a cottage, a workshop, a hayrick, a barn and a livestock pen or sheepfold. The layout and positioning of the enclosing ditches and structures suggest that the farmstead was a planned settlement. All of the buildings shared common alignments, with long axes either parallel or perpendicular to each other (Illus. 7.4).

The east–west orientated ditch measured 75 m in length by 2 m in width by 0.50 m in depth and became narrower and deeper as it moved east, where it is thought to have emptied into a small tributary stream of the River Barrow. It is difficult to interpret it as a defensive feature or one for livestock control, though it was clearly a delimiting feature. This ditch would have separated the medieval settlement from an area of marsh/wetland located directly to the north of the site. A metalled surface was located on the north side of the northern boundary ditch. It only survived in discontinuous patches but is likely to have extended parallel to the ditch along its full extent and may well have functioned as the main access route or road to the farmstead (Illus. 7.5).

Illus. 7.4 Visualisation of the 13th–14th-century late medieval farmstead (J Millar).

Illus. 7.5 View of ditch and metalled surface running parallel to northern boundary, looking east (2 m scale) (Rubicon Heritage Services Ltd).

Later activity at the site was suggested by the radiocarbon dates retrieved from the curvilinear ditch bordering the southern part of the settlement and the livestock pen. The livestock pen was situated in the north-eastern part of the site and was characterised by a series of curvilinear and linear slot-trenches. The ditch measured approximately 48 m long, 0.97–1.70 m wide and 0.24–0.40 m deep. Its function is somewhat uncertain as, given its modest dimensions and the fact that it did not fully enclose the settlement, it cannot be looked upon as having served any defensive function. Furthermore, the two radiocarbon dates obtained from it—AD 1420–1620 (SUERC-35195) and AD 1440–1640 (SUERC-35196)—suggest that the core settlement at the site had been abandoned by this time adding further confusion to its function. In addition, it cannot be viewed as an attempt to contain livestock, as even when the possibility of an accompanying

bank and substantial palisade are taken into consideration, the eastern and western extents of the settlement seemingly remained open, rendering the containment aspect of the ditch ineffective. This is also the case when examining the site from the perspective of livestock theft prevention. A role in the overall water management of the site is also questionable given that the earlier farmstead was no longer occupied and it was therefore unnecessary to keep the central space dry.

Elements of the settlement can be paralleled at contemporary rural settlement sites in Ireland. Evidence for a metalled roadway or pathway providing access to a settlement or unenclosed farmsteads is common, for example at Tullykane and Boyerstown 1, Co. Meath (Baker 2009b; Martin 2009), Leggetsrath East 1 (Devine & Kealy 2009) and Moneycross Upper, Co. Wexford (Schweitzer 2009). Partially enclosed or defined farmsteads

were excavated at Site G, Killeen Castle and Killegland Co. Meath (Baker 2009a, 46–53; Frazer 2009), Site AR31, Borris and Blackcastle, Co. Tipperary (Stevens 2010), and Leggetsrath East 1 and Oldtown, Co. Kilkenny (Devine & Kealy 2009; Flynn 2013). A recent review of a number of these late medieval farmsteads has drawn attention to a repeated layout pattern amongst them that is similar to the toft and croft system common in northern England. Such sites are defined by a road and ditch and primarily consist of a house, with an adjoining building, adjacent to the road frontage with a long plot of land (the croft) extending behind the house perpendicular to the road (Gardiner & O'Conor 2017, 143-4). This highlights the possibility that the toft and croft layout was widely adopted within the Anglo-Norman colony, which may go some way to establishing the ethnicity of the occupants of those sites.

The range and variety of the structures present at Landscape, however, are unique features of this settlement. Though some of the individual structures at Landscape 2A (Structures 1 and 4, the cottage and barn) can be paralleled with other excavated late medieval Irish sites, in general, only one or two contemporary structures have been identified at any individual farmstead or settlement (e.g. Stevens 2010; Baker 2009a, 46–53; Martin 2009; Schweitzer 2009; Devine & Kealy 2009; O'Donoghue & Kiely 2019). However, it should also be noted that at sites where more than two buildings or structures have been found, these tend to either belong to more than one property or farmstead (e.g. Baker 2009b; Moriarty 2011) or to be the result of successive phases of occupation (Foley 1989; Frazer 2009; O'Donoghue & Kiely 2019). With three contemporary structures—a

house, forge and workshop—Cookstown, Co. Meath (Clutterbuck 2009), is one of the rare sites with a demonstrable variety of buildings attached to a single farmstead. The Cookstown settlement, however, revolves around the forge which the excavator, Richard Clutterbuck, believes 'would have provided an important service for the manor and local community' and is not primarily a farmstead as is the case with Landscape 2A.

Parallels for the diversity and number of contemporaneous structures are more evident at medieval settlements in Britain. Though small farmsteads might only have as few as two buildings—a dwelling house and barn (Dyer 1986, 25)—a wide variety of different structures are known from farmsteads of the period including houses, byres, barns, granaries, stables, animal pens, dovecotes, bakehouses, brewhouses and forges (Dyer 1986). At a minimum, a farmstead would be expected to provide living space for people (a dwelling house), shelter for livestock (a byre or animal pen(s)) and storage for crops (a barn or granary) (ibid., 25). Sites with similar findings to that of Landscape 2A include Houndtor 2 on Dartmoor, where the enclosed farmstead comprised a dwelling house, two barns and an animal pen (Beresford 1979, 104). At Cefn Graenog in Wales the excavated farmstead comprised a dwelling house, a barn, a byre and a possible stable set on a single platform (Silvester & Kissock 2012, 157).

The buildings and structures

The cottage
Located in the north-west corner of the site, the cottage has been identified as the farmstead's only domestic building. It exhibits some of the characteristics associated with medieval byre-houses

(Gardiner 2014). These houses are typified by their long rectangular shape and by the fact that they provided accommodation for people and livestock under one roof, albeit at opposite ends of the house. Internally the living space is usually identified by a hearth with the byre area normally defined by a drainage feature leading to an area outside of the house (O'Conor 1998). In some byre-houses it is common to find that the domestic and byre spaces are divided by a cross-entry or hall, with doorways placed on opposite sides of the house (Meirion-Jones 1973, 137; Gardiner 2000, 163). However, apart from the division of internal space there are huge differences in the structural composition of medieval houses. The evidence from excavated Irish medieval structures suggests that there was no steadfast rule for medieval house construction, and it is not uncommon to find examples with walls built from mud, stone or timber. It is also a possibility that a number of houses were composite builds incorporating all three materials. Two medieval houses constructed from stone walls were identified at Caherguillamore, Co. Limerick (Ó Ríordáin & Hunt 1942), and a foundation layer of stone was identified at the house excavated at Newtown Jerpoint, Co. Kilkenny (Foley 1989). At MacMurrough's Castle, 3 km north of New Ross, the stone foundations of a rectangular building, of presumed post-medieval date, overlay a section of stone walling of an earlier, undated, structure (Cotter 1986–87). Two medieval buildings excavated at Oldtown, Co. Kilkenny, reportedly had earth and stone walls (Flynn 2013). Mud or clay (cob) walls were identified at the structures excavated near Bourchier's Castle Lough Gur, Co. Limerick (Cleary 1982; 2018), Moneycross Upper, Co. Wexford (Schweitzer

2009), Gortnahown 2 and Mondaniel 3, Co. Cork (O'Donoghue & Kiely 2019; Kiely & Johnston 2019), and Blackcastle, Co. Tipperary (Stevens 2010). Houses with timber-framed superstructures were identified at Leggetsrath East 1, Co. Kilkenny (Devine & Kealy 2009), and at Piperstown, Co. Louth (Barry 2000; Chapelot & Fossier 1985, 248–51), where evidence that sill beams had been laid in bedding trenches was identified.

The cottage at Landscape 2A was an east–west orientated rectangular building, 12–14 m in length by 6 m in width (Illus. 7.6). The exterior was delineated to the north, west, south and south-east by a continuous linear drain or drip trench which defined the extent of clay/cob walls of this structure. The drain was not identified on the north-east corner of the structure, possibly indicating that this section of the house was constructed differently or simply that the drain did not survive in this location. Two large contemporary foundation footings or pits were identified at the centre and south-west corner of the structure, possibly indicating reinforcement—in the form of buttresses—of the southern wall. The house has strong parallels with the medieval houses identified at Leggetsrath East 1, Co. Kilkenny (Devine & Kealy 2009), Moneycross Upper, Co. Wexford (Schweitzer 2009), and Mondaniel 3 and Gortnahown 2, Co. Cork (Quinn 2006; Kiely & Johnston 2019; O'Donoghue & Kiely 2019), where external linear slot-trenches/drains defined the location of the mud/cob walls.

A possible doorway was identified at the central point of the northern wall of the structure, where two post-holes placed 0.50 m apart were noted. This positions the entrance at the front of the structure and would be in keeping with the structure facing
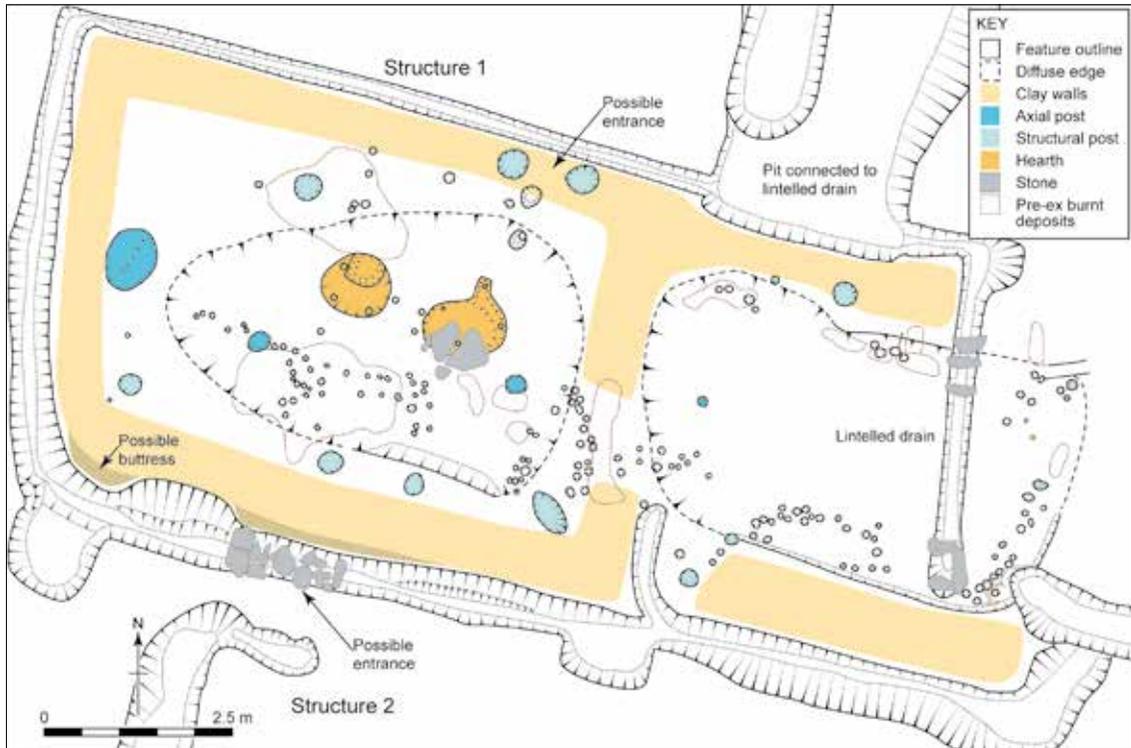
Illus. 7.6 Plan of the cottage (Structure 1), with key features highlighted (Rubicon Heritage Services Ltd).

the metalled path/roadway used to access the settlement. While there was no directly corresponding or opposing cross-entry point at the rear of the structure, it should be noted that there are variations in construction style and design of the excavated Irish medieval houses, which suggests that a single entry to this structure is still plausible. It appears that two medieval buildings excavated at Oldtown, near Kilkenny City approximately 30 km to the north-west, had single doorways located in the long sides (Flynn 2013). A second possible doorway into the house was identified 3 m from the south-west corner of the building, where five flat slate slabs (measuring 1.50 m in combined length) were laid across the drip trench/drain (Illus. 7.6). The identification of this as an entrance is questionable as there weren't any

post-holes identified in the adjacent wall, as would be expected if this was a doorway.

Internal features: Eleven post-holes and four stake-holes identified within the interior of the house were interpreted as roof supports (Illus. 7.6). They formed an approximately sub-circular arc generally reflecting the outline of the structure and also defining the internal floor space where two scarped sub-rectangular depressions were evident at either end of the building footprint. These have been interpreted as sunken floors indicative of a two-roomed building. A centrally located slot-trench and a roughly north–south alignment of 27 stake-holes thought to represent a wattle screen situated to the west of the slot-trench appear to mark the formal division between these two rooms (Illus. 7.6). The identification

of wattle-impressed vitrified daub during the excavation of Structure 1 supports this theory.

The living space—Room 1: The living space was located on the western side of the building and measured 5 m east–west in length by 3.30 m in width. Two hearths, with associated stake- and post-holes, positioned to the north of centre in the room dominated the central space and immediately highlighted the domestic nature of this half of the building (Illus. 7.6). A substantial *in situ* hearth stone was present within one of the hearths. It was broken into two large pieces with evidence of burning throughout the surface and along the sides. It is thought that the hearth stone functioned in a similar fashion to a griddle stone and may have been utilised in the cooking of medieval flat bread such as barley bread, which is known to have been part of the staple diet of medieval peasants in lowland Scotland, north-east England and parts of Wales and Cornwall (Murphy & Potterton 2010, 309).

More than 39 stake-holes had been driven into the southern section of the floor space and are thought to represent the compartmentalisation of this room or perhaps the location of furniture or fixtures. A similar array of stake-hole groupings was identified in the medieval structures excavated at Tullykane, Co. Meath (Baker 2009b), Jerpointchurch, Co Kilkenny (Foley 1989), and Gortnahown 2 (Structure 2), Co. Cork (O'Donoghue & Kiely 2019, 91–3). Two post-holes positioned along a central axis were also identified at opposite ends of the floor space and may have acted as additional roof support.

The byre—Room 2: The byre was located in the eastern half of the house and measured 6 m east–west in length by 3.30 m in width. The floor space was dominated by a north–south orientated lintelled drain which connected with a large external rectangular pit and gully complex located to the north of the house (Illus. 7.6). This strongly suggests Room 2 functioned as a byre and as such we can presume it housed a number of animals. Sixty-five stake-holes were positioned in seven groupings around the perimeter of the sunken floor and are thought to have functioned in the compartmentalisation of the byre, perhaps indicating the locations of fixtures, stalls or tool storage areas.

External features: A large rectangular pit (6 m by 3.70 m by 0.20 m) and an associated gully (5 m by 1.15 m by 0.55 m) were identified to the north-east of the house. Both were contemporary with the house linking with the lintelled drain identified in the byre (Illus. 7.6). It is thought to have functioned in the removal and temporary storage of animal waste/manure from the byre, perhaps before it was utilised as fertiliser on the fields associated with the farmstead.

Destruction layer: Two deposits that overlay the structural remains are believed to represent the destruction of the house. The inclusion of charcoal within these deposits, in particular frequent large charcoal pieces, suggests that the building was burnt down. It is uncertain whether this was a deliberate act to destroy a partially dilapidated building or if it occurred by accident. This destruction by fire is paralleled in the case of the sole building, probably a dwelling house, at the moated site of Camaross, Co. Wexford (Tierney & Johnston 2006b; Tierney 2009, 193–4), and as at Landscape 2A the cause of the fire remains unclear. A date of AD 1220–1390 (SUERC-35191) was returned from the lower of the two deposits and indicates the period when the house was no longer in use.

A total of 39 samples were processed for

paleoenvironmental analysis from the slot-trenches and internal features of the cottage. The results identified a mixed assemblage of charred plant material including oat, barley, club-bread wheat and rye along with weed seeds and hazelnut shell fragments which are thought to most likely represent food debris material either accidentally or deliberately incorporated into features associated with the house. The identified features also contained varying amounts of charcoal, burnt animal bone and sherds of medieval pottery which is in keeping with the domestic nature of this structure.

The faunal remains were very limited and in such a poor state of preservation that it prevented any identification to species. The acidic nature of the soils at Landscape 2 was not conducive to the preservation of bone. However, the evidence that the eastern part of the house was a byre can be used to infer the presence of livestock, and the recovery of a single medieval horseshoe nail indicates that the occupants are likely to have had a horse. Horses were used throughout the medieval period for transport and carrying goods to market and also occasionally for harrowing and ploughing. Oxen were the preferred animals for ploughing manorial lands, but little is actually known about

Illus. 7.7 Aerial view of the stable, store or workshop area (Structure 2), facing east (StudioLab).

peasant agriculture at this time. However, there does seem to be a connection between the size of a holding and the type of animal employed, with horses favoured on smaller holdings or where poor-quality land did not justify the use of the manorial plough-team. Tenants who were required to harrow the lord's lands or provide carrying services were likely to keep horses (Down 1993, 235). Sheep or cattle are also likely to have been kept at the site and could have been housed in the byre side of the house.

Stable, store or workshop

A horseshoe or U-shaped structure (7.5 m by 5 m) located immediately south of the cottage is thought to have functioned as a stable, storage area, or perhaps even a workshop (Illus. 7.7). It was defined by a drainage ditch that would have run around the exterior of its walls, which were most likely made of clay. Re-cuts identified along the south-eastern section of the drainage ditch suggest that this section of the building was altered or repaired during its use-history. A radiocarbon date of AD 1270–1400 (SUERC-35940) from the drainage ditch confirms it was contemporary to the house. In stark contrast to the house, however, there was very little evidence of internal features, though a centrally placed post-hole may have functioned as a roof support. The assessment of the palaeoenvironmental remains did not shed any light on the function of the structure but small amounts of oat and barley were identified, with similar quantities of both oak and non-oak species identified in the wood charcoal assemblage associated with the structure. The low frequency of cereal remains suggests that the grain had been washed or blown into the ditch from the surrounding area.

Buildings contemporary with the main

structure have been recognised on other medieval farmsteads such as Killegland, Ashbourne, Co. Meath (Frazer 2009). However, it must be noted that the outline and dimensions of Structure 2 at Landscape 2A are also reminiscent of a 13th-century house excavated at Cookstown, Co. Meath (Clutterbuck 2009). Although there was no surviving evidence for a floor or occupation surface, hearth or entrance at the Cookstown house, it was interpreted as a house on the basis of the recovery of domestic pottery from a cluster of 18 stake-holes. The stake-holes had been arranged in a square pattern and interpreted as a bench, table or settle. On this basis a domestic function, although considered unlikely for this structure, cannot be ruled out. Looking further afield, the smithy at Goltho, Lincolnshire (Beresford 1975, 46) was a rectangular structure (7.3 m by 4.3 m) open on one side. While there is no evidence (see below) that the open-ended structure at Landscape 2A could have had an identical use, it is possible that this building type was preferred for general workshop-type functions, not limited to metal-working. Indeed, two samples of industrial waste (undiagnostic slag most likely associated with iron smithing) were recovered from a refuse pit to the east of the barn, which points to small-scale iron-working in the vicinity of Landscape 2A. However, this activity appears to have taken place at a remove from the farmstead as no features such as smithing hearths or bowl furnaces were identified. This in itself would not be unusual as metal-working was a specialised activity. Where evidence has been found within manorial villages, for example, furnaces or forges tend to be localised within a specific individual plot (e.g. Beresford 1975, 46; Moriarty 2011, 250). This would suggest that it was undertaken only by specific trained members

of the community. The metal-working at Landscape 2A is unlikely to have been undertaken by its inhabitants and more likely reflects the activities of an itinerant smith or, perhaps, a smith normally based at the manorial centre travelling from time-to-time to service outlying holdings, who set up a temporary forge to make or repair tools for the inhabitants. An iron knife was recovered during the excavation, as well as the horseshoe nail, and it is likely that other iron tools, such as reaping hooks or shears, would have been needed by the inhabitants.

The hayrick or poultry house

This structure was located immediately west of the cottage and workshop. It was defined by two curvilinear double-ditched features placed opposite one another enclosing a circular space that measured approximately 4m in diameter. An additional adjoining contemporary linear ditch was also identified to the south-west of the structure (Illus. 7.8). A radiocarbon date of AD 1290–1410 (SUERC-35192) was returned from a sample taken from the northern enclosing ditch indicating that it was contemporary with the cottage and workshop. The function of the enclosing ditches is uncertain, but the concave nature of the southern pair of enclosing ditches indicates that they may have functioned in the collection or removal of water. Furthermore, a number of lintel slabs identified within the fill of the southernmost ditch indicate that this section may originally have been capped by a series of lintel stones and functioned in a similar fashion to a drain.

There were no internal features of note and although the opposing curvilinear ditches defined a circular space, there was no evidence for walls. That being said, it is possible that the structure was composed of
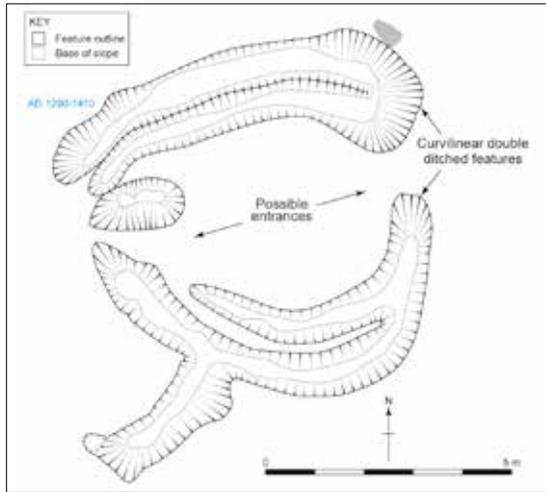
Illus. 7.8 Plan of possible hayrick or poultry house (Structure 3) (Rubicon Heritage Services Ltd).

clay walls, but that the level of preservation was not as good as elsewhere on the site. Access to the structure was provided by opposing 1 m-wide east–west cross-entry points. A number of pieces of burnt clay with distinctive partial cylindrical impressions were recovered from the fill of the innermost of the two northern enclosing ditches, which suggests that there may have been a superstructure that contained a number of wattle-and-daub panels. A small assemblage of Leinster Cooking Ware and Wexford-type ware was recovered from the fill of the enclosing ditches, including a sherd from a cresset lamp.

As this was a circular structure, its purpose is unclear. One interpretation is that it represents the location of a hayrick. Hay was a vital fodder crop used to supplement the winter feed and bedding for animals housed indoors for this period. In contrast to other crops, hay (when dried and brought in from the fields) was primarily stored outside in open-air stacks or ricks as opposed to barns (Gardiner 2013). However, hay was required to be kept off the ground to ensure

it remained dry, so saved hay was essentially piled up into a large tightly compacted heap or stack to keep it weathertight, with drainage ditches excavated around the perimeter to ensure that rain and surface water drained away from the internal area keeping the base of the stack dry. In addition, any water falling off the top of the rick would also drip into the lintelled drainage ditches ensuring the base remained as dry as possible. There are a number of examples of ditched stacks/ricks from excavations in the UK. The majority of these sites have been recorded in wetland or marshy land in the Fens of England and the uplands Scotland and are defined by curvilinear or ring-shaped ditches. Other English ditched stack sites include examples with penannular ditches, the gap believed to have allowed access to the rick throughout the winter months (ibid., 25). These examples go some way towards providing an explanation/function for Structure 3 and for the cross-entry points noted on either side of this possible rick. The location of this structure, at the edge of the farmstead close to the surrounding meadowlands, also supports the interpretation that it functioned as a hayrick. The importance of protecting harvested crops is reflected in the minister's accounts for the manor of Old Ross in 1287 when the costs of a thatcher employed to thatch 'corn stacks' and 'hay' are listed (Hore 1900, 37).

Another potential interpretation is that this may represent a poultry house. Although no directly comparable examples of medieval poultry houses have been identified in Ireland, the outline does resemble the reconstructed thatched circular poultry house from the Anglo–Saxon village of West Stow, Suffolk, England (Gies & Gies 1990, 21). On this basis, it could be suggested that the building was circular, most likely

constructed from clay walls covered by a thatched roof, a somewhat simplified version of a medieval dovecot.

This hypothesis is in keeping with the documentary evidence regarding the keeping of fowl. Poultry were kept on most Anglo-Norman manors and the 13th-century records of the manor at Old Ross list the quantities of hens, geese, swans and peacocks kept there (Hore 1900, 9–39). Hens were likely kept on most small holdings, with even the poorest peasants able to keep a few birds. Poultry also functioned as a bartering currency for rural dwellers with rents and dues often paid by batches of hens (ibid., 345). As noted in Chapter 3, betagh tenants on Roger Bigod's lands within the manor of Old Ross were expected to pay their annual rent with a batch of hens. Murphy & Potterton (2010, 345) note that 'hens would have been accommodated at night in coops or small sheds' close to the central farm buildings in order 'to protect them from predators'. Along with the comparative structural evidence from Britain, this historic picture of manorial life lends weight to the interpretation of Structure 3 as a poultry house to accommodate the hens kept at the site. However, the location of this structure, external to the farm complex, suggests that a use as a poultry house is less likely.

Barn with associated pigsty/animal pen

The barn was located approximately 10 m east of the cottage and positioned at right angles to it. It was contemporary with the house and radiocarbon dated to AD 1260–1390 (SUERC-35193). It had a rectilinear footprint (measuring 16 m north–south by 7 m) with a small separate annex (4.40 m east–west by 2.90 m)—interpreted as a possible pigsty or animal pen—located against its south gable (Illus. 7.9). Though similar in size

to the house it does not appear to have been used as a dwelling. The internal space was characterised by a scarped area/depression (12.50 m in length by 5 m in width) indicative of a sunken floor. Like the dwelling house, the barn was also constructed from clay walls, defined by external ditches and divided into two separate areas of activity. The first area was located at the southern extent of the structure where four large post-holes defined a rectangular space. In addition, two post-holes located together and a grouping of 11 stake-holes located towards the southern end of the west wall are thought to represent the internal division or compartmentalisation of this space. The second area was located in the northern extent of the structure and was characterised by a series post-holes and stake-holes that may have formed a wattle screen or fence line (Illus. 7.9). An entrance to the barn was defined by three large post-holes centrally positioned within the western wall of the structure. The post-holes are believed to represent a double-doored entrance which fronted onto the internal yard space of the farmstead (Illus. 7.9).

Gardiner (2013, 29) notes that distinguishing barns from houses is a difficult process as they have similar characteristics and that often the only way to determine function is from the results of specialist analysis of soil samples taken from the associated fills. The identification of carbonised grain amongst the analysed soil samples is an indicator that the structure most likely played a role in the storage of crops. With regards to the barn at Landscape 2A, the analysis of the fills of the sunken floor, internal pits, internal post-holes, and external features noted high levels of charred cereals, namely oats and barley, suggesting that cereal processing and/or
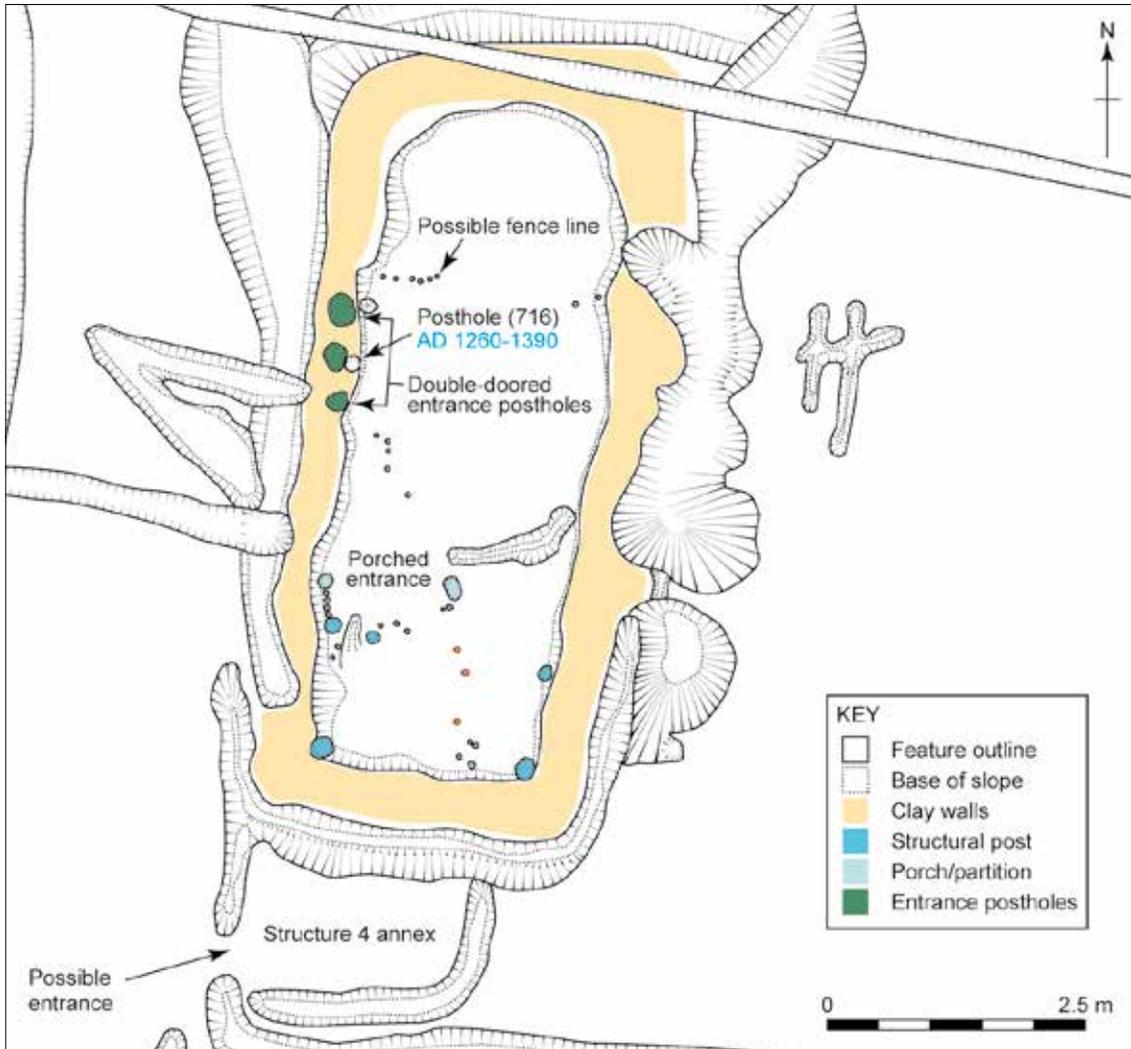
Illus. 7.9 Plan of barn with pigsty/animal pen (Structure 4 and annex), with key features highlighted (Rubicon Heritage Services Ltd).

storage was an important function of this building. Particularly high quantities of oats, barley and other cereals were recovered from the entrance post-holes. This is somewhat unsurprising when one considers the amount of traffic and footfall concentrated across this area associated with the storage and processing of crops.

The charred cereal assemblage identified from the samples associated with the barn is typical of the medieval period. Oats were the most widely grown and utilised grain throughout Ireland during the medieval period. The reason for its popularity is not fully understood, but it is believed that it is related to climatic conditions; oats were perceived as a hardy crop being more tolerant of difficult growing conditions when compared to other crops (Campbell 2000, 225). Another reason for its popularity may have been its versatility, as oats served both as a human foodstuff and animal fodder and

were even used to brew ale. Areas where oats are the dominant crop usually coincide within the environs of large urban areas. Medieval New Ross is a perfect example of this as there was a market for oats as fodder and foodstuff (Murphy & Potterton 2010, 313).

The same can be said for barley, a resilient crop that was usually sown in the spring on light to medium soil types. As with oats it was utilised as a human foodstuff and to a lesser extent as a fodder crop. It is mentioned as a food source in the early Irish legal texts, albeit in the same context as hardship and abstinence (Kelly 1998), and it also formed part of the staple diet in Scotland, parts of Wales, north-west England and Cornwall (Greig 1988, 110–11). However, in most places where wheat was also widely grown the most common use of barley was for brewing (Murphy & Potterton 2010, 309). Interestingly, both barley and oats were identified in abundance within two of the analysed samples, which may indicate that the two crops were grown together. This process is known throughout England, Ireland and Wales and was carried out to reduce the risk of total crop failure (Jones & Halstead 1995, 103–14; Johnston 2003).

Barns are considered a typical component of farmsteads in Britain (Dyer 1986), commonly serving a variety of functions relating to both the storing and processing of crops. Unthreshed grain would have been stored in ventilated barns in heaps and stacks. Barns provided security and shelter for drying and storing the harvested crop. Stringing the sheaves in a barn also had the advantage of allowing the grain to be threshed as required or as it dried out (Murphy & Potterton 2010, 321; Gardiner 2013, 28). Barns associated with the settlements at Houndtor 1 and 2 and Hutholes on Dartmoor routinely

incorporated cereal-drying kilns and ovens at one end of the structure (Beresford 1979). At Barton Blount, Derbyshire, barns were uncovered at Crofts E and G, while at Goltho, Lincolnshire, a barn was associated with Croft C (Beresford 1975, 45); these barns were similar in size to the dwelling houses present at these settlements.

An interesting question arises as to whether it was the lord or the tenant that was investing in the construction of barns across manorial lands. Gardiner (2013, 34) notes that the Domesday Book shows that the majority of manors in England were leased out in return for payment either of cash or food renders or a combination of both. He suggests that the manorial lord did not have a particular interest in investing any more than was necessary in the buildings across the demesne lands as it had a marginal effect on the value of the lease. However, the tenant, who had to make substantial payments of food to the lord during certain parts of the year, had a vested interest to ensure his crops were protected as the grain would have had to be stored and protected in preparation for delivery. As such, a tenant on a manor may well have been the one investing in the construction of a barn (ibid., 35).

Destruction layer: In common with the dwelling house, a series of deposits overlying the barn exhibited evidence for burning which has been interpreted as representing the destruction of this structure by fire. It is not possible to determine whether this was a deliberate act to destroy a partially dilapidated building or if it was an accidental occurrence. Radiocarbon dating evidence (AD 1260–1390, SUERC-35193) suggests it could have burned down at the same time as the cottage.

An ancillary annex was identified to

the south of the barn and interpreted as a possible pigsty or animal enclosure. It was defined by a curvilinear slot-trench which enclosed a space that measured approximately 4.5 m east–west by 2.5 m. The entrance (1.1 m wide) was located on the west side and appears to be the only entrance, suggesting it was not accessible from the barn (Illus. 7.9). Although there was no direct evidence for pig husbandry at Landscape 2A, it has been noted that pigs were 'the single most productive source of meat available to medieval farmers' (Murphy & Potterton 2010, 340). It is therefore plausible that pigs were reared at the site. Furthermore, it should also be noted that the contemporary woodlands to the north of the site would have provided a suitable foraging environment, as pigs are commonly herded into woods to feed on roots, fungi, nuts and other woodland foodstuffs (Turrell 2003, 44–8). The minister's accounts for the manor of Old Ross in 1288 record income from the 'right of pannage [the grazing of swine] in the Woods' (Hore 1900, 38).

Livestock pen or sheepfold

The easternmost structure within the settlement (11.5 m in length by 9 m in width) was positioned parallel to the barn. It was defined by single slot-trenches on the north and south-west and a double slot-trench on the east (Illus. 7.10). A gap in the north-west formed an entrance. The slot-trenches have been interpreted as a possible palisaded fence; however, no packing stones or stake-holes were identified with the slot-trenches to substantiate this hypothesis. This fenced enclosure would have served to house livestock and protect them from predators and theft. Animal pens or stockades are a common feature of medieval farmsteads and are closely associated with practices such as

sheep-folding (Gies & Gies 1990, 59; Murphy & Potterton 2010, 335). A radiocarbon date of AD 1440–1640 (SUERC-35944) was returned for this structure suggesting it is contemporary with the southern enclosing ditch. It also suggests a later phase of use at the site at a point where the house and barn had burnt down. However, it should be noted that the material culture recovered from the sheepfold suggests it is contemporaneous with the other farm buildings. It could very well be the case that the dated material selected from the analysed soil sample represents later material that had become incorporated into the feature post abandonment.

Sheep rearing was an important part of the economy of the manor of Old Ross to which Landscape 2A seems to have been attached (see Chapter 3; Murphy 2008, 4–6). Wool was an important export product in medieval Ireland and the port of New Ross was one of the primary points for the export of fleeces to the continent (Lydon 1993, 167). It is unsurprising, therefore, that the manorial estates in its hinterland would prioritise sheep rearing, given ready access to such an important marketplace. While cattle may also have been kept it is likely that sheep were the most important livestock animal reared at the site. Sheep would also have been beneficial to agricultural practice at the settlement. One of the most efficient ways of improving the productivity of land was through the practice of sheep-folding, which involved allowing sheep out to pasture on arable land after harvest during the day and returning them to enclosures or 'folds' at night. During this process, nutrient-rich sheep dung was walked into the fields, fertilising the soil (White 1970, 127–8). Support for this hypothesis is provided by the increase in fungal spore
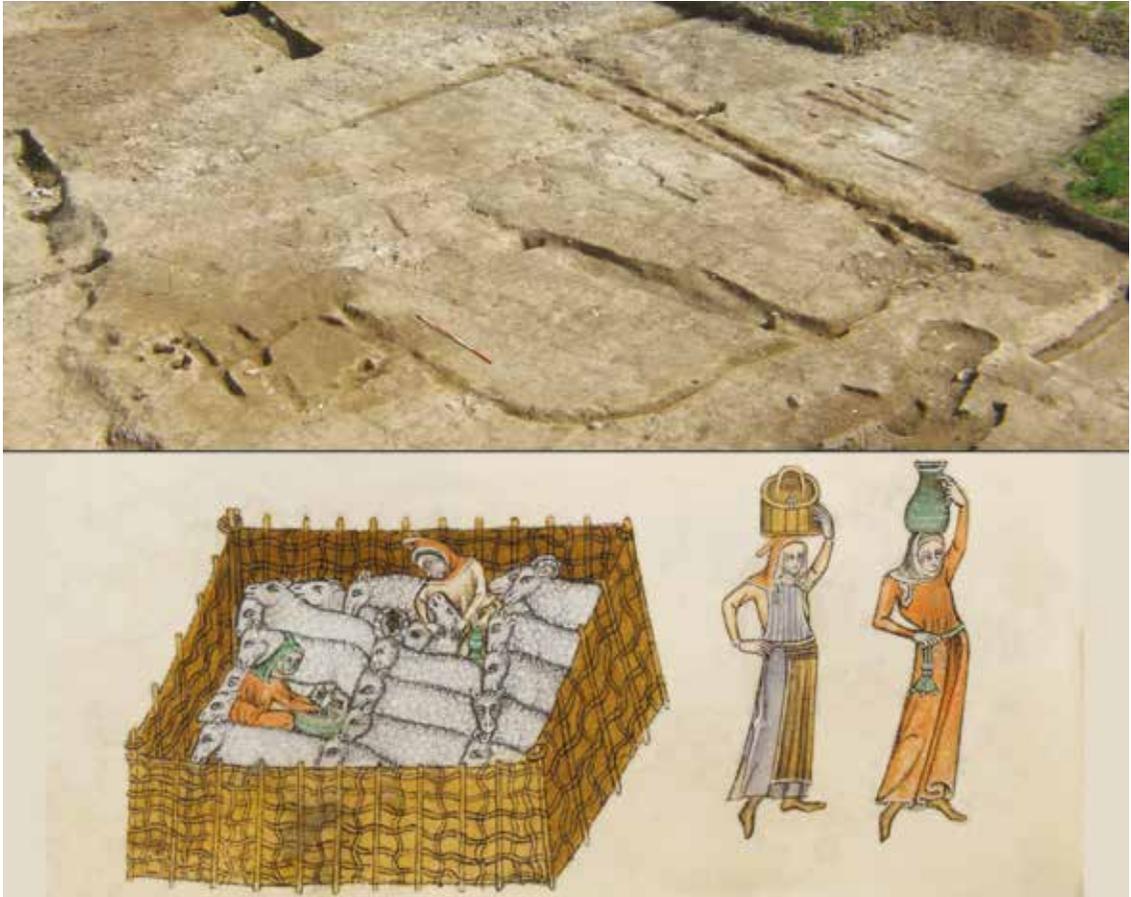
Illus. 7.10 Top: aerial view of sheepfold or stockade (Structure 5), facing north-east (StudioLab) (2 m scale) (Rubicon Heritage Services Ltd). Bottom: depiction of sheepfold from The Luttrell Psalter f.163v (copyright British Library, public domain).

indicators associated with animal dung in the contemporary section of the pollen core from the adjacent wetland (see Chapter 4). The minister's accounts for the manor of Old Ross in 1283–4 list an expense of 9 pence for 'spreading manure on 2 acres' which indicates that some lands on the manor were actively manured (Hore 1900, 30). In the following financial year, expenses related to the removal of manure from the 'new Hall' and the 'haggard' are listed and in 1287 the costs of 'throwing manure outside the sheepfold' are recorded (ibid., 34, 36).

Dating and duration of settlement

The returned radiocarbon dates (Illus. 7.11) ranged from the early 13th to mid-17th centuries suggesting two phases: one centred on the 13th and 14th centuries and the second on the 15th to mid-17th centuries. The early cluster of dates relates to the core occupancy of the site, with dates deriving from features associated with the cottage, the workshop, the hayrick, the barn and the northern enclosure ditch. This would indicate that these buildings were, by and large,

contemporary, which is consistent with their common orientation. This is also supported by the pottery assemblage from the site, which was mainly comprised of Leinster Cooking Ware (late 12th–mid-14th centuries in date) and also included some Wexford-type wares (late 12th–early 13th centuries in date).

With the exception of the workshop (Structure 2), there is no definite indication of modification or refurbishment of the buildings, so we must assume that the duration of the first phase of settlement at the site was equivalent to a single house 'generation'. All of the buildings incorporated significant timber structural elements and it is often argued that medieval farm buildings had relatively short lifespans (20–50 years), particularly where there is evidence for

regular replacement (Beresford 1975, 19). However, this is not something that can be automatically presumed (Browning & Higgins 2003, 76) and it is possible that the buildings at Landscape 2A could have had much longer lifespans. Also, any later alterations or replacements of the buildings that used different construction methods—such as, for example, where sill beams rested directly on the ground surface rather than within slot-trenches—may not have left directly identifiable remains (Chapelot & Fossier 1985, 248–50; Browning & Higgins 2003, 76). At Camaross, Co. Wexford, for example, the building does not appear to have had earth-fast foundations (Tierney & Johnston 2006b; Tierney 2009, 193). Had this building not been destroyed by fire—its footprint was delineated by burnt timbers—
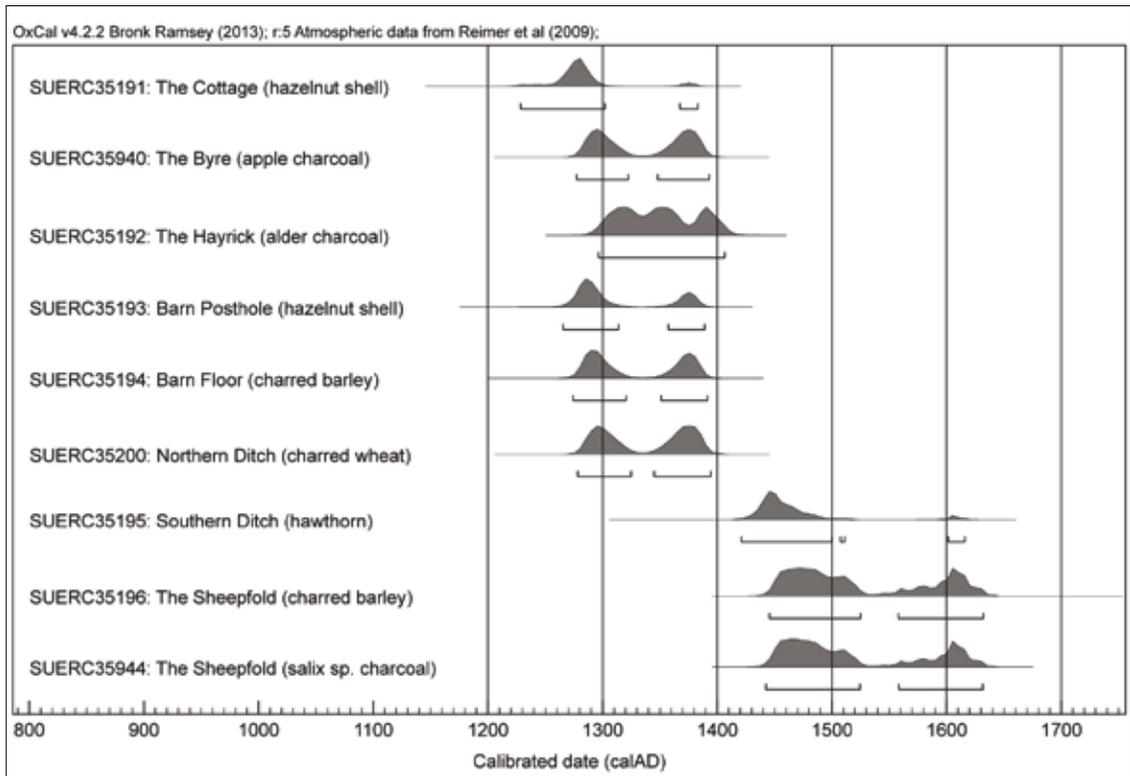
Illus. 7.11 Plot of radiocarbon dates from Landscape 2A (Rubicon Heritage Services Ltd).

it is doubtful that it would have been so confidently identified during excavation. This was also the case at Hen Domen in Wales, where post pads were the only intact physical remains of the timber buildings contained within the motte and bailey and what was once a most impressive site (Higham & Baker 2000). Thus, even in the absence of evidence for the maintenance or replacement of buildings, it is entirely plausible that the main settlement at the site extended over the greater part of the two centuries spanned by the early cluster of radiocarbon dates.

Two of the buildings—the cottage and the barn—show evidence of destruction by fire. This could have been accidental or have been part of a formal 'decommissioning' of the structures. As noted in Chapter 3, economic issues in the 14th century led to a decline in manorial settlement and this could be a factor in the decline of the Landscape 2A farmstead. However, this period also saw a resurgence of the native Gaelic Irish population so a more sinister cause for any fire must also be considered, as has been suggested for the building destroyed by fire within the Camaross moated site (Tierney & Johnston 2006b; Tierney 2009, 193–4). Though, as noted in Chapter 3, accounts of the period may have exaggerated the damage to New Ross and its hinterland from Irish raiding; there was certainly substantial disruption, which, along with the economic factors, is likely to have impacted on the settlement.

The radiocarbon dates suggested that the main buildings at the site had gone out of use by the beginning of the 15th century. Later dates were obtained from the animal enclosure and the southern enclosure ditch (15th to mid-17th centuries), which may suggest that the site continued to be used after the main settlement had ceased. However, it must be stressed that the material culture recovered from the sheepfold and southern enclosing ditch suggests they are contemporaneous with the other farm buildings and the possibility that the material selected for dating from the analysed soil samples represents later material that had become incorporated into these features after the site was abandoned cannot be discounted. It is also possible that some of the structures (including the dwelling house) were replaced by ones using construction technologies that did not leave sub-surface remains (Chapelot & Fossier 1985, 247–52) and that the settlement continued in a way that cannot be recognised archaeologically. However, in the absence of any direct evidence for this, we can only suggest that one structure—Structure 5 (the sheepfold)—remained in use during this later period. As Structure 5 appears to have been an animal pen or stockade, it may be that the site continued to be used to house livestock, perhaps seasonally. It is also possible that settlement within the manor contracted to focus on the better quality or more central holdings, while outlying holdings such as Landscape 2A were used for out-field pasturing only.

Environment, economy and subsistence

A snapshot of the local environment can be reconstructed from the palaeoenvironmental (primarily charred plant remains) assemblage. This in turn can build a picture of the site economy and daily life on the farmstead at Landscape 2A.

Agricultural landscape and environment
The palaeoenvironmental assemblage contained a wide range of wild taxa or weeds

consisting of common fumitory, wild radish, pea/vetch, ribwort plantain, corn marigold and spiked sedge seeds. These weed seeds are typically associated with agricultural field systems and broken ground (fields that have been ploughed and harrowed) and as such are in keeping with the farmstead and agricultural nature of Landscape 2A as a whole. The recovery of weed seeds within environmental samples is in fact quite common as weeds grew vigorously alongside medieval crops. In fact, the prevalence of weed seeds amongst grain crops has been accredited as the main reason for the low yields of grain from medieval arable land (Postles 1989, 130–43).

Scrub and hedge bank species such as bramble and sloe berry were also identified in conjunction with woodland species such as hazelnut shell. These edible species suggest that the inhabitants of Landscape 2A were gathering these readily available wild berries and nuts from the surrounding hedgerows to supplement their diet in much the same way we use them today.

Analysis of the charcoal fragments from Landscape 2A identified alder, hazel and willow. These species are common to low-lying damp areas close to rivers and waterlogged soils. The analysed charcoal fragments consisted of small branches and twigs and although these were most likely used as firewood some may also have been utilised as building materials. The management of willow, hazel and alder through coppicing produces long straight stems with small diameters that are ideal for incorporation into wattle screenings. Interestingly, two pieces of vitrified clay with cylindrical impressions were recovered from the dwelling house and the hayrick which were interpreted as daub material originally associated with wattle panels (the cylindrical

impressions being interpreted as the impressions of wood). This suggests that the inhabitants exploited the natural resources in the vicinity of the site for firewood and also practised woodland management.

Overall, the palaeoenvironmental evidence supports a picture of an arable farming environment to the west and south of Landscape 2A with an area of scrub woodland dominated by low-lying damp-loving tree species situated to the north of the site. This reflects the physical environment identified during the archaeological excavation as the site was situated on well-draining fertile agricultural land to the south of a minor tributary stream of the River Barrow, with a small tract of woodland located to the north of the site.

Cereal crops

The charred cereal grain assemblage (Illus. 7.12) was dominated by oats and hulled barley indicating they were the main crops grown. The importance of oats and barley has been discussed above but it should also be noted that smaller quantities of club-bread wheat, emmer wheat and rye were also identified and may have been grown as secondary crops.

Wheat grains (club or bread wheat), spelt wheat and emmer wheat were also identified amongst the analysed samples albeit in significantly lower quantities. Wheat was widely grown for human consumption and was recognised as the standard food crop in eastern Ireland throughout the medieval period, being the favoured grain for baking. At market it fetched the highest price of all the grains and this factor ensured its widespread cultivation (Murphy & Potterton 2010, 306).

Only small quantities of rye grains were identified. Primarily grown as a bread grain,
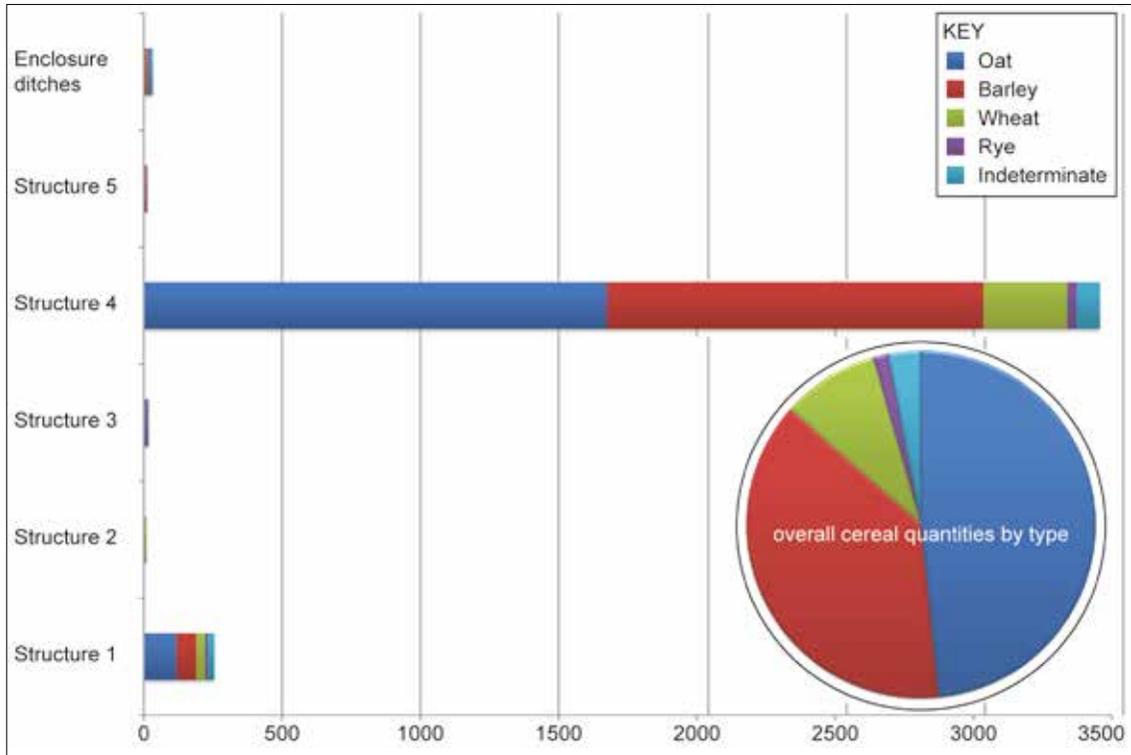
Illus. 7.12 Histogram of identified charred cereal remains from Landscape 2A (Rubicon Heritage Services Ltd).

its straw made it ideal thatching material due to its considerable length and it was much sought after for this purpose (ibid., 308). Although rye is found on the vast majority of excavated medieval sites in Ireland, the quantities noted are quite low when compared with the other cereals that have been identified within the assemblage such as barley and oats (Monk 1991).

Other crops and foodstuffs

The cultivation of legumes was also undertaken at Landscape 2A; a small quantity of pulse seeds (*Legume* sp.) was identified as the seeds of field peas and broad/horse bean. The dual nature of legumes, which were grown for consumption by humans and animals, meant they were an important component in the diet of the lower levels of society across demesne lands

and on small holdings (Campbell 2000, 228–30). They were primarily ground down and used to make bread or added to soups and stews, with horse beans being ground down and used to make horse bread (Murphy & Potterton 2010, 314). The cultivation of legumes was also beneficial to the land as it helped to fix nitrogen in the soil which was vital for replenishing the fertility of areas undergoing any form of crop rotation (Campbell 1983, 26–46).

The charred cereal grain evidence suggests an organised agricultural landscape associated with the farmstead at Landscape 2A in keeping with what we know of medieval agriculture.

Cereal processing

No evidence for cereal-drying kilns was identified at Landscape 2A or any of the

adjacent sites, though these would have been an expected feature of any farmstead practising tillage agriculture. It is likely that any kilns were located away from the main settlement and so may lie outside of the road-take. However, it has also been suggested that corn-drying kilns are more representative of large-scale cereal production (Monk & Kelleher 2005). It is possible that only small-scale cereal processing was being carried out at the site; small amounts of grain can be effectively dried by passing the sheaf through burning straw or by placing the grain in pots placed on the hearth. The possibility of small-scale cereal processing being undertaken on site is further suggested by the retrieval of a fragment of a rotary quern-stone from topsoil (Illus. 7.13). Milling was strictly controlled by the manorial administration in order to force tenants to mill their grain at the lord's mill. Tenant use of hand mills was restricted with tenants having to obtain special permission to retain them (see Chapter 3; Murphy & Potterton 2010, 416). Fourteenth-century documentary records from the archiepiscopal manor of Swords show that cottar tenants at Portraine collectively paid 6*s*. 8d. per year to retain their hand mills (O'Neill 1987, 92). If only small quantities of grain were being processed for daily use at Landscape 2A it could be seen as indicating that pastoral farming was the main economic activity undertaken at the site, with cereals grown mainly to supply food and fodder for the inhabitants rather than as any kind of 'cash crop'.

Ethnicity and associations; who were these people?

The review of the historical evidence in

Illus. 7.13 Fragment of rotary quern-stone (E4108:001:003) (Rubicon Heritage Services Ltd).

Chapter 3 has shown that Landscape 2A originally lay in the historic townland of Stokestown and most likely formed part of the manor of Old Ross. In the medieval period, Stokestown was held by William Marshal and later by the Bigod earls of Norfolk and as such it is reasonable to assume that the inhabitants of Landscape 2A most likely represent peasant tenants of English origin.

It is worth noting that although the majority of the county was under Anglo-Norman control, the vast majority of the population of Anglo-Norman manors were Irish tenants or betaghs. As such, the possibility that Landscape 2A represents the homestead of an Irish tenant rather than an English tenant has to be considered. In Chapter 3 the prevalence of the 'graig' element in placenames in the vicinity of the site has been highlighted. Nicholls (1982, 380–1) has argued this placename was used to denote betagh settlements. In addition, the graig placename is also thought to be specifically associated with settlements involved with livestock rearing. Margaret Murphy (Chapter 3) has suggested that the 'Ballycally Graige in Bantry' referred to in the Civil Survey, 1656 (Simington 1953, 184)

may preserve a placename associated with the Landscape 2A farmstead. The overall picture that emerges is that in the 13th and 14th centuries the area around Landscape 2A was home to a number of well-established betagh settlements on the southern fringes of the manor of Old Ross. Given this information and its location on the outskirts of the manor on the periphery of an area of wetland, is it reasonable to suggest that the farmstead at Landscape 2A could have been a betagh settlement specialising in livestock husbandry?

The pottery recovered from Irish late medieval sites can be seen as an indicator of the enduring nature of the economic, political and social links between the Anglo-Norman settlers and England; the manufacture and use of these pottery vessels could be interpreted as 'a deliberate statement of ethnicity through material culture' (Curtin 2019, 151). Baker (2009b, 9) has argued that the presence of imported wares in conjunction with high-quality locally produced ceramics dominated by glazed wares with decoration influenced by Ham Green at Tullykane, Co. Meath, is indicative of an immigrant population using their knowledge to manufacture pottery in the style most familiar to them and that therefore the inhabitants of this settlement were most likely English tenants. At Coolamurry, Co. Wexford, a number of locally produced Wexford-type vessels had been decorated in the style of mid-13th-century Bristol Redcliffe wares (McCutcheon 2009, 102–7), again suggesting an immigrant population recreating familiar forms in the local medium. This copying of Bristol Redcliffe wares in locally produced fabrics was also noted at Camaross, Co. Wexford (Doyle 2006; Tierney 2009, 195; Curtin 2019). However, the presence of imported pottery is not a definitive indicator of the origin of a site's inhabitants and the reality was likely to have been far more complicated; one only has to look at the excavation results from Carrickmines Castle, Co. Dublin, where very little imported pottery was identified despite the high status and Welsh origin of the site's inhabitants (McCutcheon & Meenan 2010, 96–7). Furthermore, the pottery assemblage from Moneycross Upper, Co. Wexford, comprised entirely of Leinster Cooking Ware domestic table wares (jugs and platters), though in this instance the excavator has suggested an English origin for the inhabitants (Schweitzer 2009, 184). Even where the population of a site are believed to have been Irish, such as at Attyflin, Co. Limerick, it has been argued that the pottery assemblage (which primarily comprised tableware rather than cooking pots) and the artefact assemblage generally may reflect a 'Normanised' native Irish population as opposed to a Gaelic settlement (Eogan 2009, 76). At Cookstown, Co. Meath, Clutterbuck (2009, 35) implies a possible betagh settlement, noting that 'although the ethnicity of the sites inhabitants is not readily apparent from the archaeological or historical record the relatively insubstantial nature of the identified structures and the material remains appear to place the inhabitants below the level of free tenants'. However, a note of caution must be sounded regarding the interpretation of structures as 'insubstantial' on the basis of the surviving sub-surface evidence, as it has been well demonstrated from sites in Britain and elsewhere that the surviving evidence for structures is heavily influenced by building technology (Chapelot & Fossier 1985, 247–52; Browning & Higgins 2003, 76).

The artefact assemblage from Landscape 2A consists overwhelmingly of sherds

of ceramic vessels, dominated by locally produced Leinster Cooking Ware and Wexford-type wares. It comprised mostly cooking jars in addition to tableware (jugs and platters), storage vessels, such as bunghole jars, and cresset lamps (Illus. 7.14–7.16). Though ceramic cresset lamps (also known as double-ended or pedestal lamps) are a common find on British sites of the period, the form of the Landscape 2A lamps mirrors that of Irish stone cresset lamps and as such cannot be taken as a definitive indicator of the ethnicity of the occupants (McCutcheon 2014, 101–2). The range of vessel-types at Landscape 2A most closely parallels that from the moated site at Camaross Co. Wexford (Doyle 2006), with the exception of the imported pottery present at that site. The locally produced wares from Camaross also included cooking jars, tableware (jugs and platters), storage vessels and cresset lamps. However, as this was a pottery production centre (ibid.), arguably this range of vessel-types reflects the full range that were locally produced during the period.

Though the archaeological evidence does not conflict *per se* with the interpretation of the site as an Irish or betagh settlement, the use of pottery, even if of local manufacture,

Illus. 7.15 Reconstructed Leinster Cooking Ware vessel (Rubicon Heritage Services Ltd).

Illus. 7.16 Leinster Cooking Ware bungholes (E4108:496:2 and E4108:329:1) (Rubicon Heritage Services Ltd).

Illus. 7.14 A selection of Wexford-type ware pottery sherds (Rubicon Heritage Services Ltd).

does suggest an acculturated population that had adopted some of the characteristic elements of an Anglo-Norman way of life (Illus. 7.17). The barrel padlock key suggests that the site's occupants possessed items of value that needed to be kept under lock and key (Illus. 7.18).

This interpretation, based on the material culture, is supported by the layout and organisation of the settlement. As previously noted, the diversity and number of contemporary structures associated with a single farmstead is more closely paralleled at British sites of the period, whether nucleated or dispersed (e.g. Beresford 1975; 1979; Chapelot & Fossier 1985, 212–17; Dyer

1986; Silvester & Kissock 2012, 157). Other aspects of the settlement, such as the access road or pathway, partial enclosure and type of dwelling house are paralleled at Irish sites of the period, though often those that have been interpreted as reflecting immigrant settlement such as Tullykane, Co. Meath (Baker 2009b), Boyerstown, Co. Meath (Martin 2009), or Moneycross Upper, Co. Wexford (Schweitzer 2009). This influence is hardly surprising. While we traditionally discuss the increasing Gaelicisation of the immigrant populations that arrived in Ireland during the later medieval period, it is easy to forget that the cultural exchange went both ways. It has been well established that more high-status settlement forms introduced initially in Anglo-Norman

controlled areas such as the moated site (and later the tower house) came to be adopted equally by the native Irish populations (O'Conor 1998). It should be unsurprising that more mundane or low-status settlement forms were also adopted across cultural lines.

In any case it is unlikely that any of the pottery found at the site was manufactured there; no evidence for a pottery kiln or for pottery manufacturing waste was found. All of the pottery, however, was of Irish origin and could well have been manufactured within the wider New Ross area perhaps at the main manorial centre of Old Ross or within the town of New Ross. Excavations at Ardreigh, Co. Kildare (Opie 2010), and at the Camaross moated site (Tierney 2009) have identified small-scale rural medieval

Illus. 7.17 Visualisation of the range of late medieval domestic artefacts found at the farmstead excavated at Landscape 2A (H Sims).

1. Bunghole Jar
2. Jug
3. Cresset Lamp
4. Barrel Padlock Key
5. Iron Knife
6. Cooking Jars
7. Platter
8. Storage Jar

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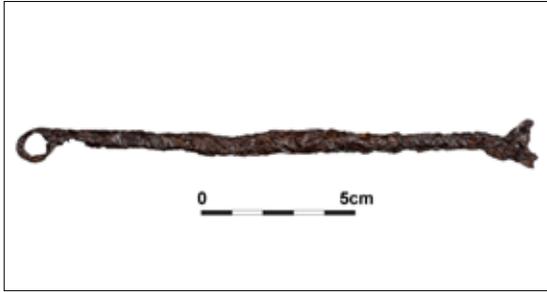
Illus. 7.18 Shaft of the barrel padlock key following conservation (Rubicon Heritage Services Ltd).

pottery kilns, while larger manufacturing centres have been identified at urban sites in Drogheda (Halpin 2007) and Kilkenny (Devine & Ó Drisceoil 2009; 2022). Unfortunately, as yet there is no direct evidence for pottery manufacture either within New Ross or the manor of Old Ross. If such evidence emerges through future work, then a comparison of the fabric of the pottery from Landscape 2A with such a manufacturing site might allow for a more definitive assessment of its origin.

Late medieval settlement landscape

A strong case has been made in Chapter 3 that the Landscape 2A farmstead was a tenant holding within the manor of Old Ross (the centre of this manor lies some c. 9.5 km to the north-east). While Old Ross was the administrative centre of the manor and would have been a focus for settlement, we know from the historical sources discussed in Chapter 3 that there was dispersed tenant settlement right across the lands of the manor. For example, in the townlands of Creakan Upper and Lower, Finshoge and Mylerspark to the east of Landscape 2A, there are references to both free tenants and betaghs (Dryburgh & Smith 2007, 71–3). There must have been many more farmsteads similar to Landscape 2A dispersed across

the manor of Old Ross, but unfortunately, as these sites have no surface expression it is difficult to ascertain their number and distribution. The main settlement sites for which we have surviving evidence—mottes or motte and bailey complexes, moated sites and tower houses (Illus. 7.3)—would all normally be associated with either the main centres of a medieval manor or the settlements of free tenants within the manor.

Mottes or motte and bailey complexes are earthwork castles and provide some of the best evidence for early Anglo-Norman settlement as they are closely associated with the initial colonisation and fortification of the lands wrested from the native Irish population (Colfer 2002, 53, 54). The motte and bailey at Old Ross is the closest to Landscape 2A. Moated sites can be described as fortified or defended farmsteads. In Britain they are often found at the centres of manors with associated manorial villages; however, in Ireland they are more commonly associated with dispersed rural settlement and are usually interpreted as the residences of free tenants within a manor. They are also commonly associated with a 'second wave' of colonisation in the 13th century rather than the initial colonisation of the late 12th century (ibid., 91). A series of moated sites is known from townlands to the east and north-east of Landscape 2A (such as Slaght, Kilclammon, Ballymacar and Mylerspark) most of which would have been located within the manor of Old Ross and so are most likely a reflection of free tenant settlements within the manor. Tower houses most commonly date from the 15th and 16th centuries and may also be indicators of earlier settlements with a small number built on the site of earlier mottes and ringworks (Murphy & Potterton 2010, 133; Barry 1999, 45). As such, their location may reflect

the ongoing placement of fortifications in strategic locations. Interestingly, there is a string of tower houses and possible tower house or castle sites running up either side of the River Barrow, including the tower house at Stokestown to the west of Landscape 2A and at Annaghs on the west bank of the Barrow opposite Camlin. It is possible that they indicate the locations of the holdings of important free tenants along the River Barrow, positioned there to maintain the security of this important routeway throughout the later medieval period. There are also a number of tower house or castle sites at Arnestown, Finshoge and Ballylane East for example, which likely reflect the same type of settlement. The tower house or castle site at Ballylane East is c. 200 m north-east of the moated site at Kilclammon, so could represent its replacement, but other than this there is no obvious overlap between the recorded locations of either type of site.

The other significant factor to consider is that Landscape 2A lies within the bounds of the forest of Ross. In modern usage the term 'forest' is synonymous with woodland; however, this was not the case in the medieval period, when 'forest' was a legal designation rather than a landscape description. Certainly, areas designated 'forest' could be expected to contain extensive woodlands or wood pasture, but they would not be fully under tree cover. Forests incorporated a wide variety of land-types and land-uses and could include villages and towns (Rackham 1996, 166). Forests were mainly controlled by the king or nobles through the exercise of forestal rights (primarily to 'pasture' his deer) and were originally envisioned as a method of supporting the royal court (ibid., 165–72). An entirely separate legal system of forest regulation with its own officialdom and

courts operated in parallel to the 'normal' medieval bureaucracy. Such a system was open to abuse and corruption, which, in England, led to the decline of the institution in the period after *Magna Carta* (ibid., 166). The partial deforestation of the forest of Ross c. 1231–4, referred to in Chapter 3, reflects this decline. It represents a withdrawal of the restrictions imposed by forest laws and would have encouraged both the expansion of settlement and also changes in the existing settlement landscape. The clearance of woodland for pasture or agriculture would have been more highly regulated and restricted, for example, while the area was under forest law. These changes are likely to have encouraged the expansion of settlement within the manor of Old Ross. Terry Barry (1977, 98) identified a large number of moated sites situated in the area covered by the forest of Ross and proposed that they were built and occupied by free tenants in the decades after the deforestation charter of 1233. Further evidence of this can be seen in the Old Ross manorial accounts for 1283–4, which include the description of the construction of what has been interpreted as a moated site at 'Ballyconnor', which Colfer (1996; 2002, 93–4) believes to be Mylerspark, some 4 km east of Landscape. It is possible that the settlement at Landscape 2A reflects the further encroachment of settlement into new (perhaps previously wooded) lands facilitated by the removal of the forest restrictions.

Conclusions

The evidence from the investigations along the bypass route suggests that the Landscape 2A site was largely peripheral within the settlement landscape of the early medieval

period. The arrival of Anglo-Norman settlers into the area at the end of the 12th century led to significant political and social change and an expansion of settlement into previously peripheral land. This was the result of the initial influx of new settlers, displacement of native populations and the introduction of new systems of land tenure with consequent changes to settlement forms and locations. This can be seen in the settlement at Landscape 2A. Whether its inhabitants were Irish or English, the settlement morphology and its buildings were based on models imported from Britain, the material culture reveals the occupants' desire to pursue an Anglo-Norman way of living, and its construction on a 'virgin' site marks a break from preceding early medieval settlement patterns.

The identification of non-moated site forms of enclosed medieval farmsteads/settlements is still in its infancy in Ireland, and it is only with the intensity of development-led archaeological investigations over recent years that many sites have been discovered. Prior to the last two decades of work the evidence for this aspect of Anglo-Norman settlement was quite limited (O'Conor 1998). However, a number of examples of sites which have parallels with Landscape 2A have recently come to light, for instance 'Site G', Killeen Castle, Cookstown and Killegland, Co. Meath (Baker 2009a; Clutterbuck 2009; Frazer 2009), Moneycross Upper, Co. Wexford (Schweitzer 2009), Leggetsrath East 1 (Devine & Kealy 2009) and Oldtown, Co.

Kilkenny (Flynn 2013). However, there is a great deal of diversity amongst these sites and the social status and ethnicity of their occupants is not always readily apparent from the excavated evidence.

Landscape 2A stands apart from most of the recent discoveries in the number and range of structures or buildings revealed. The dense farmyard 'cluster' identified during the excavation is more commonly paralleled on British sites of the period. It is possible that rather than being unusual in having this range of buildings, it is more accurate to say that Landscape 2A is unusual amongst Irish sites in that the evidence for multiple structures survives. Since it is clear in the case of most of the excavated medieval farmsteads in Ireland that they are based on an imported settlement form, it is reasonable to suggest that the diversity of building types must have been the norm here also. If barns, granaries, byres and animal pens were necessary components of medieval farmyards in Britain, they must have been similarly necessary on Irish sites. This suggests that at sites such as Moneycross Upper (Schweitzer 2009) where evidence for only one building survived, there must have been further structures for which no evidence has survived or which may be located outside the boundary of the area available for excavation. Rather than being unique in its diversity of structure Landscape 2A may be the exception that demonstrates that late medieval peasant settlements in Ireland had a complexity of form that has not been fully appreciated up to now.

CHAPTER 8

'Embellished with Many Elegant Seats': uncovering elements of the post-medieval and early modern landscape in the hinterland of New Ross

Damian Shiels and James Eogan

Post-medieval and early modern remains

The post-medieval and early modern remains discovered during the New Ross Bypass archaeological investigations were mostly small scale and often ephemeral in nature (Illus. 8.1). Many of the sites told a story of generations of agricultural activity, readily identified through the almost ubiquitous plough furrows which were revealed all along the road scheme. These modest features were complemented by evidence for sustained land improvement, as illustrated by the remains of drainage ditches and the evidence of field clearance that was encountered during archaeological investigations. That this was
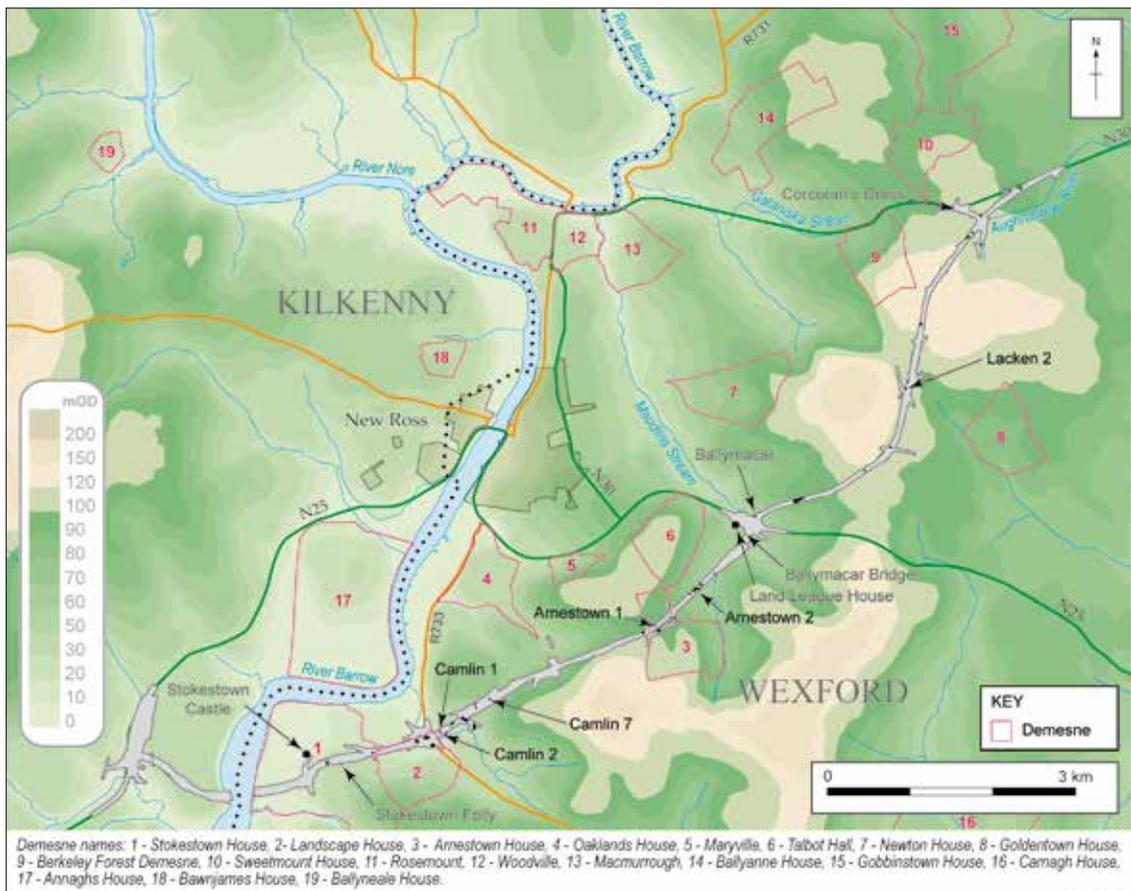
Illus. 8.1 Post-medieval and early modern sites and landed estates in proximity to the bypass (Rubicon Heritage Services Ltd).

Chapter title image Stokestown Castle tower house, southern elevation (J Eogan).

a process of several centuries' duration can be seen at a few sites. Geophysical survey of the bypass route where it passed the site of Lacken Castle revealed evidence of a field system. Archaeological investigation of two sites in this area (Lacken 2 and Lacken 2A) uncovered evidence for land improvement and enclosure. A series of boundary ditches, drains, gullies and agricultural plough furrows criss-crossing the landscape dating from the 12th to 19th centuries were revealed at Lacken 2A. At Lacken 2 (E4124), stone-filled pits are interpreted as evidence of field clearance to improve the land for ploughing. One produced a fragment of clay pipe bowl which suggested that this work had taken place during the 17th century. It is also possible that a hearth and associated pits at Camlin 1 (E4106), which returned a radiocarbon date with a range of AD 1520–1960 (with the highest probability being a date between AD 1630 and 1690), may be associated with agricultural activity in the 17th century. The recovery of sherds of North Devon gravel tempered ware at this site is evidence of the way in which New Ross and its hinterland participated in the global trade networks that developed in the early modern period. This involved the export mainly of cloth, livestock and agricultural produce from New Ross, and the import of consumer goods, foodstuffs and exotic commodities, such as sugar, spices and tobacco from the North American and Caribbean colonies. The detail of this trade is illuminated by the customs records of 17 voyages by a ship named the *Delight* between Bideford, a port on the north Devon coast, and New Ross in 1680 (Carter 2019). Among the cargo carried by the *Delight* to New Ross that year were 1,932 earthenware vessels, which the ship's master Edward Dennard exported. Much of this pottery was probably sold by Dennard

in New Ross for use in domestic contexts, like the jug from Camlin 1. Some of these ceramics were probably used in the emerging Irish dairy industry, for in the same year Dennard and four other merchants imported 5,639 kg of butter into Bideford from New Ross on the *Delight*. Approximately 1,727 kg of this butter was packed in 'pots', probably jars produced in the North Devon potteries (Anon. 2019, 5–6).

It was during this century that the countryside with which we are familiar today began to form. The most dramatic example of this landscape change was land enclosure, as fields were amalgamated and ownership rationalised. Field boundaries such as those discovered at Camlin 2, Camlin 7 and Arnestown 2 illustrate this drive to enclose and improve the land, the objective being to increase farming efficiency and yields. Along the River Barrow, in Stokestown townland, embankments were built, drains were dug, and sluices installed which facilitated 'reclamation' of the estuarine wetland and its conversion to productive farmland (Coughlan & Stevens 2021, 9–10). These activities ensured that the 17th to 19th centuries were a time of dramatic change in the region, as indeed they were across much of the island.

These changes occurred at a time when the New Ross area also found itself the focal point of a number of devastating military campaigns, upheavals which caused major hardships for those who made this part of the county their home. On 18 March 1643, against the backdrop of the Eleven Years War (1641–53), Royalist forces under the Marquess of Ormond inflicted a defeat upon the Confederate Leinster Army of Thomas Preston at Ballinvegga to the north-east of the town but failed in their main aim of taking the town itself (Cronin et al. 2010). Oliver Cromwell was more successful when

he brought his New Model Army through the area six years later. Following the sack and slaughter at Wexford, the locals in his path would have been well aware of the fate that met civilians who got on the wrong side of his battle-hardened forces. Arriving in the locality in October 1649, Cromwell purportedly spent some of his time in the 'miserable hamlet of Lacken' as he manoeuvred to take New Ross (Jeffrey 1979). The Parliamentarians and their siege guns arrived outside the walls on 17 October 1649, but thankfully for those inside another Drogheda or Wexford was avoided, as terms of surrender were agreed two days later (Wheeler 1999, 100–2). The booming of artillery and rolling crackle of gunfire were next heard during the horrific Battle of New Ross on 5 June 1798, an engagement which caused the streets to run red with blood as protracted urban fighting raged up and down the town. Prior to the engagement, the force of c. 10–15,000 United Irishmen had encamped on Corbet Hill (Arnestown townland) to the south-east of New Ross, and it was from there that they launched their major assaults towards the Priory Gate, Three-Bullet Gate and Market Gate (Cronin et al. 2008). Recent archaeological works within the town have uncovered military artefacts associated with the ultimately unsuccessful United Irish effort to gain control of the town, their survival bearing testament to the ferocity of the 1798 fighting (Shiels 2019).

Yet despite these intermittent shocks of extreme violence, the landscape reveals the extent to which protracted stability and prosperity was the lot of the local landed classes. This becomes most noticeable when we broaden our view beyond the individual pieces of archaeological evidence for land management and improvement and survey the surrounding countryside.

The N25 New Ross Bypass was constructed in part of County Wexford dominated by the country houses and estates of ascendancy families (Gahan 1987) (Illus. 8.1 and 8.2). Samuel Lewis noted in 1837:

'the environs of the town [New Ross] are embellished with many elegant seats and fine demesnes among which are Oaklands, the seat of Colonel Sankey; Talbot Hall, of J. Hyacinth Talbot, Esq.; Macmurrough, of Charles Tottenham, Esq., part of an estate which had been the ancient property of Dermod Mac Murrough, King of Leinster; Woodville, of Edward Tottenham, Esq.; Maryville, of J. Talbot, Esq.; Stokestown, of Josh. Deane, Esq.; and Rosemount, the property of the Misses Rossiter' (Lewis 1837, 530–1).

Many of the post-medieval and early modern remains encountered on the road scheme can be associated with this ascendancy landscape. The first 2.3 km of the route where it enters Wexford runs through demesne lands associated with Stokestown House and Landscape House. The Stokestown lands are the site of a tower house which was extant in 1582, when documentary sources show it was lost by the 'Old English' Prendergast family to New Ross Catholic merchant George Dormer (Moore 1996, 179). Dormer's property was confiscated and Roger Drake, whom sources variously describe as a London merchant who lent money to the English Parliament during the Civil War[20] and an agent to the Victuallers of the Navy, (Colliers 2019) was granted the lands of Stokestown under the Cromwellian Act of Settlement (Vigors 1890–1, 301 n. 132). Roger's descendant John Drake is shown as

20 Archaeological Survey of Ireland SMR File WX034-015----

Illus. 8.2 Extract from Map of Wexford by Valentine Gill, overlaid with the approximate route of the bypass (reproduced courtesy of Wexford County Council Archives) (J Eogan).

the owner of Stokestown Castle on Valentine Gill's early 19th-century map of Wexford (Gill 1811). John's daughter Sarah married Joseph Berkeley Deane in 1810.

Reclamation of the estuarine wetlands to the west of the tower house, apparently in the early decades of the 19th century, added approximately 55 hectares (136 acres) of productive land to the estate. Stokestown Castle was located on the side of the Dunganstown road and before reclamation it was approximately 100 m from the edge of the estuarine wetland. The castle seems to have been the residence of the Drake family until the construction of Stokestown House. The Ordnance Survey six-inch map (surveyed 1839) indicates that the 16th-century tower house was incorporated into a complex of buildings, arranged in a quadrangle around a large rectangular yard (approximately 24,000 sq. ft. (2,230 m^2)). The enclosed area was accessed by a gateway in the southern range of buildings immediately west of the tower house. The yard was subdivided into two sections by a boundary aligned on the eastern side of the tower house; a trough located in the larger eastern section suggests that this end of the complex was utilised for agricultural purposes. An enclosed garden (approximately 1.9 acres), laid out along formal lines, was located beside the road south-west of the buildings, and an orchard

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(approximately 5.5 acres) was located west of the garden.

By the end of the 19th century the 25-inch map (surveyed 1902) indicates that several significant changes had been made. The original western range of buildings was replaced with a narrower building on a slightly different alignment and the eastern range was replaced by a curved building with two wings, one of which extended beyond the line of the southern range. This had the effect of transforming the enclosed yard into a roughly trapezoidal space and increased its area to approximately 27,000 sq. ft. (2,508 m^2). Buildings along the north range were also reconfigured or rebuilt between 1839 and 1902. The yard was accessed via two gates, one on the site of the earlier gateway beside the tower house, the other in the western range providing access to the

reclaimed lands. There is no indication of the garden and orchard on the 25-inch map. The buildings mapped in 1902 seem mostly to be the surviving upstanding farmyard buildings. It appears that by the end of the 19th century, the earlier Drake residence and farmyard was being used exclusively as a farmyard.

Stokestown House was built by Joseph Berkeley Deane (1778–1850) and Sarah Drake following their marriage in 1810 (Yates 2010b, 11). The two-storey country house was sited to make the most of panoramic views along the Barrow Valley (Illus. 8.3). Its classically inspired detailing and generously proportioned, light-filled reception and family rooms demonstrated the wealth, style and modernity of its owners, and marked a decisive change from the way previous generations had lived. The needs of the family were met by domestic staff who could

Illus. 8.3 View of Stokestown House and folly from Shanbogh Upper, Co. Kilkenny (J Eogan).

access the upper floor via a service staircase from the kitchen wing (Colliers 2019).[21] Stokestown House was sited in a landscaped parkland at the end of a quarter-mile-long avenue, with a gate lodge controlling access from the Dunganstown road. It had a walled garden which, at the end of 19th century, contained a glasshouse. It seems likely that Camlin Bridge, a three-culvert masonry lintel bridge, was constructed as part of the works to improve road access to Stokestown House and its demesne in the early 19th century (Goodbody 2018a; Meharg et al. forthcoming). The mid-19th-century Griffith's Valuation records George Drake as the owner of the estate, although Sarah, his sister, continued in occupancy. Upon George's death in 1852 his nephew John Deane took on the running of the estate and changed his name to John Deane-Drake in 1854 to reflect his inheritance (Howard & Crisp 1897, 80). The Deane-Drake Estate also owned Landscape House and its associated lands, which in the 1830s were occupied by John Ussher. Lewis (1837, 715) noted that Landscape townland derived its name from the view it enjoyed of the river and ornamental grounds of Castle Annaghs on the other side of the Barrow, and that Landscape House was surrounded by a 'fine plantation of fir, sycamore, beech and oak trees'.

A notable feature within the former Stokestown demesne is a folly or summer house situated on a prominent hillside opposite the entrance to Stokestown House. It takes the form of an octagonal tower, most probably constructed at the same time as Stokestown House. The folly, or 'turret',

was surveyed as part of the road scheme and enjoys views of the River Barrow (Illus. 8.4 and 8.5). According to tradition the folly was originally constructed so that Joseph Berkeley Deane could paint the River Barrow (Craig & Garner 1975, 70). Views across the Stokestown House demesne and the Barrow Valley, particularly upstream, could have been appreciated from the folly in every season and in all weather conditions. It probably also served as a place where the proprietors of Stokestown House could picnic when desired and entertain visitors (Yates 2010b, 11–12).

As the route moves north and east it passes between the demesnes of Arnestown House and Talbot Hall. Arnestown was extant in 1777 when it appears on Taylor and Skinner's map of the area and was the home of 'Corbet Esquire' (Taylor & Skinner 1778, 149). Nearby Talbot Hall was also standing in 1777, at which time it was the Corbet family's principal residence. This important building once had an attached walled garden. Although initially owned by the Corbets, it passed to the Talbots and then by marriage to the Redingtons and eventually the Roches.[22]

Illus. 8.4 Stokestown folly, south-west elevation (Rubicon Heritage Services Ltd).

21 Stokestown House, Stokestown, Wexford, National Inventory of Architectural Heritage, Reg. No. 15703403 https://www.buildingsofireland.ie/buildings-search/building/15703403/stokestown-house-stokestown-wexford.
22 Talbot Hall, Arnestown, Wexford, National Inventory of Architectural Heritage, Reg. No. 15702922 https://www.buildingsofireland.ie/buildings-search/building/15702922/talbot-hall-arnestown-ban-by-wexford

The fragmentary remains of a demolished building were uncovered at Arnestown 1 north of the Arnestown House demesne. The evidence suggests that this building was utilised into the 20th century, with artefacts such as pottery sherds also indicating 19th-century activity. All that remained of the building itself was a small fragment of a stone wall which stood to a height of one course and a second section which consisted of red brick (Hackett et al. 2010, 26–7). A small portion of the original entrance avenue represented by a metalled gravel surface was also uncovered.

Cartographic analysis of the Ordnance Survey mapping—6-inch (surveyed 1839) and 25-inch (surveyed 1902)—revealed that the structure uncovered at Arnestown 1 was probably a service building or outhouse which was part of a complex of buildings. The buildings were accessed by a curving avenue and were flanked by landscaped gardens. The historic mapping indicates that the buildings were altered in form and layout at some point in the mid to late 19th century. Their depiction on the 25-inch map indicates that the probable residence was located to the north of Arnestown 1, in an area not affected by road construction. Among the structures added during the redevelopment were a pump and an ornamental summer house. The 1853 Griffith's Valuation indicates that the buildings and 20 acres of land around them were leased by Robert Rogers from Sir
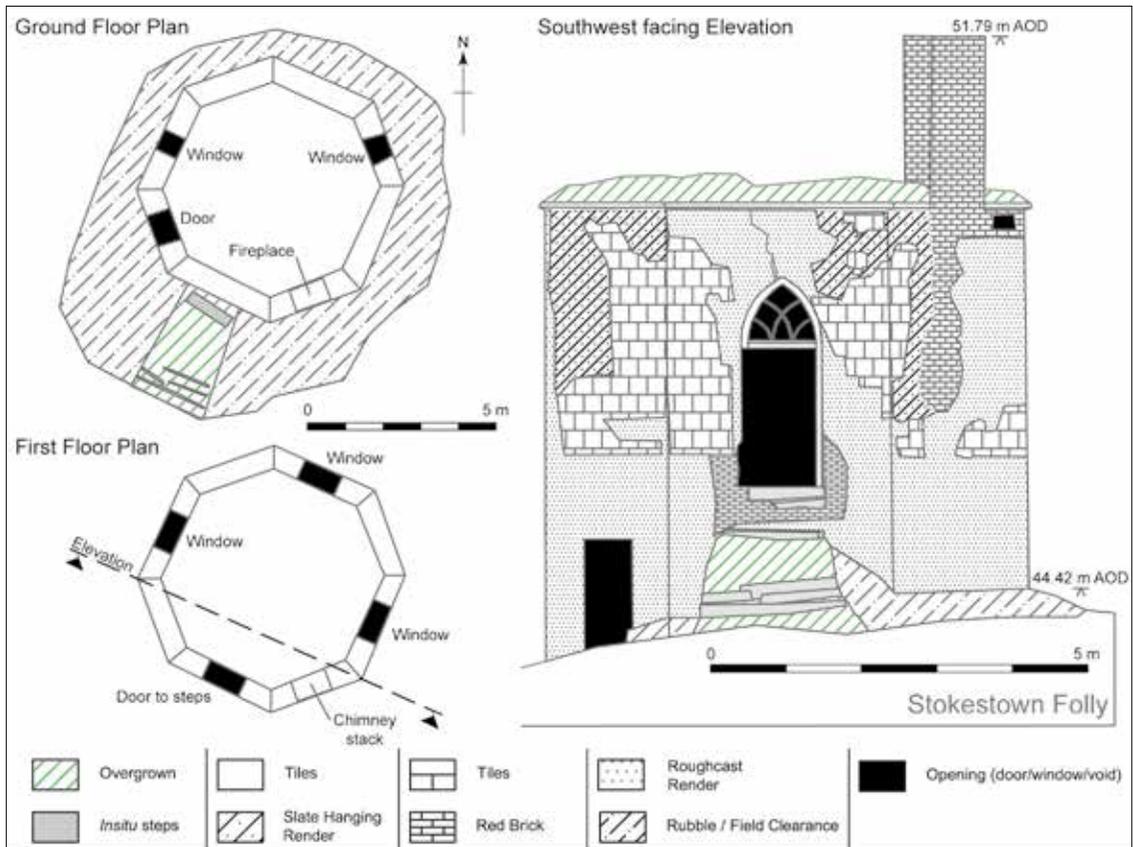
Illus. 8.5 Stokestown folly, floor plans and south-west elevation (Rubicon Heritage Services Ltd).

Thomas Redington, the owner of Talbot Hall.

Other elements of the 18th- and 19th-century landscape were identified during the archaeological works on the road scheme. Ballymacar Bridge carried the New Ross to Wexford road which was developed in the 18th century; the bridge is labelled on Valentine Gill's map of County Wexford (1811). The first detailed depiction of it is on the Ordnance Survey 6-inch map (surveyed 1839) (Yates 2010a, 17; Goodbody 2018b; Meharg et al. forthcoming). The bridge spans the Maudlins Stream and is part of a larger causeway constructed to cross the small floodplain. This stone-built causeway was approximately 80 m in length, 8 m in width and 5 m in height. The bridge comprised two semi-circular arches with dressed rubble stone voussoirs, and a rubble stone V-shaped cutwater on the central pier of the upstream elevation. The depiction of the bridge on the 6-inch map indicates that in the mid-19th century it was narrower. Archaeological monitoring of its demolition revealed an earlier elevation which showed that the bridge was widened by 1.8 m on its downstream side (Coughlan & Stevens 2021, 25–6; Meharg et al. forthcoming) (Illus. 8.6). These works reflect the need to improve road infrastructure in the post-famine period to accommodate larger vehicles and higher traffic volumes resulting from greater economic activity and trade.

Ballymacar was also the location of several interesting structures. One of the most intriguing is a small single-storey house south-west of the bridge adjacent to the bypass (Illus. 8.7). Local historian Bernard Browne has identified this as a Land League relief house, originally constructed in a single week during the 1880s to house an evicted family (Bernard Browne and John Meehan pers. comm.). Other evidence for the once vibrant 19th-century community in the area is represented by a number of buildings which stood to the east of Ballymacar Bridge. These included a three-bay, two-storey house constructed in the late 19th century on the site of an earlier settlement (Coughlan & Stevens 2021, 26–8; Meharg et al. forthcoming). Another settlement cluster was located in Ryleen townland, approximately 190 m north-east of Ballymacar Bridge. In pre-famine times this settlement consisted of three structures; these buildings and their associated fields and access tracks were cleared before the end of the 19th century.

At the northern end of the project another vestige of the estate landscape is evident at Corcoran's Cross, Rathgaroge townland. Today this crossroads is at the intersection of routes leading in four directions. Examination of the Ordnance Survey first edition six-inch map (surveyed 1839) reveals that originally a fifth road extended south-west from the junction to Berkeley Forest Demesne. This road was taken up by the end of the 19th century; however, remnants of it can be traced in the modern landscape as a tree-lined trackway which follows the old road alignment. A pair of cut stone gate piers marked the point where this road joined the junction. Another interesting feature of this locality is that the Ordnance Survey six-inch map depicts the 'site of' a Roman Catholic chapel, built within the remains of a ringfort just north of the crossroads, although the site, which was not affected by construction of the bypass, has now returned to pasture. This may have been the site of the Penal Laws era chapel, where Catholic diocesan sources record that the confirmation day sermon in 1753 was delivered in Irish (Corish 1970, 10).

The post-medieval and early modern remains recorded as part of the New Ross

Illus. 8.6 Ballymacar Bridge phase 1 downstream elevation revealed during demolition; the phase 2 causeway revetment wall is visible in section to the left of the bridge arches (IAC Ltd).

Bypass project provide us with a snapshot of this landscape at a time of significant political and economic change when social and economic inequality was expressed through the creation and operation of landed estates and the construction of infrastructure to service them. These remains reflect the high concentration of country houses and demesnes in the landscape surrounding New Ross in the 18th and 19th centuries. It is clear from both the archaeological remains and the cartographic evidence that these 'big houses' dominated the local rural economy and landscape and influenced patterns of development and land tenure which persisted into the 20th century.

Illus. 8.7 Ballymacar Land League House (Rubicon Heritage Services Ltd).
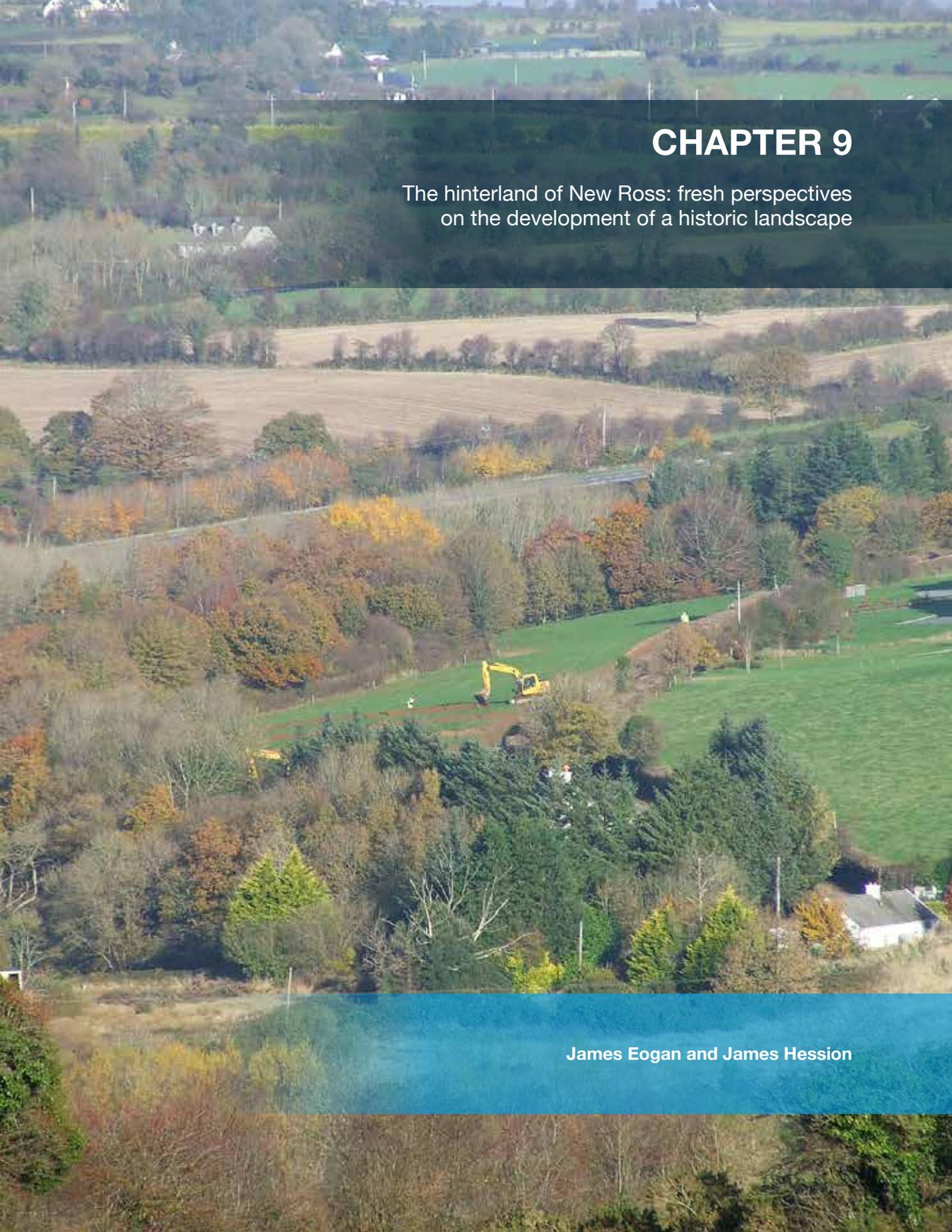
CHAPTER 9

The hinterland of New Ross: fresh perspectives
on the development of a historic landscape

James Eogan and James Hession

Fresh perspectives on the historic landscape

For most people, New Ross and its hinterland is best known for the Dunbrody Famine Ship and the story of the Irish diaspora, exemplified in the story of the emigration of President John F Kennedy's great-grandfather Patrick Kennedy from Dunganstown, during the great Irish famine. For others, New Ross is synonymous with significant military engagements during the Confederate Wars, the Cromwellian conquest and the 1798 Rebellion. In recent years New Ross's rich medieval legacy has been the focus of the Ros Tapestry community arts and history project. Wexford County Council has built on this legacy in developing the Norman Way heritage route, promoted under the auspices of Ireland's Ancient East tourism initiative, linking the town with other 'authentic medieval sites' in Wexford so that visitors can '...discover the Norman way of life in the place where it first took hold in Ireland'.[23] However, prior to the archaeological investigations undertaken in advance of the construction of the New Ross Bypass, very little was known about the hinterland of the medieval town or of the communities that made this part of counties Wexford and Kilkenny their home before the town's establishment by William Marshal and Isabella de Clare.

The archaeological work undertaken as a consequence of construction of the N25 New Ross Bypass has uncovered a wealth of evidence relating to the history of settlement in this part of the Lower Barrow Valley from the Mesolithic to the post-medieval period. Most of the excavated sites dated to the Bronze Age, a pattern replicated on the vast majority of large infrastructural schemes undertaken across the island. This points to a widely dispersed and dynamic Bronze Age population on the island. The findings from this project add to our understanding of Bronze Age society during this time. The discoveries on the project also include a significant number of 'first findings', such as the first Early Neolithic house identified in County Wexford at Ryleen 2; the two multi-phase Middle Bronze Age flat cemeteries at Camlin 4 and Berkeley 3; and the unique example of a complete low-status late medieval farmstead at Landscape 2A.

The project also provided the opportunity to examine environmental evidence preserved in sediments that accumulated over approximately 4,500 years in the Landscape Wetland. In comparison to the midlands and the Atlantic coastal region, a limited number of palaeoenvironmental sediment cores had been examined from south-east Ireland. This resulted in a significant gap in our understanding of environmental and vegetation change in this region and what role humans

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23 The Norman Way https://thenormanway.com/ (accessed 20/10/2022)

Chapter title image Test excavation in Ballyverneen, Co. Kilkenny (J Eogan).

might have played in those changes. The environmental remains preserved in the sediment core complements the analyses of palaeoenvironmental remains from individual excavated sites and enables us to consider these sites in their wider ecological setting. It also complements the results of the recently published palaeoenvironmental analysis of the core from Lough Cullin 13 km to the south-west (Kearney et al. 2022).

When combined with other discoveries along the route, these 'first findings' not only demonstrate the value of the work undertaken but highlight that the upstanding archaeological monuments that survive in the modern landscape only account for a fraction of our surviving archaeological heritage, particularly in areas like south-east Ireland with a long tradition of tillage agriculture. Systematic archaeological investigation of this and other development projects demonstrates the wealth of information surviving beneath our feet. The evidence revealed by the work is significant because in many cases it relates to activities or types of site that never had a substantial or long-lasting monumental aspect or were constructed with organic materials that, once they decayed, left no significant recognisable trace above ground.

Pre-construction archaeological test excavation is a proven method of identifying previously undocumented sub-surface archaeological features and deposits and is standard practice on TII-funded transport infrastructure projects (Eogan & Shee Twohig 2011). Undertaking test excavation in advance of construction allows consideration of the different options for mitigation of impacts on newly identified archaeologically significant remains. When the agreed

mitigation is archaeological excavation, this approach ensures that this work can be efficiently planned and implemented. This methodology not only minimises the risk of unforeseen and costly delays resulting from the discovery of archaeological sites during the construction programme but also ensures that adequate time, budgets and resources can be allocated so that the mitigation excavations are undertaken by professional archaeologists, in accordance with the directions issued by the relevant licensing authority[24], with oversight from TII's Archaeology and Heritage Section.

It has previously been observed that large-scale development projects like this one provide a unique opportunity for archaeologists to compile new data from sites that would otherwise not have been discovered (ibid., 292). Selection of the route of linear infrastructure projects, such as roads and pipelines, is influenced by many factors. These include physical factors, such as topography, drainage, and soils; design factors such as the need to connect with the existing road network, ensuring the safety of road users and balancing cut and fill; human factors, such as the location of existing settlements and residences; and economic factors, such as the minimisation of impacts on farm enterprises. In relation to cultural heritage, considerable effort goes into designing a route that has the least possible impact on significant known cultural heritage sites. As a result, the routes of projects like the N25 New Ross Bypass represent transects through the landscape which avoid topographic extremes, existing settlement clusters, and significant cultural heritage sites. The result is that the assessment and mitigation of cultural heritage impacts on

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24 At the time of writing the Minister for Housing, Local Government and Heritage
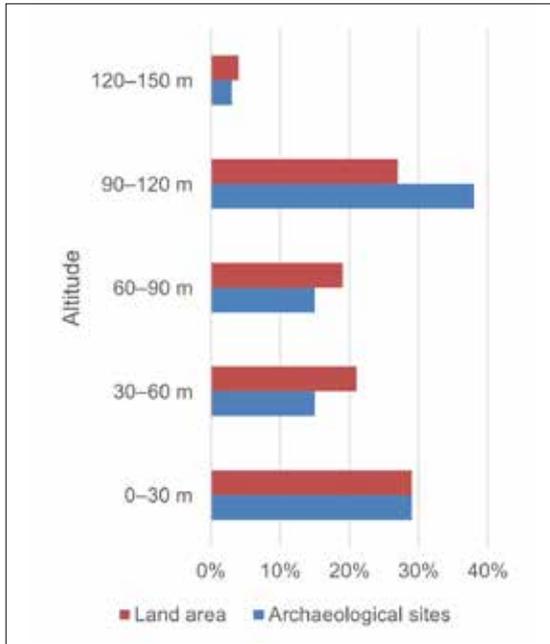
Illus. 9.1 Histogram comparing the percentage of land acquired for road construction and archaeological sites by altitude (J Eogan).

these projects contribute to the refocusing of research on previously neglected topics or in regions where funded research would not have been identified as a priority.

However, the archaeological data generated by these projects should not be considered an unbiased or random sample given the factors highlighted above. This can be seen by comparing the frequency of archaeological sites found at different altitudes along the length of this project (Illus. 9.1). The land in the vicinity of the bypass ranges from sea level along the Barrow Estuary to 230 m above sea level on the northern slopes of Slievecoiltia. The bypass route traverses land with altitude that ranges from 0–135 m OD. Almost 70% of the land acquired for construction of the bypass was below 90 m OD; however, 40% of the excavated archaeological sites were found in land above 90 m OD. Within

this broad pattern there is a notable under representation of sites between 30 m and 90 m OD. The reasons for this are probably related to topography. The land between these altitudes includes exposed locations either side of the River Barrow in Ballyverneen and Stokestown and on the north-facing slopes of Creakan Hill, as well as localised steep slopes and poor land in Ballymacar and Ryleen. Conversely, there is an over representation of sites between 90 m and 120 m OD; this is largely attributable to the frequency of sites of all periods on the fertile south and east slopes of Lacken Hill.

Hunter-gatherers in the landscape

The density of the Mesolithic hunter-gather population on the island is likely to have been low and post-glacial sea level rises mean that land that was accessible along the River Barrow in the Mesolithic is now buried under estuarine sediments. Therefore, any evidence of the hunter-gatherer communities that inhabited this landscape is significant. The radiocarbon date from Ryleen 2 is from a fragment of charred hazelnut shell from the fill of one of a pair of curvilinear cuts. While no associated Mesolithic artefacts were found in this feature, it is considered probable that these features resulted from human activity at this location in the Early Mesolithic. The identification of a reworked probable Late Mesolithic chert blade associated with the later Early Neolithic house, and a second Late Mesolithic blade from Arnestown 2, strengthens the argument for Mesolithic activity along the valley of the Maudlins Stream, which would have provided an attractive territory for a hunter-gatherer community given its probable diverse range of habitats and plentiful natural resources. It should also be noted that, based on the

radiocarbon date, the activity at Ryleen 2 comes at the end of a 'distinctive period of growth' in the distribution of radiocarbon dates in the eighth millennium BC which has been associated with the 'first clear evidence for the establishment of settlement in Mesolithic Ireland' (Chapple et al. 2022, 19). The Early Mesolithic date from Stokestown 2 is more difficult to interpret. It is from a sample of hazel roundwood charcoal from one of a pair of slightly curvilinear cuts, which were longer and wider than the Ryleen 2 features. The only other material identified in the fill was oak charcoal. This feature was cut by an Early Bronze Age burial, and the pair of features appeared to partly enclose another burial. These features are interpreted as the remains of a possible truncated ring-ditch associated with the use of the site as an Early Bronze Age cemetery; in this case the dated charcoal is residual. However, it is possible that the charcoal was associated with the use of these pits in the mid-sixth millennium BC. If so, this activity may be related to the increase in the radiocarbon dating evidence for hunter-gatherer activity across the island in the centuries before 5000 BC (ibid., 24).

The first farmers in the landscape

The excavations at Ryleen 2, on the lower south-eastern slopes of Lacken Hill, revealed the foundations of the first Early Neolithic house to be discovered in County Wexford. This represents a remarkable discovery as prior to the investigations associated with the road scheme the best evidence for the Neolithic period in Wexford and much of the south-east was provided solely by the distribution of megalithic tombs and stone axes.

The house at Ryleen 2 shares many of the characteristics we have come to associate with the homes of Ireland's early farmers; they have a rectangular footprint, often with internal sub-divisions. In common with other Early Neolithic houses a substantial assemblage of artefacts and ecofacts was recovered from structural features associated with the various life cycle stages of the house. As outlined in Chapter 5, almost all this material represents occupational debris that was generated by those living within the house. It informs us about everyday life at Ryleen during this period and importantly allows us to compare this evidence with that recovered from other Early Neolithic houses across the island.

The Ryleen 2 discovery adds to the body of evidence linking the location of megalithic tombs and the rectangular houses of the first farmers and adds considerably to our knowledge of early prehistoric settlement of the area. As well as the dwelling at Ryleen 2, four other sites excavated along the route of the N25 New Ross Bypass provided evidence for Early Neolithic settlement in this area. These were located within the townlands of Ryleen, Arnestown, Camlin and Landscape and suggest that the house at Ryleen formed part of a range of Neolithic activity in this part of the River Barrow catchment during the first half of the fourth millennium BC.

In addition to the house at Ryleen 2, recent archaeological investigations undertaken in conjunction with road schemes elsewhere in the south-east have identified further Early Neolithic houses. Wexford's second Early Neolithic house was identified in Dunsinane in the River Slaney Valley during the archaeological investigations carried out in advance of the M11 Gorey to Enniscorthy road scheme, and three other examples were identified in Granny and Newrath, Co. Kilkenny, on the route of the

N25 Waterford City Bypass. These sites display a riverine distribution on fertile, well-draining soils, in the valleys of the Barrow, Slaney and Suir, suggesting that these places were preferentially selected as locations for settlement, most likely because of the natural attributes these areas possessed. It is likely that the rivers facilitated communication and interaction with other communities, upstream and downstream, at this time. The addition of the Ryleen house and the other Early Neolithic sites from the bypass to the archaeological record of this area indicates a wider distribution and greater range of activities across the landscape than hitherto suspected and has radically altered our knowledge of the nature of settlement of this part of the country during the fourth millennium BC.

The Bronze Age—sharing the landscape with the ancestors

In common with the Neolithic period, prior to this project the Bronze Age in the Lower Barrow Valley had received little sustained scholarly attention, with the presence of Bronze Age communities in the area indicated by the discovery of a number of Early Bronze Age burials and chance discoveries of metal objects. As a result of the discoveries along the bypass we can now see that this area was populated by groups who used the landscape in a very structured way.

The discovery of burials associated with the bipartite vase and encrusted urn at Stokestown 2 and the cordoned or collared urn at Camlin 3 is significant as it extends the distribution of Early Bronze Age burials in this part of the catchment of the River Barrow. The careful excavation, post-excavation processing and analysis and chronological modelling of the two

cemeteries at Camlin 4 and Berkeley 3 shed valuable new light on Middle Bronze Age funerary practices which is of national significance. The form of burials interred at these sites demonstrates that Bronze Age communities in this area adopted the same funerary practices, such as token cremation, as communities elsewhere in the country, and that these rites were carried out in accordance with a set of cultural norms. The deposition of unusual stone beads and other grave goods, including lithics and ground-stone objects at Camlin 4, and the association of charred plant remains with burials at both cemeteries is notable. The occurrence of grave goods, other than sherds of pottery, in Middle Bronze Age token cremation burials is unusual. The identification of the stone beads from the Camlin 4 burials suggests that the tradition of depositing personal ornaments with the dead observed in some Early Bronze Age burials may have continued to a certain degree. The identification of charred plant remains is also significant as it suggests that food offerings may have been placed on the funeral pyre, indicating a complexity of ritual and social practice not otherwise evident from these burials, which appear to be much simpler in comparison to the Early Bronze Age examples. The practices observed at these sites may demonstrate that within the wider ritual norms there was scope for local or regional variation.

The interment of a Late Bronze Age burial at Camlin 4 is a significant addition to the small number of burials of this date in this region. It is also notable as it suggests continuity of funerary practices from the Middle Bronze Age and the significance of these locations for many generations.

The locations chosen for the burial of the dead during the Bronze Age are also significant. In the Early Bronze Age, burial

sites appear to be closely related with natural boundaries—Stokestown 2 (and the nearby contemporary Dunganstown cemetery) with the River Barrow, and Camlin 3 with the Camlin Stream. They may also be associated with routeways—both the River Barrow and a potential overland routeway between Camlin and Creakan hills. The Middle Bronze Age cemeteries at Camlin 4 and Berkeley 3 are in more elevated locations. Their siting and long-term use-history, involving the deliberate sealing of an initial phase of burial with a deposit of soil followed by the interment of further burials, suggest an emphasis on establishing links with real or perceived ancestors by the communities that buried their deceased members at these locations. This reuse and remodelling of ancestral burial places may be connected with the need to demonstrate control of the territories in which the cemeteries were located.

No Bronze Age houses or domestic activity were identified along the route. The only evidence for settlement in the area was provided by pit-type features identified at six sites along the route. These sites were situated on fertile well-draining land adjacent to and overlooking the River Barrow and would appear to be situated in ideal locations for settlement. It is tempting to interpret them as outlying activity associated with settlements beyond the boundary of the road scheme. However, their dispersed nature and small amount of associated artefactual and ecofactual remains suggest that these features represent short-term or episodic activity occurring away from the core of more densely settled areas.

Another indicator of Bronze Age activity in the region comes from the identification of the 11 *fulachtaí fia* of Middle–Late Bronze Age date found along the road scheme.

With *fulachtaí fia* there is a functional link between their use and their location in the landscape; they had to be sited in proximity to a water source. Typically, they are located on the margins of wetland or former wetland areas. Although these sites are located on marginal land, *fulachtaí fia* themselves should not be regarded as being marginal to the communities that constructed and used them. Consideration must be given to the considerable investments of time, energy and manpower that their construction and use required.

As such, we can view them as indicative of settlement in the wider area. Furthermore, the burials, pit sites and *fulachtaí fia* are unlikely to represent isolated sites. Given the clustering evident around Camlin and Berkeley they must be viewed as forming components of integrated local landscapes only part of which has been observed as a result of the investigation of the land acquired for road construction.

Pollen preserved in the sediment core taken from the Landscape Wetland shows that in the Middle and Late Bronze Age the surrounding area was covered in alder carr-woodland with hazel birch and willow present within the canopy layer, while grasses and sedges were also present. Fluctuations in the pollen curve for alder during this period suggest coppicing was being practised. This interpretation is complemented by the analysis of charcoal which identified that alder was being used as fuel at the Landscape 3 burnt mound beside the wetland. The age pattern of the alder roundwood charcoal fragments is indicative of coppicing. The combined data indicate that the Bronze Age population were actively managing local woodland resources in order to keep a regular supply of suitably sized wood for fuel and possibly other purposes.

The occurrence of comparatively high microscopic charcoal values accompanied by an increase in minerogenic sediments suggest that woodland in the Landscape and Camlin area in the Bronze Age was being cleared by burning which led to the development of pasture. The presence of fungal spores associated with animal dung in the Middle and Late Bronze Age levels of the sediment core suggests that the woodland may have been cleared to provide pasture for livestock to graze. Unfortunately, the acidic soils in this area meant that unburnt bone did not survive at any of the excavated Bronze Age sites, so it is not possible to compare the data from the core with excavated faunal remains.

Questions remain as to where the people who interred their dead at the burial sites, constructed and used the *fulachtaí fia* and cleared the woodland lived. Landscape studies in other regions have observed that Middle to Late Bronze Age settlement, burial and ritual sites were generally clustered together to form compact and integrated landscapes which were highly structured in their organisation (Gowen et al. 2005; Grogan 2005a; 2005b; Grogan et al. 2007, 131–62). General studies have noted that Bronze Age settlements tend to be found on higher ground such as the ridges overlooking river valleys, while the lower-lying parts are often utilised for burial sites (Cooney & Grogan 1999, 103; Grogan 2005a; 2005b). However, the patterns observed from the results of investigations of individual road schemes can vary from this model. On the route of the M8 motorway in the middle catchment of the River Suir in south County Tipperary, settlements and contemporary burial sites were observed to be sited in close proximity to each other (McQuade et al. 2009, 141, 360). In contrast, on the M9 Carlow Bypass, Bronze Age burial sites appeared to be set aside from contemporary settlements (Moloney 2015, 130).

Overall, these findings confirm the presence of a vibrant Bronze Age population in the lower catchment of the River Barrow. Significant numbers of previously undocumented Bronze Age sites were also found during archaeological investigations undertaken on the M9 Carlow Bypass, in the middle Barrow Valley, and along the lower and middle Suir Valley, on the N25 Waterford City Bypass and M8 Cashel to Mitchelstown projects. These discoveries emphasise the importance of these major river valleys to prehistoric populations. They undoubtedly played a significant role in the lives of the Bronze Age communities that lived near them, probably providing a valuable source of food, while also enabling communication between communities that lived along their courses and providing access to the sea and the potential for connections with communities living along the coast and in distant lands.

While the people who inhabited this area occupied a local world, and must have had a strong sense of place, reinforced by the presence of ancestral cemeteries, they did not live in isolation. The results of the excavations demonstrate that Bronze Age communities in this part of the Barrow catchment were aware of and adopted the latest technological, cultural and social innovations. The discovery of Late Bronze Age southern British-style gold bracelets at Dunbrody, Co. Wexford, and Ballymaclode, Co. Waterford, approximately 10 km downstream, shows that the Bronze Age communities in this region participated in trade networks with links to communities far beyond the Lower Barrow Valley (Illus. 9.2).

Illus. 9.2 Irish and British-style penannular gold bracelets recovered from a *fulachtaí fia* overlooking the River Suir at Ballymaclode in the suburbs of Waterford City (copyright National Museum of Ireland).

Sadly, we have no details of the dugout boats found along this part of the River Barrow; it is tempting to interpret them as evidence for Bronze Age navigation along the river.

The Iron Age—a quiet landscape

The data from the pollen core show a significant decline in indicators of human impacts on the vegetation in the Camlin and Landscape areas in the Iron Age; there is a noticeable decrease in burning activity, signalled by the microscopic charcoal record (Wheeler et al. 2012). This Iron Age lull identified in the pollen evidence is reflected in the absence of evidence of Iron Age activity at any of the excavated sites. However, it is unlikely that this landscape was completely empty of people at this time. The pollen record from Lough Cullin also shows significant reduction in human activity in that area in the Iron Age, but it also contains evidence for a period of intense activity. What is clear is that the Iron Age marks a significant break with patterns of settlement and agricultural activity established in the Bronze Age. The evidence

from other excavations in the south-east shows that this was associated with changes in burial practices and in the northern half of the island significant changes in material culture.

Early medieval secular and spiritual landscapes

The N25 New Ross Bypass passes through an area with a high density of early medieval ringforts. Approximately two-thirds of the land acquired for construction of the bypass is within the 30–122 m OD altitude range that Isabel Bennett (1989, 54–5) identified as being preferred by the builders of these monuments in County Wexford (Illus. 9.3). However, no ringforts or related settlement remains were uncovered along the bypass. An early medieval ditch, which contained remains of charred oat and barley grains in its fills, was identified at Ryleen 2. It may be part of a more extensive field system associated with an as yet unidentified
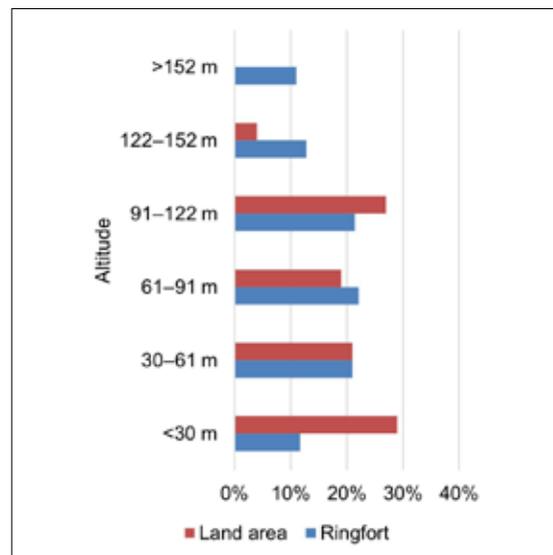
Illus. 9.3 Histogram comparing the percentage of land acquired for road construction and the numbers of ringforts by altitude (J Eogan).

ringfort. The explanation for the absence of early medieval settlement remains is twofold. Firstly, the Archaeological Survey of Ireland has comprehensively mapped the locations of ringforts in the county; these known sites were identified during the design process and avoided when designing the bypass. Secondly, the siting of ringforts is influenced by topography as well as altitude; it has been noted that generally ringforts are located on east-facing slopes of low hills, commanding a good outlook (Cody 2007, 6). Topographic conditions matching these criteria only occur along a 3 km stretch of the bypass in Ryleen and Lacken. An examination of the distribution of ringforts in the surrounding area reveals that they are generally located on higher ground to the south of the road scheme (Illus. 9.4).

The evidence for early medieval activity that was uncovered relates to the production of charcoal that was undertaken in the non-settled parts of the landscape. As noted in Chapter 7, charcoal production is almost always undertaken in close proximity to the natural resource. These charcoal-production sites were concentrated in the environs of Camlin Hill, in the area known as the forest of Ross in the later medieval period (see Chapter 3). The fact that only non-settlement activity was identified in the investigations along the bypass route supports the idea that lowland areas were not considered suitable locations for settlement during the early medieval period, though they were clearly still exploited by the farming families occupying the ringforts on the higher ground.

The pollen evidence from the Landscape Wetland sediment core shows a reduction

Illus. 9.4 A ploughed-out ringfort is located above the break of slope in this field on the north-east side of Creakan Hill, Ballylane townland. Lacken Hill is visible in the middle distance (J Eogan).

in arboreal pollen during this period, which indicates woodland clearance in the vicinity. A slight decline in the pollen curve for oak may be linked to the management of this valued hardwood species and its use in charcoal production. A corresponding rise in the pollen of grasses and herbaceous species indicates that the reduction of woodland was associated with an expansion of pasture. As hay was not saved in early medieval Ireland, large parts of the landscape must have been reserved for seasonal grazing. In some areas seasonal grazing utilised upland pastures, and it may be that in this area the lower-lying areas along the Barrow were used by early medieval farmers as seasonal pastures for their cattle herds. The presence of fungal spores associated with animal dung in the early medieval levels of the sediment core is evidence for the presence of herbivores in this landscape.

The late medieval feudal landscape

The excavated remains at Landscape 2A, considered in conjunction with the documentary and placename evidence, suggest that this late medieval farmstead was most probably a Gaelic Irish betagh settlement, specialising in livestock rearing, situated on the periphery of the manor of Old Ross. This planned settlement is unique in terms of the range and variety of buildings that survived and although the layout has some similarities to other Irish rural medieval settlement sites, the best parallels for the dense farmyard 'cluster' identified are in Britain.

Under the Anglo-Norman feudal system established by Strongbow and maintained by his successors, the Gaelic Irish betaghs did not enjoy the same social or legal status as the colonists. Nonetheless, they appear

to have played an important role in the manorial economy (see Chapter 3). The evidence from Landscape 2A demonstrates how the Gaelic Irish adapted to the new situation. This settlement was established in a location which would not previously have been considered suitable. The domestic and farm buildings that were built were modelled on Anglo-Norman types. Pottery vessels were used to store and consume food, and inside the buildings light was provided by pottery lamps. Novel agricultural practices also seem to have been adopted, such as saving hay, which meant that parts of the landscape restricted for seasonal pastures in the early medieval period could be put to more productive use. This may have come about as a necessity given that under the feudal system the best land was granted to the colonists. The charred plant assemblage from Landscape 2A indicates that the occupants of the site had access to a variety of cereal crops. However, the pollen evidence from the adjacent wetland does not show any significant increase in cereal-type pollen in the late medieval levels, suggesting that the tillage crops may have been grown elsewhere on the manor. It may be that tillage agriculture on the manor was carried out by colonial settlers who had access to the necessary resources. The pollen record shows a continued presence of pastoral indicator species and an ongoing reduction in arboreal pollen indicating that woodland clearance continued in the late medieval period. However, the values for oak and hazel pollen remain stable which may indicate selective management of woodland species, with a focus on those species that were most useful or valuable as a raw material. The presence of fungal spores associated with dung, suggests the continued presence of livestock in this part of the landscape. This

environmental evidence aligns well with the placename evidence which suggests that the late medieval community living in this part of the manor of Old Ross specialised in raising livestock (see Chapter 3).

The farmstead at Landscape 2A is currently unique in terms of the quality of survival, its scale and the variety of the excavated remains. This suggests that other medieval farmsteads in the region must also have been based on similar imported forms and that diversity of building type would have been standard practice at the time. Unfortunately, given the fact that these undefended farmsteads have no surface expression, it is difficult to evaluate their likely frequency and distribution on late medieval manors. This highlights the importance of development-led archaeological investigations, as these sites are often only identified through such work. These discoveries are critical to developing our understanding of undefended late medieval farmsteads/settlements, especially Gaelic Irish settlements within the Anglo-Norman colony. The evidence from Landscape 2A will also enable researchers to re-evaluate the findings from contemporary rural medieval sites across the island which should advance our knowledge of the period.

Landscapes of conflict and confiscation

The landscape of the hinterland of New Ross in the post-medieval period embodies the stories of the 'haves' and the 'have nots'. The 'haves' were the notable merchants, the landed gentlemen and their families who lived on estates like Stokestown and Arnestown. Their wealth allowed them to shape the landscape to their economic needs and aesthetic preferences, laying

out demesnes and landscaping parklands around the 'big house', amalgamating fields and constructing functional and decorative buildings. Their social position enabled them to harness the resources of the state, to 'reclaim' estuarine wetlands along the Barrow and to convert them into productive farmland. They could use the grand jury system to finance improvements to the road network, so that communication was improved and the produce from their estates could be transported to market more efficiently. They were educated and were often members of 'antiquarian' societies who, like John H Glascott, were the first to make records of archaeological discoveries in this area. The heritage associated with this ascendancy class, which was investigated as part of this project, included the folly at Stokestown, the remains of the outbuilding associated with a minor country house at Arnestown, and Ballymacar Bridge. While significant elements of the built heritage associated with these notable ascendancy families and their estates have been lost over the past century, the surviving structures and the wealth of cartographic and documentary material available provide many insights into their privileged lives.

In contrast, the 'have nots' were those nameless tenant farmers, landless labourers and their families whose endeavours could be traced in the plough furrows that criss-crossed many of the excavated sites. They were the workmen who, having uncovered two Early Bronze Age encrusted urns while quarrying sand, dug up the whole sandbank 'expecting to find money', as John H Glascott, the landlord's son scornfully noted (Anon. 1854–5). These were the people who built the earthen banks and stone walls that still flank the roads and enclose the fields and who dug the drains and ditches which still

drain surface water from them. They staffed the 'big house' and tended the livestock ensuring a supply of animals and agricultural commodities, like wool and butter, for mart and market that could be profitably exported from New Ross port. Many of them were the people who, like Patrick Kennedy, when faced with famine in the 1840s made the decision that their future lay overseas. While these communities are closer to us in time, it is a paradox that we have better archaeological evidence for the lives that their late medieval or Neolithic forebears lived in this landscape.

Conclusions

New Ross and its hinterland have a rich and storied past, and at times it has been the location of events that shaped the history of the island. However, the people who lived in this landscape mostly left no written records and even in historic eras the events and activities that shaped their daily lives were not deemed noteworthy by the chroniclers. Their lives can only be reconstructed from the physical remains of the structures that they built and the objects that they used.

The discovery of archaeological objects and identification of monuments in this landscape over the past two centuries opened a window on the past communities who lived in this part of the Barrow Valley. However, monuments were only identified if they had some recognisable architectural form and the documentation of archaeological objects depended on the finder realising that they had discovered something of significance— or in the 19th century, monetary value— and recording it. This means that our understanding of the temporal and spatial distribution of the communities that lived in this area was partial, being confined to

settlements and burial sites constructed of durable materials and archaeological objects that were recognisable by farmers and workers.

The effect of this is that before the 1990s there was no evidence for the hunter-gatherer communities who lived in this landscape for four millennia, and our knowledge of the earliest Neolithic agriculturalists was limited to the distribution of megalithic tombs they built and the stone axes they used. The metal-using communities who considered this place home over the 1,700 years of the Chalcolithic and Bronze Age were only known through the copper, bronze and gold objects they deposited in the landscape, and the burials of their dead interred in cists and urns which were encountered by sharp-eyed workers involved in tillage and quarrying. Despite its popular association with Ireland's heroic Celtic past, there was a more than 1,000-year gap with no definite Iron Age finds or monuments known in this part of the south-east. The 750 years of early medieval habitation, when a literate and Christian society developed, could only be perceived through the earthen raths scattered through the countryside, sometimes protected by traditional folk beliefs and taboos on interfering with them, and by the traces of monastic sites and holy wells connected with early Christian missionaries like St Abbán. The advent of Norman feudalism, personified in the figure of Strongbow and his descendants, could be traced in the distribution of mottes, castles and parish churches constructed on the manors, some of which were documented in surviving legal and financial records, with the town of New Ross established by his daughter Isabella de Clare and her husband William Marshal. For more recent eras the documentary sources and the upstanding architectural heritage is

mostly associated with notable events like the 1798 Battle of New Ross, the landed estates of ascendancy families and the fluctuating fortunes of the town of New Ross.

The combined archaeological, historical and architectural heritage evidence formed the basis of the cultural heritage impact assessments carried out during the planning phase of the project which influenced the final road design. The result of the design process and environmental impact assessment was that the bypass avoided significant archaeological and architectural heritage sites and the chosen route avoided topographic extremes (Illus. 9.5). The outcome of these processes has affected the nature of the data generated by archaeological investigations undertaken before and during construction.

The New Ross Bypass largely avoided areas preferred for settlement during the Bronze Age and early medieval eras. While this means that the project did not provide opportunities to investigate settlements associated with these two pivotal periods in the development of Irish society, the sites that were identified from those periods have provided significant insights into the way those communities structured their activities in the landscape. This affords archaeologists and historians a greater understanding of the factors that influenced settlement patterns in both eras and will contribute to calibrating settlement models for later prehistory and the early historic era in the south-east.

In contrast, the discovery of the late

Illus. 9.5 The New Ross Bypass passing between Camlin Hill (left) and Creakan Hill (right), with Lacken Hill visible in the background. The route chosen for the bypass influenced the types of archaeological remains encountered on the project. It is likely that the main areas of Bronze Age and early medieval settlement were sited on the higher ground either side of the bypass (J Eogan).

medieval farmstead in a low-lying marginal area at Landscape 2 demonstrates the opportunity that large-scale development projects provide to uncover sites that are very difficult to identify in the course of traditional archaeological survey or fieldwork. This discovery has led to the most comprehensive archaeological investigation of a type of low-status rural settlement that was known to exist from references in historical sources, but which had never been fully uncovered before. As with many archaeological discoveries, the results of this excavation and the associated historical research raise as many questions as they answer, especially in relation to the ethnicity of the people who lived here. Were they poor but aspirant Anglo-Norman colonists or were they Gaelic Irish pushed to the physical and social margins of the newly established feudal manorial system who adopted some aspects of an Anglo-Norman way of life?

The systematic recovery and analysis of environmental remains from each of the archaeological excavations have revealed aspects of the environment in which the people who carried out activities at these sites lived and provided evidence of their farming and land management practices. This type of evidence complements the results of analyses of pollen and other environmental indicators from sediment cores in this region. It demonstrates that human impacts on the environment and changes to agricultural practices in the region were not uniform, either spatially or temporally.

The methodical excavation and documentation of individual sites have revealed details of activities at those sites that provide insights into how people in the past created places that structured their social interactions with both the living and the dead. This can be observed most clearly at the Middle Bronze Age cemeteries at Camlin 4 and Berkeley 3. At both sites we can imagine that the initial act of burial of cremated remains brought the survivors together in mourning. The subsequent sealing of the initial burials created a delimited location which then became the focus of further rituals and burials by subsequent generations. The later communities presumably considered these ancestral burial places to be important foci and may well have used them as locations where their genealogical roots in this landscape could be displayed and validated.

The range of evidence uncovered as a result of the archaeological and historical evaluation of the N25 New Ross Bypass adds significantly to our understanding of the history and development of settlement in the landscape of the Lower Barrow Valley, from the Mesolithic to the post-medieval period. The reports of these investigations and the data generated are a valuable resource for anyone interested in New Ross and its hinterland. Already the significance of some of the excavations along the bypass has been recognised by their inclusion in two volumes of the *On Our Own Ground* series describing the built and natural heritage of Wexford's parishes (Culleton 2019, 126, 129; Culleton & Murphy 2020, 23). Undoubtedly, further historical and archaeological research, particularly the application of novel scientific techniques to analyse excavated artefacts and samples, and new discoveries will add to this story and further enrich our understanding of the people who considered this area home over the past nine millennia. In time, the bypass and the Rose Fitzgerald Kennedy Bridge, which in 2021 became the first Irish project to be given the Outstanding Structure

award by the International Association for Bridge and Structural Engineering[25], may come to be considered a significant part of our heritage to be studied and protected by future generations of archaeologists, engineers, architectural historians, planners and historians (Illus. 9.6).

Illus. 9.6 The Rose Fitzgerald Kennedy Bridge viewed from Slievecoiltia (J Eogan).

25 *The Irish Times,* June 17, 2021 https://www.irishtimes.com/news/ireland/irish-news/rose-fitzgerald-kennedy-bridge-wins-international-award-1.4596309

Appendix 1 N25 New Ross Bypass digital archive of reports and datasets

Digital versions of the reports and datasets produced as a result of the N25 New Ross Bypass archaeological investigations are published online in the TII Digital Heritage Collections hosted on the Digital Repository of Ireland website (www.dri.ie). These assets can be accessed using the links provided in the following tables.

Excavation reports (.pdf)

Asset identifier	Excavation Director	Permalink
E4067 Arnestown 1	Liam Hackett	https://doi.org/10.7486/DRI.w663hp65w
Foundations of an early modern building and roadway		
E4111 Arnestown 2	Liam Hackett	https://doi.org/10.7486/DRI.w950jk49r
Early to Middle Neolithic pit. Middle Bronze Age burnt mound		
E4129 Arnestown 3	Liam Hackett	https://doi.org/10.7486/DRI.x059rt373
Small burnt mound deposit		
E004783 Arnestown 4	Yvonne Whitty	https://doi.org/10.7486/DRI.xp6904310
Middle Bronze Age burnt mound		
E4531 Ballyverneen 1, 2 and 3	Mandy Stephens	https://doi.org/10.7486/DRI.v6936s258
Ballyverneen 1: probable post-medieval or early modern agricultural activity; Ballyverneen 2: Middle–Late Bronze Age pits; Ballyverneen 3: Linear cut features and possible pit of unknown date		
E4067 Ballyverneen 4	Mandy Stephens	https://doi.org/10.7486/DRI.gq67zj981
Activity associated with the periphery of the 19th-century Bearstown settlement		
E4120 Berkeley 1	Liam Hackett	https://doi.org/10.7486/DRI.rn30dm41d
Middle–Late Bronze Age burnt mound		
E4121 Berkeley 2	Liam Hackett	https://doi.org/10.7486/DRI.vh549f77t
Middle–Late Bronze Age burnt mound		
E4122 Berkeley 3	Liam Hackett	https://doi.org/10.7486/DRI.qv345g690
Middle Bronze Age unenclosed cremation cemetery, two phases of burial separated by a deposit		

Excavation reports (.pdf) *cont'd*

Asset identifier	Excavation Director	Permalink
E4106 Camlin 1	Liam Hackett	https://doi.org/10.7486/DRI.st74s9490
Post-medieval–early modern hearth, pits and boundary. A medieval iron knife was a residual find		
E4103 Camlin 2	Liam Hackett	https://doi.org/10.7486/DRI.v11950578
Middle–Late Bronze Age burnt mound		
E4104 Camlin 3	Liam Hackett	https://doi.org/10.7486/DRI.z0302q77k
Early Bronze Age urn burial, buried in a pit beside a natural boulder		
E4101 Camlin 4	Liam Hackett	https://doi.org/10.7486/DRI.rf56bt736
Middle Bronze Age unenclosed flat cremation cemetery, two phases of burial separated by a deposit. A probable Late Bronze Age cremation was interred at the periphery of the earlier cemetery		
E4100 Camlin 5	Liam Hackett	https://doi.org/10.7486/DRI.vq28c7459
Nine intercutting pits of unknown function dated to the early medieval period. A late medieval pit containing sherds of Wexford-type pottery. Post-medieval/early modern field boundary and agricultural features		
E4528 Camlin 6	Mandy Stephens	https://doi.org/10.7486/DRI.tm711f21j
Five early medieval pits and a curvilinear slot-trench		
E4105 Camlin 7	Liam Hackett	https://doi.org/10.7486/DRI.qr474k854-1
Early medieval charcoal-production pit		
E4113 Camlin 8	Liam Hackett	https://doi.org/10.7486/DRI.xk81z5415
Two Early Bronze Age pits and an early medieval charcoal-production pit		
E4067 Camlin 9	Liam Hackett	https://doi.org/10.7486/DRI.xd07wc730
Two pits one of which contained Early Neolithic carinated bowl pottery		
E4532 Creakan Lower 1	Mandy Stephens	https://doi.org/10.7486/DRI.sj13pm97p
Early–late medieval charcoal-production pit and possible associated waste pits		
E4112 Creakan Upper 1	Liam Hackett	https://doi.org/10.7486/DRI.wm11n801k
Field boundary of probable post-medieval or early modern date		
E4067 Forestalstown 1	Mandy Stephens	https://doi.org/10.7486/DRI.s178j5773-1
Late medieval charcoal-production pit		
E4123 Lacken 1	Liam Hackett	https://doi.org/10.7486/DRI.vt15d4295
Cluster of pits, one dated to the Middle Bronze Age		
E4124 Lacken 2	Liam Hackett	https://doi.org/10.7486/DRI.t148v317h
Early modern field clearance pits		

Excavation reports (.pdf) *cont'd*

Asset identifier	Excavation Director	Permalink
E4067 Lacken 2A	Mandy Stephens	https://doi.org/10.7486/DRI.gq67zj981
Late medieval and post-medieval boundary ditches		
E4125 Lacken 3	Liam Hackett	https://doi.org/10.7486/DRI.tt453689r
Middle–Late Bronze Age burnt mound		
E004869 Lacken 4	Yvonne Whitty	https://doi.org/10.7486/DRI.z6044k51m
Early–Late Bronze Age burnt mound		
E4107 Landscape 1	James Hession	https://doi.org/10.7486/DRI.rv04gd09d
Early medieval charcoal-production pit		
E4108 Landscape 2 Vol 1	James Hession	https://doi.org/10.7486/DRI.wp98p485w
E4108 Landscape 2 Vol 2 App 1–6		https://doi.org/10.7486/DRI.qn603q01s
E4108 Landscape 2 Vol 3 App 7–15		https://doi.org/10.7486/DRI.qz216c53b
Landscape 2A: Early Neolithic pits and late medieval farmstead; Landscape 2B: pits; Landscape 2C: field boundary ditch. Landscape 2D: Early Neolithic linear cut feature, Middle Bronze Age pit, early medieval charcoal-production pit		
E004891 Landscape 3	Yvonne Whitty	https://doi.org/10.7486/DRI.xk81z7477
Early–Middle Bronze Age burnt mound		
E4130 Rathgaroge 1	Liam Hackett	https://doi.org/10.7486/DRI.vd678j93z
Middle–Late Bronze Age burnt mound		
E4131 Rathgaroge 2	Liam Hackett	https://doi.org/10.7486/DRI.t435w001v
Middle Bronze Age pit group		
E4115 Ryleen 1	James Hession	https://doi.org/10.7486/DRI.xs560z094
Tree-throw holes utilised in the Early Neolithic		
E4116 Ryleen 2	James Hession	https://doi.org/10.7486/DRI.s752kz454
Early Mesolithic pits. Early Neolithic house and associated pits. Early medieval boundary ditch		
E4119 Ryleen 3	James Hession	https://doi.org/10.7486/DRI.sf26nr13m
Middle to Late Bronze Age burnt mound, possible Early Iron Age activity		
E4523 Stokestown 1	Mandy Stephens	https://doi.org/10.7486/DRI.x633tm059
Early–Middle Bronze Age hearth and associated pits		

Excavation reports (.pdf) *cont'd*

Asset identifier	Excavation Director	Permalink
E4524 Stokestown 2	Mandy Stephens	https://doi.org/10.7486/DRI.td96zn536
Early Bronze Age flat cemetery and pits		
E004661 N25 New Ross Bypass Construction Phase Heritage Services	Tim Coughlan	https://doi.org/10.7486/DRI.7d27pm09w
Report on the construction stage archaeological monitoring and survey services		

Other reports (.pdf)

Asset identifier	Author(s)	Permalink
N25 New Ross Bypass Landscape Wetland Pollen Core Report	Jane Wheeler and Scott Timpany	https://doi.org/10.7486/DRI.v69371001-1
Report on the analysis of samples from a sediment core from the Landscape Wetland		
N25 New Ross Bypass C14 dating & calibration certificates supplement	N/A	https://doi.org/10.7486/DRI.1v53zq16r
Copies of radiocarbon dating and calibration certificates for E4105, E4131 & E4524		

Datasets (.csv)

Asset identifier	Compiler	Permalink
N25 New Ross Bypass excavation dataset	James Eogan	https://doi.org/10.7486/DRI.sx61tf18p
Dataset of sites excavated as part of the project		
N25 New Ross Bypass radiocarbon dating dataset	James Eogan	https://doi.org/10.7486/DRI.tb09z054w
Dataset of 87 radiocarbon dates from the project		
N25 New Ross Bypass *fulacht fia* site dataset	James Hession	https://doi.org/10.7486/DRI.t435w686d
Dataset of *fulachtaí fia* identified at 10 excavations undertaken as part of the project		
N25 New Ross Bypass *fulacht fia* feature dataset	James Hession	https://doi.org/10.7486/DRI.th840s221
Dataset of 12 troughs, 21 pits and four other features identified at *fulachtaí fia* excavated as part of the project		

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Bibliography

Anon. 1846 *The Parliamentary Gazetteer of Ireland 1844–1845.* A Fullerton, Dublin, London & Edinburgh (reprinted by Thoemmes Press & Edition Synapse, 1998).

Anon. 1849 'Sepulchral remains', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 1, 26–9.

Anon. 1854–5 'Proceedings and transactions', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 3, No. 1, 203–6.

Anon. 1858 'Proceedings and transactions', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 5, No. 1, 199–215.

Anon. 1895 'Gold fibulae discovered in Ireland', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 25, 386.

Anon. 2019 *Trade in North Devon.* Museum of Barnstaple and North Devon, Barnstaple.

Armit, I, Swindles, G & Becker, K 2013 'From dates to demography in later prehistoric Ireland? Experimental approaches to the meta-analysis of large 14 C data-sets', *Journal of Archaeological Science,* Vol. 40, 433–8.

Armit, I, Swindles, G T, Becker, K, Plunkett, G & Blaauw, M 2014 'Rapid climate change did not cause population collapse at the end of the European Bronze Age', *Proceedings of the National Academy of Sciences,* Vol. 111, 17045–9.

Armstrong, W 1850 'On an ancient earthenware vessel, and certain bronze antiquities found in it, at Kilmuckridge, County Wexford', *Proceedings of the Royal Irish Academy,* Vol. 4, 369–70.

Baker, C 2008 'Excavations within the manor of Merrion Castle, Dublin', *in* S Duffy (ed.), *Medieval Dublin VIII,* 228–86. Four Courts Press, Dublin.

Baker, C 2009a *The archaeology of Killeen Castle, Co. Meath.* Wordwell, Dublin.

Baker, C 2009b 'Tullykane, Co. Meath: a medieval rural settlement', *in* C Corlett & M Potterton (eds), *Rural Settlement in Medieval Ireland in the Light of Recent Archaeological Excavations,* 1–16. Wordwell, Dublin.

Ball, F E 1906 *A History of the County Dublin.* Alex. Thom & Co, Dublin.

Bankoff, H A & Winter, F 1979 'A house-burning in Serbia. What do burned remains tell an archaeologist?', *Archaeology,* Vol. 32, 8–14.

Barfield, L & Hodder M 1987 'Burnt mounds as saunas, and the prehistory of bathing', *Antiquity,* Vol. 61, 370–9.

Barrett, J C 1990 'The monumentality of death: the character of Early Bronze Age mortuary mounds in southern Britain', *World Archaeology,* Vol. 22, No. 2, 179–89.

Barrett, J C 1994 *Fragments from Antiquity.* An Archaeology of Social Life in Britain, 2900–1200 BC. Blackwell, London.

Barry, T B 1977 *Medieval Moated Sites of South-eastern Ireland.* British Archaeological Reports, British Series 35. Oxford.

Barry, T B 1999 *The Archaeology of Medieval Ireland.* Methuen, London and New York.

Barry, T B 2000 'Excavations at Piperstown deserted medieval village Co. Louth', *Proceedings of the Royal Irish Academy,* Vol. 100C, 113–35.

Bayes, T 1763 'An essay towards solving a problem in the doctrine of chances', *Philosophical Transactions of the Royal Society of London,* Vol. 53, 370–418.

Bayliss, A, Bronk Ramsey, C, van der Plicht, J & Whittle, A 2007 'Bradshaw and Bayes: towards a timetable for the Neolithic', *Cambridge Archaeological Journal,* Vol. 17(1), 1–28.

Bayliss, A & O'Sullivan, M 2013 'Interpreting chronologies for the Mound of the Hostages, Tara and its contemporary contexts in Neolithic and Bronze Age Ireland', *in* M O'Sullivan, C Scarre & M Doyle (eds), *Tara – from the Past to the Future,* 26–104. Wordwell, Dublin.

Becker, K, Armit, I & Swindles, G T 2017 'New perspectives on the Irish Iron Age: the impact of NRA development on our understanding of later prehistory', *in* M Stanley, R Swan & A O'Sullivan (eds), *Stories of Ireland's Past: knowledge gained from NRA roads archaeology,* 85–100. TII Heritage 5. Transport Infrastructure Ireland, Dublin.

Behre, K E 1981 'The interpretation of anthropogenic indicators in pollen diagrams', *Pollen et Spores,* Vol. 23, 225–45.

Bell, J & Watson, M 1986 *Irish Farming, Implements and Techniques 1750–1900.* John Donald Publishers Ltd, Edinburgh.

Bennett, I 1989 'The settlement pattern of ringforts in County Wexford', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 119, 50–61.

Beresford, D 2009a 'Clare, Richard de ('Richard fitz Gilbert', 'Strongbow')', *Dictionary of Irish Biography,* Vol. 2, 530–2. Cambridge University Press, Cambridge.

Beresford, D 2009b 'Montmorency, Hervey de', *Dictionary of Irish Biography,* Vol. 6, 603–4. Cambridge University Press, Cambridge.

Beresford, G 1975 *The Medieval Clay-land Village: excavations at Goltho and Barton Blount.* Society for Medieval Archaeology Monograph Series No. 6. Society for Medieval Archaeology, London.

Beresford, G 1979 'Three deserted medieval settlements on Dartmoor: a report on the late E. Marie Minter's excavations', *Medieval Archaeology,* Vol. 23, 98–158.

Bloch, M & Parry, J (eds) 1982 *Death and the Regeneration of Life.* Cambridge University Press, Cambridge.

Bolger, T 2017 *Colonising a Royal Landscape. The History and Archaeology of a Medieval Village at Mullamast, County Kildare.* TII Heritage 6. Transport Infrastructure Ireland, Dublin.

Bolger, T, Moloney, C & Shiels, D (eds) 2015 *A Journey Along the 'Carlow Corridor'.* NRA Scheme Monographs 16. National Roads Authority, Dublin.

Bonsall, J & Grimson H 2010 *Proposed N25 New Ross Bypass, Co. Wexford: archaeological geophysical survey (Detection Licence No. 09R147).* Report by Earthsound Ltd for Wexford County Council (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.j099bt169).

Booth, T J & Brück, J 2020 'Death is not the end: radiocarbon and histo-taphonomic evidence for the curation and excarnation of human remains in Bronze Age Britain', *Antiquity,* Vol. 94, 1186–203.

Boyd, W E 1988 'Cereals in Scottish antiquity', *Circaea,* Vol. 5 101–10.

Bradley, J & King, H n.d. *County Wexford; Urban Archaeological Survey.* Unpublished report for the OPW.

Bradley, R 2003 'A life less ordinary: the ritualization of the domestic sphere in later prehistoric Europe', *Cambridge Archaeological Journal,* Vol. 13, No. 1, 5–23.

Bradley, R 2005 *Ritual and Domestic Life in Prehistoric Europe.* Routledge, London.

Bradley, R 2007 *The Prehistory of Britain and Ireland.* Cambridge University Press, Cambridge.

Breen, T C 2007 'Beside the Rath: excavations at Raheenagurren West, Co. Wexford', *in* J O'Sullivan & M Stanley (eds), *New Routes to the Past,* 1–11. Archaeology and the National Roads Authority Monograph Series No. 4. National Roads Authority, Dublin.

Bremer, W 1926 'A founder's hoard of the Copper Age at Carrickshedoge, Nash, Co. Wexford', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 56, 88–91.

Brindley, A L 2007 *The Dating of Food Vessels and Urns in Ireland.* Department of Archaeology, National University of Ireland, Galway.

Brindley, A & Lanting, J 1990 'The dating of *fulachta fiadh', in* V Buckley (ed.), *Burnt Offerings: international contributions to burnt mound archaeology,* 55–6. Wordwell, Dublin.

Bronk Ramsey, C 1995 'Radiocarbon calibration and analysis of stratigraphy: the OxCal program', *Radiocarbon,* Vol. 37(2), 425–30.

Bronk Ramsey, C 1998 'Probability and dating', *Radiocarbon,* Vol. 40(1), 461–74.

Bronk Ramsey, C 2001 'Development of the radiocarbon calibration program OxCal', *Radiocarbon,* Vol. 43(2A), 355–63.

Bronk Ramsey, C 2009a 'Dealing with outliers and offsets in radiocarbon dating', *Radiocarbon,* Vol. 51(3), 1023–45.

Bronk Ramsey, C 2009b 'Bayesian analysis of radiocarbon dates', *Radiocarbon,* Vol. 51(1), 337–60.

Brooks, E St. J 1950 *Knights' Fees in Counties Wexford, Carlow and Kilkenny.* Irish Manuscripts Commission, Dublin.

Brown, A G, Davis, S R, Hatton, J, O'Brien, C, Reilly, F, Taylor, K, Dennehy, E, O'Donnell, L, Bermingham, N, Mighall, T, Timpany, S, Tetlow, E, Wheeler, J & Wynne, S 2016 'The environmental context and function of burnt-mounds: new studies of Irish *fulachtaí fiadh', Proceedings of the Prehistoric Society,* Vol. 82, 259–90.

Browne, B 2002–03 'Robinstown Great stone circle', *Wexford Historical Society (Old Wexford Society) Journal,* No. 19, 78–80.

Browning, J & Higgins, T 2003 'Excavations of a medieval toft and croft at Cropston Roads, Anstey, Leicestershire', *Transactions of the Leicestershire Archaeological and Historical Society,* Vol. 77, 65–81.

Brück, J 1999 'Ritual and rationality: some problems of interpretation in European archaeology', *European Journal of Archaeology,* Vol. 2, No. 3, 313–44.

Brück, J 2006a 'Fragmentation, personhood and the social construction of technology in Middle and Late Bronze Age Britain', *Cambridge Archaeological Journal,* Vol. 16, No. 2, 297–315.

Brück, J 2006b 'Death, exchange and reproduction in the British Bronze Age', *European Journal of Archaeology,* Vol. 9, No. 1, 73–101.

Brück, J 2009 'Women, death and social change in the British Bronze Age', *Norwegian Archaeological Review,* Vol. 42, No. 1, 1–23.

Buckley, L 2005 'Human remains', *in* M Gowen, J Ó Néill & M Phillips (eds), *The Lisheen Mine Archaeological Project 1996–8,* 326–8. Wordwell, Bray.

Buzer, J S 1980 'Pollen analysis of sediments from Lough Ine and Ballyally Lough, Co. Cork, S.W. Ireland', *New Phytologist,* Vol. 86, 93–108.

Byrne, F J 1973 *Irish Kings and High Kings.* Batsford, London.

Cahill, M 1994a 'Mr Anthony's bog oak case of gold antiquities', *Proceedings of the Royal Irish Academy,* Vol. 94C, 53–109.

Cahill, M 1994b 'Boxes, beads, bobbins and… notions', *Archaeology Ireland,* Vol. 8, No. 1, 21–3.

Cahill, M 2004 'Unspooling the mystery', *Archaeology Ireland,* Vol. 15, No. 3, 8–15.

Cahill, M 2010 'Bronze into gold', *Irish Arts Review,* Vol. 27, No. 3, 106–9.

Cahill, M 2015 'Here comes the sun', *Archaeology Ireland,* Vol. 29, No. 1, 26–33.

Cahill Wilson, J 2014a 'Romans and Roman material in Ireland: a wider social perspective', *Later Iron Age and 'Roman' Ireland,* 11–58. Discovery Programme Reports, 8.

Cahill Wilson, J 2014b 'Findings and priorities for future research', *Later Iron Age and 'Roman' Ireland,* 175–84. Discovery Programme Reports, 8.

Campbell, B M S 1983 'Arable productivity in medieval England: some evidence from Norfolk', *Economic History Review* (2nd Ser.), Vol. 36, 26–46.

Campbell, B M S 2000 *English Seigniorial Agriculture, 1250–1450.* Cambridge University Press, Cambridge.

Carlin, N 2017 'Getting into the groove: exploring the relationship between Grooved Ware and developed passage tombs in Ireland c. 3000–2700 cal BC', *Proceedings of the Prehistoric Society,* Vol. 83, 155–88.

Carlin, N 2018 *The Beaker Phenomenon? Understanding the Character and Context of Social Practices in Ireland 2500–2000 BC.* Sidestone Press, Leiden.

Carlin, N, Clarke, L & Walsh, F 2008 *The Archaeology of Life and Death on the Boyne Floodplain.* NRA Scheme Monographs 2. National Roads Authority, Dublin.

Carlin, N & Cooney, G 2017 'Transforming our understanding of Neolithic and Chalcolithic society (4000–2200 BC) in Ireland', *in* M Stanley, R Swan & A O'Sullivan (eds), *Stories of Ireland's Past: knowledge gained from NRA roads archaeology,* 23–56. TII Heritage 5. Transport Infrastructure Ireland, Dublin.

Carlin, N & Cooney, G 2020 'Early prehistoric societies in Ireland: the contribution of DNA', *Archaeology Ireland,* Vol. 34, Issue 3, 19–23.

Carlin, N, Hannah, E, Corns, A 2022 'Archaeological periods for the island of Ireland', PeriodO http://n2t.net/ark:/99152/p06hps8.

Carlin, N, O'Connell T J & O'Neill, N 2015 'The Neolithic discoveries', *in* T Bolger, C Moloney & D Shiels (eds), *A Journey Along the 'Carlow Corridor',* 95–108. NRA Scheme Monographs 16. National Roads Authority, Dublin.

Carrigan, Rev. W 1905 *The History and Antiquities of the Diocese of Ossory* (4 vols). Sealy, Bryers & Walker, Dublin.

Carter, D (comp.) 2019 *Customs Port Books: Barnstaple and Bideford, 1680* (https://www.genuki.org.uk/big/eng/DEV/Barnstaple/PortBook1680).

Carver, G 2012 'Pits and place-making: Neolithic habitation and deposition practices in East Yorkshire c. 4000–2500 BC', *Proceedings of the Prehistoric Society,* Vol. 78, 111–34.

Case, H 1961 'Irish Neolithic pottery: distribution and sequence', *Proceedings of the Prehistoric Society,* Vol. 27, 174–233.

Case, H 1969 'Settlement patterns in the north Irish Neolithic', *Ulster Journal of Archaeology,* Vol. 32, 3–7.

Case, H 1973 'A ritual site in the north-east of Ireland', *in* G Daniel & P Kjaerum (eds), *Megalithic Graves and Ritual,* 173–96. Jutland Archaeological Society Publications, Moesgard.

Case, H 1995 'Some Wiltshire Beakers and their contexts', *Wiltshire Archaeological and Natural History Magazine,* Vol. 88, 1–17.

Cassidy, L M, Ó Maoldúin, R, Kador, T, Lynch, A, Jones, C, Woodman, P C, Murphy, E M, Ramsey, G, Dowd, M, Noonan, A, Campbell, C, Jones, E P, Mattiangeli, V & Bradley, D G 2020 'A dynastic elite in monumental Neolithic society', *Nature,* Vol. 582, 384–8.

Channing, J 2012 *Final Report on Excavations at Site AR053/54 Baysrath, Co. Kilkenny (E2517). N9/N10 Kilcullen to Waterford Scheme. Phase 2: Waterford to Knocktopher.* Report by Valerie J Keeley Ltd for Kilkenny County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI. kd17s895n).

Chapelot, J & Fossier, R 1985 *The Village and the House in the Middle Ages.* University of California Press, Berkeley & Los Angeles.

Chapple, R M, Dunlop, C, Gilmore, S & Heaney, L 2009 *Archaeological Investigations Along the A1 Dualling Scheme, Loughbrickland to Beech Hill, Co. Down, N. Ireland* (2005). British Archaeological Report, British Series 479. John and Erica Hedges, Oxford.

Chapple, R M, McLaughlin, R & Warren, G 2022 '"…where they pass their unenterprising existence…": change over time in the Mesolithic of Ireland as shown in radiocarbon-dated activity', *Proceedings of the Royal Irish Academy,* Vol. 122C, 1–38.

Cleary, K 2005 'Skeletons in the closet: the dead among the living on Irish Bronze Age settlements', *Journal of Irish Archaeology,* Vol. 14, 23–42.

Cleary, K 2016 'Burial practices in Ireland during the late third millennium BC connecting new ideologies with local expressions', *in* J T Koch & D Cunliffe (eds), *Celtic From the West 3. Atlantic Europe and the Metal Ages: questions of shared language,* 139–78. Oxbow Books, Oxford.

Cleary, K & Unitt, R 2011 'Stone bead and pendant', *in* H Kelleher & R M Cleary (eds), *Neolithic Settlement in North Munster – Archaeological Excavations at Tullahedy, County Tipperary,* 402–5. Collins Press, Cork.

Cleary, R M 1982 'Excavations at Lough Gur, Co. Limerick: Part II', *Journal of the Cork Archaeological and Historical Society,* Vol. 87, 77–106.

Cleary, R M 2018 *The Archaeology of Lough Gur.* Wordwell, Dublin.

Clutterbuck, R 2009 'Cookstown, Co. Meath: a medieval rural medieval settlement', *in* C Corlett & M Potterton (eds), *Rural Settlement in Medieval Ireland in the Light of Recent Archaeological Excavations,* 27–47. Wordwell, Dublin.

Cody, E 2007 'A brief look at ringfort morphology and distribution', *in* C Manning (ed.), *From Ringforts to Fortified Houses,* 1–19. Wordwell, Dublin.

Colfer, B 1987 'Anglo-Norman settlement in County Wexford', *in* K Whelan (ed.), *Wexford History and Society,* 65–101. Geography Publications, Dublin.

Colfer, B 1996 'In search of the barricade and ditch of Ballyconnor, County Wexford', *Archaeology Ireland,* Vol. 10, No. 2, 16–19.

Colfer, B 2002 *Arrogant Trespass. Anglo-Norman Wexford 1169–1400.* Duffry Press, Wexford.

Colfer, B 2013 *Wexford Castles: landscapes, context and settlement.* Cork University Press, Cork.

Colliers 2019 'Stokestown House, Stokestown, New Ross, Wexford'. Sales brochure, prepared by Colliers estate agent https://www.myhome.ie/residential/brochure/stokestown-house-stokestown-new-ross-wexford/4343488 (published 17/06/2019).

Condit, T & Moore, F 2003 *Ireland in the Iron Age: Map of Ireland by Claudius Ptolemaeus c. AD 150.* Archaeology Ireland Heritage Guide, No. 21.

Condit, T & O'Sullivan, A 1999 'Landscapes of movement and control: interpreting prehistoric hillforts and fording places on the River Shannon', *Discovery Programme Reports No. 5,* 25–39. Royal Irish Academy, Dublin.

Cooney, G 2000 *Landscapes of Neolithic Ireland.* Routledge, London.

Cooney, G 2007 'Parallel worlds or multi-stranded identities? Considering the process of 'going over' in the Irish Sea zone', *Proceedings of the British Academy,* Vol. 144, 543–66.

Cooney, G & Grogan, E 1999 *Irish Prehistory: a social perspective.* Wordwell, Bray.

Cooney, G & Mandal, S 1998 *The Irish Stone Axe Project.* Monograph 1. Wordwell, Bray.

Cooney, G, Bayliss, A, Healy, F, Whittle, A, Danaher, E, Cagney, L, Mallory, J, Smyth, J, Kador, T & O'Sullivan, M 2011 'Ireland', *in* A Whittle, F Healy & A Bayliss (eds), *Gathering Time: dating the Early Neolithic enclosures of Southern Britain and Ireland,* 562–669. Oxbow Books, Oxford.

Corish, P J 1970 'The Diocese of Ferns and the Penal Days', *The Past: The Organ of the Uí Cinsealaigh Historical Society,* No. 8, 5–17.

Corlett, C & Potterton, M (eds) 2009 *Rural Settlement in Medieval Ireland in the Light of Recent Archaeological Excavations.* Wordwell, Dublin.

Cotter, C 1986 *'MacMurroughs, Co. Wexford',* in C Cotter (ed.), *Excavations 1985,* 41. Organisation of Irish Archaeologists, Dublin.

Cotter, C 1986–87 'Excavations at the site of MacMurrough Castle, near New Ross, Co. Wexford', *Journal of the Wexford Historical Society,* Vol. 11, 33–49.

Cotter, E 2009 'The medieval moated site at Ballinvinny South, Co. Cork', *in* C Corlett & M Potterton (eds), *Rural Settlement in Medieval Ireland in the Light of Recent Archaeological Excavations,* 49–58. Wordwell, Dublin.

Coughlan, T & Stevens, P 2021 *Report on Archaeological Monitoring Undertaken During Construction of the New Ross Bypass PPP Scheme, Co. Wexford and Co. Kilkenny, E004661.* Report by Irish Archaeological Consultancy Ltd for New Ross Joint Venture and Transport Infrastructure Ireland (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.7d27pm09w).

Craig, A J 1978 'Pollen percentage and influx analyses in south-east Ireland: a contribution to the ecological history of the Late-Glacial period', *Journal of Ecology,* Vol. 66, 297–324.

Craig, M & Garner, W 1975 *Buildings of Historic and Artistic Interest in County Wexford.* An Foras Forbatha, Dublin.

CRDS Ltd 2007a 'Archaeological heritage', *in* O Howell, P Doherty & C McCarthy (compilers), *New Ross By-pass: Environmental Impact Statement,* Vol. 1, 291–308. Report by Environmental Resources Management for Mott McDonald Pettit on behalf of Wexford County Council and the National Roads Authority.

CRDS Ltd 2 007b 'Architectural heritage', *in* O Howell, P Doherty & C McCarthy (compilers), *New Ross By-pass: Environmental Impact Statement,* Vol. 1, 309–18. Report by Environmental Resources Management for Mott McDonald Pettit on behalf of Wexford County Council and the National Roads Authority.

Cronin, J, Shiels, D & Fitzsimons, F (eds) 2008 *Report on the Battlefield of New Ross 1798.* Unpublished report for the Department of the Environment, Heritage & Local Government by Rubicon Heritage Services Ltd and Eneclann Ltd.

Cronin, J, Shiels, D & Fitzsimons, F (eds) 2010 *Report on the Battlefield of Ballinvegga (Ross) 1643.* Unpublished report for the Department of the Environment, Heritage & Local Government by Rubicon Heritage Services Ltd and Eneclann Ltd.

Crooks, P 2012 CIRCLE: *A calendar of Irish Chancery Letters, c. 1244–1509,* University of Dublin (https://chancery.tcd.ie/).

Cross, S 2001 'Competitive feasting in the Irish Neolithic', *Archaeology Ireland,* Vol. 15, No. 1, 11–13.

Culleton, E 1984 *Early Man in County Wexford: 5000BC–300BC.* Agricultural Institute, Dublin.

Culleton, E 1999 *Celtic and Early Christian Wexford AD 400 to 1166.* Four Courts Press, Dublin.

Culleton, E 2019 *On Our Own Ground. County Wexford Parish by Parish,* Vol. 2. Wexford County Council Public Library Service, Wexford.

Culleton, E & Murphy, C 2020 *On Our Own Ground. County Wexford Parish by Parish,* Vol. 3. Wexford County Council Public Library Service, Wexford.

Curtin, N 2019 'Pottery production in twelfth–fifteenth-century Ireland as an indicator of cultural, social and economic relationships', *Journal of Irish Archaeology,* Vol. 28, 139–59.

Danaher, E 2007 *Monumental Beginnings: the archaeology of the N4 Sligo Inner Relief Road.* NRA Scheme Monographs 1. National Roads Authority, Dublin.

Danaher, E 2009 'An Early Neolithic house at Barnagore, Co. Cork', *Journal of Irish Archaeology,* Vol. 18, 1–16.

Devine, E & Kealy, M 2009 *Archaeological Excavation Report, E3734 Leggetsrath East 1, County Kilkenny.* Report by Irish Archaeological Consultancy Ltd for Kilkenny County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI. vh549d948-1).

Devine, E & Ó Drisceoil, C 2009 'McDonagh Station, Highhays, Dublin Road, Kilkenny', *in* I Bennett (ed.), *Excavations 2006,* 271–2. Wordwell, Dublin.

Devine, E & Ó Drisceoil, C 2022 *Highhays, Kilkenny: a medieval pottery production centre in south-east Ireland.* Oxbow Books, Oxford.

Devine, E & Zimny, P 2008 *Danesfort 5 (E3456), Preliminary Report. N9/N10 Kilcullen to Waterford Scheme. Phase 4: Knocktopher to Powerstown.* Unpublished Stage (iii) preliminary report by Irish Archaeological Consultancy Ltd for Kilkenny County Council and the National Roads Authority.

Dickson, C & Dickson, J 2000 *Plants and People in Ancient Scotland.* Tempus Publishing, Stroud.

Doherty, C 2015 'A road well travelled: the terminology of roads in early Ireland', *in* E Purcell, P MacCotter, J Nyhan & J Sheehan (eds), *Clerics, Kings and Vikings. Essays on Medieval Ireland in Honour of Donnchadh Ó Corráin,* 23–30. Four Courts Press, Dublin.

Doody, M 1987 'Early Bronze Age burials, Ballyveelish 3, Co. Tipperary', *in* R M Cleary, M F Hurley & E A Twohig (eds), *Archaeological Excavations on the Cork–Dublin Gas Pipeline (1981–82).* Department of Archaeology, University College Cork, 10–21.

Doody, M 2000 'Bronze Age houses in Ireland', *in* A Desmond, G Johnson, M McCarthy, J Sheehan & E Shee Twohig (eds), *New Agendas in Irish Prehistory: pPapers in commemoration of Liz Anderson.* 135–58. Wordwell, Bray.

Doran, L 2008 *New Ross, c. 1200 to c. 1900: seven hundred years in the making.* Royal Irish Academy, Dublin.

Doran, L 2012 'New Ross: from European archetype to town "situated in the Marches"', *in* J Ní Ghrádaigh & E O'Byrne (eds), *The March in the Islands of the Medieval West,* 53–78. Brill, Leiden.

Dowd, M A 2002 'Kilgreany, Co. Waterford: biography of a cave', *Journal of Irish Archaeology,* Vol. 11, 77–97.

Down, K 1993 'Colonial society and economy', *in* A Cosgrove (ed.), *A New History of Ireland: Vol. II, Medieval Ireland 1169–1534,* 439–91. Oxford University Press, Oxford.

Doyle, I W 2016 '"Telling the dancer from the dance": the archaeology of early medieval Wexford', *in* I W Doyle & B Browne (eds), *Medieval Wexford: essays in memory of Billy Colfer,* 35–61. Four Courts Press, Dublin.

Doyle, L, Hackett, L, Hession, J, Marshall, M, Yates, D & Bolger, T 2010 *N25 New Ross Bypass Road Scheme, Cappagh, Co. Kilkenny to Knockroe, Co. Wexford. Archaeological Services Contract, Stage (i) – Standard Test Excavation, Wetland Test Excavation, Townland Boundary Survey and Architectural/Built Heritage Survey. Test Excavation Report, under Ministerial Directions Number A52 (E4067).* Unpublished report by Headland Archaeology (Ireland) Ltd for Wexford County Council.

Doyle, N 2006 'Appendix 3: medieval and post-medieval pottery from Carrowreagh', *in* M Tierney & P Johnston, *Archaeological Excavation Report Carrowreagh [Camaross] (00E0471). N25 Harristown to Rathsillagh Realignment, Co. Wexford,* 48–71. Report by Eachtra Archaeological Projects for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.p554nb14s).

Dryburgh, P & Smith, B (eds) 2007 *Inquisitions and Extents of Medieval Ireland.* List and Index Society, Special Series, Vol. 320. London.

Dunlevy, M 1988 *Ceramics in Ireland.* National Museum of Ireland, Dublin.

Dunne, C 2003 'Neolithic structure at Drummenny Lower, Co. Donegal: an environmental perspective', *in* I Armit, E Murphy, E Nelis & D D A Simpson (eds), *Neolithic Settlement in Ireland and Western Britain,* 164–71. Oxbow Books, Oxford.

Dunne, L 1998 'Late Bronze Age burials in County Kerry', *Archaeology Ireland,* Vol. 12, No. 2, 4.

Dunne, L 1999 'Ballyvelly, Tralee, Co. Kerry. Flat cemetery and crematoria', *in* I Bennett (ed.), *Excavations 1998,* 96–7. Wordwell, Bray.

Dyer, C 1986 'English peasant buildings in the later Middle Ages (1200–1500)', *Medieval Archaeology,* Vol. 30, 19–45.

Elder, S & Johnston, P 2009a *Archaeological Excavation Report, 00E0623, Bricketstown. N25 Harristown to Rathsillagh Realignment, Co. Wexford.* Eachtra Archaeological Projects for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.nz80kj468).

Elder, S & Johnston, P 2009b *Archaeological Excavation Report 00E0624, Bricketstown. N25 Harristown to Rathsillagh Realignment, Co. Wexford.* Eachtra Archaeological Projects for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.pr76tp18g).

Elliot, R 2008 *AR146 Paulstown 2 (E3632), Archaeological Resolution Report, N9/N10 Kilcullen to Waterford Scheme. Phase 4b: Rathclogh to Powerstown.* Unpublished Stage (iii) preliminary report by Irish Archaeological Consultancy Ltd for Kilkenny County Council and the National Roads Authority.

Empey, C A 1990 'County Kilkenny in the Anglo-Norman period', *in* W Nolan & K Whelan (eds), *Kilkenny: history and society,* 75–97. Geography Publications, Dublin.

Eogan, G 1965 *Catalogue of Irish Bronze Swords.* The Stationery Office, Dublin.

Eogan, G 1983 *The Hoards of the Irish Later Bronze Age.* University College Dublin, Dublin.

Eogan, G 1994 *The Accomplished Art. Gold and Gold-working in Britain and Ireland During the Bronze Age.* Oxbow Books, Oxford.

Eogan, J 2004 'The construction of funerary monuments in the Irish Early Bronze Age: a review of the evidence', *in* H Roche, E Grogan, J Bradley, J Coles & B Raftery (eds), *From Megaliths to Metals. Essays in Honour of George Eogan,* 56–60. Oxbow Books, Oxford.

Eogan, J 2007 'Cleansing body and soul', *Seanda,* Vol. 2, 38–9.

Eogan, J 2009 'A betagh settlement in Attyflin, Co. Limerick', *in* C Corlett & M Potterton (eds), *Rural Settlement in Medieval Ireland in the Light of Recent Archaeological Excavations, 67–77.* Wordwell, Dublin.

Eogan, J 2011a 'Introduction', *in* J Eogan & E Shee Twohig (eds), *Cois tSiúire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* 1–19. NRA Scheme Monographs 8. National Roads Authority Dublin.

Eogan, J 2011b 'The later prehistory of the Suir Valley (2400 BC–AD 400)', *in* J Eogan & E Shee Twohig (eds), *Cois tSiúire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* 253–83. NRA Scheme Monographs 8. National Roads Authority, Dublin.

Eogan, J forthcoming 'The prehistory of the Gorey region', *in* I Kenneally (ed.), *Gorey 400 – a Portrait of a Town and its Hinterland.* North Wexford Historical Society, Gorey.

Eogan, J & Kelly, B 2016 'New roads to medieval Wexford', *in* I W Doyle & B Browne (eds), *Medieval Wexford: essays in memory of Billy Colfer,* 211–40. Four Courts Press, Dublin.

Eogan, J & Shee Twohig, E 2011 'Conclusions', *in* J Eogan & E Shee Twohig (eds), *Cois tSuire - Nine Thousand Years of Human Activity in the Lower Suir Valley,* 291–8. NRA Scheme Monographs 8. National Roads Authority, Dublin.

Erck, J C 1846 *A Repertory of the Inrolments on the Patent Rolls of Chancery in Ireland.* J. M'Glashan, Dublin.

Evans C, Pollard J & Knight M 1999 'Life in woods: tree-throws, "settlement" and forest cognition', *Oxford Journal of Archaeology,* Vol. 18 (3), 241–54.

Farrell, C & Coxon, P 2004 *N25 Waterford Bypass: sedimentological and palaeoenvironmental investigation of wetland area adjacent to Woodstown.* Unpublished report for the National Roads Authority.

Fegan, G 2009 'Discovery and excavation of a medieval moated site at Coolamurry, Co. Wexford', *in* C Corlett & M Potterton (eds), *Rural Settlement in Medieval Ireland in the Light of Recent Archaeological Excavations,* 91–102. Wordwell, Dublin.

Ffrench, J F M 1889 'Cinerary urns discovered at Adamstown, Co. Wexford', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 19, 19–20.

Flanagan, M T 2005 *Irish Royal Charters: texts and contexts.* Oxford University Press, Oxford.

Flynn, C 2011 *Archaeological Excavation Report, E3486 Coolnaveagh Site 21 and 22. N11 Gorey – Arklow Link, Co. Wexford.* Report by Valerie J Keeley Ltd for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.ff36jm15k).

Flynn, C 2013 '2013:086 – Oldtown, Kilkenny', *Database of Irish Excavation Reports* (https://excavations.ie/report/2013/Kilkenny/0023030/).

Foley, A 2011 'Chieftains, betaghs and burghers: the Irish on the royal manors of medieval Dublin', *in* S Duffy (ed.), *Medieval Dublin XI: proceedings of the Friends of Medieval Dublin Symposium 2009,* 202–18. Four Courts Press, Dublin.

Foley, C 1989 'Excavations at a medieval settlement site in Jerpointchurch townland, Co. Kilkenny', *Proceedings of the Royal Irish Academy,* Vol. 89C, 71–126.

Fontijn, D R 2008 'Everything in its right place? On selective deposition, landscape and the construction of identity in later prehistory', *in* A Jones (ed.), *Prehistoric Europe. Theory and Practice,* 86–106. Willey-Blackwell, London.

Frazer, W 1893–6 'On five gold fibulae lately discovered in the south of Ireland, and on the art processes used in their manufacture', *Proceedings of the Royal Irish Academy,* Vol. 19, 776–83.

Frazer, W O 2009 'A medieval farmstead at Killegland, Ashbourne, Co Meath', *in* C Corlett & M Potterton (eds), *Rural Settlement in Medieval Ireland in the Light of Recent Archaeological Excavations,* 109–23. Wordwell, Dublin.

Fry, M 2000 *Coití – Logboats from Northern Ireland*. Northern Ireland Archaeological Monographs, No. 4. Environment and Heritage Service, Department of the Environment, Belfast.

Furlong, N 2003 *A History of Co. Wexford*. Gill & MacMillan, Dublin.

Gahan, D 1987 'The estate system of County Wexford, 1641–1876', *in* K Whelan (ed.), *Wexford History and Society,* 201–21. Geography Publications, Dublin.

Gallagher, D 2013 'Drumgold 3', *in* I Bennett (ed.), *Excavations 2010,* 240. Wordwell, Dublin.

Gallagher, D, Ruttle, E, Hardy, C & Rajic, M 2015 *Final Archaeological Excavation Report, E4325 Dunsinane 3. M11 Gorey to Enniscorthy Scheme, Co. Wexford*. Report by TVAS (Ireland) Ltd for Wexford County Council and the National Roads Authority.

Gardiner, M 2000 'Vernacular buildings and the development of the later medieval domestic plan in England', *Medieval Archaeology,* Vol. 44, 159–79.

Gardiner, M 2013 'Stacks, barns and granaries in early and high medieval England: crop storage and its implications', *in* A Vigil-Escalera Guirado, G Bianchi & J A Quirós (eds), *Horrea, barns and silos. Storage and Incomes in Early Medieval Europe,* 23–38. Documentos de Arqueología Medieval 5. Servicio Editorial de la UPV/EHU.

Gardiner, M 2014 'The distribution and adoption of the byre-house (longhouse) in late medieval Britain', *in* I Boháčová & P Sommer (eds), *Středověká Europa v pohybu k poctě Jana Klápště [Medieval Europe in Motion in Honour of Jan Klápště],* 145–62. Archeologický ústav AV ČR, Praha.

Gardiner, M & O'Conor, K 2017 'The later medieval countryside lying beneath', *in* M Stanley, R Swan & A O'Sullivan (eds), *Stories of Ireland's Past: knowledge gained from NRA roads archaeology,* 133–52. TII Heritage 5. Transport Infrastructure Ireland, Dublin.

Gardiner, M J & Radford, T 1980 *Soil Associations of Ireland and Their Landuse Potential. Soil survey Bulletin No. 36*. An Foras Talúntais, Dublin.

Gardiner, M J & Ryan, P 1964 *Soils of Wexford*. An Foras Talúntais, Dublin.

Garrow, D 2006 *Pits, Settlement and Deposition During the Neolithic and Early Bronze Age in East Anglia*. British Archaeological Reports, British Series 414. John & Erica Hedges, Oxford.

Garrow, D & Wilkin, N 2022 *The World of Stonehenge*. British Museum Press, London.

Geber, J 2009 'The animal bones', *in* M McQuade, B Molloy & C Moriarty *In the Shadow of the Galtees: archaeological excavations along the N8 Cashel to Mitchelstown Road Scheme,* 209–40. NRA Scheme Monographs 4. National Roads Authority, Dublin.

Gibson, A 2002 *Prehistoric Pottery in Britain and Ireland*. Tempus, Stroud.

Gies, F & Gies, J 1990 *Life in a Medieval Village*. Harper and Row, New York.

Gill, V 1811 *A New Map of the County of Wexford From Actual Survey by Valentine Gill*. Valentine Gill, Enniscorthy.

Gillespie, R G & Kerrigan, A 2010 *Of Troughs and Tuyères. The Archaeology of the N5 Charlestown Bypass*. NRA Scheme Monographs 6. National Roads Authority, Dublin.

Ginn, V & Plunkett, G 2020 'Filling the gaps: a chronology of Bronze Age settlement in Ireland', *Journal of Irish Archaeology,* Vol. 29, 41–61.

Goodbody, R 2018a 'Camlin Bridge, Co. Wexford', *in* T Coughlan & P Stevens, *Report on Archaeological Monitoring Undertaken During Construction of the New Ross Bypass PPP Scheme, Co. Wexford and Co. Kilkenny,* Appendix 4. Report by Irish Archaeological Consultancy Ltd for New Ross Joint Venture and Transport Infrastructure Ireland (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.7d27pm09w).

Goodbody, R 2018b 'Pre-demolition architectural heritage record and report of demolition of Ballymacar Bridge, Arnestown, New Ross', *in* T Coughlan & P Stevens, *Report on Archaeological Monitoring Undertaken During Construction of the New Ross Bypass PPP Scheme, Co. Wexford and Co. Kilkenny,* Appendix 5. Report by Irish Archaeological Consultancy Ltd for New Ross Joint Venture and Transport Infrastructure Ireland (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.7d27pm09w).

Gowen, M 1988 *Three Irish Gas Pipelines: new archaeological evidence in Munster.* Wordwell, Bray.

Gowen, M & Halpin, E 1992 'A Neolithic house at Newtown', *Archaeology Ireland,* Vol. 6, No. 2, 25–7.

Gowen, M, Ó Néill, J & Phillips, M (eds) 2005 *The Lisheen Mine Archaeological Project 1996–8.* Wordwell, Bray.

Grant, A 1983 *North Devon Wares: the seventeenth century.* University of Exeter, Exeter.

Grattan Esmonde, T H 1899 'Notes on crannog and other finds in north County Wexford', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 29, 404–6.

Grattan Esmonde, T H 1902 'Some further finds in north Wexford', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 32, 68–70.

Green, S W & Zvelebil, M 1990 'The Mesolithic colonization and agricultural transition of south-east Ireland', *Proceedings of the Prehistoric Society,* Vol. 56, 55–88.

Greig, J 1988 'Plant resources', *in* G Astill & A Grant (eds), *Countryside of Medieval England,* 108–27. Blackwell, Oxford.

Grogan, E 1996 'Changing places: settlement patterns in prehistory', *The Other Clare,* Vol. 20, 48–52.

Grogan, E 2002 'Neolithic houses in Ireland: a broader perspective', *Antiquity,* Vol. 76, 517–25.

Grogan, E 2004a 'The implications of Irish Neolithic houses', *in* I Shepherd & G Barclay (eds), *Scotland in Ancient Europe,* 103–14. Society of Antiquaries of Scotland, Edinburgh.

Grogan, E 2004b 'Middle Bronze Age burial traditions in Ireland', *in* H Roche, E Grogan, J Bradley, J Coles & B Raftery (eds), *From Megaliths to Metals. Essays in Honour of George Eogan,* 61–71. Oxbow Books, Oxford.

Grogan, E 2005a *The North Munster Project: volume 1. The Later Prehistoric Landscape of South-east Clare.* Discovery Programme Monograph No. 6. Wordwell, Bray.

Grogan, E 2005b *The North Munster Project: volume 2. The Prehistoric Landscape of North Munster.* Discovery Programme Monographs 6. Wordwell, Bray.

Grogan, E & Roche, H 2008 'Prehistoric pottery report', *in* L McKinstry, *Archaeological Excavation Report, E3478 Moneylawn Lower Site 13, 48–62. N11 Gorey – Arklow Link, Co. Wexford.* Report by Valerie J Keeley Ltd for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.dn409g43c).

Grogan, E & Roche, H 2009 'An assessment of Middle Bronze Age domestic pottery in Ireland', *in* G Cooney, K Becker, J Coles, M Ryan & S Sievers (eds), *Relics of Old Decency: archaeological studies in later prehistory. A Festschrift for Barry Raftery,* 127–36. Wordwell, Dublin.

Grogan, E & Roche, H 2010 'Clay and fire: the development and distribution of pottery traditions in prehistoric Ireland', *in* M Stanley, E Danaher & J Eogan (eds), *Creative Minds,* 27–46. Archaeology and the National Roads Authority Monograph Series No. 7. National Roads Authority, Dublin.

Grogan, E & Roche, H 2011a 'The prehistoric pottery from the N25 Waterford City Bypass and its regional and wider significance', *in* J Eogan & E Shee Twohig (eds), *Cois tSiúire—Nine Thousand Years of Human Activity in the Lower Suir Valley,* 207–16. NRA Scheme Monographs 8. National Roads Authority, Dublin.

Grogan, E & Roche, H 2011b 'Appendix 10 – The prehistoric ceramic assemblage', *in* L Clark, *Final Excavation Report for Camlin 3 in the Townland of Camlin, Co. Wexford.* Report by Rubicon Heritage Services Ltd for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.z0302q77k).

Grogan, E, O' Donnell, L & Johnston, P (eds) 2007 *The Bronze Age Landscapes of the Pipeline to the West: an integrated and environmental assessment.* Wordwell, Bray.

Gurrin, B, Brown, D, Crooks, P & Wallace, C 2021 *People, Place and Power. The Grand Jury System in Ireland.* Beyond 2022: Ireland's Virtual Record Treasury Research Project. Government of Ireland, Dublin.

Hackett, L, Doyle, L, Hession, J, Marshall, S, & Bolger, T 2010 *N25 New Ross Bypass Road Scheme, Cappagh, Co. Kilkenny to Knockroe, Co. Wexford. Archaeological Services Contract, Stage (i) – Standard Test Excavation. Test Excavation Report under Ministerial Directions Number A52 (E4067).* Unpublished report by Rubicon Heritage Services Ltd for Wexford County Council and the National Roads Authority.

Hagen, I 2005 *Excavations at Kilgobbin, Co. Dublin.* Unpublished final excavation report by Margaret Gowen & Co. Ltd for a private client.

Halpin, E 1995 'Excavations at Newtown, Co. Meath', *in* C Mount & E Grogan (eds), *Annus Archaeologiae,* 45–54. Organisation of Irish Archaeologists, Dublin.

Halpin, E 2007 'Old Mart, Magdalene Street, Drogheda, Co. Louth', *in* I Bennett (ed.), *Excavations 2004,* 259–60. Wordwell, Bray,

Hamilton, D & Krus, A M 2018 'The myths and realities of Bayesian chronological modeling revealed', *American Antiquity,* Vol. 83(2), 187–203.

Harbison, P 1968 'Catalogue of Irish Early Bronze Age associated finds containing copper or bronze', *Proceedings of the Royal Irish Academy,* Vol. 67C, 35–91.

Harbison, P 1969 *The Daggers and Halberds of the Early Bronze Age in Ireland.* Prähistorische Bronzefunde, Ab. 6:1. C H Beck, München.

Hardy, C & Taylor, K 2012 *Final Archaeological Excavation Report, E4229 Tinnacross 2. M11 Gorey to Enniscorthy Scheme, Co. Wexford.* Report by TVAS (Ireland) Ltd for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.8g8518822).

Hawkes, A 2015 '*Fulachtaí fia* and Bronze Age cooking in Ireland: reappraising the evidence', *Proceedings of the Royal Irish Academy,* Vol. 115C, 47–77.

Hawkes, A 2018 *The Archaeology of Prehistoric Burnt Mounds in Ireland.* Archaeopress, Oxford.

Hawkes, A 2021 *Archaeology Research Excavation Grant 2021, the Rathcoran Hillfort Project.* Royal Irish Academy Archaeology Research Excavation Grants Reports (https://www.ria.ie/sites/default/files/rathcoran-hillfort-project.pdf. Accessed March 2023).

Hawkes, A, & Malainey, M E 2018 'Fulacht fats – Bronze Age cooking confirmed', *Archaeology Ireland,* Vol. 32, No. 4, 47–50.

Higham, R & Barker, P 2000 *Hen Domen, Montgomery: a timber castle on the English–Welsh border: a final report.* University of Exeter Press, Exeter.

Hindli, A 2022 '2022:474 – Rathnaskilloge, Stradbally, Waterford', *Database of Irish Excavation Reports* (https://excavations.ie/report/2022/Waterford/0032302/).

Holden, T G 2006 'The botanical evidence', *in* C Lowe (ed.), *Excavations at Hoddom, Dumfrieshire,* 150–5. Society of Antiquaries of Scotland, Edinburgh.

Hore, P H 1900 *History of the Town and County of Wexford: Old and New Ross.* Elliot Stock, London.

Hore, P H 1911 *History of the Town and County of Wexford: history of the towns and castles of Ferns and Enniscorthy with notes on some of the parishes.* Elliot Stock, London.

Howard, J J & Crisp, F A 1897 *Visitation of Ireland.* Privately published.

Howell, O, Doherty, P & McCarthy, C (compilers) 2007 *New Ross By-pass: Environmental Impact Statement* (3 vols). Report by Environmental Resources Management for Mott McDonald Pettit Ltd, on behalf of Wexford County Council and the National Roads Authority.

Hughes, J 2006 *Final Report on Archaeological Excavations at Site 24 – 30, in the Townland of Granny, Co. Kilkenny.* Report by Headland Archaeology (Ireland) Ltd for Waterford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.pg15r504c).

Hughes, J & Price, J 2011 'Granny 27 – Neolithic buildings, Copper Age roasting pits and early medieval pit kilns', *in* J Eogan & E Shee Twohig (eds), *Cois tSiúire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* 89–106. NRA Scheme Monographs 8. National Roads Authority, Dublin.

Hughes, J, Wilkins, B & Price J 2011 'Newrath 35—Neolithic ritual and Iron Age metalworking', *in* J Eogan & E Shee Twohig (eds), *Cois tSiúire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* 128–36. NRA Scheme Monographs 8. National Roads Authority, Dublin.

Hull, G 2014 '2014:630 – Drumgold 6', *Database of Irish Excavation Reports* (https://excavations.ie/report/2014/Wexford/0032767b/).

Jeffrey, S 1991 'Burnt mounds, fulling and early textiles?', *in* M Hodder & L Barfield (eds), *Burnt Mounds and Hot Stone Technology,* 97–102. Metropolitan Borough Council, Sandwell.

Jeffrey, W H 1979 *The Castles of County Wexford.* Old Wexford Society, Wexford.

Jennings, R 2009 *Ennisnag 1 (AR074, E3614), Archaeological Excavation Report, N9/N10 Kilcullen to Waterford Scheme. Phase 4: Knocktopher to Powerstown.* Report by Irish Archaeological Consultancy Ltd on behalf of Kilkenny County Council and the National Roads Authority Ltd (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.hd775j26b).

Johnston, P 2003 'Analysis of the plant remains', *in* E Byrnes, *Flemington Site 4, Co. Dublin, Licence no. 02E0296, Final Excavation Report.* Unpublished report by Margaret Gowen & Co. Ltd for M C O'Sullivan and Bord Gáis Éireann.

Johnston, P 2007 'Analysis of charred plant remains', *in* E Grogan, L O'Donnell & P Johnston (eds), *The Bronze Age Landscapes of the Pipeline to the West: an integrated archaeological and environmental assessment,* 70–7. Wordwell, Bray.

Johnston, P, Kiely, J & Tierney, J 2008 *Near the Bend in the River. The Archaeology of the N25 Kilmacthomas Realignment.* NRA Scheme Monographs 3. National Roads Authority, Dublin.

Johnston, S A & Wailes, B 2007 *Dún Ailline: excavations at an Irish Royal Site, 1968–1975.* niversity of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia.

Jones, G & Halstead, P 1995 'Maslins, mixtures and monocrops: on the interpretation of archaeological crop samples of hetrogenous composition', *Journal of Archaeological Science,* Vol. 22, 103–14.

Kavanagh, J 2007 'Ferns Upper, Co. Wexford', *in* I Bennett (ed.), *Excavations 2004,* 466–7. Wordwell, Bray.

Kavanagh, R M 1973 'The encrusted urn in Ireland', *Proceedings of the Royal Irish Academy,* Vol. 73C, 507–617.

Kearney, K, Gearey, B, Hegarty, S, Richer, S, Ferreira, C, O Carroll, E, Hamilton, D, Eogan, J, McClatchie, M, Armit, I, Nagle, C, Taylor, K, Hull, G & Becker, K 2022 'A multi-proxy holocene palaeoenvironmental record of climate change and prehistoric human activity from Lough Cullin, southeast Ireland', *The Holocene,* Vol. 32(4), 262–79.

Kelly, F 1998 *Early Irish Farming.* Dublin Institute for Advanced Studies, Dublin.

Kemble, J M 1863 *Horae Ferales; Or, Studies in the Archeology of the Northern Nations.* Lovell, Reeve and Company, London.

Kenny, N 2009 *Charcoal Production and Ironworking: a selection of sites from the M7/M8.* Unpublished research report for ACS Ltd.

Kenny, N 2010 'Charcoal production in medieval Ireland', *in* M Stanley, E Danaher & J Eogan (eds), *Creative Minds,* 99–115. Archaeology and the National Roads Authority Monograph Series No. 7. National Roads Authority, Dublin.

Kerr, T R & McCormick, F 2014 'Statistics, sunspots and settlement: influences on sum of probability curves', *Journal of Archaeological Science,* Vol. 41, 493–501.

Kiely, J, & Johnston, P 2019 'Later medieval cob-built houses at Gortnahown 2', *in* P Johnston & J Kiely (eds), *Hidden Voices. The Archaeology of the M8 Fermoy–Mitchelstown Motorway,* 155–9. TII Heritage 7. Transport Infrastructure Ireland, Dublin.

Kinahan, G H 1879–88 'Sepulchral and other prehistoric relics, counties Wexford and Wicklow', *Proceedings of the Royal Irish Academy,* Vol. 16, 152–60.

Knight, J A 1985 *Differential Preservation of Calcined Bone at the Hirundo Site, Alton, Maine.* Unpublished MSc Thesis in Quaternary Science, University of Maine.

Kyle, J 2009 *AR068 Knockadrina 2 (E3611). Archaeological Excavation Report, N9/N10 Kilcullen to Waterford Scheme. Phase 4: Knocktopher to Powerstown.* Unpublished Stage (iii) preliminary report by Irish Archaeological Consultancy Ltd for Kilkenny County Council and the National Roads Authority.

Laidlaw, G 2009 'Breaking pots: the Grooved Ware assemblage from Scart, Co. Kilkenny', *Old Kilkenny Review,* Vol. 61, 37–46.

Laidlaw, G 2010 *Final Report on Excavations at AR022 North Scart, Co. Kilkenny (E3021). N9/N10 Kilcullen to Waterford Scheme. Phase 2: Waterford to Knocktopher.* Report by Valerie J Keeley Ltd for Kilkenny County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.f475fz83x).

Laidlaw, G 2017 'Excavations of the Late Neolithic Grooved Ware site at Scart, Co. Kilkenny', *Journal of Irish Archaeology,* Vol. 26, 33–56.

Laing, L 2006 *The Archaeology of Celtic Britain and Ireland.* Cambridge University Press, Cambridge.

Lewis, S 1837 *A Topographical Dictionary of Ireland,* Vol. 2. S. Lewis, London.

Long, P, Moloney C & Bolger T (in prep.) *N9 / N10 Kilcullen to Waterford Scheme: Kilcullen to Prumplestown Scheme Monograph.* TII Heritage Series. Transport Infrastructure Ireland, Dublin.

Lucas, A T 1950 'Neolithic burial at Norrismount, Co. Wexford', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 80, 155–7.

Lydon, J F 1993 'A land of war', *in* A Cosgrove (ed.), *A New History of Ireland, Vol. II, Medieval Ireland 1169–1534,* 240–74. Oxford University Press, Oxford.

Lynch, L & O'Donnell, L 2007 'General evaluation and assessment of the archaeological results 2: funerary, ritual and domestic evidence', *in* E Grogan, L O'Donnell & P Johnston (eds), *The Bronze Age Landscapes of the Pipeline to the West: an integrated and environmental assessment,* 103–29. Wordwell, Bray.

Lyons, M C 1981 'An account for the manor of Old Ross, September 1284–September 1285, part I', *Decies, Journal of the Waterford Archaeological and Historical Society,* Vol. 18, 33–40.

Lyons, M C 1982 'An account for the manor of Old Ross, September 1284–September 1285, part II', *Decies, Journal of the Waterford Archaeological and Historical Society,* Vol. 19, 18–31.

MacCotter, P 2008 *Medieval Ireland: territorial, political and economic divisions.* Four Courts Press, Dublin.

MacManus, C 2008 'Strandfield', *in* I Bennett (ed.), *Excavations 2005,* 410–1 Wordwell, Bray.

MacNiocaill, G 1964 *Na Buirgéisí XII–XV aois* (2 vols). Chló Morainn, Charraig Dhubh.

Marshall, S & McMorran, T 2016 'People and places: a bird's-eye view of medieval Old Ross', *in* I W Doyle & B Browne (eds), *Medieval Wexford: essays in memory of Billy Colfer,* 241–61. Four Courts Press, Dublin.

Martin, K 2009 'Boyerstown: a rediscovered medieval farmstead', *in* M B Deevy & D Murphy (eds), *Places Along the Way. First Findings on the M3,* 135–52. NRA Scheme Monographs 5. National Roads Authority, Dublin.

Mason, R 2020 'A United Irishman's Bronze Age sword', *Archaeology Ireland,* Vol. 34, No. 1, 58.

Mays, S 1998 *The Archaeology of Human Bones.* Routledge, London.

McCarthy, C 2008 'Skreen, Co.Meath', *in* I Bennett (ed.), *Excavations 2005,* 306–7 Wordwell, Bray.

McClatchie, M, Bogaard, A, Colledge, S, Whitehouse, N J, Schulting, R J, Barratt, P & McLaughlin, T R 2014 'Neolithic farming in north-western Europe: archaeobotanical evidence from Ireland', *Journal of Archaeological Science,* Vol. 51, 206–15.

McClatchie, M, Bogaard, A, Colledge, S, Whitehouse, N J, Schulting, R J, Barratt, P & McLaughlin, T R 2016 'Farming and foraging in Neolithic Ireland: a review of the evidence from plant macro-remains', *Antiquity,* Vol. 90, 302–18.

McClatchie, M, McCormick, F, Kerr, T R & O'Sullivan, A 2015 'Early medieval farming and food production: a review of the archaeobotanical evidence from archaeological excavations in Ireland', *Vegetation History and Archaeobotany,* Vol. 24(1), 179–86.

McClatchie, M, Schulting, R, McLaughlin, T R, Colledge, S, Bogaard, A, Barratt, P & Whitehouse, N 2022 'Food production, processing and foodways in Neolithic Ireland', *Environmental Archaeology,* Vol. 27, 80–92.

McClatchie, M, Whitehouse, N, Schulting, R, Bogaard, A & Barratt, P 2009 'Cultivating societies: new insights into agriculture in Neolithic Ireland', *in* M Stanley, E Danaher & J Eogan (eds), *Dining and Dwelling,* 1–8. Archaeology and the National Roads Authority Monograph Series No. 6. National Roads Authority, Dublin.

McComb, A M G & Simpson, D D A 1999 'The wild bunch: exploitation of the hazel in prehistoric Ireland', *Ulster Journal of Archaeology,* Vol. 58, 1–16.

McCormick, F 1995 'Cows, ringforts and the origins of Early Christian Ireland', *Emania,* Vol. 13, 33–7.

McCormick, F 2007 'Mammal bone studies from prehistoric Irish sites', *in* E M Murphy & N J Whitehouse (eds), *Environmental Archaeology in Ireland,* 77–101. Oxbow Books, Oxford.

McCormick, F & Murray, E 2007 *Knowth and the Zooarchaeology of Early Christian Ireland. Excavations at Knowth 3.* Royal Irish Academy, Dublin.

McCutcheon, C 2009 'The medieval pottery from Coolamurry, Co. Wexford', *in* C Corlett & M Potterton (eds), *Rural Settlement in Medieval Ireland in the Light of Recent Archaeological Excavations,* 102–7. Wordwell, Dublin.

McCutcheon, C 2012 'Appendix 10.2. The medieval and post-medieval pottery', *in* J Hession, *New Ross Bypass. Final Excavation Report E4108, Landscape 2, Co. Wexford. N25* Report by Rubicon Heritage Services Ltd for Wexford County Council and the National Roads Authority, Vol. 3 (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.qz216c53b).

McCutcheon, C 2014 'In praise of Leinster Cooking Ware', *in* B Kelly, N Roycroft & M Stanley (eds), *Fragments of Lives Past*, 95–104. Archaeology and the National Roads Authority Monograph Series No. 11. National Roads Authority, Dublin.

McCutcheon, C & Meenan, R 2010 'Pots on the hearth: domestic pottery in historic Ireland', *Proceedings of the Royal Irish Academy,* Vol. 111C (2011), 91–113.

McEneaney, E 1979 'Waterford and New Ross trade competition c. 1300', *Decies: Journal of the Waterford Archaeological & Historical Society,* Vol. 12, 16–24.

McGarry, T 2009 'Irish late prehistoric burial ringditches', *in* G Cooney, J Coles, M Ryan, S Sievers and K Becker (eds), *Relics of Old Decency: archaeological studies in later prehistory. A Festschrift for Barry Raftery,* 413–23. Wordwell, Dublin.

McKinley, J I 1994a 'Bone fragment size in British cremation burials and its implications for pyre technology and ritual', *Journal of Archaeological Science*, Vol. 21, 339–42.

McKinley, J I 1994b *The Anglo-Saxon cemetery at Spong Hill, North Eltham, Part VIII: the cremations*. East Anglian Archaeology Report, No. 69. Field Archaeology Division, Norfolk Museums Service, Dereham.

McKinley, J I 1997 'Bronze Age barrows and funerary rites and rituals of cremation', *Proceedings of the Prehistoric Society,* Vol. 63, 129–45.

McKinley J I 2004 'Compiling a skeletal inventory: cremated human bone', *in* M Brickley & J I McKinley, *Guidelines to the Standards for Recording Human Remains,* 9–13. IFA Paper No. 7.

McKinley, J I 2006 'Cremation… the cheap option?', *in* R Gowland & C Knüsel (eds), *Social Archaeology of Funerary Remains,* 81–8. Oxbow Books, Oxford.

McKinstry, L 2008 *Archaeological Excavation Report, E3478 Moneylawn Lower Site 13. N11 Gorey – Arklow Link, Co. Wexford*. Report by Valerie J Keeley Ltd for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.dn409g43c).

McKinstry, L 2010 *Final Report on Excavations at Site AR031 Earlsrath, Co. Kilkenny (E3005). N9/N10 Kilcullen to Waterford Scheme. Phase 2: Waterford to Knocktopher.* Report by Valerie J Keeley Ltd for Kilkenny County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.jq08k207c).

McLoughlin, C 2002a *Excavations at Kerlogue, Wexford*. Unpublished report by Stafford McLoughlin Archaeology Ltd.

McLoughlin, C 2002b 'Prehistoric remains at Kerlogue, Co. Wexford', *Archaeology Ireland,* Vol. 16, No. 3, 16–19.

McLoughlin, C 2012 'Excavation of an Iron Age ring-ditch and associated features at Kerloge, Co Wexford', *in* C Corlett & M Potterton (eds), *Life and Death in Iron Age Ireland in the Light of Recent Archaeological Excavations,* 161–73. Wordwell, Dublin.

McNamara, M, Hardy, C & Rajic, M 2013 *Final Archaeological Excavation Report, E4162 Cooladine 1. M11 Gorey to Enniscorthy Scheme, Co. Wexford*. Report by TVAS (Ireland) Ltd for Wexford County Council and the National Roads Authority.

McQuade, M 2006 'Archaeological excavations of pre-historic settlement sites at Knockhouse Lower and Carrickphierish, Co. Waterford', *Decies: Journal of the Waterford Archaeological and Historical Society,* Vol. 62, 21–48.

McQuade, M, Molloy, B & Moriarty, C 2009 *In the Shadow of the Galtees: archaeological excavations along the N8 Cashel to Mitchelstown road scheme.* NRA Scheme Monographs 4. National Roads Authority, Dublin.

McSparron, C 2008 'Have you no homes to go to?', *Archaeology Ireland,* Vol. 22, No. 3, 18–21.

McSparron, C 2021 *Burials and Society in Late Chalcolithic and Early Bronze Age Ireland.* Archaeopress, Oxford.

Meharg, T, Coughlan, T & Stevens, P forthcoming 'Bridging the past – archaeological findings on the N25 New Ross Bypass during the construction of Ireland's longest bridge, the Rose Fitzgerald Kennedy Bridge', *Journal of the Wexford Historical Society.*

Meirion-Jones, G I 1973 'The long-house: a definition', *Medieval Archaeology,* Vol. 17, 135–7.

Mighall, T M, Timpany, S, Blackford, J J, Innes, J B, O'Brien, C E, O'Brien, W B & Harrison S E 2008 'Vegetation change during the Mesolithic and Neolithic on the Mizen Peninsula, Co. Cork, south-west Ireland', *Vegetation History and Archaeobotany,* Vol. 17 (6), 617–28.

Mills, J 1894 'The Norman settlement in Leinster: the cantreds near Dublin', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 24, 174.

Mitchell, G F & Watts, W A 1993 'Notes on an interglacial deposit in Ballykeerogemore townland and an interstadial deposit in Battlestown townland, both in Co. Wexford', *Irish Journal of Earth Sciences,* Vol. 12, 107–17.

Mithen, S, Finlay, N, Carruthers, W, Carter, S & Ashmore, P 2001 'Plant use in the Mesolithic: evidence from Staosnaig, Isle of Colonsay, Scotland', *Journal of Archaeological Science,* Vol. 28, 223–34.

Molleson, T I 1985–6 'New radiocarbon dates for the occupation of Kilgreany cave, Co. Waterford', *Journal of Irish Archaeology,* Vol. 3, 1–3.

Moloney, C 2015 'Sacred places, *fulachtaí fia* and settlements', *in* T Bolger, C Moloney & D Shiels (eds), *A Journey Along the 'Carlow Corridor',* 109–30. NRA Scheme Monographs 16. National Roads Authority, Dublin.

Monk, M A 1985/86 'Evidence from macroscopic plant remains for crop husbandry in prehistoric and early historic Ireland: a review', *Journal of Irish Archaeology,* Vol. 3, 31–6.

Monk, M A 1991 'The archaeobotanical evidence for field crop plants in early historic Ireland', *in* J M Renfrew (ed.), *New Light on Early Farming: recent developments in palaeo-ethnobotany,* 315–28. Edinburgh University Press, Edinburgh.

Monk, M A 2000 'Seeds and soils of discontent: an environmental archaeological contribution to the nature of the Early Neolithic', *in* A Desmond, G Johnson, M McCarthy, J Sheehan & E Shee Twohig (eds), *New Agendas in Irish Prehistory: papers in commemoration of Liz Anderson,* 67–87. Wordwell, Bray.

Monk, M A 2013 'The environmental evidence', *in* K. Hanley & M F Hurley (eds), *Generations. The Archaeology of Five Road Schemes in County Cork,* Vol. 2, 357–72. NRA Scheme Monographs 13. National Roads Authority, Dublin.

Monk, M A 2015 'Early medieval agriculture in Ireland: the case for tillage', *in* E Purcell, P MacCotter, J Nyhan & J Sheehan (eds), *Clerics, Kings and Vikings. Essays on Medieval Ireland in Honour of Donnchadh Ó Corráin,* 309–22. Four Courts Press, Dublin.

Monk, M A & Kelleher, E 2005 'An assessment of the archaeological evidence for Irish corn-drying kilns in the light of the results of archaeological experiments and archaeobotanical studies', *Journal of Irish Archaeology,* Vol. 14, 77–114.

Monteith, J 2010 *Final Report on Excavations at Site AR043 Kilkeasy, Co. Kilkenny (E3014). N9/N10 Kilcullen to Waterford Scheme. Phase 2: Waterford to Knocktopher.* Report by Valerie J Keeley Ltd for Kilkenny County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.kh04t579h).

Monteith, J 2011 *Final Report on Excavations at AR022 Scart, Co. Kilkenny (E3001). N9/N10 Kilcullen to Waterford Scheme. Phase 2: Waterford to Knocktopher.* Report by Valerie J Keeley Ltd for Kilkenny County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.df667q95v).

Moore, M 1996 *Archaeological Inventory of Co. Wexford.* The Stationery Office, Dublin.

Moriarty, C 2011 'The medieval vill of Portmarnock', *in* S Duffy (ed.), *Medieval Dublin XI: proceedings of the Friends of Medieval Dublin Symposium 2009,* 229–74. Four Courts Press, Dublin.

Mott MacDonald EPO 2002 *New Ross Second River Crossing and Bypass: route selection report.* Report for Wexford County Council.

Mount, C 1997 'Early Bronze Age burial in south-east Ireland in the light of recent research', *Proceedings of the Royal Irish Academy,* Vol. 97C, 101–93.

Mount, C 1998 'Five Early Bronze Age cemeteries at Brownstown, Graney West, Oldtown and Ploopluck, County Kildare, and Strawhall, County Carlow', *Proceedings of the Royal Irish Academy,* Vol. 98C, 25–99.

Mount, C 2001 'The collection of Early and Middle Bronze Age material culture in south-east Ireland', *Proceedings of the Royal Irish Academy,* Vol. 101C, 1–35.

Mount, C, Hartnett, P J & Buckley, L 1993 'Early Bronze Age cemetery at Edmondstown, County Dublin', *Proceedings of the Royal Irish Academy,* Vol. 93C, No. 2, 21–79.

Movius, H 1935 'Kilgreany Cave, County Waterford', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 65, 254–96.

Mullally, E 2002 *The Deeds of the Normans in Ireland.* Four Courts Press, Dublin.

Murphy, M 2007 'The profits of lordship: Roger Bigod, earl of Norfolk and the lordship of Carlow, 1270–1306', *in* L Doran & J Lyttleton (eds), *Lordship in Medieval Ireland,* 75–98. Four Courts Press, Dublin.

Murphy, M 2008 'Agriculture and rural settlement in medieval Wexford – revisiting the sources', *Áitreabh – The Newsletter of the Society for Irish Historic Settlement,* No 13, 1–6.

Murphy, M & Potterton, M 2010 *The Dublin Region in the Middle Ages. Settlement, Land-use and Economy.* Four Courts Press, Dublin.

Nicholls, K W 1982 'Anglo-French Ireland and after', *Peritia,* Vol. 1, 370–403.

Ní Mhaonaigh, M 2009 'Mac Murchada, Diarmait (MacMurrough, Dermot)', *Dictionary of Irish Biography,* Vol. 6, 110–13. Cambridge University Press, Cambridge.

Noble, G & Brophy, K 2017 'Cremation practices and the creation of monument complexes: the Neolithic cremation cemetery at Forteviot, Strathearn, Perth & Kinross, Scotland, and its comparanda', *Proceedings of the Prehistoric Society,* Vol. 83, 213–45.

Nolan, W 2012 'Land reform in post-Famine Ireland', *in* J Crowley, W J Smyth & M Murphy (eds), *Atlas of the Great Irish Famine, 1845–52,* 570–9. Cork University Press, Cork.

O'Brien, W F 1994 *Mount Gabriel, Bronze Age Mining in Ireland.* Galway University Press, Galway.

O'Brien, W F 2004 *Ross Island: mining, metal and society in early Ireland.* Galway, Department of Archaeology, National University of Ireland, Galway.

O'Brien, W F 2017 'The development of the hillfort in prehistoric Ireland', *Proceedings of the Royal Irish Academy,* Vol. 117, 3–61.

O'Byrne, E 2007 'The MacMurroughs and the marches of Leinster, 1170–1340', *in* L Doran & J Lyttleton (eds), *Lordship in Medieval Ireland,* 160–92. Four Courts Press, Dublin.

O Carroll, E 2021 'Report on Jamestown/ Ballyverneen wetlands', *in* T Coughlan & P Stevens *Report on Archaeological Monitoring Undertaken During Construction of the New Ross Bypass PPP Scheme, Co. Wexford and Co. Kilkenny, Appendix 2.* Report by Irish Archaeological Consultancy Ltd for New Ross Joint Venture and Transport Infrastructure Ireland (TII Digital Heritage Collections: https://doi.org/10.7486/ DRI.7d27pm09w).

O'Conor, K D 1998 *The Archaeology of Medieval Rural Settlement in Ireland.* Discovery Programme Monograph No. 3. Royal Irish Academy, Dublin.

Ó Corráin, D 1972 *Ireland Before the Normans.* Gill & Macmillan, Dublin

Ó Donnabháin, B 1988 'Appendix 4. Report on the osseous remains from sites on the Mitchelstown–Limerick and Bruff–Mallow gas pipelines', *in* M Gowen (ed.), *Three Irish Gas Pipelines: new archaeological evidence in Munster,* 192–5. Wordwell, Dublin.

O'Donnell, L 2007 'Environmental archaeology: identifying patterns of exploitation in the Bronze Age. charcoal and wood', *in* E Grogan, L O'Donnell & P Johnston (eds), *The Bronze Age Landscapes of the Pipeline to the West: an integrated archaeological and environmental assessment,* 27–69. Wordwell, Bray.

O'Donnell, L 2009 'Charcoal results', *in* M McQuade, B Molloy & C Moriarty, *In the Shadow of the Galtees: archaeological excavations along the N8 Cashel to Mitchelstown road scheme,* 243–61. NRA Scheme Monographs 4. National Roads Authority, Dublin.

O'Donoghue, J & Kiely, J 2019 'Gortnahown 2 – prehistoric features, early medieval bell manufacturing and late medieval settlement', *in* P Johnston & J Kiely (eds), *Hidden Voices. The Archaeology of the M8 Fermoy–Mitchelstown Motorway,* 80–94. TII Heritage 7. Transport Infrastructure Ireland, Dublin.

O'Donovan, E 2003/2004 'A Neolithic house at Kishoge, Co. Dublin', *Journal of Irish Archaeology,* Vol. 12/13, 1–27.

O'Donovan, J (trans. & ed.) 1856 *Annals of the Kingdom of Ireland, by the Four Masters from the Earliest Period to the Year 1616,* Vol. 4, 731. Hodges, Smith & Co., Dublin.

Ó Drisceoil, C 2003 'Archaeological excavation of a Neolithic settlement at Coolfore, Co. Louth', *in* I Armit, E Murphy, E Nelis & D D A Simpson (eds), *Neolithic Settlement in Ireland and Western Britain,* 176–81. Oxbow Books, Oxford.

Ó Drisceoil, C 2017 *'Pons Novus, villa Willielmi Marescalli:* New Ross, a town of William Marshal', *in* J Bradley, C Ó Drisceoil & M Potterton (eds), *William Marshal and Ireland,* 268–314. Four Courts Press, Dublin.

O'Flaherty, R 2002 *A Consideration of the Early Bronze Age Halberd in Ireland.* Unpublished PhD thesis, University College Dublin.

O'Hara, R & Ginn, V 2011 'Butlerstown North 2—Early Neolithic and Early Bronze Age settlement activity', *in* J Eogan & E Shee Twohig (eds), *Cois tSiúire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* 52–3. NRA Scheme Monographs 8. National Roads Authority, Dublin.

O'Kelly, M J 1954 'Excavations and experiments in ancient Irish cooking-places', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 84, 105–55.

O'Lochlainn, C 1940 'Roadways in ancient Ireland', *in* J Ryan (ed.), *Féil-Sgribhinn Eóin Mhic Néill: essays and studies presented to Professor Eoin MacNeill,* 465–74. At the Sign of the Three Candles, Dublin.

Ó Maoldúin, R 2009 *Moneytucker Site 1 04E03291, N30 Moneytucker to Jamestown Realignment, Co. Wexford,.* Report by Valerie J. Keeley Ltd for Wexford County Council and National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.1831s474m).

O'Neill, T 1987 *Merchants and Mariners in Medieval Ireland.* Irish Academic Press, Dublin.

Ó Nualláin, S 1972 'A Neolithic house at Ballyglass near Ballycastle, Co. Mayo', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 106, 92–117.

Opie, H 2010 'Ardreigh, Co. Kildare', *in* I Bennett (ed.), *Excavations 2007,* 185–7. Wordwell, Dublin.

Ó Ríordáin, B & Waddell, J 1993 *The Funerary Bowls and Vases of the Irish Bronze Age.* Galway University Press, Galway.

Ó Ríordáin, S P 1936 'Two Bronze Age burials from Co. Wexford', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 66, 186 –90.

Ó Ríordáin, S P 1954 'Lough Gur excavations: Neolithic and Bronze Age houses on Knockadoon', *Proceedings of the Royal Irish Academy,* Vol. 56, 297–459.

Ó Ríordáin, S P & Hunt, J 1942 'Medieval dwellings at Caherguillamore, County Limerick', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 72, 37–63.

Orpen, G H 1911 *New Ross in the Thirteenth Century.* University Press, Dublin.

Orpen, G H 2005 *Ireland under the Normans* (new edn). Four Courts Press, Dublin.

Orpen, G H & Brooks, E St J 1934 'Charters of earl Richard Marshal of the forests of Ross and Taghmon', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 64, 54–63.

O'Sullivan, A, McCormick, F, Kerr, T R & Harney, L 2014 *Early Medieval Ireland AD 400–1100. The Evidence from Archaeological Excavations.* Royal Irish Academy, Dublin.

O'Sullivan, M, O'Connor, J & Kennedy, L 2000 *Archaeological Features at Risk. A Survey Measuring the Recent Destruction of Ireland's Archaeological Heritage.* The Heritage Council, Kilkenny.

O'Sullivan, T F 2001 *Goodly Barrow – a Voyage on an Irish River.* Lilliput Press, Dublin

Parker Pearson, M 1981 *The Archaeology of Death*. Cambridge University Press, Cambridge.

Plunkett, G 2009 'Land-use patterns and cultural change in the Middle to Late Bronze Age in Ireland: inference from pollen records', *Vegetation History and Archaeobotany,* Vol. 18, 273–95.

Pollard, E 2021 '2021:708 – Woodstown, near Annestown, Waterford', *Database of Irish Excavation Reports,* No. 2012:708 (https://excavations.ie/report/2021/Waterford/0032691/).

Pollard, J 1999 '"These places have their moments": thoughts on settlement practices in the British Neolithic', *in* J Brück & M Goodman (eds), *Making Places in the Prehistoric World: themes in settlement archaeology,* 76–93. UCL Press, London.

Pollard, J 2000 'Neolithic occupation practices and social ecologies from Rinyo to Clacton', *in* A Ritchie (ed.), *Neolithic Orkney and its European Context,* 363–69. McDonald Institute Monographs, Cambridge.

Pollock, D 2009 'Ballymaclode, Co. Waterford', *in* I Bennett (ed.), *Excavations 2006,* 525. Wordwell, Dublin.

Postles, D 1989 'Cleaning the medieval arable', *Agricultural History Review,* Vol. 37:2, 130–43.

Powell, T G E 1938 'Excavation of a megalithic tomb at Ballynamona Lower, County Waterford', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 68, 260–71.

Power, D 1997 *Archaeological Inventory of Co. Cork, Vol. III, Mid Cork.* The Stationery Office, Dublin.

Pryor, F 1995 'Abandonment and the role of ritual sites in the landscape', *Scottish Archaeological Review,* Vol. 9/10, 96–109.

Purcell, A 2002a 'Excavation of three Neolithic houses at Corbally, Kilcullen, Co. Kildare', *Journal of Irish Archaeology,* Vol. 11, 31–75.

Purcell, A 2002b 'Courtlands East, Co. Wexford', *in* I Bennett (ed.), *Excavations 2000,* 354. Wordwell, Bray.

Quinn, A 2006 *Final Report on Archaeological Excavation of Mondaniel 3* (03E1094). Report by Archaeological Consultancy Services Ltd for Cork County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.x346sk057).

Quinn, B & Moore, D 2009 '*Fulachta fiadh* and the beer experiment', *in* M Stanley, E Danaher & J Eogan (eds), *Dining and Dwelling,* 43–53. Archaeology and the National Roads Authority Monograph Series No. 6. National Roads Authority, Dublin.

Rackham, O 1996 *Trees and Woodlands of the British Landscape* (rev. edition). Phoenix, London.

Rackham, O 2003 *Ancient Woodland: its history, vegetation and uses in England.* Arnold, London.

Raftery, B 1994 *Pagan Celtic Ireland. The Enigma of the Irish Iron Age.* Thames and Hudson, London.

Rajic, M & Hardy, C 2012 *Final Archaeological Excavation Report, E4174 Knockrathkyle 1. M11 Gorey to Enniscorthy Scheme, Co. Wexford.* Report by TVAS (Ireland) Ltd for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.pv63vn825).

Rajic, M & Hardy, C 2013 *Final Archaeological Excavation Report, E4276 Corbally 2 & 3. M11 Gorey to Enniscorthy Scheme, Co. Wexford.* Report by TVAS (Ireland) Ltd for Wexford County Council and the National Roads Authority.

Rajic, M & Ruttle, E 2013 *Final Archaeological Excavation Report, E4171 Ballydawmore 5. M11 Gorey to Enniscorthy Scheme, Co. Wexford.* Report by TVAS (Ireland) Ltd for Wexford County Council and the National Roads Authority.

Reilly, F 2005 'Bronze Age cemetery', *Archaeology Ireland,* Vol. 19, No. 2, 32–5.

Roche, H 2004 *The Prehistoric Pottery from Kerloge, Co. Wexford (02E0606).* Unpublished report for Stafford-McLoughlin Associates.

Roche, H 2008 'Prehistoric pottery', *in* P Johnston, J Kiely & J Tierney, *Near the Bend in the River. The Archaeology of the N25 Kilmacthomas Realignment,* 137–40. NRA Scheme Monographs 3. National Roads Authority, Dublin.

Rodwell, J S (ed.) 1991 *British Plant Communities. Volume 1: woods and scrub.* Cambridge University Press, Cambridge.

Rose, H A, Meadows, J & Henriksen, M B 2020 'Bayesian modelling of wood-age offsets in cremated bone', *Radiocarbon*, Vol. 62(2), 379–401.

Ryan, F 2012 'Excavation of a Late Iron Age ring-ditch at Ferns Lower, Co. Wexford', *in* C Corlett & M Potterton (eds), *Life and Death in Iron Age Ireland in the Light of Recent Archaeological Excavations,* 273–89. Wordwell, Dublin.

Rynne, E 1966 'Bronze Age cemetery at Scarawalsh, Co. Wexford', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 96, 39–46.

Schweitzer, H 2009 'A medieval farmstead at Moneycross Upper, Co Wexford', *in* C Corlett & M Potterton (eds), *Rural Settlement in Medieval Ireland in the Light of Recent Archaeological Excavations,* 175–88. Wordwell, Dublin.

Scott, A B & Martin, F X (eds) 1978 *The Expugnatio Hibernica of Giraldus Cambrensis.* Royal Irish Academy, Dublin.

Scott, L 2010 'Appendix 9 – Charcoal identification report', *in* L Doyle, *Final Report on Archaeological Investigations at Site E2951, Woodlands East, Co. Kildare. N9/N10 Kilcullen to Waterford: Phase 3, Kilcullen to Carlow.* Report by Headland Archaeology (Ireland) Ltd for Kildare County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.rv04g854d).

Scott, L & Timpany, S 2010 'Appendix 8 – Charcoal analysis for Site E2982', *in* O Lenihan & E Dennehy, *Final Report on Archaeological Investigations at Site E2982, Moone, Co. Kildare.* Report by Headland Archaeology (Ireland) Ltd for Kildare County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.th840d851).

Seaver, M 2004 'From mountain to sea – excavation at Lehaunstown/Glebe', *Archaeology Ireland,* Vol. 18, No.1, 8–12.

Sharpe, R 1991 *Medieval Irish Saints' Lives. An Introduction to Vitae Sanctorum Hiberniae.* Clarendon Press, Oxford.

Shee Twohig, E 2011 'The early prehistory of the Lower Suir Valley (8000–2400 BC)', *in* J Eogan & E Shee Twohig (eds), *Cois tSuire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* 245–52. NRA Scheme Monographs 8. National Roads Authority Dublin.

Sheridan, A 1995 'Irish Neolithic pottery: the story in 1995', *in* I Kinnes & G Varndell (eds), *Unbaked Urns of Rudely Shape,* 3–21. Oxbow Monograph 55. Oxbow Books, Oxford.

Sheridan, A 2013 'Early Neolithic habitation structures in Britain and Ireland: a matter of circumstance and context', *in* D Hofmann & J Smyth (eds), *Tracking the Neolithic House in Europe. Sedentism, Architecture and Practice,* 283–300. Springer, New York.

Shields, H 1975–6 'The Walling of New Ross: a thirteenth-century poem in French', *Long Room,* Vol. xii–xiii, 24–33.

Shiels, D 2019 *Report on the Military Artefacts from the New Ross Sewerage Scheme, Irishtown to Nunnery Lane 17E0634.* Unpublished client report for Yvonne Whitty, De Faoite Archaeology, on behalf of Wexford County Council.

Sikora, M & Reilly, F 2011 'Tomfarney, Co. Wexford, E1190', *in* M Cahill & M Sikora (eds), *Breaking Ground, Finding Graves – Reports on the Excavations of Burials by the National Museum of Ireland, 1927–2006,* Vol. 1, 598–645. Wordwell, Dublin.

Silvester, R & Kissock, J 2012 'Wales: medieval settlements, nucleated and dispersed, permanent and seasonal', *in* N Christie & P Stamper (eds), *Medieval Rural Settlement, Britain and Ireland AD 800–1600,* 151–71. Windgather Press, Oxford.

Simington, R C 1953 *The Civil Survey of the County of Wexford.* Irish Manuscripts Commission, Dublin.

Simpson, D D A 1996a 'The Ballygalley houses, Co. Antrim, Ireland', *in* T Darvill & J Thomas (eds), *Neolithic Houses of Northwest Europe and Beyond,* 123–32. Oxbow Monograph 57. Oxbow Books, Oxford.

Smyth, A P 1982 *Celtic Leinster. Towards an Historical Geography of Early Irish Civilization A.D. 500–1000.* Irish Academic Press, Dublin.

Smyth, J 2006 'The role of the house in Early Neolithic Ireland', *European Journal of Archaeology,* Vol. 9, 229–57.

Smyth, J 2010 'The house and group identity in the Irish Neolithic', *Proceedings of the Royal Irish Academy,* Vol. 111, 1–31.

Smyth, J 2012 'Breaking ground: an overview of pits and pit-digging in Neolithic Ireland', *in* H Anderson-Whymark & J Thomas (eds), *Regional Perspectives on Neolithic Pit Deposition: beyond the mundane,* 13–29. Oxbow Books, Oxford.

Smyth, J 2013 'Tides of change? The house through the Irish Neolithic', *in* D Hofmann & J Smyth (eds), *Tracking the Neolithic House in Europe. Sedentism, Architecture and Practice,* 301–27. Springer, New York.

Smyth, J 2014 *Settlement in the Irish Neolithic.* Oxbow Books, Oxford.

Smyth, J, Carlin, N, Cooney, G, Greene, S, Rice, K, McDermott, C & Warren, G forthcoming *The Neolithic House and Tomb, Ballyglass, Co. Mayo, Ireland: Excavations by Seán Ó Nualláin 1969–1971.* UCD School of Archaeology/Sidestone, Leiden.

Smyth, W J 2012 'The province of Leinster and the Great Famine', *in* J Crowley, W J Smyth & M Murphy (eds), *Atlas of the Great Irish Famine,* 1845–52, 325–33. Cork University Press, Cork.

Snoeck, C, Brock, F & Schulting, R J 2014 'Carbon exchanges between bone apatite and fuels during cremation: impact on radiocarbon dates', *Radiocarbon*, Vol. 56, 591–602.

Spillane, B 2019 *Report on the Stone Objects from Camlin 4, Co. Wexford (E4101).* Unpublished report for Headland Archaeology (Ireland) Ltd.

Stafford, E 2008 *Archaeological Assessment Report, Lacken, Co. Wexford (08E0560).* Unpublished report by Stafford McLoughlin Archaeology for a private client.

Stevens, P 2005 'Killoran 10', *in* M Gowen, J Ó Néill & M Phillips (eds), *The Lisheen Mine Archaeological Project 1996–8,* 292–4. Wordwell, Bray.

Stevens, P 2007 'Burial and ritual in late prehistory in north Wexford: excavations of a ring-ditch cemetery in Ask townland', *in* J O'Sullivan & M Stanley (eds), *New Routes to the Past,* 35–47. Archaeology and the National Roads Authority Monograph Series No. 4. National Roads Authority, Dublin.

Stevens, P (ed.) 2010 *Final Report Site AR 31, Borris and Blackcastle Townlands, Co. Tipperary. M8/N8 Cullahill to Cashel Road Improvement Scheme* (2 vols). Report by Valerie J Keeley Ltd for Kilkenny County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.7s75st269).

Stevens, P 2011 *Archaeological Excavation Report, E3502 Ask Site 42–44. N11 Gorey – Arklow Link, Co. Wexford.* Report by Valerie J Keeley Ltd for Wexford County Council and the National Roads Authority (https://doi.org/10.7486/DRI.h1291v592).

Stevens, P 2022 'Ireland's Roman jet set', *Archaeology Ireland,* Vol. 36, No. 3, 42–3.

Stevens, P & Schweitzer, H 2010 *Archaeological Excavation Report, E3472 Moneycross Upper Site 7. N11 Gorey – Arklow Link, Co. Wexford.* Report by Valerie

J Keeley Ltd for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.d2184439g).

Stout, G 1987 'Wexford in prehistory 500 BC to AD 300', *in* K Whelan (ed.), *Wexford History and Society,* 1–39. Geography Publications, Dublin.

Stout, M 1997 *The Irish Ringfort.* Four Courts Press, Dublin.

Stuijts, I 2005 'Wood and charcoal identification', *in* M Gowen, J Ó Néill & M Phillips (eds), *The Lisheen Mine Archaeological Project 1996–8,* 137–85. Wordwell, Bray.

Swift, C 2014 'Follow the money: the financial resources of Diarmait MacMurchada', *in* E Purcell, P MacCotter, J Nyhan & J Sheehan (eds), *Clerics, Kings and Vikings. Essays on Medieval Ireland in Honour of Donnchadh Ó Corráin,* 91–102. Four Courts Press, Dublin.

Taylor, G & Skinner, A 1778 *Maps of the Roads of Ireland, Surveyed 1777.* London.

Taylor, K & Hardy, C 2013 *Final Archaeological Excavation Report, E4198 Drumgold 3. M11 Gorey to Enniscorthy Scheme, Co. Wexford.* Report by TVAS (Ireland) Ltd for Wexford County Council and the National Roads Authority.

Théry-Parisot, I & Henry, A 2012 'Seasoned or green? Radial cracks analysis as a method for identifying the use of green wood as fuel in archaeological charcoal', *Journal of Archaeological Science,* Vol. 39(2), 381–8.

Thomas, J 1996 *Time, Culture and Identity: an interpretive archaeology.* Routledge, London.

Thomas, J 1999 *Understanding the Neolithic.* Routledge, London.

Tierney, J 1998 'Wood and woodlands in early medieval Munster', *in* M Monk & J Sheehan (eds), *Early Medieval Munster. Archaeology, History and Society,* 53–8. Cork University Press, Cork.

Tierney, M 2009 'Excavating feudalism? A medieval moated site at Carrowreagh, Co. Wexford', *in* C Corlett & M Potterton (eds), *Rural Settlement in Medieval Ireland in the Light of Recent Excavations,* 189–200. Wordwell, Dublin.

Tierney, M & Johnston P 2006a *Final Excavation Report 00E0424, Harristown Big. N25 Harristown to Rathsillagh Realignment, Co. Wexford.* Report by Eachtra Archaeological Projects for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.qr474k587).

Tierney, M & Johnston P 2006b *Archaeological Excavation Report Carrowreagh [Camaross] (00E0471). N25 Harristown to Rathsillagh Realignment, Co. Wexford.* Report by Eachtra Archaeological Projects for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.p554nb14s).

Tietzsch-Tyler, D 1994 *Geology of South Wexford. A Geological Description of South Wexford and Adjoining Parts of Waterford, Kilkenny and Carlow.* Geological Survey of Ireland, Dublin.

Timpany, S 2011a 'The changing landscape of the Lower Suir Valley: evidence for seven thousand years of people's interaction with the environment', *in* J Eogan & E Shee Twohig (eds), *Cois tSuire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* 187–98. NRA Scheme Monographs 8. National Roads Authority, Dublin.

Timpany, S 2011b 'Appendix 7 – the charred plant remains from Site E4089, Mahanagh 3, Co. Galway', *in* N O'Neill & T J O'Connell, *Final Excavation Report for Mahanagh 3 (E4089). M17 Rathmorrissy to Tuam, Co. Galway.* Report by Headland Archaeology (Ireland) Ltd for Galway County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.5h743987q).

Timpany, S & MacLeod, R 2015 'The palaeoenvironmental evidence', *in* T Bolger, M Jones, B MacDomhnaill, R MacLeod, C Moloney & S Timpany, *Through the Lands of the Auteri and St Jarlath,* 110–18. NRA Scheme Monographs 17. National Roads Authority, Dublin.

Tobin, R 2003 'Corbally, Co. Kildare', *in* I Bennett (ed.), *Excavations 2001,* 184–5. Wordwell, Bray.

Tobin, R 2004 *Excavation and Specialist Reports, Houses 4, 5, 6 & 7, Corbally, Kilcullen, Co. Kildare.* Unpublished draft report for Margaret Gowen & Co. Ltd on behalf of Kilsaran Concrete Products Ltd.

Topping, P 1996 'Structure and ritual in the Neolithic house: some examples from Britain and Ireland', *in* T Darvill & J Thomas (eds), *Neolithic Houses of Northwest Europe and Beyond,* 157–70. Oxbow Books, Oxford.

Tratman, E K 1928 'Excavations at Kilgreany Cave, Co. Waterford', *Proceedings of the Bristol Speleological Society,* Vol. 3, 109–53.

Troy, C 2011 'Osteological report', *in* P Stevens, *Final Report Ask, Co. Wexford, E3502, 234–68. N11 Gorey to Arklow Link, Co. Wexford.* Report by Valerie J Keeley Ltd for Wexford County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.h1291v592).

Troy, C 2015 'Contextualising cremations: evidence from prehistoric burials', *in* T Bolger, C Moloney & D Shiels (eds), *A Journey Along the 'Carlow Corridor',* 131–44. NRA Scheme Monographs 16. National Roads Authority, Dublin.

Turrell, S J 2003 *The Archaeozoology of Medieval Dublin and Ireland.* MSc. Thesis, Queens University Belfast.

van Geel, B, Buurman, J, Brinkkemper, O, Schelvis, J, Aptroot, A, van Reenen, G, & Hakbijl, T 2003 'Environmental reconstruction of a Roman Period settlement site in Uitgeest (The Netherlands), with special reference to coprophilous fungi', *Journal of Archaeological Science,* Vol. 30, 873–83.

Vigors, P D 1890–1 'Alphabetical list of the free burgesses of New Ross, Co. Wexford, from 1658 to 30th September, 1839. From H L Tottenham, Esq.'s, MS', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 21(4), 298–309.

Waddell, J 1990 *The Bronze Age Burials of Ireland.* Galway University Press, Galway.

Waddell, J 2010 *The Prehistoric Archaeology of Ireland* (rev. ed.). Wordwell, Bray.

Walsh, F 2006 'Neolithic Monanny, County Monaghan', *in* J O'Sullivan & M Stanley (eds), *Settlement, Industry and Ritual,* 7–18. Archaeology and the National Roads Authority Monograph Series No. 3. National Roads Authority, Dublin.

Walsh F 2009 *Final Report Site 110, Monanny 1 (03E0888). N2 Carrickmacross–Aclint Re-alignment, Co. Monaghan.* Report by Irish Archaeological Consultancy Ltd for Monaghan County Council and the National Roads Authority (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.6w92hs58z).

Warner, R 1987 'A proposed adjustment for the "Old Wood Effect"', *in* W Mook & H Waterbolk (eds), *Proceedings of the 2nd Symposium of 14C and Archaeology,* 159–72. Groningen.

Warren, G 2022 *Hunter-Gatherer Ireland. Making Connections in an Island World.* Oxbow Books, Oxford.

Warren, G, Davis, S, McClatchie, M & Sands, R 2014 'The potential role of humans in structuring the wooded landscapes of Mesolithic Ireland: a review of data and discussion of approaches', *Vegetation History and Archaeobotany,* Vol. 23 (5), 629–46.

Warren, M W & Maples, W R 1997 'The anthropometry of contemporary commercial cremation', *Journal of Forensic Science,* Vol. 42 (3), 417–23.

Westropp, T J 1904 'On Irish motes and early Norman castles', *Journal of the Royal Society of Antiquaries of Ireland,* Vol. 34, 313–45.

Wheeler, J 2011 'Charcoal analysis of industrial fuelwood from medieval and early modern iron-working sites in Bilsdale and Rievaulx, North Yorkshire, UK: evidence for species selection and woodland management', *Environmental Archaeology,* Vol. 16 (1), 15–35.

Wheeler, J, Timpany, S & Long, P 2012 'Palaeoenvironmental evidence for local human-environment impacts and abandonment at Landscape, Co. Waterford', *Journal of Irish Archaeology,* Vol. 11, 17–34.

Wheeler, J S 1999 *Cromwell in Ireland.* Gill & MacMillan, Dublin.

Whelan, K (ed.) 1987 *Wexford History and Society.* Geography Publications, Dublin.

White, K D 1970 *Roman Farming.* Thames & Hudson, London.

Whitehouse N J, Schulting R J, McClatchie, M, Barratt, P, McLaughlin, T R, Bogaard, A, Colledge, S, Marchant, R, Gaffrey, J & Bunting, M J 2014 'Neolithic agriculture on the European western frontier: the boom and bust of early farming in Ireland', *Journal of Archaeological Science*, Vol. 51, 181–205.

Whitty, Y & Kavanagh, L 2018 *Archaeological Excavation Report, E004788 Drumgold 7, Co. Wexford*. Report by Irish Archaeological Consultancy Ltd for M11 Enniscorthy Joint Venture and Transport Infrastructure Ireland (TII Digital Heritage Collections: https://doi.org/10.7486/DRI.p841p9780).

Woodman, P 2011 'The significance of the lithic assemblages from the archaeological excavations on the N25 Waterford City Bypass', *in* J Eogan & E Shee Twohig (eds), *Cois tSuire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* 199–206. NRA Scheme Monographs 8. National Roads Authority, Dublin.

Woodman, P 2015 *Ireland's First Settlers: time and the Mesolithic*. Oxbow Books, Oxford.

Woodman, P & Sternke, F 2015 'Hunter-gatherers in Mesolithic Carlow', *in* C Moloney, D Shiels & T Bolger (eds), *A Journey Along the 'Carlow Corridor',* 87–94. NRA Scheme Monographs 16. National Roads Authority, Dublin.

Woodman, P C 1978 *The Mesolithic in Ireland*. British Archaeological Reports, British Series 58. Oxford.

Wren, J & Price J 2011a 'Newrath 37—Neolithic building and Early Bronze Age cemetery', *in* J Eogan & E Shee Twohig (eds), *Cois tSiúire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* 135–46. NRA Scheme Monographs 8. National Roads Authority, Dublin.

Wren, J & Price J 2011b 'Rathpatrick 38–39—Later Early Bronze Age cemetery', *in* J Eogan & E Shee Twohig (eds), *Cois tSiúire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* 175–9. NRA Scheme Monographs 8. National Roads Authority, Dublin.

Wren, J & Price J 2011c 'Newrath 36—Early Bronze Age urn burial and pits', *in* J Eogan & E Shee Twohig (eds), *Cois tSiúire – Nine Thousand Years of Human Activity in the Lower Suir Valley,* Vol. 2, 39–41. NRA Scheme Monographs 8. National Roads Authority, Dublin.

Wright, W B 1889 *The Ussher Memoirs*. Sealy, Bryers & Walker, Dublin.

Yates, D 2010a *N25 New Ross Bypass Road Scheme Stage (i) Architectural/Built Heritage Survey*. Unpublished report by Headland Archaeology (Ireland) Ltd for Wexford County Council and the National Roads Authority.

Yates, D 2010b *N25 New Ross Bypass Road Scheme Stage (iii) Architectural/Built Heritage Survey*. Unpublished report by Headland Archaeology (Ireland) Ltd for Wexford County Council and the National Roads Authority.

Zvelebil, M, Macklin, M G, Passmore, D G, & Ramsden, P 1996 'Alluvial archaeology in the Barrow Valley, Southeast Ireland: the "Riverford Culture" re-visited', *Journal of Irish Archaeology,* Vol. 7, 13–40.

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The N25 New Ross Bypass, opened in January 2020, was designed to alleviate traffic congestion in the historic town of New Ross and to improve journey times and safety for road users. Over the course of almost 20 years the project provided the opportunity for archaeologists and historians to undertake an in-depth examination of the historic landscapes along the route.

New Ross and its hinterland have a rich and storied past; at times the locality has been pivotal to events that shaped Ireland's history. This area is dominated by the River Barrow and its adjacent fertile lands. Most of the people who lived in this landscape left no written records; even in historic eras the events and activities that shaped their daily lives were not deemed noteworthy by the chroniclers. Therefore, their stories can only be reconstructed by examining the remains of the structures that they built, the objects they used and their impacts on the surrounding environment.

Systematic excavation revealed 36 previously unidentified archaeological sites along the new 14 km-long road. These excavations provide valuable new evidence for the people who lived and died in this part of the Barrow Valley. These varied from the simple remains of short-lived activities like charcoal production,

to farmsteads occupied for many years, and cemeteries which contained the remains of multiple generations. This latest volume in the TII Heritage Series describes the discoveries made and shows how this new evidence provides fresh perspectives on the communities who called this place home over the past 9,000 years.

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