



# Irish Archaeological Field School

Unit 4A Dundrum Business Park, Dundrum, Dublin 14, Ireland

Tel: +353 1 2968190; Fax: +353 1 2968195; email: [info@iafs.ie](mailto:info@iafs.ie); web: [www.iafs.ie](http://www.iafs.ie)

## RESEARCH PROGRAMME

The area known as *Brú na Bóinne*, focussing on the major passage tomb complexes of Knowth, Dowth and Newgrange, was inscribed as a UNESCO World Heritage Site in 1993. However human settlement in the Boyne Valley can be traced back to long before the construction of these tombs, from at least the Mesolithic Period. A research framework (draft 2008) sponsored by the Department of Environment, Heritage and Local Government and prepared by The Heritage Council has set out a research agenda for the Brú na Bóinne area. This is grouped around five themes (People, Politics and Power, Landscape and Environment, Legacy and The Living World Heritage Site) and spans its history from earliest times to the modern era. The Boyne Valley Research Project aims to investigate these themes with a view to significantly contributing to the Brú na Bóinne research framework.

Work to date in the area has mainly focused on the passage tomb complexes. Although Knowth in particular demonstrates the long and varied history of use of these places, (Eogan 1968, 1984; Eogan *et al.* 2007, 2008; Stout and Stout 2008), there is much yet to be understood about settlement, burial practices, changing land-use and land ownership within the World Heritage Site itself, but also beyond it to the west.

The River Boyne was a conduit for travel into the interior of Ireland and outwards to the Irish Sea and this can be seen in the passage tombs of Lough Crew, and the Cistercian and Norman penetrations of Meath. The Boyne Valley Research Project will focus on the role of the river as routeway into and out of this wider landscape, and will seek to expand and build on work already carried out within Brú na Bóinne.

We seek to understand how and where people lived in the region through time, what markers they left in the form of monuments, artefacts, and the more subtle patterns of territorial divisions. The absence of bogland makes the reconstruction of the environment through pollen analysis difficult, but excavation of waterholes and pools may provide location specific detail.

By selecting areas for intensive field survey we can build on the work carried out by Brady (2002, 2007a and b; Brady *et al.* 2007) on lithic scatters, thus increasing, for example, the potential for understanding the Mesolithic presence in the region, already identified in nearby Leshemstown in excavations carried out by CRDS in 2005 (see below).

The Bronze Age is not well understood in this area, though work carried out at Knowth and Newgrange has shown a significant Early Bronze Age presence. It is clear from field walking and topographical studies that areas of Bronze Age activity can be identified by these means, and confirmed by limited and targeted excavations, such as those carried out by CRDS at Sheephouse and Oldbride in 2003 (see below).

Similarly, excavations carried out by CRDS have identified a Cistercian Grange on the south bank of the Boyne near Stalleen. Our excavations at Bective will look in detail at the physical remains of a Cistercian Abbey, but through further fieldwork and documentary research, their influence over and ownership of large parts of the area can be clarified.

There is a rich architectural legacy in the region, from the Cistercian remains at Bective and Mellifont, through to the houses of the landed gentry such as Slane Castle, Beauparc, Stackallen and Townley Hall. The towns of Drogheda, Navan and Trim are medieval foundations, with histories going back before the Normans came. There is also a rich industrial history. All these will form sub-themes to the overall research.

The project aims to enhance our understanding of the known monuments and their context and will use principally non-invasive techniques coupled with targeted excavations, thus contributing to the greater understanding of the area, and to the greater enjoyment of those who visit it.



### **Bective Abbey, Co. Meath**

Bective Abbey is an imposing and beautiful collection of buildings overlooking the River Boyne, Co. Meath. The second of a series of Cistercian abbeys in Ireland, Bective was founded in 1147 by Murchadh O'Melaghlin, King of Meath. Bective continued in importance after the arrival of the Anglo-Normans and the establishment of the Liberty of Meath by the important marcher Lord Hugh de Lacy in the later 12th century. The Abbey was the initial burial place for de Lacy after his murder before being

moved to Dublin after a legal dispute. The Abbey was dissolved by Henry VIII in 1536 and its possessions passed to the Dillons and the Boltions. While elements of its history are known there is an enormous amount to be learnt about everyday life of the Abbey through archaeological research. Bective Abbey's complex of buildings, which were rebuilt and modified over five hundred years, consists of a ruined church, chapter house, cloister, refectory, dormitory and tower house. Geophysical survey and test excavations have indicated that extensive remains dating to the foundation of the Abbey survive in the area outside these buildings.

In 2006 CRDS undertook archaeological excavations at Bective on behalf of the Office of Public Works. The work identified the presence of medieval deposits dating from the twelfth century which would relate to the very earliest period of Cistercian activity on the site.

In 2009 the Field School undertook a further programme of geophysical survey, architectural building survey and excavation. The survey work identified a range of previously unknown enclosures and possible buildings surrounding the abbey. Excavations uncovered the remains of a stone footed building, provisionally interpreted as a guesthouse, along with a drain and occupation deposits rich in medieval refuse; animal bone, plant remains, pottery and a beautiful metal pin. The excavations found that the area was possibly enclosed by a large ditch. Tiles with the Geraldine motto, sixteenth century benefactors of the abbey, were recovered from demolition deposits along with evidence for human burial in the post medieval period. The students received on site seminars from Fiona Beglane (animal bone) and Sarah Cobain (plant remains) as well as a chance to take part in all areas of archaeological recording.

### **Rosnaree, Boyne Valley, Co. Meath**

In 2010 we will be working in partnership with Dr Conor Brady of the Dundalk

The Rosnaree enclosure is located in the western corner of the bend of the Boyne, on the southern side of the river. The location of the site is highly significant within the Brú na Bóinne complex. It marks the point at which the river begins to delineate the 'bend' of Brú na Bóinne and is located directly to the SW and across the River Boyne from the Knowth complex. It is located on the first gravel terrace above the river and while the inner three ditches seem to focus on a low topographic knoll, the outer ditch of the enclosure seems to extend a significant distance further eastwards probably cutting off the corner of this area and formally defining the space.

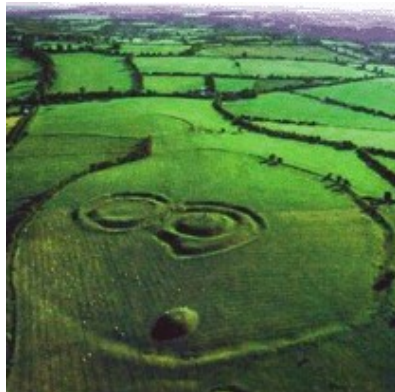


The site was discovered as the result of large-scale, systematic landscape survey of the Brú na Bóinne area. The first phase of the research was a fieldwalking survey and it was during this work that attention was first drawn to the potential of the Rosnaree site. At that time appeared as a large, dense scatter of worked lithics focused on a low knoll in the NE corner of a tillage field. The lithics

suggested intensive activity, possibly involving residential settlement, broadly dating to the Neolithic (Brady 2007a, 2007b, 2002). Animal bone was noted on the surface of the field to the E of the knoll and in cattle scrapes in the adjacent pasture field and a human tooth was also recovered suggesting a possible parallel ceremonial function to the site (Brady 2008). The presence of a greywacke slab close to the field boundary suggests the possibility that the stone was originally a standing stone standing within the enclosure and also indicates a link with the builders of the passage tomb cemetery on the N side of the river.

Detailed topographical survey was undertaken subsequently followed by magnetic susceptibility survey on a 10 pace grid (Brady 2007a, 2007b). Further geophysical survey funded by the Heritage Council was carried out in late 2008 and included magnetic gradiometry survey, targeted earth resistance survey over the central portion of the enclosure and on the face of the gravel terrace to the N (Brady 2008, 2009a, Brady and Barton 2009. See also figure in Smyth forthcoming). Earth resistance tomography was carried out along a radial transect extending from the centre of the site to explore the vertical make-up of the central knoll and the depths of the ditches and groundpenetrating radar transects were carried out along six radial lined also radiating from the central knoll. This work was funded by Meath County Council and data are currently being processed.

This is the first site of its kind to be identified in the Brú na Bóinne area and is additionally significant as it positioned on the S side of the river Boyne. At present because of the close association of the lithic scatter, it appears that the enclosure is likely to date from the Neolithic period. Although there are some similarities to Neolithic enclosure sites identified elsewhere, e.g., the palisades at Knowth, Thornhill, Co. Derry there are no close parallels. The strategic location of the site, the presence of the animal bone in some quantity as well as the human tooth and the greywacke slab all point to a complex set of functions for this site likely to include both a residential habitation element and a more ceremonial element. Investigation of this site is a logical extension of the current research programme and potentially addresses key research questions identified in the Brú na Bóinne World Heritage Site Research Framework, in particular those looking at settlement, the scale of operation of the complex, the changing environment and the significance of the river itself.



#### **Rath Maeve, Hill of Tara, Co. Meath**

Rath Maeve and The Hill of Tara are set in the rolling pasture land of south central Meath and this may have been one of the factors which lead to its choice as the focus for ritual activity from at least as early as the Neolithic period and ultimately led to its role as royal seat and major ceremonial and ritual centre prior to the coming of Christianity (Fenwick 1997, 1). The hinterland around Tara consists of rich pasture land and would have supported a large settled population throughout the prehistoric period. While it is difficult to define the boundary or territory that would have been under the control of Tara at different stages in prehistory it is likely that this boundary was fluid and would have fluctuated over time.

The monument is a component of the Tara complex, however, Rath Maeve is archaeologically significant in its own right. It is one of a relatively small number of embanked enclosures or hengiform monuments in the country, characterised by an enclosing bank and a single monumental entrance. The greatest concentration of this class of monument is located in Co. Meath. It is likely to have functioned as a ceremonial space and these monuments are often associated with burials. Excavated examples of embanked enclosures include Monknewtown, the Grange stone circle and the pit circle at Newgrange. These have yielded examples of grooved ware and food vessel pottery, suggesting continuity of use from the Neolithic to Bronze Age (Cooney and Grogan, 1994). Rescue archaeological excavations and survey were undertaken on behalf of the National Monuments Service in 2006. The excavations revealed valuable information regarding the construction and structure of the monument.

Geophysical survey aimed at identifying features in the interior of the monument, funded by the Royal Irish Academy, is being undertaken in the autumn of 2009.

The focus of the 2010 investigations will be to assess the features identified during geophysical survey.

## **Other areas of research**

### **Newgrange Lightbox Project**

In partnership with RTE (Ireland National Television Broadcaster) and model makers from Dun Laoghaire Institute of Art, Design & Technology, we attempted to reconstruct the famous lightbox at Newgrange Passage tomb in the heart of the Boyne Valley Heritage Park. The first part of the study, undertaken in the summer and broadcast on national television during Ireland's Heritage Week, was to allow the team - with the aid of archaeoastronomer Dr Frank Prendergast - to sight in the position of the winter solstice and plan the engineering and design of the passage.



During the summer and autumn, the model makers will be busy in a warehouse in Dublin making models of the lightbox and orthostats.

The teams met again at Newgrange in the days leading up to the winter solstice, constructed the model overnight, and awaited the first rays of sun coming over the horizon in the east, in hope and anticipation that the lightbox would recreate the wonder of the adjacent passage tomb. The work was aired on national television in January 2010.



### **Trim, Co. Meath**

The medieval town of Trim, with its abbeys and the iconic King John's castle is one of Ireland's most prominent historic sites. While the castle was extensively excavated, until recently relatively little was known about the archaeology of the town. CRDS Ltd in conjunction with the Heritage Council and Meath County Council held a conference in 2008 on recent excavations. The proceedings of the conference have recently been published in a book entitled 'Uncovering Medieval Trim' edited by Matthew Seaver (Irish Archaeological Field School) and Dr Michael Potterton (Renowned Academic with research interests in Trim). This book revealed the Early Medieval origins of the town, evidence of how the town's layout changed over time, details of lost burial grounds, religious houses, suburbs and daily life.

### **The Battle of the Boyne (1690)**

An assessment of the site of the Williamite encampment was undertaken by CRDS on behalf of the Office of Public Works in 2002. The study was undertaken with a view to bringing forward a series of recommendations as to the management of the lands. The focus of the recommendations were twofold: to protect whatever physical remains survive and the visual amenity of those remains, their location having been deduced through interpretation of the terrain and the available documentary evidence; and to suggest means whereby the encampment, and the movements of the Williamite troops, could be presented and interpreted for the public, principally by means of storyboards, viewsheds and walking routes. The results indicated that it is possible to reconstruct with reasonable accuracy the location of the Williamite encampment.





### **Industrial Archaeology & Architectural Heritage**

In partnership with consultants Architectural Recording and Research, our architectural heritage specialist Aislinn Collins MA PGDip DipEIAMgt MIAI undertook the National Inventory of Architectural Heritage for County Meath 2000. This survey, which includes a database record and images of each building/structure has been published as the Survey of the Architectural Heritage of County Meath (Government of Ireland 2002). Participants in the 2010 programme will have the opportunity to learn the principals

and practice of architectural heritage recording.

## Excavations Summaries (from [www.excavations.ie](http://www.excavations.ie))

### **Meath**

**2005:1211**

### **LESHEMSTOWN**

Burnt mound with crouched inhumation

**293990 252750**

**05E0398**

The site was excavated as part of the Dunshauglin to Castletown Tara sewerage scheme. It was situated on a low mound within a natural basin into which surface water from the higher ground to the north, east and west drained freely. In addition, the River Skane passed immediately to the south of the site, which in turn meant the land here was constantly waterlogged. At the time of excavation the area was in agricultural use for very poor-quality pasture. It is unlikely that the land here was ever under any form of tillage.

The site was dominated by a large north–south-oriented mound of fulacht material, measuring 15m by 12m, that extended beyond the southern limits of the site and towards the River Skane. During the initial testing phase, directed by Red Tobin (Excavations 2004, No. 1236, 04E1499), a number of possible wooden stakes were identified in the area immediately to the north and west of the mound. This resolution excavation uncovered a considerable number of additional stakes in the same area, presenting the possibility of a small platform or associated causeway that would have connected the mound to the drier, higher ground that surrounds the site on three sides. Upon excavation, however, the vast majority of these were discounted, having been shown to be the result of root activity. However, a small number of hand-cut stakes were uncovered to the west of the mound, although these were too few to establish any pattern.

The fulacht fiadh itself would seem only to represent the latest phase of activity here. The mound on which it was situated was comprised of a hillock of orange silty clay that would seem to have formed naturally upon natural gravel deposits in the area, possibly due to the deposition of river silts. This probably represented the first time any habitable land was available within this basin and soon after some limited human activity was taking place on top of this mound. This produced a small spread of burnt material that was associated with an arrangement of nine stake-holes confined to the southern part of the site (these may form one end of a rectangular structure that extends beyond the southern extent of the site).

This would seem to have been a relatively brief, perhaps even seasonal, period of occupation before the site was abandoned again and a new layer of orange silty clay, perhaps deposited by river action, once more was deposited over the site, in turn creating a larger, more pronounced, mound. It was at this stage that the actual fulacht fiadh was constructed. This consisted of a rectangular trough feature measuring 1.8m by 1.25m in the more northerly part of the mound, which had been lined by carefully trimmed pieces of wood that had been tightly jammed on to the base of the trough. These consisted mainly of pieces of roundwood that had been simply cut at each end, although there may also have been two planks or split pieces of roundwood. In addition, several sharpened stakes were recovered from each of the four corners of the trough, suggesting the presence of an associated structure.

The associated fulacht/burnt mound was comprised of two discrete deposits of burnt material. The first of these was restricted to the southern part of the mound and was comprised of several layers of typical fulacht material. A small egg-shaped pit measuring 1.4m by 1.1m was uncovered within this concentration of material. This had been cut into the top layer of fulacht material before any topsoil formation or vegetation growth had taken place. Upon closer investigation, it became clear that this was a north–south-oriented grave cut that contained the articulated remains of one individual, probably an adult female, who had been tightly jammed into the cut. She was laid on her right-hand side and in a crouched position. There were no associated grave goods. A radiocarbon date obtained from the burial suggested a year of death between 1260 and 1020 BC.

Following the disposal of this first mound of material, an attempt had been made to reclaim some of the land on the northern edge of the mound, thus extending its surface area and with it the life-span

of the fulacht. In order to achieve this, a crescent-shaped bank of gravel, stone and clay was constructed along the northern edge of the mound. This was successful and there is evidence that the areas enclosed by this bank saw the formation of new soils and sod layers associated with the silting and drying up of standing water.

The second deposit of fulacht material, which was restricted to the northern part of the mound, sealed much of this made ground. It would seem that this was the final activity on site and shortly afterwards it was abandoned.

In the intervening period a considerable amount of overburden built up, sealing this activity and reaching as much as 0.95m in depth. These soils were heavily disturbed and diffused by successive episodes of flooding.

**Laurence McGowan, CRDS Ltd.**

## **Meath**

**2005:1212**

### **LESHEMSTOWN**

Prehistoric

**294933 252066 (SITE 1), 294973 252094 (SITE 2)**

**05E0628**

Archaeological work on Section F of the Dunshaughlin to Castletown Tara sewerage scheme revealed two sites, designated as Sites 102 and 103. Both sites were identified as burnt mounds, potentially of Bronze Age date. On removal of the burnt-mound material, it was possible to examine what appeared to be either paleo-channels of the River Skane or erosional features in what was perceived as natural deposition along the flood-plain of the river.

The sites were identified during the excavation of a test-trench following the proposed route of the trunk sewer. They were initially identified as deposits of characteristic firing material associated with burnt mounds. Two such deposits were identified. These deposits lie at a depth of between 0.15–1m below the present ground surface and are obviously heavily silted in places by the floodwaters of the Skane.

#### *Leshemstown 1*

This site is the most westerly of this Leshemstown group. It consists of a subcircular burnt mound c. 5m from east to west by c. 4m. An active spring exists in the eastern corner of the site and the area is severely waterlogged. The centre of the site consisted of a concentration of fire-shattered stone, charcoal and discoloured soil, with an adjacent trough to the south. The presence of the firing material and the shallow trough were interpreted as the remains of a burnt mound. As the burnt mound and lower deposits were excavated, pits, metallised surfaces and stake-holes were exposed. Finds of flint and chert such as thumbnail scrapers, scrapers and flakes were found in the lower features, suggesting that the site had been in use at two separate times, leaving two separate phases of activities. The lower features had been sealed by various deposits, on which the burnt mound then was located.

Phase I deals with the presence of pits, stake-holes, metallised surfaces and various deposits interpreted to be part of the earliest activities on site. Finds such as flint scrapers, thumbnail scrapers and other implements and debitage, mostly made from flint, were retrieved from this phase and an initial dating placed them in the Early Neolithic period.

Phase II covers later activities dealing with the presence of the burnt mound and its associated features. The majority of the features and the artefacts mentioned in Phase I were covered by the features from Phase II and it was made evident during excavation that there was a distinct difference between the two.

Preserved wood from the stake-holes is being analysed for species identification and age prior to being dried and sent for 14C dating. It is likely that these stake-holes represent the foundations of fish traps of early prehistoric date, possibly Mesolithic. Artefacts from this site include 68 bags of flint

and chert artefacts and waste flakes (debitage). Site 102 has also produced 46 bags of animal bone from various contexts throughout the site and 8–10 bags of well-preserved wood.

### *Leshemstown 2*

This site was located c. 40m east of Leshemstown 1. It consisted of a subcircular burnt mound c. 14m from east to west by c. 8.5m. To the south of the mound are two localised areas of burnt-mound material, measuring c. 1m by c. 1.5m, which may represent troughs or pot-boiler pits associated with the mound. A notably large quantity of animal bone was recovered from the immediate area. The mound is well preserved.

Excavation was confined to an area 19.5m in length from east to west by 13.5m. On average, the early prehistoric level was 0.5m below present ground level. Including the burnt-mound material, Leshemstown 2 was made up of 41 individual contexts. These represent the stratigraphic matrix of the site. It was during the examination of what were thought to be paleo-channels under the burnt mound that prehistoric lithics were unearthed. The lithics consisted of a broken flint arrowhead and a large flint scraper. These were found in association with deer antler, animal bones, wood and hazelnut shells, all preserved in the waterlogged deposits. The red deer antler was 14C dated to 2700 BC. This suggests a later Neolithic date for the deposition of the lithics. This may also serve to date the Phase 1 activity at Leshemstown 1.

Excavation of a second feature in the north-eastern part of the site resulted in the recovery of three fine Bann flakes, struck from a chert/limestone core. These were identified as being of later Mesolithic date. Careful excavation has resulted in a better understanding of how the site has evolved and has demonstrated that the Mesolithic material is largely concentrated immediately in the area of the original find site.

Excavation on this site has recovered flint artefacts that are likely to be of later Neolithic date. All chert/limestone artefacts recovered are butt-trimmed flakes and fragments thereof. Four possible chert/limestone cores have been recovered, along with 45 bags ofdebitage. Fifty bags of animal bone have been collected and three good samples of well-preserved wood from waterlogged contexts. Some hazelnut shells have been recovered from the Neolithic and Mesolithic deposits. There has been no evidence to date of any structural material, although this site has great potential of extending beyond the scope of this project to reveal a late Mesolithic encampment.

**Red Tobin, CRDS Ltd.**

### **Meath**

**2003:1466**

### **Sheephouse and Oldbridge**

Testing

**27500 30500**

**03E1759**

An assessment, including testing, was undertaken for the proposed drainage scheme and new road bypass at Oldbridge/Sheephouse in Co. Meath. The site is located to the south of the Boyne Valley and 3km west of the medieval town of Drogheda. The proximity of Oldbridge and Sheephouse townlands to the Boyne Valley region already lends importance to this historic area and the subsequent discovery of a number of flint scatters and possible barrow burials (Cooney et al. 2001) in the general area show the extent of this rich prehistoric landscape.

Testing took place over three weeks in October and November 2003, in two areas. The first area consisted of the excavation of a central trench with offsets along the course of the proposed bypass and ran a distance of c. 650m through six fields of the old estate. The second examined the route of the proposed drainage scheme, with the excavation of a series of trenches along its course. A number of features of archaeological significance were exposed along the route of the bypass.

Four areas of burning were uncovered, two in Field 2 and two in Field 4. F503 and F504 were small burnt oval patches almost directly on subsoil. Similarly, F1303 was a burnt patch with three variations evident in plan. F2003 consisted of a small pit lined with stone and containing two clay fills. Burnt

bone was mixed within these fills. A 100% sample was taken of the fills in F2003 and has been sent for analysis. F2003 is a probable cremation pit of indeterminate age. No bone was recovered from F502 or F503, but charcoal flecks were present.

A number of features were exposed, principally in Field 4, which appear to be the remnants of an old field system. The most significant of these was F1401, a ditch which may have had a wall constructed on its southern side and probably represents an old field division. A second possible boundary is thought to have run parallel to the existing laneway at the northern extreme of Field 4, acting either as a field boundary or an open drain for run-off from Field 5. Other agricultural features consisted of a series of furrows and their associated fills.

Nothing of archaeological significance was uncovered along the course of the drainage scheme.

*Reference*

Cooney, G. et al. 2001 A pilot archaeological survey of the Battle of the Boyne, Oldbridge estate, Co. Meath. Unpublished.

**David J. O'Connor, CRDS Ltd.**

## References

- Brady, C. 2002. Earlier prehistoric settlement in the Boyne Valley. *Archaeology Ireland* 16(3): 8-12.
- Brady, C. 2007a. *A Landscape Survey of the Newgrange Environs: Earlier Prehistoric Settlement at Brú na Bóinne, Co. Meath*. Unpublished doctoral thesis, School of Archaeology, University College Dublin.
- Brady, C. 2007b. The lithic landscape of the Newgrange environs: an introduction. In M. Larsson & M. Parker Pearson (eds), *From Stonehenge to the Baltic: living with cultural diversity in the third millennium BC*, BAR International Series 1692, 213-20. Oxford: Archaeopress.
- Brady, C. 2008. *Investigation of Geophysical Properties of Lithic Scatter Sites at Rossnaree, Gilttown and Newtown, (Brú na Bóinne), Co Meath. Final Report Archaeology Grant No. 16367*. Unpublished report for the Heritage Council.
- Brady, C. 2009. *Investigation of Geophysical Properties of Lithic Scatter Sites at Brú na Bóinne, Co. Meath. Interim Report Archaeology Grant 17110*. Unpublished report for the Heritage Council.
- Brady, C. and Barton, K. 2009. 'A 'New' Neolithic Enclosure at Rossnaree, Brú na Bóinne, Co. Meath', *PAST* 62, 2-5.
- Brady, C., Byrnes, E., Cooney, G., and O'Sullivan, A. 2007. An archaeological study of the Battle of the Boyne at Oldbridge, Co. Meath. *Journal of Conflict Archaeology* 3(1), 53-77.
- Eogan, G. 1963. A Neolithic habitation-site and megalithic tomb in Townleyhall Townland, Co. Louth. *Journal of the Royal Society of Antiquaries of Ireland* 92: 37-81.
- Eogan, G. 1968. Excavations at Knowth, Co. Meath, 1962-65, with historical note by F. J. Byrne. *Proceedings of the Royal Irish Academy* 67C, 299-400.
- Eogan, G. 1974. Report on the excavations of some passage graves, unprotected inhumation burials and a settlement site at Knowth, Co. Meath *Proceedings of the Royal Irish Academy* 74C, 11- 112.
- Eogan, G. 1976. Beaker material from Knowth. In C. Burgess and R. Miket (eds), *Settlement and economy in the third and second Millennia BC*, BAR British Series 33, 251-166. Oxford: British Archaeological Reports.
- Eogan, G. 1977. The Iron Age-Early Christian settlement at Knowth. In V. Markotic (ed.), *Ancient Europe and the Mediterranean*, 69-76. Warminster: Aris and Phillips.
- Eogan, G. 1984. *Excavations at Knowth 1*. Dublin: Royal Irish Academy.
- Eogan, G. 1986. *Knowth and the Passage Tombs of Ireland*. London: Thames and Hudson.
- Eogan, G. 1990. The archaeology of Brugh na Bóinne during the early centuries A.D. *Seanchas Ard Mhacha: Journal of the Armagh Diocesan Historical Society* 14(1), 20-34.
- Eogan, G. 1991. Prehistoric and Early Historic culture change at Brugh na Bóinne. *Proceedings of the Royal Irish Academy* 91C, 105-132.
- Eogan, G. 1996. Pattern and Place: A preliminary study of the decorated kerbstones at Site 1, Knowth, Co. Meath and their comparative setting. In J. L'Helgouach, C.T. Le Roux and J.
- Eogan, G. 1997. Overlays and Underlays: Aspects of Megalithic Art Succession at Brugh na
- Eogan, G. 2007a. Knowth in the Early Christian Period: the cultural and chronological context of the animal bone assemblage. In F. McCormick and E. Murray 2007. *Excavations at Knowth 3: Knowth and the Zooarchaeology of Early Christian Ireland*, 1-6 Dublin: Royal Irish Academy.
- Eogan, G. 2007b. Culture and cult: some aspects of passage tomb society in the Boyne region, Ireland. In D. Barrowclough and C. Malone (eds), *Cult in Context. Reconsidering Ritual in Archaeology*, 134-9. Oxford: Oxbow.
- Eogan, G. and Richardson, H. 1982. Two maceheads from Knowth, Co. Meath. *Journal of the Royal Society of Antiquaries of Ireland* 112, 123-138.
- Eogan, G. and Roche, H. 1997. *Excavations at Knowth 2*. Dublin: Royal Irish Academy.
- Eogan, G. and Roche, H. 1998. Further evidence for Neolithic habitation at Knowth, Co. Meath. *Ríocht na Midhe* 9(4), 1-9.
- Eogan, G. and Roche, H. 1999. Grooved Ware from Brugh na Bóinne and its wider context. In R. Cleal and A. Mac Sween (eds), *Grooved Ware in Britain and Ireland*, 98-111. Oxford: Oxbow Books.
- Eogan, G. and Roche, H. 2001. Late Neolithic activity in the Boyne Valley, Co. Meath. In C.T. Le Roux (ed.), *Revue Archéologique de L'Ouest, Supplément No.9*, 125-140.
- Lecornec (eds) *Art et Symboles du Megalithisme European*, 97-104. Rennes: Revue Archéologique de l'Ouest, Supplement 8.
- Smyth, J. forthcoming. Brú na Bóinne World Heritage Site Research Framework. The Heritage Council.
- Stout, G. and Stout, M. 2008b. *Excavation of a secular cemetery at Knowth Site M, County Meath, and related sites in north-east Leinster*. Bray: Wordwell.