THE
DISCOVERY
PROGRAMME
An Clár Fionnachtana

2006
ANNUAL REPORT
Ar Thóir Na Sean
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Message from the Chairman

I am pleased to introduce the Annual Report for the year 2006. Due to the early completion of the audit for that year by the Comptroller and Auditor General we are able to include here an extract from the draft accounts for 2006. The complete accounts will be presented for approval to the 2007 AGM of the Discovery Programme Ltd.

2006 was another successful year for the Discovery Programme. Full descriptions of the organization’s work will be given below; here I can only mention some of the highlights. The Medieval Rural Settlement Project (MRS) excavation at Tulsk in Co. Roscommon was continued while the other modules of the research programme – the Dublin hinterland study and the investigation of the manor at Castlemore, Co. Carlow – were also progressed. The main innovation in the project in 2006 was the commencement of an excavation at Carns near Tulsk, on what was thought might be a house-site of the later medieval period. The excavation and associated work revealed an amazingly richer complex of features than had been anticipated, including a previously unknown Ogham stone. In addition our new laser-scanning equipment was used innovatively for the recording of the excavation at Tulsk and, more especially, at Carns.

The Lake Settlement Project concentrated on post-excavation analysis of the Mesolithic site at Derragh Island, Lough Kinale, the excavation itself having been brought to a conclusion in 2005. The draft report of the first module of that project – the general study of the Lough Kinale area – was further progressed for publication and work also resumed on the Upper Shannon module of the project.

The remaining work for the Phase I projects was progressed, with the monograph for the Ballyhoura Hills Project brought nearer to publication. Further work took place also on the draft reports for the Western Stone Forts Project.

As in previous years, members of staff of the Discovery Programme were very active in communicating the results of their work to a variety of audiences, as indicated by the list of publications and presentations outlined below. The series of important and very well-attended thematic seminars, organized in collaboration with the Royal Society of Antiquaries of Ireland to outline the results from the huge number of excavations mainly associated with infrastructural development projects, was continued in 2006.

We are very grateful for the continuing support for our work by the Heritage Council, especially for the additional grant that they were able to make to us late in the year, which allowed us to purchase several new pieces of expensive equipment.

Finally, I would like to take this opportunity to congratulate all the staff, and our collaborators in other institutions, on another excellent year of high quality archaeological research.

Dr Michael Ryan
Chairman
The year began with the end of the term of office for the outgoing Directorate and the appointment of a new board from mid-January. The Chairman, Dr Michael Ryan, was reappointed, as were four other members of the previous Directorate. This meant that the four additional members were newly-appointed. Although formally we had no current corporate plan in place, the work of the organization was still guided by aspects of the Discovery Programme Plan 2002-2004. The main elements of this were still current and it had been felt that the preparation of a new plan should ideally await the arrival of the new Directorate in January 2006. The drafting of that plan began early in the year but full agreement had not been secured by December and finalization was deferred until the meeting of the Directorate in February 2007.

The main constraints on our research work as in previous years arose from limited financial resources. Remaining work on the Phase I projects continued, i.e. the finalization for publication of the monograph on the Ballyhoura Hills Project and the work of bringing the equivalent report(s) on the Western Stone Forts Project to publication. As with the last few publications and for reasons of economy it had been agreed that our monographs would be published in future in association with commercial publishers rather than through the Royal Irish Academy, as had been the previous practice.

Due to staff maternity leave, the Barrow Valley Project only operated for a few months at the start of the year and only a limited amount of work was achieved; a fuller account of this work will be found below, as also for each of the other projects. The Lake Settlement Project spent much of the year finalizing the text for their first volume: the Lough Kinale monograph. Post-excavation work on the material from the Derragh Island excavation continued, and some preliminary work on the Upper Shannon module was also conducted at Inch Island in Lough Gara, Co. Sligo. The Medieval Rural Settlement Project continued in full research mode with another very exciting and successful excavation season at Tulsk, Co. Roscommon, as well as with developments in all the other areas and modules of the Project, perhaps especially at the Castlemore site in Co. Carlow. In addition, a second excavation, at Carns in Co. Roscommon, was also commenced and immediately began to produce exciting evidence.

Under the ‘restructuring’ arrangements agreed in 1998 with the Department of Arts, Heritage, Gaeltacht and the Islands, in 2006 the Company accounts (for 2005) were audited for the eighth time by the Comptroller and Auditor General. As the Discovery Programme is funded now directly by the Heritage Council, relations with the Department of the Environment, Heritage and Local Government are restricted to a small number of specified matters such as pensions, especially the transference of the support staff from the older Scottish Provident scheme to the New Ireland scheme of which the research staff are already members. Most of this process was completed by the end of 2006.

Communications between the Discovery Programme and the Heritage Council, our funders, continued to be excellent. The Chief Executive of the Heritage Council was reappointed to the Directorate and took a full part in its business, acting also as chairman of the Discovery Programme Audit Committee. Discovery Programme staff were in frequent contact with staff of the Heritage Council throughout the year, especially with the Archaeology Officer, the Human Resource Manager and the Financial Controllers. Towards the end of the year the Heritage Council generously made available an extra allocation of funds of €173,625.92, which was used mainly to purchase major new items of equipment (see below) and to assist in fitting out the new offices (see below).

A successful fieldtrip, involving members of the Directorate, Council and staff took place on 25 July. Among the sites visited were the excavations at Tulsk, a site in nearby Carns townland where excavation began later in the season, and Ballintober Castle where it was hoped some survey work could be done in 2007. Anthony Corns and Rob Shaw gave a presentation in the Cruachan Ai centre, on their novel application of Laser-scanning to the recording of the excavation at Tulsk.
Further progress was achieved in terms of implementing the government’s Code of Practice for the Governance of State Bodies, the Code of Business Ethics for members and staff, and also a Risk Assessment Plan.

The matter of relocating the Company to new premises was kept under review throughout the year. As in the previous year, it had been hoped that accommodation in the house of the Royal Society of Antiquaries of Ireland, 63 Merrion Square, would become available during 2006 but this did not happen for reasons beyond the control of either organisation. By the end of the year, however, the relevant offices had been vacated by the previous tenants and refurbishment work was well underway, leading to an assurance that the ‘move’ could take place early in 2007.

Arrangements were also made to replace vacant positions on the Council.

Dissemination of Information
There were no specifically Discovery Programme publications this year, although four draft volumes were undergoing finalization and editing. Publications by members of staff in other outlets but relating to Discovery Programme projects are listed in Appendix 5. Staff also continued to publish on aspects of their private work in various external outlets (see also Appendix 5); these publications included two major books on medieval topics.

Staff members were also active lecturing at conferences in Ireland and abroad, as well as to local societies and student groups on their work for the Discovery Programme and on their private research (Appendix 6). It should be noted that due to financial constraints it was necessary for members of staff to finance attendance at most of the conferences themselves, including, in most instances, those at which they were speaking on Discovery Programme projects.

Both major projects organized outreach events for local schools and the public during their fieldwork seasons and, later in the year, and discussions also began about organizing an educational project for some transition-year students from Dublin.

Our website at www.discoveryprogramme.ie continued to be updated throughout the year with Discovery Programme news items. Recent technical innovations to the website now, allow members of staff to contribute items directly themselves.

Expenditure during 2006
A grant of €1,400,000 was made available by the Heritage Council for 2006. That sum combined with a small amount of additional income from various sources created available funding of €1,424,983. In December the Heritage Council was able to make available an additional sum of €173,625.92, which was used mainly to purchase pieces of survey and computer equipment, and office furniture for our new premises.

Staff Matters
During the year it continued to be common practice on the days of the Directorate meetings for members and staff to meet over a light lunch. The process of transferring the support members of staff to the New Ireland pension scheme had been completed in 2005. Some residual matters still arise but these were well in hand by the end of 2006. The Staff Performance Appraisal system was continued during the year. Frequent staff meetings took place and the Partnership Committee also met during the year. Among the most pressing items dealt with at these meetings were the arrangements for moving to the new offices. Several ‘family-friendly’ work practices were continued.
The main aim of the GIS and survey section is to support and aid the objectives of the research projects, both in the field and in the office. Work continued at the Roscommon excavations, with tasks such as setting out trenches, 3D surface-modelling, and training excavation staff in total-station operation. Surveys were also required for the setting out of geophysics grids, photo-control for aerial surveys and the mapping of finds from field-walking. GIS tasks included continued design and updating of the excavation database, and the creation of maps and illustrations for publication. Office support, advice and training in GIS and IT was provided to all staff. Additional time was taken also in the preparation of the new office building at 63 Merrion Square, including both electrical and computer network rewiring. Besides these core tasks a number of significant developments also took place.

1. New IT/Survey Equipment
Towards the end of 2006 the survey and IT section was able to make additional equipment and hardware purchases as a result of extra funding from the Heritage Council. This extra money also allowed for the purchase of several new computers and printers.

Major capital investments made during 2006 include:

**DELL Poweredge 2900 Server & Dell PV132T LTO3 Autoloader Backup System**
A new network server was purchased to cope with the increasing amount of digital content generated during research. In particular the growing amount of digital data created by aerial surveys and laser scanning has outgrown previous estimates of storage capacity and accompanying secure digital backup.

**Bartington Grad 601-2 Dual Sensor Magnetic Gradiometers**
The magnetic gradiometer Grad601-2 is a survey instrument that detects disturbances in the geomagnetic field caused by the contrasts in magnetic susceptibility. It will also detect thermo-remanance in kilns and bricks. The depth of survey for the gradiometer can be typically 2m with a surface spatial resolution of down to 0.25m. Area coverage can be up to 1 hectare per day.

The Grad 601-2 is a vertical component fluxgate gradiometer with data logger and two cylindrical sensor assemblies for use in geophysics and archaeology. Each sensor assembly contains two fluxgate magnetometers with a one metre vertical separation together with electronics and non-volatile memory for calibration data. The system provides an enhanced depth response, exceptional stability and electronic adjustment.

The Grad 601-2 device has two-sensors, is designed for archaeological prospection and allows geophysical surveys to be completed in about half the time in comparison with traditional single sensor instruments. The device also has a relatively fast and simple calibration procedure and has good temperature stabilization, allowing for ease of use in the field.

**Geoscan RM15 Resistance Meter**
The RM15 resistance meter passes a small electrical current through the earth via a series of metal probes and measures the resistance of the earth to that current. Variations in the earth’s resistance can be caused by archaeological remains including stone structures (relatively poor conductors producing a positive anomaly) or ditches or pits (relatively good conductors producing low resistance anomalies). The depth to which the resistance meter can identify archaeological features when using a two probe array is dependant on the mobile probe separation. The RM15 device has the ability to use an optional multiplexer and several varying probe array spreads. This has three benefits: faster ground coverage, increased sampling density of data and where necessary increased depth penetration.

**Topcon’s PI-3000 Pro Image Station Software**
The Topcon PI-3000 photogrammetry system allows for the easy measurement and creation of 3D models to be taken from stereo-images produced using conventional digital photography. Similar to technology employed by The Discovery Programme in the aerial survey of Roscommon, one of the main products will
be the production of ortho-images. This system will be used primarily to record and document elements of the archaeological excavation that at present are not being captured by the terrestrial laser scanner, including sections, subtle context changes and smaller features including skeletal remains.

In addition to the software, additional camera equipment including digital SLR cameras and fixed focal length lenses were purchased to allow for system flexibility. Camera calibration software enables us to calibrate digital SLR lenses and cameras. An aerial platform based on a helium balloon kite was also purchased to allow for the photogrammetric recording of the excavation in plan, and larger field monuments.

**Geomagic Studio 3D Modelling Software**

To produce surface models of laser-scan point-clouds, a software solution was needed that could handle very large and complex data. Geomagic Studio enables us to carry out several processing stages to laser-scan data to enable the production of an accurate complete surface model of an archaeological object. Stages of processing include: removal of noise within the point cloud; intelligent reduction of data sets; and polygon surface creation, editing and repair functions. Once models are constructed using this software they can then be employed to create photorealistic visualization and the production of custom manufactured copies of the model via a 3D printer.

**2. Terrestrial Laser Scanner**

As highlighted in the *Annual Report 2005* we were able to purchase a Trimble/Mensi GS101 terrestrial laser scanner as a result of extra funding from the Heritage Council. The Medieval Rural Settlement 2006 excavations in Co. Roscommon provided our first opportunity to prove the effectiveness of this technology, as we used it to create the graphic record of the excavation surfaces. Conventionally such plans and sections are hand-drawn, a time-consuming and subjective process, the value of which depends on the skill of the draftsperson. Scanning offered significant advantages, firstly increasing the accuracy and consistency of the record. With a scan resolution of 5mm all the subtlety of the surface is captured in the millions of points, known as point cloud data. Scanning proved to be a much faster method of working, recording a surface in around two hours compared to the day or more that conventional planning may require. The real advantage of this approach will be seen in post-excavation analysis which should be able to benefit from the 3D nature of scan data.

Our field practices were quickly resolved, scanning each surface from multiple positions to minimize ‘shadow’ areas – those areas obscured from the laser by features or trench edges. The multiple scans were then registered and geo-referenced using a number of sphere targets around the trenches. Other practical issues were resolved like using a small generator, rather than batteries, to provide a more reliable source of power.
Working closely with our archaeologist colleagues in the MRS team we were able to satisfy their requirement to have hard-copy plans in the field (laminated A3 plots) for them to mark up with archaeological interpretation and comments, integral to the recording process. Initially it had been agreed to continue drawing surfaces in tandem with the laser scanning, but after the quality of the first scan was seen this was considered unnecessary.

This first season of laser-scanning continued from the MRS excavations at Tulsk and Carns to the LSP excavation of a cairn on Inch Island, Lough Gara.

Laser-scanning is conventionally associated with architectural surveys, and we undertook such surveys of the church at Lissonuffy (see below) in the Roscommon study area for the MRS project and at the Bishop’s Palace in Kilkenny for the Heritage Council. The Bishop’s Palace was also surveyed by Nick Russill using Topcon PI-000 system, a low-cost photogrammetric approach using conventional digital SLR cameras, which provided an interesting comparison with our laser scan data.

3. Aerial Survey

Lough Gara Aerial Survey
An aerial survey of an area of Lough Gara was commissioned to produce both digital elevation models (DEM) and associated ortho-rectified images of the central area of the Lough, in particular the area around and including Inch Island. BKS Ltd, Coleraine, carried out the acquisition of the vertical images at a photo scale of 1:3,000. Positioning of the survey was carried out using the Trimble 5800 RTK GPS purchased in 2005, which allows for real-time correction of positional data via the OSI active network utilising mobile phone data. The full processing of this data and production of DEM and ortho-images will be complete by the second quarter of 2007.

Roscommon Aerial Survey
The processing of the vertical aerial survey commissioned in 2005 for the study of landscapes and monuments within the Medieval Rural Settlement Project study area of north Roscommon was concluded in 2006 with the production of 70km² of digital elevation models (DEM) and associated ortho-rectified imagery. In the area around Carns aerial survey combined with geophysics has enabled a fuller understanding of the landscape and informed a more effective excavation methodology. As part of the extra funding provided by the Heritage Council an additional area of similar size (70km²) was flown directly to the east of the 2005 campaign area. This additional data will be processed during the course of 2007 and will provide mapping for a comparative landscape, where water bodies are a defining feature.

In addition to aerial surveys carried out by the Discovery Programme, comments and contributions were submitted for the forthcoming Heritage Council publication *Air and Earth: Aerial Archaeology in Ireland*.

4. COST A27 EU Framework Programme - Understanding pre-industrial structures in rural and mining landscapes
The Discovery Programme continued to play a role in COST Action A27. Two network meetings took place at Samos in Greece and Ghent in Belgium. Activities during this year have led to the collation of two works to be published in 2007, to each of which the Discovery Programme has submitted a chapter.
Managing and Protecting Landscape in Europe - a summary by COST A27

A review and comparison of the legislation and management afforded to landscape and its protection in the individual countries within the EU. Concepts covered include the current methodologies employed to carry out landscape characterisation and assessment, the role of instruments that enforce or promote effective landscape protection and management.

Rural and Mining Landscapes Case Studies
The Discovery Programme has submitted a chapter that details how the use of modern aerial survey technology has enabled archaeologists to fully understand the cultural components of the Roscommon landscape.

5. Additional assistance to external organisations
UCD Derravarragh Project: Envisioning a Landscape
This Heritage Council supported research project undertaken by Dr Rob Sands, UCD School of Archaeology, was given technical and survey support by the Discovery Programme. Advice was given on setting-up and processing an aerial photogrammetric project from our experience working on the Mullaghfarna and Roscommon projects. 28 ground control points were also surveyed using network RTK GPS.

NUI Galway, Dún Ailinne Geophysics Survey
Assistance was given to Conor Newman in the positioning of a grid framework for the carrying out of a geophysical survey. The survey was carried out using network RTK GPS.

Heritage3d.org
In conjunction with English Heritage, the University of Newcastle and several other bodies, the Discovery Programme took part in a project to explore the effective use of technology in the recording of cultural objects. Seventeen case studies examining the use of terrestrial laser-scanning for the recording of archaeological excavations.

Dublin Institute of Technology
In response to a student carrying out a thesis on the modelling of laser-scan data, and so that the Discovery Programme staff could obtain experience of using the laser-scanner, a survey was carried out early in 2006 of a Formula One racing car.
The Discovery Programme - Annual Report for 2006

Project Work in 2006

The Barrow Valley Project
Dr Annaba Kilfeather

From January to March 2006 work on the Barrow Valley Project concentrated on the analysis of the information gathered from fieldwork in 2005. The databases for monuments and artefacts were both completed (although they are updated regularly). The monuments and artefacts can now be mapped in some detail, allowing chronological and geographical examination of their distribution. Chapters for the final publication were also drafted and first outlines written.

The River Barrow near Portarlington, winter 2005/2006

The Lake Settlement Project
Dr Christina Fredengren

The Lake Settlement Project continued its work in 2006. The main focus was on the post-excavation work for the Mesolithic site at Derragh Island, Lough Kinale. Work was also resumed in the upper Shannon lakes, with study of Inch Island in Lough Gara and a particular focus on the transition between the Late Bronze Age and Early Iron Age. Work also continued on preparing for publication the text of the Lough Kinale vol. 1.

Post-excavation of Kinale II
Christina Fredengren

Work began with the creation of a database of the artefacts from the sites including context descriptions and initial stratigraphic analysis. The result was an extended stratigraphical report which will form part of the final excavation publication. We are still waiting for radio-carbon dates to finalise our sequence. The site plans and sections were digitised and the results merged into the Discovery Programme’s GIS system. Work also began on the cataloguing of the worked wood from the site (see below). Site 1 in area A produced a significant collection of animal bones, which contains specimens, for example, of early cattle and wild pig. At the end of 2006 the initial osteological report was received. During 2007 this material will be further analysed in its site context and additional specialist studies will be carried out. The first macrofossil samples from the site were also sent for external analysis, and the report promptly delivered. Nearly 19,000 lithic pieces were analysed by Dr Farina Sternke and Prof. Peter Woodman of UCC, and a final report was received. This noted that chert was the main material, followed by flint and a range of other materials, and that the collection dates generally to the Late Mesolithic.

Post-excavation of Kinale II: Worked Wood
Claire Anderson and Dr Ingelise Stuijts

In 2006 the main post-excavation processing of the wood assemblage took place. The platform excavated at Lough Kinale, Derragh Td. produced c.5000 wood samples, due to the 100% sampling policy which was in place from the first year. The majority of these are single pieces of wood lifted, planned, numbered and bagged on site. There are also a number of bulk samples, bags of twigs or small brushwood which were sampled by square metre. The excavation policy on-site was to separate clearly worked pieces from ‘natural’ pieces, and to retain all the samples for post-excavation analysis at a later date. The first step in the process was to record the markedly worked pieces. This included cleaning, completing detailed worked wood sheets and photographing certain samples. A number of interesting artefacts came to light at this stage in addition to the many axe-marked stakes from Trench 2. Once these samples had been fully recorded it was decided
to clean and re-examine as much of the ‘natural’ wood as time permitted, to see whether additional information on Mesolithic wood-working could be gleaned from these. The majority of the 5000 samples were thus subjected to further scrutiny throughout 2006, with many interesting results. Less obvious wood-working, such as light cut-marks from stone (or bone?) blades and also patterns of typologically distinct wood-working waste came to light. As pieces were examined they were again fully recorded and catalogued. Storage conditions continue to be closely monitored for both the wooden artefacts and general wood samples, with a view to selecting certain pieces for conservation in 2007.

In late 2006 a further method of examining the wood assemblage was introduced, which has run in conjunction with the species identification and annual ring-count of a percentage of the material. As samples are being taken for species identification, the piece is examined under the microscope in good lighting. This method has enabled the identification of surface markings on the lighter brushwood, scorching at a microscopic level and has also provided confirmation of the archaeological nature of certain breakage patterns: splitting, tearing and grooves previously noted in the assemblage. Patterns of erosion (both animal and water/air) are recorded where evident, and also the felling period if clear. This can help to determine whether some pieces excavated in a horizontal position were originally upright. By meticulously recording such details, overall patterns in the material become apparent. This method has also been beneficial in terms of time, speeding up the process of analysing and recording the wood species and wood-working characteristics. With the environmentalist and archaeologist working in tandem, decisions can be taken and information processed in much shorter time. This method will continue in 2007 as the most efficient way to get the most information from material such as this. Due to time constraints it will only be possible to carry out species identification on a percentage of the platform layers. However, all of the pieces sampled from the site will have been examined a number of times for indications of wood-working. A variety of Mesolithic wood-working methods are coming to light, besides the traditionally documented stone-axe marks and larger wood-working waste. There are also patterns to species use, with pine and hazel standing out especially as favoured species for particular artefacts. This method will eventually contribute to the discussion of seasonality and resource procurement at the site and add a new dimension to the Irish Mesolithic record.

Specialists involved in the post-excavation of Kinale II
Dr Nicky Whitehouse, Department of Archaeology & Paleoecology. Queens University Belfast with students
Dr Chris Hunt, Department of Archaeology & Paleoecology. Queens University Belfast with students
We started fieldwork in the upper Shannon area in the summer of 2002 but due to developments at Lough Kinale this had to be left for a time. During 2006 we resumed this work and decided to focus on Inch Island in Lough Gara, Co. Sligo/Co. Roscommon.

**Survey**

The role of lakes and lake-settlement during the transition between the Bronze Age and Iron Age and into the Early Medieval period had not been dealt with by the project earlier. We decided to focus on Inch Island, located centrally in Lough Gara, given our earlier investigations in that locality. Investigations of a crannog off the southern shores of Inch Island had produced structural dates from the Late Bronze Age and into the Iron Age, and Early Iron Age artefacts are also provenanced to the area. The water level in Lough Gara has been lowered on two occasions, first at the end of the nineteenth century, then in the 1950s. It was during the latter drainage that the crannogs of Lough Gara were revealed.

OS maps show Inch Island before the first drainage, with its two drumlins connected by only a small tongue of land. No crannog is shown. After drainage these drumlins had clearly merged into one island. During spring 2006 we carried out a detailed survey of the island using aerial photography. We examined the visual fields from known sites in relation to features on the lake such as crannogs.

**Excavation**

Birgitta Larsson

A number of previously unknown features were identified during the survey of Inch Island. Among these were six cairns, all located in a row along an all-year dry former shoreline at the southern side of the island and facing a crannog (SMR 47:3). The cairns were of similar character to each other and appeared as concentrations of exposed small stones with further overgrown stones around the
Overview after de-sodding and cleaning back the cairn centre which could be felt under foot. One of the six cairns was chosen for excavation, which was carried out in September 2006. Before excavation the site was recorded with a non-invasive laser scanner, which will make it possible later to build a three dimensional model of the site. The general aim of the excavation was to investigate if this was a burial or if the cairn had served another purpose. If it was a burial we would have liked to see if there was a connection with the two crannogs located on the same shore. The excavation showed the site to be man-made. It was constructed in an organised manner, with larger stones at the base, possible kerb stones and well sorted smaller stones in a neat concentration at the top. Unfortunately the site did not produce anything to give an indication as to why it was built and, unless bone had completely disintegrated, there is nothing that indicates that this is a burial site.

Further, as neither artefacts nor ecofacts were retrieved, it makes it very difficult to place the site securely in time. It seems likely that the cairn was constructed while the then present shoreline was exposed. Its interpretation has to be sought through its landscape context, perhaps suggesting that the cairns were part of the shoreline area in front of the crannog.

Regional Support
Bernard & Brian Hunt, Moygara, Co. Sligo
Mr & Mrs Giacometti, Annagh, Co. Sligo
P. J. & Fiona Reilly, Longford County Council, Longford
Shirley Markley, Acting Heritage Officer, Longford
Seamus McGinley, St Angela’s College, Sligo
Nollaig McKeon, Heritage Officer, Roscommon County Council

During 2007 the project committee consisted of Dr Joanna Brück, Ms Margaret Gowen, Mr Fionbarr Moore, Prof. Barry Raftery and Prof. Peter Woodman.

Aerial photograph of southern shore, with four of the six cairns marked. Cairn 3 was excavated
The Medieval Rural Settlement Project
Dr Niall Brady

The Medieval Rural Settlement Project focussed on advancing the Roscommon module, commissioning a new aerial photographic survey of the core study area and continuing the excavation programme. A second excavation was begun at Carns. A great deal of thanks is owed to the volunteer students. In terms of publication and dissemination, the primary effort has been directed towards the drafting of the project monographs, the first of which (Dublin) is well advanced and is due for submission in 2007. Brief reports follow on developments in the Southeast module and the Roscommon module.

Southeast Module
Margaret Murphy and Niall Brady

The geophysical survey conducted in 2005/6 has revealed the location and detail of the former borough. The main street, house platforms and property boundaries are all clearly visible, along with garden features and a selection of possibly prehistoric underlying features, as well as details of circular buildings and structures within the bailey itself. Preliminary assessment of the c.2,000 artefacts recovered during fieldwalking, suggests patterns that correlate closely with aspects indicated in the geophysical survey. It is clear that the combination of historical analyses, geophysical survey and fieldwalking has given an especially rich result.

Roscommon
Niall Brady, Anne Connon, Rory McNeary and Brian Shanhan

The work conducted on the broader Roscommon landscape was focused on three areas in 2006:
• Digitization of Aerial Photographic (A/P) Survey
• Excavation at Carns
• Additional work conducted on documentation; on the survey of Lissonuffy church and graveyard

Digitizing and analysis of the A/P coverage of the 70km² area within the core study zone of Rathcroghan and Carns was progressed. The digitized data permits a sequence of interpretative maps to be constructed quickly with great accuracy over a wide area. It also allows for the construction of digital terrain maps of sites and features with relative ease.

Plan of Castlemore, Co. Carlow, showing geophysical survey data and overlay of Leinster Cooking Ware and the rather fewer imported medieval potteries collected by fieldwalking
One Kilometre square Aerial Photograph tile from within Roscommon study area that has been ortho-rectified and showing ING overlay. The image is degraded to fit into the present report. It is possible for the Programme to produce any number of such images as base maps and/or merchandise for sale to prospective purchasers.

Excavation at Carns
Rory McNeary and Brian Shanahan
Following the mapping of the A/P coverage, Carns townland was identified for excavation. It has a wide range of relict earthworks that represent long-term occupation since prehistoric times, and it has a documented medieval presence.

Excavation
The circular enclosure identified as the site of the Patrician church of Domnach Mór Maige Selce, was chosen for excavation because it appeared to be the primary settlement node within the field system. Earthworks representing building foundations and gardens suggested there was a settlement horizon of medieval or later date. However, geophysical survey revealed an earlier site consisting of a figure-of-eight structure inside a bivallate enclosure. It has parallels with prehistoric places of assembly and kingship, such as Emain Macha, Co. Armagh and Dún Ailinne, Co. Kildare. Excavation of part of the enclosure revealed a ditch, c.1.6m deep. It yielded animal bones that will hopefully date this earlier phase of occupation.

Both phases incorporate punch-dressed stones indicating a fifteenth- to seventeenth-century date. Burials exposed on the floor level of the extension suggest that they post-date the abandonment of the medieval building. However, the discovery of a burial under the west gable wall of the main building established without doubt that the site was the focus of a much longer tradition of burial. The discovery of an early medieval lignite bracelet and an ogham stone increases the likelihood of John O’Donovan’s assertion that this is the location of the Patrician church of Domnach...
Mór Maige Seilge. Seven rotary quern fragments were recovered. When considered in conjunction with the house sites and garden enclosures the querns suggest the presence of a larger settlement attached to the church. The close symmetry of the prehistoric features and the stone enclosure raises the possibility that this church site was developed on or deliberately subsumed an earlier prehistoric centre. Although the site is mentioned in earlier sources it is absent from the papal taxation list of AD 1302-6. It may have been a chapel within the parishes of Ogulla or Kilcooley, which feature on the list. In 1593 the quarter of Carns was included in a grant of lands formerly belonging to the Dominican Priory of Tulsk. That Priory was founded in 1448. The punch-dressed masonry in the church at Carns is consistent with a date after the foundation of Tulsk, when the site came into the hands of the Dominicans. The position of Carns may be part of a wider process of church reorganisation.

Environmental work
Collaboration with Dr Ingelise Stuijts has been rewarding. The team retrieved a core sample from a boggy area east of the site that should enable a reconstruction of past land-use patterns in a landscape rich in prehistoric and medieval monuments.

Additional work
A grant from Roscommon County Council allowed us to undertake a survey of Lissonuffly church and graveyard which included detailed logging of individual grave-plots and laser-scanning of the overall structure.

Tulsk
Niall Brady
The third of four proposed seasons of excavation at Tulsk took place in 2006. The season was organized as in 2004-5 as a field school for students. The formula has proved to be very successful, and was applied to the work in Carns as well. It generated an independent income of €25,700 in 2006, which offset the overall cost of €56,733 for the field season. In addition, we were able to offer four bursaries to Irish students worth €960 each. The bursaries, which covered the costs associated with accommodation and food, were awarded to Judith Ellen Gilmore, TCD, Orla Howley and Siobhan McDermott, NUI Galway, and Vicki McAlister, TCD. Dr John Soderberg, bones specialist from the University of Minnesota, brought a party of six students. Dr Jimmy Schryver, University of Minnesota, Morris, volunteered on the project as well.
The excavation at Tulsk continued to focus on establishing the primary sequences of development on the mound. The excavation cutting was extended to the northeast to expose the corner of the stone tower, and to the east to expose a wider area of the building that was constructed against the tower. The recovery of a leaf-shaped arrowhead and a barbed-and-tanged arrowhead on the east side of the mound attest to a prehistoric horizon, and support the discovery of a saddle quern in 2004 from the cutting opened beside the well, off the northwest slope of the platform. Geophysical survey by Dr Paul Gibson and Dot George, NUI Maynooth, in the course of the 2006 season identified that the eastern half of the platform area was formerly cut away to a depth of c.3m, to accommodate the footprint for the later stone tower. The prehistoric flints came from re-deposited soil that is most logically associated with this work and consequently it is entirely likely that the natural hillock which forms the core to the mound had a prehistoric horizon. No additional insight was achieved in 2006 for the ringfort phase of the site. Excavation has confirmed an outer fosse, or ditch, to the east of the stone tower, but it remains to be seen whether this is a primary cut or was re-cut subsequently to accommodate works in the later medieval period.

**Stone Tower**

Excavation outside the tower focused on the northeast corner. It exposed more fully the rounded corner, which is constructed above a right-angled corner plinth. The base of the external wall was not revealed due to a confined excavation area, but it was traced 1.5m below the batter, at which point a narrow outer plinth was found. The foundations of the tower extend c.3m below the top of the present-day mound.

Internally, the tower consists of a main chamber and a narrow north chamber. The southern extent of the tower lies outside the excavated area. The main chamber is further divided into two halves, the northern one of which is flagged and retains three localized ash spreads or hearths. The southern half of the main chamber is cobbled. It aligns with a break in the west wall of the tower, as well as with the c.15m long by 9m wide stone building that was added outside the tower to the east. It is unclear what this alignment means but a working hypothesis is that it may represent an entrance feature. The main chamber in the tower was filled with collapsed stonework that might represent a fallen vault. The north chamber is narrow and, while it would logically represent a stairwell, the floor surface is still too confused for this supposition to the clarified. The eastern external wall of the tower retains a garderobe chute. The chute falls vertically to a culverted base, which is then channelled further east to empty into the external fosse. The culvert was destroyed when the tower collapsed, but some of the arch stones survive, and the channel is filled with loose rubble.

**Eastern Building**

At a point sometime after the tower was built, a second mortared stone structure was erected. This building lies east of and against the stone tower, and measures c.15m long E/W by 9m wide N/S. Where the boundary wall has been exposed on its northern face, the external façade is well finished and was designed to be seen. The internal façade is constructional and served to
accommodate a series of introduced layers of re-deposited boulder clay. No definite features were identified in these layers, which can be traced some 50cm above the surviving height of the wall. The infill layers are themselves truncated by a later field boundary ditch and bank and possible trackway, which are nineteenth-century in date. It is still not clear what purpose this building served. It crosses the line of the ditch that surrounds the platform, and was built after the tower was erected. The alignment mirrors the internal division within the tower’s main chamber, and it is possible that the two are interlinked. However, whether the eastern building is an entrance feature that provided access to the tower, or whether it is an external hall structure cannot be determined at this stage. Both the eastern building and the tower collapsed at the same time, and this event is recorded in the sections. A series of small finds from 2005, in the upper levels of the ditch, might indicate a thirteenth-century date, which pre-supposes that the tower and the eastern building post-date this period. However, as excavation was focused on removing the post-fosse overburden, and only looked at the ditch layers very superficially, it would be unwise to read too much into the small finds assemblage at this point.

**Sixteenth Century**

In 2005 the excavations revealed a surprising level of detail from the mid-1500s and later; work in 2006 continued on these features. The small rectangular building that protruded above the mound on the northern perimeter prior to excavation was more fully exposed in 2006. It is reasonably well built and extends more than a metre in depth. The southern long wall is however only a skin-deep revetment and cannot have been load-bearing; it is suggested that this building served as a cellar feature. It is built against a series of dark glacial till deposits that were pit fill from the sixteenth century. Two horse skeletons were exposed in the pit fill. A series of silver coins found at the base of the stone building are from the late 1500s as well, which suggests that there was no real gap in time between the filling of the pit and the construction of the building. The building suffered burning, as indicated by a significant charcoal deposit that contains a mixture of wood types. It is thought to represent a former roof and samples have been taken for dating purposes.

Outside the stone building and to its east, excavation revealed a broadly curving low mud bank that ran directly above the internal walls of the early stone tower. It is suggested that the mud bank is the foundation to a breastwork defence that would have supported a latticed timber frame, to provide added defence to northeast corner of the stone building. The range of equipment and features associated with the sixteenth-century levels supports the contention that this phase represents a re-occupation of the mound at the time when Sir Richard Bingham, the Queen’s Governor in Connaught, garrisoned the settlement. The stone tower was collapsed by this stage, and certain stones have been identified in re-used sixteenth-century contexts. The range of coins recovered continues into the 1640s.

The range of material recovered and the scale of the features exposed present legitimate grounds for considering this to be the site of Tulsk Castle, which is recorded in the annals as being built in 1406. If this is the case, then it raises questions concerning the traditional location of the castle as the stony mound behind Kellys Pub. It is entirely possible that Tulsk had more than one encastellated structure. It is equally possible that the mound in Kellys Pub belongs to the Elizabethan period. This conundrum was highlighted by the Directorate and Council during their summer visit to the site.
List of Residential Volunteers
Michael Ann Bevivino, University of Virginia
Tiffany Cochrane, University of Evansville
Stephanie Contino, Cornell University
Deirdre Doherty, University of Strathclyde
Toni Earls, Stonehill College
Amy Fox, University of Toronto
Judith Ellen Gilmore, Trinity College Dublin and DP Bursary Holder
Brid Greene, NUI Galway
James Grogan, unaffiliated, Essex
Kathryn Hampton, Princeton University
Sarah Hampton, University of Minnesota
Síle Healy, University College Cork
Brittany Henthorne, Ohio University (Athens, Ohio)
Matt Hiatt, University of Minnesota
Orla Howley, NUI Galway and DP Bursary holder
Brett Janos, University of Texas - Austin
Anne Koenig, Vanderbilt University
Sean Arthur Mandell, Georgetown University
Vicky McAlister, Trinity College Dublin and DP Bursary Holder
Siobhan McDermott, NUI Galway and DP Bursary holder
Alissa McFarlin, Cornell University
Kelsy Perry, Ohio University (Athens, Ohio)
Christina Pierce-Winters, Kalamazoo College
Andrea Phelps, University of Minnesota
Amanda Polvi, University of Minnesota
Catherine Riley, unaffiliated, Los Angeles
Burt Smith, University of Minnesota

Non-residential Volunteers
David Cole, local resident
Richard Clutterbuck, CRDS
Jennifer Davitt, St Angela’s College, Sligo
Betty Gray, St Angela’s College, Sligo
Emma Kenny, local resident
Richard Gray, St Angela’s College, Sligo
Seamas McGinley, St Angela’s College, Sligo
Aidan Mc Guinness, St Angela’s College, Sligo
Jim Mulrenan, local resident
Tony Wilkinson, Sligo Institute of Technology

Local Area Support
Seamus Beirne, Tulsk Action Group and Roscommon County Councillor
Carolyn Candish and staff, Cruachan Al Heritage Centre Tulsk
Seamus Conway, Tulsk Action Group
The Curran, Landowners Carns

Environmental Work
Dr Ingelise Stuijts
The environmentalist worked with both the Lake Settlement Project and the Medieval Rural Settlement Project in 2006. The practical work included pollen preparations and wood/charcoal identifications, mainly for the Lake Settlement Project. Soil samples from the Medieval Rural Settlement Project were floated/sieved in a simple set-up and sorting occurred. A training course in wood identification techniques was attended from 16 to 20 January in the Jodrell Laboratory and School of Horticulture, Royal Botanic Gardens, London. The instructors were Dr Peter Gasson and Rowena Gale. This international course was attended by a number of wood and charcoal specialists from Ireland.

Lake Settlement Project
The quality of the waterlogged deposits at Derragh Island is in general excellent. This preservation may provide a unique opportunity to study the possibility that genetic material was preserved on site. Therefore contact was established with Prof. Martin Downes, NUI Maynooth, and permission was sought to provide him with some hazelnuts from Derragh Island, where kernels are still partly

Microscopic pictures of egg capsule from the Derragh Bog core
intact, for this fundamental research. Although the quality of most of the materials is excellent, this is not the case with the wood remains. The wood is degraded both by roots and by plant growth as well as by natural degradation processes caused by bacteria and fungi, especially after being out of their waterlogged position on site. This strengthened the necessity to study the material as quickly as possible. As a result, it was decided in late 2006 to study the wood species and wood technology in tandem. This method quickly proved to be highly productive and will continue until July 2007. By agreement with Prof. Pete Coxon and Dr Fraser Mitchell of TCD arrangements were made for the preparation of pollen samples in their laboratory facilities. For this, the Discovery Programme is very grateful. The first samples were prepared in 2006. On first inspection, while the samples from the Derragh Island Mesolithic platform itself contain microscopic charcoal, this is not visible in the pollen monolith from the dry-land, less than 50m away, and this will need to be prepared at a higher resolution. The actual counting process will take place in 2007.

Specialists from Queen’s University Belfast have shown a keen interest in the site, and Dr Nicki Whitehouse has finished an evaluation of the beetle samples from the platform with her students. Dr Whitehouse will continue her studies at a more detailed level in 2007. Dr Chris Hunt and Andy McWilliams from QUB visited the site in 2005, and at the time expressed their wish to study the marl deposits of the area. As a result, the environmentalist and Andy McWilliams, cored close to the site in the summer of 2006. Enough marl was secured for his studies that not only looked at mollusc assemblages but also used various chemical analyses. The results will form part of McWilliams extended thesis and a report will be included in the final publication on the Derragh Island excavation.

In September prospecting fieldwork occurred on Inch Island, Lough Gara, as part of the Upper Shannon module. This included fieldwalking and soil-augering. The prospecting highlighted two areas of interest for future environmental research, in close proximity to archaeological sites.

**Medieval Rural Settlement Project**

The environmentalist joined the excavations in Tulsk and Carns for three weeks. During this period lectures on environmental subjects were also given to the visiting students. The environmental component of this project gained momentum in 2006. This year, a mobile sieving/flotation station was installed at Tulsk by courtesy of the Cruachan Ai visitor centre. Students received instructions on the use of this and processed a number of soil samples from the two sites. This method is specifically designed for the retrieval of carbonized remains, such as seeds and charcoal, and will also allow small bones etc. to be found. This is the first step towards a complete sieving process on site, where only exceptional soil samples will be retained after the end of the excavations.

Augering close to the excavations at Tulsk produced evidence for an alder carr vegetation to the north of the site. Deposits included fen peat with wood remains in the upper levels. This material seems to have been undisturbed and, as such, has great study potential. Further augering and coring occurred in a wetland area close to the Carns site. This produced further evidence for the existence of a lake at Carns. Augering shows that deposits are at least 3.4m deep and probably much deeper. The lower sections of marl are very nicely layered. Coring was very difficult due to weather conditions and the heavy nature of the clay deposits. Eventually, a large hole was dug to retain monolith boxes of the upper 80cm, but test samples were collected from the auger from deeper layers. Study of this material is planned for autumn 2007 and 2008.

Susan Lyons from Headland Archaeology sieved/floated the bulk of the remaining samples from Tulsk as well as Carns in autumn 2006, and produced a valuable report with recommendations. Her report has been attached to the archaeological report for Carns. Further identification work on selected carbonized remains for dating purposes remains to be done.
Appendix One

Discovery Programme Directorate (Board of Directors) 2006-2011

Dr Michael Ryan
(Chairman)
Appointed by the Heritage Council with the approval of the Minister for the Environment, Heritage, and Local Government

Prof. Terence Barry
Discovery Programme Council appointee

Dr Joanna Brück
Discovery Programme Council appointee

Ms Mary Cahill
Discovery Programme Council appointee

Ms Rose Cleary
Heritage Council appointee

Ms Margaret Gowen
Heritage Council appointee

Mr Roger Mercer
Discovery Programme Council appointee

Dr Kieran O’Conor
Discovery Programme Council appointee
## Members of the Council of the Discovery Programme 2004-2008

<table>
<thead>
<tr>
<th>Council members</th>
<th>Nominating bodies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Michael Ryan</td>
<td>Chairman of Directorate (from January 2001; re-appointed January 2006)</td>
</tr>
<tr>
<td>Mr Christiaan Corlett</td>
<td>Institute of Archaeologists of Ireland</td>
</tr>
<tr>
<td>Ms Claire Foley</td>
<td>Department of the Environment, Northern Ireland</td>
</tr>
<tr>
<td>Dr Annaba Kilfeather</td>
<td>Discovery Programme staff</td>
</tr>
<tr>
<td>Dr Finbar McCormick</td>
<td>Queens University Belfast</td>
</tr>
<tr>
<td>Mr Fionnbarr Moore</td>
<td>Department of Environment, Heritage, and Local Government</td>
</tr>
<tr>
<td>Mr Conor Newman</td>
<td>National University of Ireland Galway</td>
</tr>
<tr>
<td>Dr Elizabeth O’Brien</td>
<td>Royal Society of Antiquaries of Ireland</td>
</tr>
<tr>
<td>Ms Nessa O’Connor</td>
<td>National Museum of Ireland</td>
</tr>
<tr>
<td>Dr Elizabeth Shee Twohig</td>
<td>University College Cork</td>
</tr>
<tr>
<td>Mr David Sweetman</td>
<td>Royal Irish Academy</td>
</tr>
<tr>
<td>Mr Richard Warner</td>
<td>Ulster Museum</td>
</tr>
<tr>
<td>Dr Graeme Warren</td>
<td>University College Dublin</td>
</tr>
</tbody>
</table>
Appendix Three

Meetings of Directorate and Council

Meetings of the Directorate:

During 2006, the Directorate met in separate session six times.
14 February
25 April
13 June
26 July
10 October
19 December

Meetings of the Council:

There were no specific meetings of the Council in 2006.

Joint meetings of the Council and Directorate:

A one day joint meeting with presentations by the research and technical staff was held on 29 May to review: technological developments in the organisation; the current state of progress in the projects; and the plans for their completion. A joint meeting with presentations by the GIS/Survey staff was held on 25 July, associated with the field trip to Co. Roscommon.

Annual General Meeting:

19 December

Audit Committee meetings:

25 April and 19 December

In addition there were a number of meetings of committees and groups of directors and staff, relating to project matters and other specific issues.
Appendix Four

The following were members of staff at the Discovery Programme during 2006:

- Dr Brian Lacey, Chief Executive Officer
- Ms Kathleen O’Sullivan, Company Administrator
- Ms Aoife Kane, Administrative Assistant
- Mr Anthony Corns, GIS/IT Manager
- Mr Robert Shaw, Geo-surveyor
- Dr Ingelise Stuijts, Environmentalist
- Dr Annaba Kilfeather, BVP Project Director
- Dr Christina Fredengren, LSP Project Director
- Ms Birgitta Larsson, LSP Senior Research Archaeologist
- Ms Claire Anderson, LSP Research Archaeologist
- Ms Rebecca Boyd, LSP Research Archaeologist
- Mr Dominic Gallagher, LSP Research Archaeologist
- Ms Jean O’Dowd, LSP Research Archaeologist
- Dr Niall Brady, MRSP Project Director
- Mr Brian Shanahan, MRSP Assistant Project Director
- Dr Michael Potterton, MRSP Senior Research Archaeologist
- Mr Rory McNeary, MRSP Senior Research Archaeologist
Appendix Five

Publications and reports by members of staff relating to Discovery Programme projects


Publications by members of staff not relating to Discovery Programme projects


Brian Lacey, ‘Derry, the Cenél Conaill and Cenél nEógain’ in M. Meek (ed.) *The Modern Traveller to our Past: Festschrift in honour of Ann Hamlin*, 65-9

Brian Lacey, *Cenél Conaill and the Donegal Kingdoms: AD500-800*. Dublin, pp 350

Brian Lacey is editor of the *Journal of the Royal Society of Antiquaries of Ireland*. Vol. 134 for 2004 was published in October 2006

Brian Lacey is editor of the *Journal of the Royal Society of Antiquaries of Ireland*. Vol. 135 for 2005 was published in December 2006


Michael Potterton is editor of *TEA: The European Archeologist*. Issue 25 for summer 2006 was published in May 2006; Issue 26 for Winter 2006-2007 was published in December 2006


Lectures and presentations given by members of staff in 2006


Niall Brady and Margaret Murphy, 15 March, ‘History and Archaeology of Castlemore in the medieval period’. Lecture to the Carlow Historical and Archaeological Society, Mount Wolseley, Tullow.

Niall Brady and Margaret Murphy, 19 April, ‘English manors in Ireland? The Bigod manor of Forth, Co Carlow’ at the Conference of the Society for Medieval Archaeology, Mullaghmore, Co. Sligo. Organiser of Conference: Niall Brady, with Mark Gardiner, Kieran O’Conor and Mick Monk.

Niall Brady, 28 April, ‘Archaeological Research in North Roscommon’, Irish Cultural Centre, Phoenix AZ.

Niall Brady, 2 May, ‘Medieval Rural Settlement in North Roscommon, Ireland: archaeology and ethnicity’, Mesa Community College, AZ.

Niall Brady, 4 May, as session organizer and presenter, ‘Excavation of a Gaelic Royal site at Tulsk, Co. Roscommon, 2005’, 41st International Congress on Medieval Studies, Kalamazoo MI.

Niall Brady, 2 June, Poster presentation on ‘Ploughing in medieval Ireland’ to the Irish Agricultural History Society, summer meeting.


Niall Brady, 9 Nov., ‘Cattle thieves and wasters: re-envisioning Gaelic lordship in later medieval Ireland’, Longwood University VA.

Niall Brady, 11 Nov., ‘When mounds become castles, and when water has value: archaeological research in Ireland today’, East Carolina University NC.


Anne Connon, Rory McNeary and Brian Shanahan, 19 April, ‘Approaches to the study of rural settlement in a medieval Gaelic lordship: the parish of Ogulla, Co. Roscommon’, at The Rural Archaeology of Later Medieval Ireland (The Society of Medieval Archaeology), Mullaghmore, Co. Sligo.


Anthony Corns & Rob Shaw, 17 October, ‘Survey Technology in Archaeology, Department of Archaeology, UCD

Christina Fredengren, 26 August Heritage Week, ‘Life and Death on the Shores of Lough Gara’, King House, Boyle.


Christina Fredengren, 14 Nov., ‘The Wet landscape’, NUI Galway Landscape MA course.
Christina Fredengren, 18-19 Nov., UCD participated in Bronze Age Study Group conference.

Christina Fredengren, 4 Dec., ‘Lake Settlement and the Bronze Age’, St Angelas College, Sligo.

Brian Lacey, 15 Feb., address at launch of the Derry/Londonderry fascicle of the Irish Historic Towns Atlas, Royal Irish Academy, Dublin.

Brian Lacey, 28 Feb., ‘St Colum Cille – Life and legacy’, Donnybrook Retirement Association, Dublin.


Brian Lacey, 6 May, ‘Manus Ó Domnaill and the Columban landscapes in Donegal and Derry’, Lives and Afterlives conference, Micheál Ó Cléirigh Institute, UCD.

Brian Lacey, 8-12 June, Guide at various sites in Cos Derry and Donegal, summer outing of the Royal Society of Antiquaries of Ireland, based in Derry.

Brian Lacey, 9 June, ‘Derry and Londonderry – a very historic city’, summer lecture of the Royal Society of Antiquaries of Ireland, Guildhall, Derry.

Brian Lacey, 29 June, ‘Fahan and Carndonagh: two cross-slabs, three Áeds and four clerics’, Conference of Irish Medievalists, Kilkenny.

Brian Lacey, 30 June, after-dinner address at meeting of Heritage Council, Guildhall, Derry.


Brian Lacey, 6 Oct., opening address of Beltany conference, Raphoe, Co. Donegal.

Brian Lacey, 7 Oct., after-dinner address at Beltany conference, Lifford, Co. Donegal.

Brian Lacey, 21 Oct., address at launch of The Cult of Saint Catherine of Alexandria in Ireland by Arthur Spears, Killybegs, Co. Donegal.


Brian Lacey also contributed to a number of programmes on RTE Radio 1 and BBC Radio Ulster and Radio Foyle.

Margaret Murphy, 26 January ‘Ladies, nuns, wives and workers: women in the medieval Irish countryside’. Lecture to the Kilkenny Archaeological and Historical Society, Rothe House, Kilkenny.

Margaret Murphy and Michael Potterton, 19 April, ‘Settlement and society in the hinterland of medieval Dublin’ at the Conference of the Society for Medieval Archaeology, Mullaghmore, Co. Sligo.

Margaret Murphy, 18 June, ‘The role of grain in the medieval diet’ at the Conference of the Agricultural History Society of Ireland, Johnstown Castle, Co Wexford.

Margaret Murphy, 10 July, Organiser and chair of the Discovery Programme sponsored sessions on Town and Country in Medieval Ireland at the 2006 International Medieval Congress, Leeds University, Leeds.

Michael Potterton, 31 March: Co-organiser of seminar (with Christiana Corlett) entitled ‘Settlement in Early Christian Ireland, in light of recent excavations’. At the Helen Roe Theatre, Royal Society of Antiquaries of Ireland, Dublin [16


Michael Potterton, 3 Nov., ‘Tulsk and the late usage of ringforts in Ireland’. At the National University of Ireland, Galway.

Rory McNeary, 1 Feb., led historical walking tour of Enniskillen, Co. Fermanagh, and guided tour en route from Enniskillen to Blacklion, Co. Cavan, for a Cultural heritage workshop organised by the Joining Up Development Programme, Irish Central Border Network (ICBAN).


Brian Shanahan, 12 July, ‘Mapping medieval and early modern rural settlement: resources and methodologies’, Discovery Programme archaeological field school.

Brian Shanahan, 31 Oct., ‘Recent research at Carns, Co. Roscommon’, Department of Archaeology Seminar, University College Galway.


Brian Shanahan, 22 Nov., ‘Reconstructing the framework of late medieval Gaelic lordship in Co. Roscommon’, Sligo B.Sc class.


Brian Shanahan, 30 Nov., ‘The O’Conors of north Roscommon: recent research on the landscape and settlement of a medieval Gaelic lordship’, Trinity College School of History.


Ingelise Stuijts, 3 August 2006, Bog bodies: the perfect victims for environmental research, in-house seminar series (excavation 2006), at Clonalis House, Co. Roscommon.
## Income and Expenditure Account for the year ended 31 December 2006

### Income

<table>
<thead>
<tr>
<th>Description</th>
<th>2006 (€)</th>
<th>2005 (€)</th>
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<tbody>
<tr>
<td>Income - Heritage Council</td>
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<td>Income - European Union</td>
<td>25,283</td>
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<td>Other Income</td>
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<td>Interest receivable</td>
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<td><strong>Total Income</strong></td>
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<td><strong>Total Income Adjusted</strong></td>
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### Expenditure

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<th>2006 (€)</th>
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<td>Promotions and conferences</td>
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<td>Training</td>
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<td><strong>Total Expenditure</strong></td>
<td>(1,511,669)</td>
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**SURPLUS / (DEFICIT) FOR THE YEAR**

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<th>2006 (€)</th>
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<tbody>
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<td><strong>SURPLUS / (DEFICIT) FOR THE YEAR</strong></td>
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<td>OPENING SURPLUS 1 JANUARY</td>
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<td>CLOSING SURPLUS 31 DECEMBER</td>
<td>183,315</td>
<td>87,404</td>
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The financial statements were approved by the board of directors on 25th September 2007 and signed on its behalf by:

[Signature]

[Signature]
**Discovery Programme**

**Balance Sheet as at 31 December 2006**

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2005</th>
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</thead>
<tbody>
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<td><strong>FIXED ASSETS</strong></td>
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<td>Tangible assets</td>
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<td>241,385</td>
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<tr>
<td><strong>CURRENT ASSETS</strong></td>
<td></td>
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<tr>
<td>Stocks</td>
<td>55,207</td>
<td>57,597</td>
</tr>
<tr>
<td>Debtors</td>
<td>88,926</td>
<td>68,256</td>
</tr>
<tr>
<td>Cash at bank and in hand</td>
<td>89,872</td>
<td>95,595</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>234,005</td>
<td>221,448</td>
</tr>
<tr>
<td><strong>CREDITORS (Amounts falling due within one year)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(50,690)</td>
<td>(134,024)</td>
</tr>
<tr>
<td><strong>NET CURRENT ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>183,315</td>
<td>87,424</td>
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<tr>
<td><strong>TOTAL NET ASSETS</strong></td>
<td></td>
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<tr>
<td></td>
<td>443,315</td>
<td>328,809</td>
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<tr>
<td><strong>CAPITAL AND RESERVES</strong></td>
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<td></td>
</tr>
<tr>
<td>Capital Account</td>
<td>260,000</td>
<td>241,405</td>
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<tr>
<td>Income and expenditure account</td>
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<td>87,404</td>
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<tr>
<td><strong>TOTAL CAPITAL EMPLOYED</strong></td>
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<td></td>
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<tr>
<td></td>
<td>443,315</td>
<td>328,809</td>
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