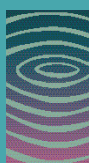# A REVIEW OF
RESEARCH NEEDS
IN
IRISH ARCHAEOLOGY

A Report prepared by The Heritage Council

for the Minister for the Environment, Heritage and Local Government

January 2007

A REVIEW OF RESEARCH NEEDS

IN

IRISH ARCHAEOLOGY

An Chomhairle Oidhreachta — The Heritage Council

Report prepared by

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Cover photos:

*Left: Visitors at the early medieval monastic complex at Skellig Michael
off the Co Kerry coast (I. Doyle)*

*Right: Archaeological excavation of a Mesolithic hunter-gatherer coastal site
at Belderrig, Co.Mayo (G.Warren)*

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CONTEXT

'The development of the knowledge economy is one of the key challenges and opportunities facing Ireland. The factors which contributed to our economic success to date will not be sufficient to achieve this vision. Competition is creating pressure for improvements in efficiency, quality and productivity and a growing need to innovate. These pressures are only going to increase. They are generating the need to take courageous forward looking steps that will achieve real strategic change, show tangible medium term results and shape the future.'
(Strategy for Science, Technology and Innovation 2006-13, 8)

Applying this concept to the Humanities leads to the creation of the knowledge society. In the case of Irish archaeology, there is a need for real strategic change and courageous forward-looking steps.

This report has been produced by the Heritage Council at the invitation of the Minister for the Environment, Heritage and Local Government. The Minister invited Council inter alia to make recommendations to him on research needs in Irish archaeology. Following extensive consultation, this report identifies specific themes as the means by which to prioritise research and address current and relevant research needs. This approach is under-pinned by the wider need to place archaeological research into the context of public access, life-long learning, social inclusion and cultural diversity. If implemented, the recommendations in this report will address the crisis in which Irish archaeology now finds itself.

To implement a National Archaeological Research Programme, public expenditure on archaeological research in Ireland will need to be increased. Current figures available to Council suggest that approximately €30 million per annum is spent on pre-development archaeology by State agencies and the private sector. (It should be noted that this figure includes significant expenditure on ancillary costs such as civil works, fencing, security etc.) Direct State expenditure on archaeological research amounts to circa €2 million per annum. To achieve the full knowledge potential from all archaeological work, a figure of circa €10 million per annum is required. This would be best achieved by earmarking a specific research fund within the National Development Plan 2007-2013.

While there are other mechanisms for providing such funding, the NDP provides an outstanding opportunity to put in place the structure and capacity required if existing shortfalls in archaeological research are to be addressed. Such an approach will provide the opportunity to meet the challenge of translating the current levels of archaeological activity into a greater understanding of Ireland's past as part of the drive to generate new knowledge for economic and social progress.

EXECUTIVE SUMMARY

Introduction

This document is a report to the Minister for the Environment, Heritage and Local Government setting out archaeological research needs. The Heritage Council believes that the approach outlined in this report will meet the challenge of translating the current expenditure in archaeological activity into knowledge about Ireland's past. The National Development Plan provides an important opportunity to improve practice, build research capacity, and facilitate engagement with national programmes such as those envisaged under the Strategy for Science, Technology and Innovation, as well as with the European Commission's 7th Framework Programme (FP7).

Towards a National Archaeological Research Programme

To fully realise the potential of Ireland's archaeological record, and to transform our understanding of how society in Ireland has evolved, a National Archaeological Research Programme is required. Such a programme will provide a sharpened research focus for ongoing archaeological activity, thus fostering greater integration and information-flow within the profession. The main objectives of a National Archaeological Research Programme should be these:

- Ensure that the highest standards of quality are consistently achieved by all forms of archaeological research in Ireland and that the results are disseminated to a wide audience.

- Provide the necessary enabling capacity for archaeological research which leaves a durable impact in the archaeological sector and within Irish society generally.

- Address key issues of strategic and researcher-driven investigation.

- Support sustainable models of best archaeological practice which is linked to knowledge gain.

- Contribute to building and maintaining a knowledge society.

To achieve the full knowledge potential from all archaeological work, circa 10 million per annum is required. It is Council's view that while other mechanisms exist to provide such funding, this would be best achieved by earmarking a specific research fund within the National Development Plan 2007-2013. Indicative costings for this are provided.

Major Research Questions

The Research Framework contained in this report attempts to refocus archaeological research by concentrating capacity on major research questions. These questions have been arrived at by a process of dialogue, and through a consultative forum composed of archaeologists from the academic, State and private sectors. The profession has given strong support to the present report and an earlier consultative version. The structural proposals suggested herein, however, are those of the Heritage Council itself. These are based on Council's own extensive experience in developing pilot projects in a number of relevant areas and its own assessment following the preparation of the report.

To ensure the success of the Research Framework and the ability to carry out thematic research, a series of key research needs, common to all the elements in the programme and in line with the Strategy for Science, Technology and Innovation, needs to be addressed.

Key Research Needs

These include the following:

- Ensure that the highest standards of quality are consistently achieved by all forms of archaeological research in Ireland and that the results are disseminated to a wide audience.

- Establish a competitive and collaborative archaeological research fund.
  This will bring about a transformation in the quality of research undertaken by private enterprise in co-operation with the higher education and State sectors.

- Upgrade the existing state of archaeological excavation archives and storage locations. Ultimately, this will lead to a national archaeological archival facility, including the creation of inter-operable, sustained, online databases of archaeological information in Ireland. This is the key ICT complement to the physical archives and will also add research value to those archives at both national and European level.

- Upgrade resources and facilities for the scientific analysis of archaeological materials and samples available within Ireland.

  This will lead to the development of an archaeological research laboratory which will provide the diagnostic and analytical information required for engaging in research projects dealing with the identification of materials and sources.

- Support continuous professional development programmes such as that of the Institute of Archaeologists of Ireland.

- Review the State's programme of archaeological survey work.

  This will include: assessment of the condition and ongoing management of known visible monuments; a greater integration of information from development-led projects; improved aerial survey and reconnaissance of monuments; and an evaluation of the need for a survey of post 1700 AD monuments which are not included in the statutory Record of Monuments and Places or listed as 'Protected Structures'.

- Increase support for accredited museums in the curation and presentation of the results of archaeological investigations.

- Upgrade existing infrastructural facilities to support research and analysis.

- Develop a Publications Bureau, within an existing institution.

  This will seek to formulate innovative policies and guidelines on dissemination, project management systems, and commissioning strategies.

The Research Framework

The Research Framework is structured under seven themes as summarised below. Taken as a whole, these themes and their associated actions will provide a comprehensive, focused research framework for Ireland's past and the future application of that knowledge. Such a framework should be seen as supporting the 'developer pays' principle as it seeks to disseminate new information by placing the core data derived from pre-development archaeological work into a wider knowledge context.

Archaeological monuments are protected under the National Monuments Acts 1930-2004. The provision of a Research Framework can therefore be seen as a means of upholding existing State policy in relation to the archaeological heritage. Further, it is State policy to preserve archaeological sites intact and in a largely unaltered condition (i.e. preservation in-situ), or alternatively to excavate (i.e. to 'preserve by record', as this practice is increasingly known).

The major research themes have been identified as follows:

- Develop a Publications Bureau, within an existing institution.
- Cultural Identity, Territories and Boundaries
- Resources, Technology and Craft
- Exchange and Trade
- Religion and Ritual
- Environment and Climate Change
- Landscapes and Settlement
- Archaeology and Contemporary Society

Structures for Delivery

It is evident from this study that there is a need to improve levels of co-operation between all sectors of the archaeological community. As recommended here, a national programme offers a real opportunity to overcome existing difficulties, and to develop national capacity and knowledge about our past. Efficient delivery of this programme can be achieved through partnership between existing organisations.

The programme as proposed has three distinct but related structural proposals.

- Administer and manage a strategic collaborative funding mechanism for archaeological research.
- Establish an Archaeological Records Archive.
- Establish a Publications Bureau.

Structural Proposal 1 — Collaborative Funding Mechanism

The Heritage Council should be charged with implementing a strategic collaborative funding mechanism on behalf of the Minister for the Environment, Heritage and Local Government through an invitation tender procedure. Funds would be allocated to joint proposals in a manner similar to the Environmental Research, Technological Development and Innovation (ERTDI) Programme administered by the EPA on behalf of the Department of the Environment, Heritage and Local Government. Agencies and institutions such as the Discovery Programme, the higher education sector, private companies and individuals would compete for research funding under such a programme.

It is envisaged that the administration of this programme would be overseen by a group chaired by Council, with full participation from the Royal Irish Academy and the Department of the Environment, Heritage and Local Government. External and international members could also be appointed to this group. It is the view of Council that the strategic collaborative funding mechanism proposed for archaeological research, together with this delivery mechanism, will ensure cohesion and the establishment of inter-organisational and sectoral synergies.

Structural Proposal 2 — Archaeological Records Archive

The Department of the Environment, Heritage and Local Government should be resourced to develop an Archaeological Records Archive. Arising from the Department's responsibility to license all excavations, this proposal can be seen as completing the circle in this area of activity. As the generators of data, there is a clear need to ensure that the commercial sector of the archaeological profession is fully involved in the development and implementation of this proposal.

Structural Proposal 3 — Publications Bureau

Previous assessments of Irish archaeology have highlighted the need for a Publications Bureau which would tackle the backlog of unpublished excavation reports. This bureau would carry out synthesis work for academic and other professional researchers, but most crucially for educational uses and the general readership.

A focus on the dissemination of backlog material should be a salient feature of the strategic collaborative funding mechanism for archaeological research. Part of the remit of the group (referred to earlier in 'Structural Proposal 1') should relate to this important area, with ring-fenced resources and appropriate protocols and procedures to commission dissemination projects through agencies or bodies which have demonstrated a capacity in this area. Alternatively, an expansion of the role for the Discovery Programme which would act as a Publications Bureau could be envisaged; a dedicated publications section within the DoEHLG might also be established.

Conclusion

A National Archaeological Research Programme based on these themes, and with the proposed structural synergies, would provide the necessary research focus and the enabling capacity which is essential in creating critical mass in research. Most importantly, it would ensure the conversion of the findings of development-led archaeological excavations into knowledge.

The key proposal in this report is the establishment of structures which will secure more active collaboration, partnership and synergy between the major professional sectors: consultancy, State, local government and higher education.

1. INTRODUCTION

In his letter of 31 January 2006, the Minister for the Environment, Heritage and Local Government invited the Heritage Council to report on the research needs of Irish archaeology. He asked the Heritage Council to

'…make recommendations to me on the research needs in the field of Irish archaeology. This is with a view to recommending necessary changes to structures, including funding structures, and formulating proposals for the future management and dissemination of research findings. I am anxious for the Council to identify available synergies and examine the need for an overall national programme, as an input to my determination of an overall strategic plan for archaeological research.'

In response, this document sets out the research needs in the context of a research framework. In doing so, it outlines the mechanisms whereby the recently published National Development Plan could provide an important opportunity for improving practice and building research capacity. Such an approach will allow the profession to meet the challenge of translating the current levels of archaeological activity into knowledge about Ireland's past.

The Research Framework contained in this report will refocus all archaeological activity towards research and knowledge-building by concentrating capacity on major research questions. These questions have been arrived at by a process of extensive dialogue, and through a consultative forum comprised of archaeologists from the academic community, and State and private sectors.

It is envisaged that the Research Framework presented here will provide the template by which key research needs in Irish archaeology will be addressed and reviewed over time.

1.2   Work to Date

The Heritage Council engaged with the terms of the Minister's invitation in Spring 2006. To date, this has involved discussion at Council, within Council's Archaeology Committee, and at a specially convened consultative forum (see Appendix 1 for membership). In addition, Council has communicated with senior figures and bodies in the archaeological profession about this process. In July 2006, an interim report was submitted to the Minister for the Environment, Heritage and Local Government.

The interim report was open to a formal period of public consultation over the period of July-September 2006 (see Appendix 2). As a part of this process, the Research Needs Framework was the subject of a presentation by the Heritage Council's Chief Executive at a Royal Irish Academy Forum entitled Archaeology: A Vision for the Future on 14-15 September 2006.

1.3   Understanding the Archaeological Resource

Ireland possesses a remarkable archaeological record. Traditionally, this was seen as field monuments, built heritage and archaeological objects that are often accompanied by outstanding documentary and folklore sources. Additionally, our peat bogs contain an enviable record of palaeo-environmental history, tracing past vegetational and climatic change.

Now, however, the character of Ireland's archaeological heritage is understood to include an even greater number and variety of monuments. Many survive without any surface expression or visibility and have been levelled by past human activity or natural weathering. Such monuments are generally only visible through the results of aerial photography, through geophysical survey, or when the topsoil is removed in advance of development. These 'hidden' monuments form a major new resource of information. Despite important work by antiquarians and archaeologists — and prior to modern

archaeological practice and State regulation — road, rail and other developments in the 19th and early 20th centuries produced an array of un-provenanced and poorly understood archaeological finds and evidence for human habitation. In the past 20 years, with development and construction activity on an unprecedented scale, the range of well-documented archaeological discoveries can be seen as a unique opportunity to make good the losses of information over the preceding two centuries. We now have a unique opportunity to translate that information into knowledge and understanding of Ireland's past.

1.4 Archaeological Structure

In the past, the focus of Irish archaeology was on research in universities and the State sector. At present, the profession is dominated by a private sector that has developed over the last 20 years, with particularly rapid expansion in the last decade (Figure 1). Private-sector archaeology is engaged in a range of services (both consulting and contracting) which they provide to the development and construction sectors. As identified in the recently published Archaeology 2020: Repositioning Irish Archaeology in the Knowledge Society (2006), the rate of archaeological excavation as part of pre-development works is at a significant scale. In relation to pre-development archaeology in particular, information about new and sometimes exciting discoveries is not made available to the public. Thus investment in archaeology does not achieve a knowledge or research return equating with the time, effort or resources invested. There have, however, been notable examples in the publication of large development-led projects.

Research activity in the universities and research institutions has continued. While there have been some notable successes, this has not kept pace with the findings that continue to emerge from pre-development excavations. It is further notable that the costs of carrying out research and fieldwork have increased dramatically in recent years, while funding sources have remained static to a large extent.

In many respects, the current situation is the result of the major development-driven expansion of Irish archaeology since the 1980s. This growth meant that those State bodies charged with the administration of archaeology were no longer capable of servicing the levels of fieldwork, recording and excavation required by relevant legislation and the development of infrastructure and general construction. As a consequence, a commercial archaeological private sector came into existence to mitigate impacts upon the historic environment. This significant structural shift, coupled with the richness of the Irish archaeological record — and fuelled by the current boom in development — has resulted in a wealth of information. Unfortunately, this information remains largely untapped in terms of its implications for transforming our understanding of Ireland's past.
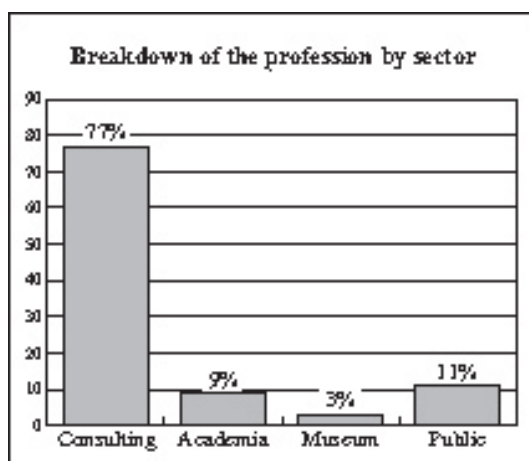

Figure 1: The percentage of archaeologists working in different sectors of the profession. Based on a survey of archaeologists carried out in 2001 by CHL Consulting on behalf of the Heritage Council and the Institute of Archaeologists of Ireland

In summary, archaeology in Ireland today is greatly fractured, with much of the information gained from current excavations and other work remaining hidden in technical reports. The discipline is failing to maximise the return on the scale of its current activity. In part, this is due to ineffective regulation. But it is also a matter of professional focus — a failure, up to recently, to secure a profession-wide consensus on the major problems that have arisen as a consequence of expansion since the 1980s, and the impact of the largely unchecked, and intellectually marginalised, development of private-sector activity. It is of paramount importance to recognise that the research activity of private-sector archaeologists is a key resource that has to be fully acknowledged and sustained.

Having assessed the situation, this report advocates putting in place a set of measures which will assist in the creation and dissemination of knowledge across all sectors of the profession. The key proposal in this report is the establishment of structures which will secure more active collaboration, partnership and synergy between the major professional sectors: consultancy, State and local government, and higher education.

2. TOWARDS A NATIONAL ARCHAEOLOGICAL RESEARCH PROGRAMME

If the potential of Ireland's archaeological record is to be fully recognised, and if our understanding of how Ireland has evolved is to be transformed, a National Archaeological Research Programme is required. Such a programme will provide a sharpened research focus for ongoing archaeological activity. The need to prioritise research issues in Irish archaeology has been recognised previously, most notably by the Discovery Programme in its Strategies and Questions publication of 1992. However, with the explosion of archaeological activity and information over the past decade, there is now a compelling requirement for a research framework to review and influence archaeological activity.

The main objectives of this programme will facilitate research as follows:

- Ensure that the highest standards of quality are consistently achieved by all forms of archaeological research in Ireland and that the results are disseminated to a wide audience.
- Provide the necessary enabling capacity for archaeological research, with a consequent durable impact in the archaeological sector and within Irish society generally.
- Address key issues of strategic and researcher-driven investigation.
- Support sustainable models of best archaeological practice which are linked to knowledge gain.
- Contribute to building and maintaining a knowledge society.

2.1 Funding the Programme

State agencies and the private sector spend approximately €30 million per annum on pre-development archaeology (a figure which includes significant expenditure on ancillary costs such as civil works, fencing, security etc.). Public expenditure on archaeological research in Ireland currently amounts to approximately €2m per annum. This is divided between the Discovery Programme (funded by the Heritage Council) and further grants given by the Heritage Council, the Royal Irish Academy, and the Irish Research Council for the Humanities and the Social Sciences. To provide the necessary capacity for a National Archaeological Research Programme, the level of public support would need to increase to €10 million per annum. This could be achieved by earmarking a fund within the National Development Plan 2007-2013.

Importantly, the provision of matching NDP funding would encourage participation in EU research programmes such as the European Commission's 7th Framework Programme. This emerging programme focuses on supporting trans-national cooperation, collaborative projects, information technology, and networks in the coordination of national research programmes. The Programme places a strong emphasis on the citizen and on building the knowledge society. Under the recently issued Call for Proposals (22 December 2006), there is significant scope to fund cultural heritage.

In so far as many of the infrastructural projects enabled under the NDP have had an archaeological element, archaeology has been a feature of the National Development Plan 2000-2006. The approach recommended in this document for the NDP 2007-2013 builds upon Council's earlier submission on the NDP and seeks to ensure that future monies spent under a National Archaeological Research Programme are linked to producing knowledge and a public product. Furthermore, it complements relevant recommendations to the NDP from the Council of National Cultural Institutions. It also provides a focus for collaborative, cross-sectoral research programmes as envisaged under the Strategy for Science, Technology and Innovation.

Accordingly, the NDP provides an outstanding opportunity to put in place the structure and capacity to correct existing shortfalls in archaeological research.

2.2   A Research Framework for Irish Archaeology

If a National Archaeological Research Programme is to provide direction and coherency, it requires a framework within which to operate. With this in mind, consideration has been given to establishing priorities and determining what questions need to be addressed in future research. Archaeology 2020 called for the drafting of such an agenda; internationally (for example in the UK and the Netherlands), such research frameworks are considered an integral part of modern-day practice. Having considered the current state of our knowledge, the gaps in that knowledge and the priorities needed to advance our understanding of the past, it is clear that a well-defined research framework will promote and facilitate research by drawing together a broad range of interests and issues.

The Research Framework suggested in this document is the product of a representative consultative forum comprised of a range of archaeologists from the academic community, and the State and private sectors. While the themes identified are considered relevant to today, they will naturally evolve over time. Regular review and evaluation will ensure that the research agenda is dynamic, not static, indicative, not prescriptive, and that it takes account of emerging research.

The Research Framework is predicated upon ensuring that future archaeological activity is informed by key questions. At this point in the 21st century, after almost 80 years of modern archaeological practice, it is appropriate to reflect on where we think we are in terms of our knowledge of Ireland's past. The Research Framework deliberately examines Ireland's past by theme rather than period, thus emphasising its relevance to broader interests beyond the archaeological profession.

The provision of a Research Framework can be seen as a means of upholding existing State policy in relation to Ireland's archaeological heritage. Archaeological sites and monuments are protected under the National Monuments Acts 1930-2004, and it is policy to preserve them intact and in a largely unaltered condition — i.e. preservation in-situ or, where this is not feasible, to excavate, i.e. to 'preserve by record', as this practice is known. The Research Framework should be seen as supporting the 'developer pays' principle. It seeks to place the core data coming from pre-development archaeological work into a wider knowledge context and to disseminate new information. Nonetheless, it should be stressed that the archaeological record is a fragile cultural asset which is studied by a variety of approaches; excavation is just one technique.

3. KEY RESEARCH NEEDS

To ensure the success of the Research Framework and the ability to carry out thematic research, a series of key research needs, common to all the elements in the programme, must be addressed. Many of these needs have been identified as key actions in the National Heritage Plan and accordingly are still government policy.

3.1 Visions and Challenges

These can be considered as follows:

- Increase public participation and enjoyment of Ireland's archaeological heritage.

- Ensure that the highest standards of quality are consistently achieved by all forms of archaeological research in Ireland and that the results are disseminated to a wide audience.

- Emphasise that the appropriate development-related work be undertaken within an agreed research framework.

- Recognise that the publication of results is a key requirement in regulating archaeological work.

- Secure a significant increase in the numbers of people across the profession with advanced qualifications in archaeology (with fieldwork experience and output counting towards an advanced qualification).

These visions and challenges can be accomplished in various ways:

- Promote inter-institutional collaboration.
  This will enable a pooling of expertise, mobility, knowledge transfer, and the best use of physical resources within the State, North-South, and internationally between third-level educational institutions, State agencies, research bodies and the private sector.

- Encourage archaeologists working in the private sector, the State sector and in third-level institutions to engage with the information accruing from the excavations of the last 20 years. This can be accomplished by providing opportunities to undertake analysis, thereby enhancing the mobility of researchers and developing sustainable career paths for all sectors of the profession.

- Promote inter-disciplinary collaboration involving the wider scientific community and the development of appropriate science-based expertise within the archaeological profession.

- Promote inter-disciplinary collaboration involving cognate Humanities subjects to unlock the potential of Ireland's archaeological record.

- Collaborate in an all-island approach to analysing the past, thereby increasing the range of expertise and knowledge available.

- Support the active engagement of Irish archaeologists, in conjunction with international partners, with European Commission funding schemes such as the 7th Framework Programme.

3.2 Key Research Needs

These are viewed as follows:

- Establish a competitive and collaborative archaeological research fund.
  This will bring about a transformative change in the quality of research undertaken by private enterprise, in co-operation with the higher education and State sectors.

- Upgrade the existing state of archaeological excavation archives and storage locations. Ultimately, this will lead to a national archaeological archival facility, including the creation of inter-operable, sustained, online databases of archaeological information in Ireland. As the ICT key complement to the physical archives, it will also add research value to those archives at both national and European levels.

- Upgrade resources and facilities for scientific analysis of archaeological materials and samples available within Ireland.
  This will lead to the development of an archaeological research laboratory which provides diagnostic and analytical information, and engages in research into the identification of materials and sources.

- Ensure the ongoing development of continuous professional development programmes such as that of the Institute of Archaeologists of Ireland.

- Review the State's programme of archaeological survey work.
  This will include: assessment of the condition and ongoing management of known visible monuments; the greater integration of information from development-led projects; the need for improved aerial survey and reconnaissance of monuments; and an evaluation of the need for a survey of post 1700 AD monuments which are not included in the statutory Record of Monuments and Places or listed as 'Protected Structures'.

- Increase support for accredited museums in the curation and presentation of the results of archaeological investigations.

- Upgrade existing infrastructural facilities to support research and analysis.

- Develop a dedicated Publications Bureau, within an existing institution, which will seek to develop innovative policies and guidelines on dissemination, project management systems, and commissioning strategies.

4. RESEARCH THEMES

The Research Framework is structured under the following seven themes:

- Cultural Identity, Territory and Boundaries

- Resources, Technology and Craft

- Exchange and Trade

- Religion and Ritual

- Environment and Climate Change

- Landscapes and Settlement

- Archaeology and Contemporary Society

Each theme is presented below, with its key issues in italics. This is followed by an explanatory text, after which a series of bullet points indicates the key research questions in this area. Although outlined as separate themes, there are clear complementarities and overlaps in the content and the key research questions. Taken as a whole, these themes and the associated actions will provide a comprehensive, focused research framework for Ireland's past.

4.1 Cultural Identity, Territory and Boundaries

The physical territories which peoples defined on the island of Ireland, from the most local of landscapes to greater political entities, were integral to their sense of social and cultural identity. The main research priorities in this area are: to examine cultural identity, define territorial units, and frame the study of human settlement within those units; to determine relationships between territories, boundaries, settlements, and natural and created route-ways; and to examine what archaeology can reveal about previous phases of population movements such as migration, invasion and colonisation. As part of this, it is important to examine the physical remains, causes and effects of conflict arising from territorial and cultural disputes.

It is becoming possible to archaeologically define territories and their boundaries during the major periods of our past based on field survey, material culture and documentary evidence. Such territories ranged from the most local of landscapes to greater political entities, and their boundaries frequently altered through time. In order to give meaning to the archaeology of human settlement, it needs to be explored within relevant geographies such as bounded landscapes, known tribal areas, lordships and landholdings. The relationships between territory and settlements, boundaries and route-ways also need to be explored. In addition, it is important to question the kind of cultural identities that corresponded with such territorial units and to perceive evidence of inter-territorial and cultural conflict through systematic research on weaponry, physical defences, boundaries, routes, resources, population movement, and border control.

On a larger scale, archaeology has the potential to examine the influence of the sea on the cultural identities, settlement, social organisation and economies of coastal peoples on this island. It can also advance an understanding of how the island nature of Ireland influenced both interaction and isolation in its relations with Britain, the European mainland and the Atlantic world.

Some of the key research questions are:

- How can we archaeologically define territories through an exploration of boundaries, borders, monuments and route-ways to examine how they framed human settlement and cultural identity?

- How can we identify sources of territorial and cultural conflict among peoples by examining defences, route-ways and borders and by seeking to understand weaponry in a social context?

- How can detailed studies of coastal communities contribute to our understanding of the influence of the sea on settlement and cultural identities?

- How can we determine, through archaeological research or through collaboration with cognate disciplines, the character of population mobility and migration?

4.2 Resources, Technology and Craft

There is a continuing relationship between the people who first occupied the island of Ireland in the 8th millennium BC and those of the present day which can be traced through the continuing search for sources of sustenance and raw materials for production. This search for resources provides a link through past millennia to the modern era and resonates with the world's current preoccupation with oil and other vital commodities. There is a need to explain what resources were used, how they were used, what social, religious or cultural meaning was invested in them, and how this changed through time.

Procurement, exploitation, supply and consumption of natural resources have been essential components of daily life at all periods of our history. These fundamental activities provide us with a potent means of connection to the past. The survival of the first settlers depended on the certainty of sustainable food sources, while the basic need for shelter required access to suitable raw materials and the supply of lithic resources for tool-making.

The development of all crafts and trades — from agricultural pursuits, domestic and manufacturing activities such as stone working, woodworking, leather and textiles from animal and plant sources, ceramics and metalworking — requires the availability of and access to resources, the development of technical skills, and continuous innovation and technological development from earliest times until the modern industrial age.

By its very nature, research which is based around the theme of Resources, Technology and Craft has to be inter/multi-disciplinary. It is dependent for its success on the application of scientific techniques and methodologies to archaeological data. Examples which demonstrate the value of this approach include studies on the early copper mines in the southwest of Ireland, the Irish Stone Axe Project, and the work of the Prehistoric Gold Research Group. All of these have contributed to a better understanding of the procurement and consumption of essential raw materials.

Some of the key research questions are:

- How can we assess the range and relative importance of resources that were utilised at specific times in the past?

- How can we best exploit the recent explosion of information about craft production, thus providing a better understanding of the procurement, processing and use of essential resources in past societies?

- How do we investigate the cultural meaning invested in objects by past societies and examine the social standing of craftspeople and tradespeople?

- What can we learn about social organisation from the study of craft production sites and industrial production complexes?

4.3 Exchange and Trade

Exchange and trade embody many different aspects of social and economic activity. These include gift-giving, gift exchange, market-orientated and coin-based trade which operated within shifting socio-economic and ideological contexts, and on varying geographical scales throughout the prehistoric and historic periods. Exchange and trade have impacted on, transformed and have been integral to the development of society in Ireland. There is a need to establish more precisely what moved, why it moved, how it moved, where it moved to and how far it moved.

In focusing on the local, regional, national and international movement of people, objects and resources, exchange and trade is an area of research that spans the Stone Age to the present. Research here will contribute to an integrated understanding of the socio-economic and cultural context of 'movement'. It will deal with mobility, technology, communication and settlement within past societies, along with its relevance to contemporary society. Today's prevailing form of currency-based trade was preceded by gift-giving, raiding and early forms of coin-based trade, all of which were conducted within well-defined social relationships.

Future research in this area must analyse and evaluate the material evidence for the movement of people, objects and resources at various geographical and chronological scales. It will also provide a critical evaluation of the changing physical and social mechanisms by which exchange and trade were accomplished. There is an important opportunity here to make connections and establish projects between the academic and pre-development archaeological sectors. The effective utilisation of scientific techniques such as geo-chemical and residue analysis, Scanning Electron Microscopy (SEM) and DNA analysis would greatly advance archaeological interpretation. Multi-disciplinary collaborative research projects and partnerships between institutions, researchers, the pre-development sector and funding agencies should be developed.

Some of the key research questions are:

- Can we examine the diagnostic elements of material culture from past periods with a view to determining their sources, production techniques, movement mechanisms and social significance?

- Can we explore the geographical, social and economic contexts of exchange and trade, with a particular focus on production, gift-giving and territorial development of trading networks?

- Can an investigation of the maritime archaeological evidence provide a basis for understanding the role of the Atlantic seaways in long-distance exchange and trade from prehistory to the present?

4.4   Religion and Ritual

Religion and ritual have been central to human development. In Ireland, we have extensive archaeological evidence of religious and ritual activity dating to c. 8000 BC. We also have extensive literary sources for the historic period which can be unlocked through various cognate disciplines. The key objectives in this theme are to understand the changing nature of religious and spiritual beliefs through time, how this is archaeologically evident, and how this corresponds with wider European patterns of social and ritual archaeological activity.

Throughout the past and into the present, human behaviour has been underpinned by religious beliefs and activities. Archaeology is now beginning to develop interpretative frameworks for understanding the evidence for ritual activity. Given the richness of the material and the presence of documentary sources and folklore, the Irish archaeological record is well suited to such analysis. However, we have limited knowledge of the spiritual beliefs of the earliest settlers in Ireland, and despite much previous work, we require greater analysis of megalithic tombs and related ritual monuments of the Neolithic and Early Bronze Age periods. While many sites seem to show 'continuity', or at least 're-use', from prehistoric into later times, it is unclear whether this represents unbroken belief systems or the advantageous adoption and appropriation of special sites. What is becoming obvious from all periods of our past is that daily domestic activities and spiritual beliefs were inseparable and that domestic activities were clearly influenced by spiritual concerns and rules.

The background to the introduction of Christianity to Ireland is an area requiring further attention. The analysis and excavation of cemeteries from this and other periods can make an enormous contribution to population studies, social organisation and an understanding of the treatment of the dead. Within the context of Christian beliefs, we need to examine the nature of kingship and associated 'inauguration' sites as well as the provision of pastoral care. Pilgrimage routes and the archaeology of the Reformation and Penal periods are areas of significant research potential.

Some of the key research questions are:

- How do archaeological sites that show long-term ritual continuity contribute to our understanding of religious beliefs?

- How can the combined study of ceremonial deposition of objects and monument distribution add to our knowledge of ritual and religion in later prehistory?

- How does the archaeological evidence inform our understanding of the introduction of Christianity into Ireland and its development during the medieval period?

4.5   Environment and Climate Change

Ireland is uniquely endowed in a European context with peat, lake and other palaeo-environmental deposits spanning the entire period of human occupation of the island. These contain important palaeo-environmental indicators and comprise important records of past environmental and climatic change that provide us with

a setting for the development of human society in Ireland. A need to understand how past climate and environmental change affected human society in Ireland is not only crucial to an understanding of our current landscape and natural resources, but also to its management and survival for future generations.

In a European context, Ireland has the potential to provide data which will allow us to understand key periods of climatic and environmental change and their associated impacts on past society. However, we are only beginning to exploit this important resource through studies of pollen, plant macrofossils, bog oaks, insects and other animal remains, as well as airborne inclusions such as tephra, cosmic dust and sedimentary and chemical particles. For instance, we know very little about the earliest phases of landscape development, and our information on later periods is at best patchy. The impact of important periods of climatic change (e.g. the Post-Glacial Climatic Optimum and the Little Ice Age) on society would have been profound, not only in Ireland but throughout the North Atlantic region.

On a national scale, we know very little about regional variations in palaeo-environmental change that may have occasioned regionalised differences in the archaeological record. Other issues that require research include questions regarding changing levels of human population, past standards of health, and the issue of past human migrations. The level of forest destruction and management, areas and crops under cultivation, and the use of natural resources need to be understood within the context of human behaviour. Similarly, the level of human interaction with ecosystems such as forests, wetlands, lakes, coastal and marginal upland areas, as well as the agricultural landscape, needs to be understood. To facilitate this work, we need to refine our environmental and archaeological chronologies, using the latest scientific technologies available.

Some of the key research questions are:

- Can we establish whether there is a relationship between past climatic/environmental change and significant cultural changes as reflected in the palaeo-environmental and archaeological records in Ireland?

- To what degree have climate and the environment impacted on the development of the cultural/ historic landscape and vice versa? What inferences can we make from the palaeo-environmental record about demographic patterns, densities and health?

- How can we improve the chronological correlation of archaeological and palaeo-environmental records so that we may correlate the two at a comparable time resolution?

4.6 Landscapes and Settlement

The whole landscape bears an imprint of human activity over the past 10,000 years. Our landscapes and urban streetscapes are a product of long-term interactions between people, plants, animals and the physical environment. Key issues involve understanding the historical processes and contexts of these interactions, why sudden changes take place, why there are persistent places and points of long-term continuity of activity and settlement. Understanding this will enable us to grasp the historical significance and impact of the rapid changes taking place in Irish society and settlement today on the landscape.

Since the beginnings of human settlement in Ireland, people have been living in and interacting with a very distinctive island landscape and ecology. Ireland's accessibility from areas of known human settlement over the last 50,000 years should make us aware of the possibility of very early settlement, earlier than the current known beginning of settlement around 8000 BC. Recent archaeological work demonstrates considerable complexity in the settlement record for particular periods. What has probably achieved most international attention in this regard is the settlement evidence of the Neolithic period, but the observation holds true for other prehistoric periods, notably the Bronze Age, and for the historic period. Particularly striking has been the discovery of relict landscapes, where new settlement evidence has the potential to overturn long accepted views, including ideas about

the origins of urbanism in Ireland. Equally, urban archaeology in Ireland possesses huge potential to elaborate on life in villages, towns and cities and how such settlements interacted with the rural hinterland and the environment.

Without doubt, agriculture was one of the long-term drivers of change and stability in the Irish cultural landscape, but we still know surprisingly little about its history. When and why key innovations were introduced and the context of the background of agriculture in the modern period is poorly understood. It is often assumed that the origin of the modern landscape owes its establishment to the enclosure and landscape alteration of the late 17th and particularly the 18th century. However, the evidence emerging from recent archaeological research suggests a much more complex picture and points to considerable continuity from at least the medieval period, if not earlier times. Also, we need to recognise that not all people derived their food and livelihood from farming. For example, maritime traditions and economies have been little explored by archaeology. One of the other areas which is insufficiently understood is the changing character and extent of woodlands at different times in the past. These contain vital clues to landscape history and human impacts as woodlands were exploited, managed and perceived as key industrial resources particularly in the medieval and post-medieval periods.

Some of the key research questions are:

- When was Ireland first occupied, and how do we identify the earliest phase of human settlement?

- What is the background to the introduction of agriculture? What was the character and impact of the prehistoric and historic agricultural economy, and how has this affected the form and organisation of the landscape?

- How can we track the emergence and long-term development of urban settlement in Ireland, the relationship of urban centres to their rural hinterlands, and the relationship to European urban development?

4.7   Archaeology and Contemporary Society

As a part of the national heritage and due to the State support of archaeology as an essential element of that heritage, the citizen remains a vital stakeholder in Irish archaeology. Through national and local museums, popular and academic archaeological publications, local amateur societies, classroom activities, summer schools, visits to State historic properties, public conferences and project-based outreach, as well as local discoveries, communities all over Ireland engage with Ireland's rich past and show an increasing interest in that past. Important issues include increasing the involvement of the public in archaeological research, the public's perceptions and requirements, and developing the concept of Public Archaeology in Ireland. Dissemination of archaeological research through a variety of media to a wider audience must be considered a key priority to be ring-fenced in any potential research strategy. As well as research into public engagement with heritage, and the position of heritage in informing a unique sense of place for Irish citizens, there is a need for policy-orientated research into the care and management of the archaeological resource. This is of paramount importance and can provide the research base required to guide policy formation in relation to the protection, custodianship, duty of care and conservation of Ireland's rich archaeological heritage.

Greater public involvement and participation in archaeology can potentially be one of the more significant developments for the discipline in Ireland over the coming years. While such a change can provide an increased audience for information, it can also influence how archaeologists think and conduct projects by involving the community as stakeholders. Archaeology's potential for creating a local identity, a sense of place, and a notion of the depth of time and the scale of human experience in a given area is considerable. Given the changes in Irish society in recent years and the predictions for increased change in years to come, the resonances in the archaeological record about migration,

multi-ethnicity, foreign contact and identity are likely to be important themes that can be developed and communicated.

With the present pace and scale of economic developments and their associated social changes, the immediate years ahead constitute a high-risk period for Ireland's archaeological heritage. Without understanding the nature, wealth and significance of the resource, archaeological heritage is very vulnerable. Some of the chief pressures impacting on archaeological monuments, features and landscapes will include unprecedented economic and social development pressure in urban and rural areas, peri-urban areas, and coastal and amenity areas. There will also be significant changes in agriculture and farming practices, such as the withdrawal of farming from less productive areas and the amalgamation of smaller farms into larger units as part of increased intensification in more productive farming areas.

Additional questions to be addressed in this area might include the consideration of archaeology as a constantly renewing resource, how archaeology is best managed with reference to environmental governance, and how the built heritage is used to underpin current identities within society.

To meet these needs, priority needs to be given to the following strategic topics:

- How do we best communicate the results of Ireland's 'archaeological revolution' to the citizen by means such as television programmes, internet resources, exhibitions, greater public access to excavations and fieldwork projects, and a greater 'outreach' on the part of the profession?

- How does the media communicate archaeology, how does the public view archaeology, and how can the citizen and tourist become more involved in Irish archaeology?

- How can Ireland's archaeological resources be managed to ensure their continued survival for the quality of life, information, interest and enjoyment of future generations?

5. OBJECTIVES AND PRIORITIES OF THE PROGRAMME

Archaeological projects collect specified data within a defined time and at a defined cost. The justification and research context must be clearly set out. The product should be the publication and dissemination of results which clearly demonstrate the research value of the data collected to a wide audience. The product should also see the creation of an archive deposited in a location which facilitates appropriate and continuing curation and legitimate access.

The following are the main objectives of a National Archaeological Research Programme:

- Ensure that the highest standards of quality are consistently achieved by all forms of archaeological research in Ireland and that the results are disseminated to a wide audience.

- Provide the necessary enabling capacity for archaeological research, leaving a durable impact in the archaeological sector and within Irish society generally.

- Address key issues of strategic and researcher-driven investigation.

- Support sustainable models of best archaeological practice linked to knowledge gain.

- Contribute to building and maintaining a knowledge society.

5.1 Priorities of the Programme

With a view to meeting these objectives, the main phases in an archaeological project and their associated indicative allocations are presented in Table 1.

Planning		Process				Product		
De-sign/	Ca-pa-bil-ity				In-nova-tive Tech-nolo-gies	Ar-		Dis-semi-nation
5%	5%							
					10%			
								20%
								50%

Table 1: Breakdown of project phases and associated indicative allocation

Table 1 places the greatest emphasis upon the Product element of any research project. This may be in the form of an archive, or the curation and safeguarding of a monument or artefacts, or the dissemination of publicly accessible knowledge, e.g. a book or web resource.

An initial indicative resource allocation is provided as a percentage at each phase and stage. These indications reflect where the greatest emphasis is needed. It is argued that dissemination requires more attention than perhaps accorded traditionally. Moreover, such an indicative allocation reflects the need for capital expenditure and infrastructural development and upgrading, particularly in terms of Capability, Analysis, Archives and Curation.

The sub-division of the project phases — Planning, Process and Production — are described below.

5.2 Planning Phase

Design/Methodology
This refers to the research questions which are relevant to a given project, based on either an existing research framework or researcher driven. Resource allocation for this area could be used to cover feasibility planning, consultation and partnership formation.

Capability

This includes items such as training, continuous professional development, advanced degree funding, post-doctoral collaborative projects, mobility, knowledge transfer and infrastructural upgrading.

5.3 Process Phase

Collection
This category includes activities such as data collection, synthesis and management, methodological innovation, and closing gaps in knowledge using collaborative linkages and structures.

Analysis

This critical stage can include post-excavation work, analyses of environmental data, scientific materials analyses and overall synthesis. Such a phase may require infrastructural upgrading.

Quality

Quality control and assurance will become more important with the adoption of a National Research Framework. This will be reflected in greater regulation, editorial and peer review, and stringent quality control management.

Innovative Technology

The use of innovative and new technologies, as well as research to develop such technologies, will be crucial for a National Research Strategy. The use of information technologies which link digital data sources and provide greater access to data for researchers and the public is vital. It provides a key input not just in national terms but as a contribution to the European Research Area.

5.4 Product Phase

Archives

The archive (the preserved 'record'), including the primary paper, drawn, photographic and digital elements, is the major resource deriving from archaeological excavation and survey. Such archival material provides the evidence base for the research and analysis of Ireland's archaeological heritage. Future publication of the results of excavations cannot be undertaken if the primary archives are not available. There is a compelling case for providing secure facilities, with consistent guidelines for deposition, access and storage to safeguard the results of fieldwork and excavation. Archive deposition in a specific format is a strategic requirement of any quality control or regulatory system. Clearly infrastructural development is required here to preserve archives and ensure that the current phase of archaeological activity is not seen by future generations as injurious to Ireland's heritage.

Curation

The curation and storage of excavation material in a designated museum or repository is a key requirement for the future development of Irish archaeology. It is clear that there is a compelling need for a strategy involving the County Museums and the National Museum of Ireland, including the possibility of setting up a dedicated repository for archaeological finds. There is also a compelling case for providing secure facilities, with consistent guidelines for deposition, access and storage to safeguard the results of fieldwork and excavation.

Dissemination

Any research programme will ultimately be judged on the research output, or product, and on the range of audiences it engages. Accordingly, this section of Table 1 is given the highest value.

6. STRUCTURES FOR DELIVERY

Securing agreement on the establishment of a research programme is just one element of this report. The following paragraphs deal with those structures which can deliver this programme through partnership between existing organisations.

It is evident from this study that there is a need to improve levels of co-operation among all sectors

of the archaeological community. Putting the national programme in place as recommended offers a real opportunity to overcome existing difficulties, develop national capacity and increase knowledge about our past.

It is the Heritage Council's view that there is a willingness among all those involved to identify ways in which they can collaborate to deliver such a programme. As part of this process, the consultation exercise identified a very high level of support for the initiatives implemented to date by the Heritage Council in respect of the Unpublished Excavations Scheme. Further support was also voiced for Council's archaeological research through its grants programmes and the work of the Discovery Programme.

The recommended programme has the following distinct but related structural proposals.

- Structural Proposal 1: administration and management of a strategic collaborative funding mechanism for archaeological research

- Structural Proposal 2: the establishment of an archaeological archive

- Structural Proposal 3: the establishment of a publications bureau

6.1   Structural Proposal 1 — Collaborative Funding Mechanism

Evidence from the consultative phase undertaken in compiling this report, along with that arising from discussion during the recent Royal Irish Academy forum Archaeology: A Vision for the Future, suggests a high level of support for the detailed involvement of the Heritage Council in delivering such a programme.

Charging the Heritage Council with the implementation of a strategic collaborative funding mechanism on behalf of the Minister for the Environment, Heritage and Local Government through an invitation tender procedure is seen as building on that support. Funds would be allocated to joint proposals in a manner similar to the Environmental Research, Technological Development and Innovation (ERTDI) Programme administered by the EPA on behalf of the Department of the Environment, Heritage and Local Government. Agencies and institutions such as the Discovery Programme, the higher education sector, private companies and individuals would collaborate in research partnerships to compete for research funding under such a programme.

The Heritage Council has an established record in grants administration and management. In 2006, Council allocated approximately 15m to a range of projects, organisations and individuals. Council also has recognised reputation in administering funds in a very cost-effective manner.

It is envisaged that the administration of a strategic collaborative funding mechanism for archaeological research would be overseen by a group chaired by Council and with full representation from the Royal Irish Academy and the Department of the Environment, Heritage and Local Government. External and international members could also be appointed to this group. It is the view of Council that the strategic collaborative funding mechanism proposed for archaeological research will ensure cohesion and the establishment of inter-organisational and sectoral synergies.

6.2   Structural Proposal 2 — Archaeological Archive

The case for an archaeological archive has been identified as a key research need. Compiled as part of the process of archaeological excavation, an excavation archive consists of drawn, written, photographic and digital data which contributes to and informs the writing of a report submitted as part of the licensing requirement (although it should be noted that survey will also generate important archives). While the report submitted in respect of the excavation licence has an inherent value, the archive

constitutes an important resource for the interpretation, analysis and synthesising of excavation data. At present, there are no consistent guidelines for the compilation of archaeological archives in Ireland, and there is no policy for the deposition or storage of archaeological archives. However, the growing body of international best practice on this subject will form an important background resource to assist the implementation of this proposal. This includes the guidelines recently formulated for the UK entitled Archaeological Archives: standards for creation, preparation, transfer and curation.

The Department of the Environment, Heritage and Local Government should be fully resourced to develop an archaeological records archive. As the commercial sector is the main generator of data, there is a clear need to ensure their involvement in the development and implementation of this proposal. Arising from the Department's responsibility to license all excavations, this proposal can be considered as completing the circle in this area of activity.

Each archive is generated as a response to an excavation licence, issued by the Department of the Environment, Heritage and Local Government, and following consultation with the National Museum of Ireland. It therefore seems entirely appropriate and logical that the Department should be resourced to set in motion a process leading to the establishment of a national archiving facility for archaeological records, in particular excavation records.

6.3   Structural Proposal 3 — Publications Bureau

Previous assessments of Irish archaeology have highlighted the need for a Publications Bureau to tackle the backlog of unpublished excavation reports. This requirement was raised in the Heritage Council's Unpublished Excavations Survey 1930-1997, and in the recently published Archaeology 2020 report. Under such proposals, this bureau would carry out synthesis work not only for academic and other professional researchers but also — and equally importantly — for general readership and educational purposes.

Some important work has been done in the area of publication, assisted by the Heritage Council's Unpublished Excavations Scheme and by the ongoing focus on publication maintained by the Royal Irish Academy Committee on Archaeology. There have been notable successes in dissemination, such as the appearance of the Department of the Environment, Heritage and Local Government's monograph series (Roscrea Castle, Co Tipperary; St Audoen's Church in Dublin City; and Kells Priory, Co Kilkenny), and the increasing output by the archaeologists of the National Roads Authority. There have also been a small number of dissemination initiatives from private sector pre-development archaeologists.

It is proposed that a focus on the dissemination of backlog material should be a salient feature of the strategic collaborative funding mechanism for archaeological research. Part of the remit of the group which administers the strategic collaborative funding mechanism (referred to in Structural Proposal 1) should relate to this important area, with ring-fenced resources and appropriate protocols and procedures to commission dissemination projects through agencies or bodies which have demonstrated a capacity in this area. Alternatively, other approaches to the setting up of a Publications Bureau could be envisaged, such as an expanded role for the Discovery Programme in this area or a dedicated publications section in the DoEHLG.

7.   EXPENDITURE

Experience in the agricultural sector through the Food Institutional Research Measure (FIRM), and in the environmental sector through the Environmental Research, Technological Development and Innovation (ERTDI) Programme[1] indicates that the collaborative funding mechanism proposed in this report ensures best value for research spend, the avoidance of duplication, and the promotion of inter-organisational and sectoral synergies.

Provisional indicative expenditure (Table 2) sets out the balance of allocation in terms of research funding and necessary infrastructural developments for the initial three years of a National Archaeological Research Programme. Further to this, it should be noted that provision should be made for a researcher-driven approach from applicants. The overall research programme framework should be seen as indicating research priorities and themes rather than being overly prescriptive. Innovation must always be encouraged. The funding proposed under the programme has the potential to lever additional funding abroad, especially as highlighted earlier from the EC's 7th Framework Programme. Under the recently issued Call for Proposals (22 December 2006), there is significant scope to fund cultural heritage.

Under the proposed National Research Fund, several categories of assistance are envisaged.

7.1   Mobility and Feasibility Funding

In line with the collaborative nature of the approach suggested in this report, financial assistance is provided to encourage multi-sectoral dialogue and engagement. In addition, seed funding for partnership formation, pilot studies and feasibility studies should also be envisaged.

7.2   Doctoral and Professional Researchers

This strategic measure will to increase the number of archaeologists with advanced professional degrees, in line with national research policy as articulated in the Strategy for Science, Technology and Innovation. Criteria such as research work being collaborative and derived from pre-development archaeology are envisaged, as well as the option of the research being carried out by the archaeologists directly involved and accredited towards an advanced degree. This would be strongly linked with dissemination.

7.3   Post-doctoral Research

This element of the Programme is aimed at archaeologists beginning an independent research career and can be seen as enabling research career development. Mobility, knowledge transfer and engagement with the varying sectors of the profession, including the commercial sector and other disciplines, are vital in the development of this element of the Programme. It should be emphasised that this and the previous measure are in direct alignment with government policy to increase the numbers and influence of researchers with advanced degrees as set out in the Strategy for Science, Technology and Innovation.

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[1] The Food Institutional Research Measure (FIRM) is operated by the Department of Agriculture and Food, while the Environmental Research, Technological Development and Innovation (ERTDI) Programme is funded by the Department of the Environment, Heritage and Local Government and administered by the Environmental Protection Agency (see relevant web links in References section).

7.4 Research Grants

Apart from developer-funded excavation projects, there is no funding for major archaeological research excavation projects, with very limited funds available for archaeological research generally. The capacity to carry out such programmes must be seen as a key element in a research strategy that seeks to address issues of knowledge return and, ultimately, of public engagement. Critical elements in the success of such projects would be: building research teams; undertaking collaborative, multi-sectoral, multi-disciplinary research; and providing a clear end-product. The teams for such projects could involve doctoral and post-doctoral researchers and professionals on sabbatical leave and could be fully integrated with work in the commercial and State sectors.

A series of small research grants should be a feature of the Programme. The combined experience of the Heritage Council and the Royal Irish Academy Committee for Archaeology ensures that a good research return can be achieved with such funding.

It is envisaged that all sectors of the profession would be eligible for such grants, which would also allow for infrastructural spending. Proposals from existing archaeological practices and individuals to resolve the current publications backlog should also be considered under this heading, subject to appropriate design, collaboration and product.

7.5 Infrastructure

Elements of spending include provision for a National Archaeological Archive, the upgrading of existing facilities such as laboratory facilities and materials analysis, and the proposal to establish a Publications Bureau. As stated above, the need for a national archive for archaeological records, particularly excavation records, is a key priority. The running costs for such an archival centre are based upon the Heritage Council's experience in the set-up of the Biological Records Centre (National Biodiversity Data Centre) which is comparable in terms of role and function.

Research spending €	Year 1: 2008	Year 2: 2009	Year 3: 2010
Research spending	3,700,000	6,600,000	7,225,000
Archaeological Archive: running costs	500,000	500,000	500,000
Publications bureau	500,000	500,000	500,000
Infrastructure Investment:			
National Archive	3,000,000	1,500,000	1,000,000
Upgrade of existing facilities	1,500,000	1,500,000	1,500,000
Total spend	**9,200,000**	**10,600,000**	**10,725,000**

Table 2: Indicative costings for a National Archaeological Research Programme

8. CONCLUSIONS

A National Archaeological Research Programme, with an annual budget of circa €10 million and which is concentrated on the priorities set out in this report, would provide the necessary research focus and enabling capacity identified in the recently published Archaeology 2020 Foresight Study. This will be essential in creating critical mass in research and in converting the findings of past and future development-led archaeological excavations into knowledge for the benefit of Irish society.

A focused and adequately resourced National Archaeological Research Programme is critical to creating an innovative research capability in Ireland which is of world-class status and capable of analysing and communicating new findings about Ireland's archaeological past and long historical relationship with Europe and our Atlantic neighbours.

A National Archaeological Research Programme with the proposed synergies and structures will endorse and strengthen Ireland's reputation as a major innovator in the heritage area. In addition, it will demonstrate a cogent means by which to address the largely unrealised research potential, and the present largely inadequately presented knowledge which has arisen from the commercialisation of archaeology in Ireland. This is a situation common to many Western European countries during the last 20 years.

This report concludes by affirming the benefits of developing a National Archaeological Research Programme within the context of programmes identified in the National Development Plan 2007-2013. To implement this Programme, public expenditure on archaeological research in Ireland will need to be increased.

The Heritage Council
January 2007

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APPENDIX 1

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APPENDIX 2

The consultation process involved an invitation to 200 bodies/individuals over the period of July-September 2006. The range of those consulted varied from consulting archaeologists, professional bodies, academics at home and abroad, local archaeological/historical societies, public authorities and civil society. Consultees were asked to comment on the consultative document, specifically on the key research needs and themes, and were also asked to comment on the synergies and structures necessary to implement such a programme of research.

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