All over Europe the requirements of economic development are rapidly destroying many archaeological sites – the character of this destructive activity and the solutions adopted vary among different countries. The papers from sixteen countries: Belgium, Czech Republic, England, Estonia, Finland, France, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Poland, Romania, Slovenia and Spain together with the European Association of Archaeologists cover the institutional and legislative background, provide statistical data and information on each country's particular strengths and greatest problems in preventive archaeology, compare theory and practice, and explore forms of existing international cooperation, aspects where European-level cooperative activity is most required. Preventive archaeology is more than development-led archaeology, rescue or salvage excavation – it sees the ideal solution as leaving the archaeological heritage intact. Suggestions and priorities are advanced on where future effort should be concentrated, firmly connected to the Council of Europe's monitoring and observation activities on the European Convention on the Protection of the Archaeological Heritage (Revised) Valletta, 1992.

EUROPEAN PREVENTIVE ARCHAEOLOGY

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PAPERS OF THE EPAC MEETING 2004, VILNIUS

COUNCIL OF EUROPE CONSEIL DE L'EUROPE

European Preventive Archaeology

Papers of the EPAC Meeting, Vilnius 2004

Edited by Katalin Bozóki-Ernyey

National Office of Cultural Heritage, Hungary – Council of Europe

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Contents

The Council of Europe played a pioneering role in the integrated conservation of cultural heritage with the slogan "A Future for our Past". From the late 1960s on, it worked in the specific field of archaeology, opening the European Convention on the Protection of Archaeological Heritage for signature on 6 May 1969. The convention, which was an innovative development in the historic context, stressed that "archaeological heritage is essential to a knowledge of the history of civilisations" and that "while the moral responsibility for protecting the European archaeological heritage, the earliest source of European history, which is seriously threatened with destruction, rests in the first instance with the State directly concerned, it is also the concern of European States jointly".

In the late 1980s, Europe's economic boom and the spread of large-scale infrastructure works in urban and rural environments provided the incentive to put archaeological issues back in the context of integrated strategies for spatial planning and urban development. The Revised Convention, signed in Valletta on 16 January 1992, provides a coherent framework for the development of policies to enhance the archaeological heritage. This convention, which has now been widely ratified, is one of the successes of the Council of Europe's cultural cooperation work.

While many states have effective national systems for managing and protecting archaeological heritage, they rarely have an opportunity to share their experiences. The Vilnius colloquium brought together representatives of 18 countries and two international organisations involved in preventive archaeology. This fruitful meeting enabled them to compare national situations, with their strengths and weaknesses, and discuss what could be improved through a European partnership.

These colloquium proceedings provide an overview of the status of preventive archaeology through the presentations of a wide range of national experts. I am convinced that they will be really worthwhile and informative reading. The work done provides us with an incentive to strengthen European cooperation in this area with the help of the European Heritage Network (the 'Herein' information system – www.european-heritage.coe.int), which is designed to facilitate joint work and the sharing of good practice.

Daniel Thérond
Deputy Director of the Directorate of Culture
and Cultural and Natural Heritage, Council of Europe

Dear Reader! The volume that you hold in your hands contains the papers presented during the EPAC meeting in Vilnius on 16-18 December, 2004. EPAC is the acronym for the European Preventive Archaeology Project, born within the HEREIN, the European Heritage Network of the Council of Europe. EPAC was planned originally to be a three-year project initiated and organized by the National Office of Cultural Heritage (Hungary), supported by the "Culture 2000" programme. Although we were not so successful in our search for resources as we had hoped, thanks to the financial help of the Directorate of Culture and Cultural and Natural Heritage of the Council of Europe and the Academy of Cultural Heritage (Lithuania), an inaugural meeting was held in Vilnius, Lithuania. The organizing bodies of the meeting were the National Office of Cultural Heritage (Hungary), the Academy of Cultural Heritage (Lithuania) and the *Institut National de Recherches Archéologiques Préventives* (France).

The basic idea of the project and the meeting was that all over Europe the requirements of economic development are rapidly wiping out many archaeological sites – the character of this destructive activity and the solutions adopted vary among the different countries of Europe. The enlargement of the European Union and the concomitant policy of support for major infrastructure works are elements that give even greater urgency to the need for preventive action. Preventive archaeology is the means for reconciling contradictory requirements: territorial and economic development on the one hand and preservation of the archaeological heritage on the other.

Originally, eight countries were involved in the EPAC project proposal, but for the Vilnius meeting, to get a better European panorama, professionals from 18 countries were invited. For practical reasons, with two exceptions, one person attended from each country, basically from the archaeological administration sector. There were archaeologists from Belgium, Czech Republic, England, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Norway, Poland, Romania, and Slovenia; Spain was represented in the form of a submitted paper. Representatives of two international professional archaeological organizations also attended: *Europae Archaeologiae Consilium* and the European Association of Archaeologists. The contributors covered the institutional and legislative background of preventive archaeology in their countries, provided statistical data and information on their country's particular strengths and greatest problems, compared theory and practice, and explored existing international cooperation, aspects where European-level cooperative activity is most required.

The title of the meeting itself became a subject of debate, revealing that 'preventive archaeology' as understood in English emphasizes very well the modern principle of heritage protection that is to foresee and avoid destruction rather than undertake excavation (be it rescue or salvage) of archaeological sites in development-led archaeology.

At the end of the meeting, a brain-storming session summarised the most important questions that had arisen during the meeting. The Council of Europe invited the participants to form a Steering Group to discuss and finalise priorities for future action, connected to the Council of Europe's monitoring and observation activities on the European Convention on the Protection of the Archaelogical Heritage (Revised) Valletta, 1992.

In addition to the main topic of the meeting there were additional presentations on the EPAC project, the HEREIN network, and Lithuanian archaeology. Unfortunately, after this enthusiastic and successful beginning the project did not continue. This made it even more important to publish the papers and to at least distribute the information this way for those who will pursue similar objectives in future. The reason for this late publication, three years after the event, was insufficient funding; thanks to a private sponsor we are now able to present it.

As the topic of the meeting is still very alive and real, important changes have taken place in some countries during these three years. Some authors have updated their papers, some have written them afresh and some have added an epilogue. For this reason the date of each paper's completion is given. The papers themselves vary between a report, the original aim of the meeting, and a detailed study, but the differences in style were not considered important beside the main goal: to highlight the main problems and areas of potential. There were a few cases where the lecturers were not able to transform their presentation into a paper, so we are lacking their contributions.

It was a difficult task to homogenize the very different papers; we tried to follow the *English Style Guide. A Handbook for Authors and Translators in the European Commission* by the European Commission Directorate-General for Translation (Fifth Edition 2005, revised August 2006). The legislative texts cited are left without copy editing. This volume was prepared in the space of two months and here I would like to thank to all the authors and collaborators for their quick reactions, support and patience during the intervening years.

Katalin Bozóki-Ernyey, Editor

Preventive Archaeology in Flanders (Belgium)

Luc Van Impe

Archaeological research: a historical outline

In the 19th century after the foundation of the Belgian state in 1830, archaeological research was organised by regional societies and by the larger museums. The latter not only had the intention to set up scientific projects but also aimed at the continuous enlargement of their collections.

1903: The foundation of the *Rijksdienst voor Opgravingen* (State Service for Excavations) as part of the National Museum at Brussels (later: the Royal Museums for Arts and History).

1958: The archaeological service was transformed as a department in the Royal Institute for Artistic Heritage (Dutch: *Koninklijk Instituut voor het Kunstpatrimonium-KIK – French: Institut Royal pour le Patrimoine Artistique-IRPA*).

1963: The archaeological department was transformed into a small independent scientific institute, the National Service for Archaeological Excavations (Dutch: *Nationale Dienst voor Opgravingen-NDO* – French: *Service National des Fouilles-SNF*), which developed archaeological research over the whole territory of Belgium.

Although coincidental finds during building work often led to scientific excavations, real intentional preventive archaeology (in the present meaning of the expression) did not yet exist. The sites investigated were mainly selected following thematic research interests, with excavations mostly taking place in non-threatened locations where fieldwork could be organised without severe time pressure. Besides, access to construction sites was at that time a dangerous undertaking, certainly for archaeologists.

On some occasions, attempts were made to reconcile thematic research and rescue excavations. An example is provided by the many excavations in

churches destroyed or heavily damaged by the Second World War. It was realised that archaeological research should take place before these building were reconstructed or demolished completely.

1989: The National Service for Archaeological Excavations ceased its activities when, as one of the steps in the federalisation process of Belgium, the responsibility for archaeological heritage was transferred to the regions (Flanders, Wallonia and Brussels).

From that time on the federal government has no longer had power over cultural, artistic, and archaeological heritage and monuments.

1991: After a transitional period, in 1991, a new Flemish institute was founded, the Institute for Archaeological Heritage (Dutch: *Instituut voor het Archaeologisch Patrimonium-IAP*). Its tasks comprised:

- compiling an inventory of the archaeological heritage;
- the management of that heritage;
- the authorisation of excavation licences;
- scientific research;
- conservation and documentation;
- logistic support for other archaeological working groups.

Occasionally, the institute was accused of conflict of interest in the process of heritage management and the issuing of excavation licences. More importantly, the practice of the institute's activities demonstrated that, in terms of organisation, heritage management tasks were difficult to reconcile with scientific projects. The latter took most of the time budget away, leaving little space for other tasks.

2003/4: The Flemish Heritage Institute was created. The tasks linked with heritage management, legislation and authorisation were moved from the Institute and transferred to the Monuments and Sites Division (Directorate of Town and Country Planning, Housing and Monuments and Sites, Administration of the Environment and Infrastructure Department) (in existence since 1972). Within this Division the Office for Archaeology takes care of:

- management policy
- legal matters, laws and regulations
- authorisations for excavations
- the protection policy.

The Flemish Institute for Archaeological Heritage underwent a face-lift and was enlarged by the incorporation of a group of specialist researchers in the domains of landscapes, sites and monuments. In this way the Flemish Institute for the Archaeological Heritage was transformed into the Flemish Institute for Immovable Heritage (Dutch: *Vlaams Instituut voor het Onroerend Erfgoed-VIOE*), in English generally cited as the Flemish Heritage Institute.

The Flemish Heritage Institute's tasks cover the whole domain of monuments, landscapes and archaeology. Regarding the latter subject, special attention is paid to:

- constructing an inventory of sites and finds, covering all of Flemish territory
- fieldwork
- the analysis of cultural remains
- environmental archaeology
- conservation of both artefacts and *in situ* structures
- establishing scientific foundation for the management of sites.

Comments on the latter transformation

At first sight, this transformation seemed to be logical, but the management and scientific tasks, despite conflicts regarding the time budget, were so interwoven that the Division and Institute are going through a process of mental and organisational adaptation. Given the fact that a rescue excavation forms the ultimate step in heritage management, it becomes clear that the division of tasks between the Institute and Division has been imposed too drastically. From day-to-day practice, the dichotomy of responsibilities now seems artificial and difficult to realise. Moreover, the Institute is trying to develop a new internal structural homogeneity, needed by the wide variety of research lines stretching from Mesolithic flint concentrations to church organs or historical gardens. This diversity makes an integrated approach rather difficult, although it also presents opportunities. Links can and have been found between heritage values studied through historical archaeology and the observation of still-existing monuments. Below-ground archaeology has been connected with above-ground building history. Landscape studies now benefit from palæo-ecological fieldwork.

Constitutional outline: the Federal State and its Communities and Regions

Belgium is a Federal State with a pyramidal structure:

- At the top level: the Federal State, the Communities, the Regions
- At the second level: the Provinces
- At the bottom: the Communes or Municipalities.

From a legal point of view the Federal State, Communities and Regions are on an equal footing, but they have powers and responsibilities for different fields. After the adoption of different laws on the use of the official languages during the 20th century – Dutch (or Flemish), French and German – State Reform started in 1970 with a wide-ranging reform that was completed provisionally by the adoption of special laws on Institutions' Reform in 1980 and 1988-1989 and finally by the Revision of the Constitution in 1993.

The Communities are based on the concept of 'language' which is 'dependent on the individual' and have powers over culture, education, the use of languages and matters relating to the individual: health policy, assistance to individuals (protection of youth, social welfare, aid to families, immigrant assistance services, etc.) including scientific research in relation to their powers and international relations associated with their powers.

On the other hand, the three Regions – the Flemish Region, the Walloon Region and the Brussels-Capital region – have power over fields that are connected with their region or territory in the widest meaning of the term: the economy, employment, agriculture, water policy, housing, public works, energy, transport (except Belgian Railways), the environment, town and country planning, modernisation of agriculture, nature conservation, credit, foreign trade, supervision of the provinces, communes, and intercommunal utility companies, including scientific research and international relations associated with their powers.

By the Special Law on Institutions Reform from 1988, especially Article 6(1), the regions have power over town and country planning, including care of the monument and landscape heritage.

Geographical outline of Flanders

The geography of Belgium shows three major areas: lower Belgium (up to 100 m above sea level), central Belgium (between 100 and 200 m

Administrative map of Belgium: Flanders lies in the northern, darker, part of the map (National Geographical Institute)

above sea level) and upper Belgium (from 200 to over 500 m above sea level). Flanders is part of Lower Belgium, which begins in the west at the coast, with beaches and dunes that extend in a straight line for 65 km. Inland from the coast lie the 'polders'. This flat and fertile land used to suffer from flooding by the sea in the past but is now totally dry, thanks to the sluices and dikes which protect it from tidal erosion. Between the western polders are the sandy lowlands, covering the so-called Flemish Valley of tertiary origin. To the west and south this sandy region is bordered by rows of hills of tertiary origin. Furthermore, to the south lies the fertile loess region. The eastern part, called the Kempen, is a region with wind-borne sand deposits, which cover a talus of the prehistoric Meuse on the east.

To the west, Flanders is bounded by the North Sea, to the north and east by the Netherlands and to the east by France. Wallonia, i.e., the French speaking part of Belgium, is located in the southern half of the country.

Belgium has three official languages: Dutch (i.e., the same as Flemish), French, and German.

Flanders' Inhabitants: 5 556 000 (2003) (Total for Belgium: 10 356 000)
Flanders' Surface: 13 522 km² (Belgium: 32,545 km²)
Flanders' Population density: 443 per km² (Belgium: 315 per km²)

Number of Archaeologists

Governmental institutions and services:	39
Towns:	9
Provinces:	6.25
Inter-communal services:	14.5
Museums:	14.4
University archaeologists (only working in Flanders):	24
Temporary projects (January, 2005):	12
Private associations and companies:	6

Total 125.15

Average number/habitants: 1 archaeologist per 48,000 inhabitants
Average number/km²: 1 archaeologist per 108 km²

Final Remark

Since the end of 2005 the autor has no longer been directly involved in the ongoing discussions for the implementation of the Valletta Convention and, besides this, the archaeological managment and daily reality of research undergone major changes. Therefore the author decided to withdraw the second part of his outdated paper.

From Planning Application to the Final Report in the Czech Repuplic

Michal Bureš

Legislation concerning the management of the archaeological heritage

Act No. 20/1987 Coll., on the State Care of Monuments[1] is the most important document for archaeological heritage management because it is the only act which is widely used in practise, not only in archaeology but also in public administration. Part three of this act is fully devoted to archaeological excavations and finds. Sections 21(1),(2), 22(1),(2) and 23(1) are crucial, as is outlined in following paragraphs. Several other sections, like Section 14, deal with public administrative procedures concerning archaeological as well as other historical heritage. Sections 35 and 39 define the penalties for different cases of violation of the law concerning archaeological monuments, finds, and excavations.

The European Convention on the Protection of the Archaeological Heritage was ratified in the Czech Republic in the year 2000 and subsequently published in the Collection of International Agreements as Treaty No. 99/2000 Coll.[2] Its significance was raised a year later after the ratification of Act No. 395/2001 Coll.[3] as an amendment of Act No. 1/1993 Coll., Constitution of the Czech Republic[4]. This amendment says that international treaties are an integral part of the legal order of the Czech Republic and in case of discordance with Czech law are superordinated.

Act No. 50/1976 Coll., on Town and Country Planning and Building Regulations[5] deals with archaeology only in Section 127 protecting

[1] Zákon č. 20/1987 Sb. o státní památkové péči
[2] Sbírka mezinárodních smluv č. 99/2000 Úmluva o ochraně archeologického dědictví Evropy
[3] Ústavní zákon č. 395/2001 Sb., kterým se mění ústavní zákon České národní rady č. 1/1993 Sb., Ústava České republiky, ve znění pozdějších předpisů
[4] Ústavní zákon České národní rady č. 1/1993 Sb. Ústava České republiky
[5] Zákon č. 50/1976 Sb. o územním plánování a stavebním řádu (stavební zákon)

archaeological finds found during construction work. It has only a marginal effect in practice.

Act No. 100/2001 Coll., on Environmental Impact Assessment[6] (hereinafter EIA) has great potential in preventive archaeology which has not yet been utilized. Archaeological sites and monuments under threat are pinpointed as an integral part of the EIA documentation at different stages but only a few companies authorized to prepare EIA documentation request an assessment from archaeological experts and consultants. On the contrary, if archaeology appears in EIA documentation it is in a formal and dilettantish way which subsequently can have no impact on practice. The Ministry of the Environment as the civil service supervising body does not express any interest in improvement.

Authority to conduct archaeological excavations

> (1) Archaeological excavations may be carried out by the Archaeological Institute of the Academy of Sciences of the Czech Republic (hereinafter referred to as the Archaeological Institute).
>
> (2) In warranted cases and upon request, the Ministry of Culture may, in agreement with the Academy of Sciences of the Czech Republic, grant permission to carry out archaeological excavations to institutions of tertiary education, if they do so in the realization of their scientific and educational tasks, as well as to museums or other organizations or to an individual, provided that they have the necessary pre-requisites for the professional conduct of archaeological excavations (hereinafter referred to as 'authorized organization'). The authorized organization shall conclude an agreement with the Academy of Sciences of the Czech Republic on the scope and conditions of archaeological excavations in question. (Act No. 20/1987 Coll., on the State Care of Monuments, Section 21)[7]

The structure of Czech archaeology

A number of public and a few private organizations conduct work in the field of archaeology. The public organizations are the following institutions: The Archaeological Institutes of the Academy of Sciences in Prague and Brno, separate and independent institutions; the National Historical Heritage Institute with its regional branches; the National Museum and

[6] Zákon č. 100/2001 Sb. o posuzování vlivů na životní prostředí a o změně některých souvisejících zákonů (zákon o posuzování vlivů na životní prostředí)

[7] Zákon č. 20/1987 Sb. o státní památkové péči (English by www.mkcr.cz) (last visited 20/02/2005) [this website is no longer available (*ed.*)]

66 regional, municipal and local museums; regional archaeological institutes (in 4 regions out of 13); and finally, the universities teaching and practising archaeology in Prague, Brno, Opava, and Pilsen. 95% of archaeologists are employed by public organizations.[8]

Among the private organizations are five public-benefit companies (non-profit organizations) and several commercial companies which, though not authorized to conduct archaeological excavations, work in the field of excavation services, special expertise, consultancy, etc.[9]

The present role of the institutions and their hierarchy

Considering the present role of institutions in Czech archaeology, we can distinguish between a formal and informal hierarchy. In the formal hierarchy the Ministry of Culture issues authorization under the condition of the conclusion of an agreement on the scope and conditions of archaeological research between the Academy of Sciences of the Czech Republic and the authorized organization, upon previous agreement of the Archaeological Institute of the Academy of Sciences. The Archaeological Institute of the Academy of Sciences has a privileged status in all aspects of Czech archaeology based in law. (see Act No. 20/1987 Coll., on the State Care of Monuments, Section 21(1) above)[10]

In the informal hierarchy the institution managing the main information sources holds the leading position in the region. The particular institution differs from region to region. Mostly the dominant position belongs to the regional branches of the National Historical Heritage Institute, sometimes a museum, exceptionally the Archaeological Institute of the Academy of Sciences or a regional archaeological institute.

Excavation of threatened sites: regulations and practice

Legal background

Section 14 of Act No. 20/1987 Coll. defines the formal procedures concerning changes to listed monuments, reservations, zones etc., e.g., listed

[8] Pavlů, J. "Experimentální archeologie a současné trendy universitního studia", *Živá archeologie, (Re) konstrukce a experiment v archeologii 5,* Hradec Králové, 2004, 278-280.

[9] Bureš, M. "Deset let nestátní archeologie v České republice. Vznik, současný stav a možnosti dalšího vývoje", *Sedmdesát neustupných let, Plzeň*, 2003, 49-63.

[10] Zákon č. 20/1987 Sb. o státní památkové péči

archaeological sites and monuments, reservations and zones and archaeological finds which are present within other cultural reservations, zones, etc.:

Restoration in the wider sense of cultural monuments

(1) If the owner of a cultural monument intends to carry out maintenance, repair, reconstruction, restoration or other modifications to a monument or its environment (hereinafter referred to as 'restoration in the wider sense'), he shall request in advance a binding opinion of the local authority of a municipality with extended competence, or in the case of national cultural monuments, the binding opinion of the competent regional authority.
(2) The owner (keeper, user) of an immovable object which is not designated as a cultural monument, but is located in a monument reservation or a monument zone, or in the protective zone of an immovable cultural monument, an immovable national cultural monument, a monument reservation or a monument zone (Section 17) shall obtain from the relevant local authority of a municipality with extended competence, in advance, a binding opinion on any intended construction work, structural change or maintenance work on such property.
(3) The binding opinion under paragraphs 1 and 2 shall state whether the work specified therein is admissible from the viewpoint of the state care of monuments and shall define the basic conditions under which such work may be prepared and carried out. The aforementioned basic conditions shall be defined with respect to the current state of knowledge of the cultural and historical values, which must be preserved, while the intended objective is being realized.
(4) In zoning and planning proceedings and in proceedings concerning the licensing of construction, structural changes and maintenance work, which take place in connection with the redesigning of the territory in which the state care of monuments asserts its interest) or in connection with the restoration in the wider sense of an immovable cultural monument or in connection with construction work, structural changes or maintenance work on an immovable property under paragraph 2, the zoning authority or the construction administration authority shall decide in accordance with the binding opinion of the local authority of a municipality with extended competence or, where an immovable national cultural monument is concerned, with the binding opinion of the competent regional authority.
(5) If the intended restoration in the wider sense of an immovable cultural monument under paragraph 1 or, as the case may be, minor construction, structural modification or maintenance work on an immovable property under paragraph 2 may be carried out on the basis of notification, the construction administration authority may license such work only in accordance with the binding opinion of the local authority of a municipality with extended competence, or, where an

immovable national cultural monument is concerned, with the binding opinion of the competent regional authority.
(6) After it has received in writing the opinion of the specialized organization of the state care of monuments, the competent agency of the state care of monuments under paragraphs 1 and 2 shall issue a binding opinion and, upon request of the aforementioned specialized organization, shall consult the draft of the opinion therewith before the termination of the proceedings.
(7) The owner of the cultural monument or the project designer) and the specialized organization of the state care of monuments shall jointly review, in the course of its drafting, the preparatory and project-design documentation relating to the restoration in the wider sense of an immovable cultural monument or to construction, structural change or maintenance work on the immovable property under paragraph 2, as to the fulfilment of the conditions which may have been set in the binding opinion mentioned in paragraphs 1 and 2. In the course of such a review, the specialized organization of the state care of monuments shall provide the necessary documents, information and professional assistance. At every completed stage of the documentation work, the specialized organization of the state care of monuments shall draw up a written opinion as a background for the binding opinion of the local authority of a municipality with extended competence and, where a national cultural monument is concerned, for the binding opinion of the competent regional authority.
(8) The restoration of cultural monuments, or parts thereof, which are works of art or artistic handicraft (hereinafter referred to as 'restoration'), may be carried out by individuals licensed under Section 14a, the term 'restoration' meaning a group of specific artistic, handicraft and technical treatment techniques respecting the technical and artistic structure of the original.
(9) The owner of a cultural monument shall supply the specialized organization for the state care of monuments, on request, with one copy of the documentation.
(10) Detailed provisions concerning the conditions for the restoration in the wider sense of cultural monuments and for the drawing up of the documentation thereof shall be stipulated by a generally binding legal regulation. (Act No. 20/1987 Coll., on the State Care of Monuments, Section 14)[11]

[11] Zákon č. 20/1987 Sb. o státní památkové péči (English by www.mkcr.cz) (last visited 20/02/2005) [this website is no longer available (*ed.*)]

Section 22 of Act No. 20/1987 Coll. describes mainly practical operations to be performed prior to archaeological excavations:

Conduct of archaeological excavations

(1) Prior to the commencement of archaeological excavations, the Archaeological Institute and authorized organizations shall conclude with the owner (-keeper, user) of the property where the archaeological excavations is to be carried out, an agreement on the conditions under which the excavations is to be conducted. If such an agreement is not reached, the competent regional authority shall decide on the obligations of the owner (keeper, user) of the property in question as to permitting of archaeological excavations and the conditions under which the excavations may be carried out.

(2) If construction works is to be carried out in an area containing archaeological finds, the developer shall report their intention to carry out such work at the preparatory stage of construction to the Archaeological Institute and permit the Institute, or an authorized organization, to conduct archaeological rescue excavations in the area concerned. If the developer is a legal person or a individual whose business activities gave rise to the necessity of the archaeological rescue excavations, the cost of such excavations shall be borne by the builder; in other cases the cost shall be borne by the organization conducting the excavations. The same procedure shall be applied to the cases where the area containing archaeological finds is to be affected by another activity which could endanger the conduct of archaeological excavations. (Act No. 20/1987 Coll., on the State Care of Monuments, Section 22)[12]

Archaeological finds

(1) An archaeological find is an object (set of objects) which is a document or remnant of man's life and activity from the beginning of his development up to the present age and has been preserved, usually underground. (Act No. 20/1987 Coll., on the State Care of Monuments, Section 23)[13]

[12] Zákon č. 20/1987 Sb. o státní památkové péči (English by www.mkcr.cz) (last visited 20/02/2005) [this website is no longer available (*ed.*)]
[13] Zákon č. 20/1987 Sb. o státní památkové péči (English by www.mkcr.cz) (last visited 20/02/2005) [this website is no longer available (*ed.*)]

Excavations of an unknown medieval fortified manor house conducted prior the development of a housing estate in a Prague suburb. (Photo M. Bureš)

The scope of regulation and practice[14]

Regulation	**Practice**
1. An archaeological site	
The developer makes an inquiry at the Archaeological Institute as to whether his building site is considered to be an archaeological site	Very exceptionally the developer makes this inquiry, but usually to the nearest organization or an organization best known to him
2. Planning documentation	
The developer receives information that his building site is an archaeological site and he passes planning documentation to the Archaeological Institute	The developer passes his planning documentation to the planning department without any respect for the archaeology
3. Planning department decision	
The planning department is obliged to care only for listed sites and monuments.	The planning department can mention sites other than those listed or any archaeological risks, but this is not its duty. The possible threat to archaeological sites is mentioned in many planning department statements. In such cases the missing first step is substituted, but later in the process.
4. Unpredictable find	
A developer discovers archaeological finds on a site where it was not predicted. He announces this fact to the local authority or museum no later than two days after discovery and makes sure that the find is not destroyed or stolen.	Builders do not recognise archaeological finds or deny they exist.

[14] J. Varhaník, "K právní úpravě archeologických nálezů a výzkumů", *Správní právo* 6, 1999, 337-356. J. Varhaník, "K uvádění obsahu maltské úmluvy do praxe", *Archeologické rozhledy* 53, 2001, 588-591. J. Varhaník, "K institucionalizaci archeologického výzkumu a stavebně historického průzkumu v naší památkové péči", *Staletá Praha* 34, 2003, 253-256.

5. Who will do the excavations?

An Archaeological Institute

The excavations are executed by the authorized organization which has the information about the building action.

The Archaeological Institute charges an authorized organization with the execution of the excavations.

The Regional Archaeological Commission sometimes coordinates the distribution of projects.

6. Contract

An authorized organization suggests the contract to a developer
The contract is signed
The contract is not signed and the regional government is obliged to decide on the conditions of the excavations

7. Control

An authorized organization announces the beginning of excavations to the Archaeological Institute and to the National Historical Heritage Institute

An authorized organization passes the Field Report to the developer

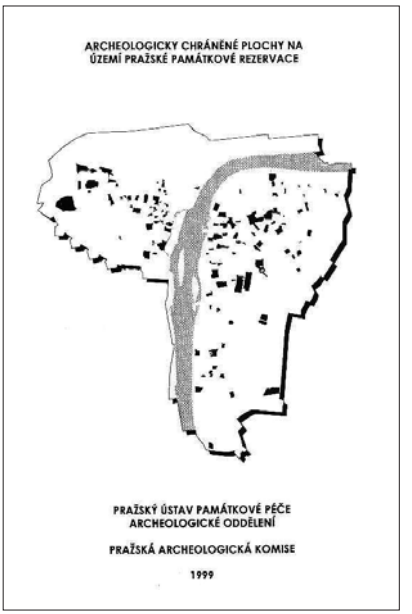
The developer keeps the report as evidence that the rescue excavations have been executed

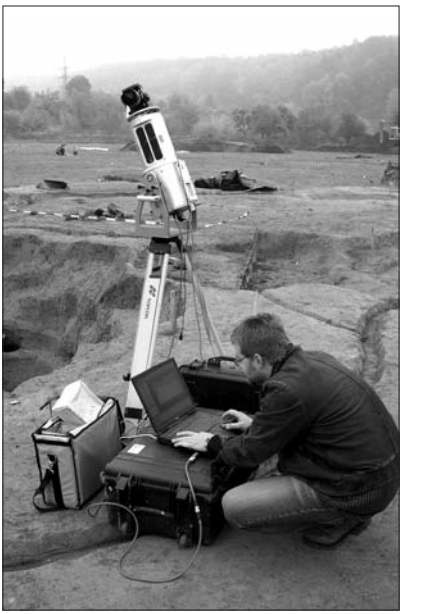
In some cases the developer passes the report to the planning department

8. Final Report

The final report is passed to the Archaeological Institute and to the National Historical Heritage institute if the excavations have been executed on a listed site or monument

As the overview shows, the scope of regulations and practice are identical only in two cases from a total of eight steps. These are step 6. The contract and step 8. The final Report. In the other six steps the regulations and practices differ. There are several reasons: Act No. 20/1987 Coll., on the State Care of Monuments dates before the great social and economic changes of





Example of primary prevention: Areas of special archaeological interest within the Prague historical heritage reservation. In these areas no new development which would require excavation should be allowed. (National Historical Heritage Institute – Prague Office)

The circumstances of the Prague 6 – Liboc excavations allowed implementation of various high-tech techniques, e.g., 3D scanning of archaeological features. (Photo M. Bureš)

the break of the 1980s and 1990s and although it has been amended several times, the centralistic spirit of it does not fit into the present legal state and social reality of the country. Analogically the Archaeological Institute of the Academy of Sciences is not the same central and centralized institution as it was some18 years ago, recently devoting itself much more to research rather than to cultural resource management.[15]

Preventive archaeology?

The term 'prevention' in archaeology has had its own development in the last twenty years or more. In the 1980s, rescue excavations in the Czech

[15] L. Jiráň, "Současný stav archeologické památkové péče v ČR a cesta k jejímu zdokonalení", *Archeologické rozhledy* 53, 2001, 583.

Republic (Czechoslovakia at that time) were considered not only as a part of preventive care but even as the aim of prevention. Nowadays it is clearly stated that rescue excavations started by/after the beginning of construction work cannot be considered as preventive archaeology. This idea, however, often repeated at conferences and professional discussions, is not reflected in recent legislation apart from the Malta Convention.

In these terms, taking into account the terminology of other sectors (for instance medicine or crime prevention), we can distinguish two grades of prevention in archaeology.

Primary prevention

The aim of primary prevention is to prevent archaeological sites and monuments from becoming threatened through appropriate and competent planning which respects archaeological sites and monuments. All kinds of monument listings are to be used as a tool for primary prevention:

Example of secondary prevention: Preparation of large-scale excavations in Prague 6 – Liboc, on the outskirts of Prague, began 3 years before the excavation started; excavations were conducted during an 18-month period prior to the development and cost CZK 12 million (EUR 400 000). (Photo M. Bureš)

- National cultural monuments
- Listed sites and monuments
- Monument reservations, monument zones
- The National Archaeological Record

Secondary prevention

The task of specific prevention is the protection, conservation, and survey of sites and monuments potentially threatened by any kind of human activity (development, agriculture, tourism, land use, etc.). All kinds of non-destructive surveys and excavations planned and executed prior to development can be used to fulfil this task.

Recent practice on preventive archaeology in the Czech Republic can be summarized in the following points:

- The position of primary prevention is very weak.
- No authority or institute is devoted specifically to primary prevention.
- Although there are site and monument records, reservations, zones, and listed monuments, there is no system in their listing.

Example of primary prevention: The early medieval hillfort in Prague Šárka is a listed monument of the highest category – a National Cultural Monument. The only activities allowed there are walking and cutting the grass. (Photo M. Bureš)

- The National Archaeological Record covers most of the country, but no way has been found to use it effectively.
- Organizations founded to conduct preventive archaeology are busy with rescue excavations.
- Rescue excavations are executed by all kinds of public as well as private authorized organizations; the specialization of institutions works only on a territorial basis. Central government institutions and authorities are not interested in prevention, particularly primary prevention.
- There is a lack of political will to change the present state.

Conclusions

Although there are remarkable differences between regulations and practice, the system secures the arrangement of rescue excavations quite sufficiently, particularly in regions with long archaeological traditions. This means that the main tool for rescue archaeology is not an official doctrine and law, but some kind of cultural habit or a matter of natural law (common law is not a part of the Czech legal system).

Some work is done on prevention. Secondary prevention is partially incorporated into the official archaeological heritage management system and executed by public as well as private institutions, although rescue excavations still occupy a major part of the scope of their activities.

The National Archaeological Record holds a special position in attempts to push some aspects of primary prevention through to an official system. Beside this there are other attempts to do some primary prevention, such as, for instance, defining areas of special archaeological interest within the Prague historical heritage reservation. In these areas no new development which would require excavations should be allowed. There is a long way to go to achieve large-scale adoption of primary prevention principles in the Czech Republic, but the situation has improved gradually case by case with the implementation of the Malta Convention principles after 2001 (see above), using it as legal support for negotiations on primary prevention.

Epilogue

Since the time of the Vilnius conference and subsequent preparation of this paper, several things have changed in the framework of archaeological heritage management in Czech Republic. The number of universities teaching archaeology has increased from four to seven and the number of public benefit companies authorised to conduct archaeological excavation has

increased from five to nine. The new Town and Country Planning and Building Code (183/2006 Coll.) was passed by the Czech Parliament in 2006. This new law gives legal protection to archaeological finds found during construction work, as did the previous law (50/1976 Coll.), but in addition it incorporates archaeology and the protection of archaeological heritage within the system of the Town and Country Planning process.

Legal documents

Sbírka mezinárodních smluv č. 99/2000 Úmluva o ochraně archeologického dědictví Evropy

Ústavní zákon č. 395/2001 Sb., kterým se mění ústavní zákon České národní rady č. 1/1993 Sb. Ústava České republiky, ve znění pozdějších předpisů

Ústavní zákon České národní rady č. 1/1993 Sb. Ústava České republiky.

Zákon č. 50/1976 Sb. o územním plánování a stavebním řádu (stavební zákon)

Zákon č. 20/1987 Sb. o státní památkové péči

Zákon č. 100/2001 Sb. o posuzování vlivů na životní prostředí a o změně některých souvisejících zákonů (zákon o posuzování vlivů na životní prostředí)

Zákon č. 183/2006 Sb. o územním plánování a stavebním řádu (stavební zákon)

Development-led Archaeology in England

Roger M Thomas

Introduction

I am only talking about England. Wales and Scotland have similar, but not identical, arrangements to England. Northern Ireland is slightly different again.

This is an issue for this meeting as a whole. As political and administrative power is devolved from national governments to smaller regions, keeping track of what is happening becomes more and more difficult.

Politically, ideologically and economically, England (and perhaps the United Kingdom as a whole) lies somewhere between the heavily market-driven philosophies of the United States and the more state-centred systems of many European countries. This is relevant for understanding our archaeological arrangements (and many other aspects of life in England today).

England is quite a prosperous country, with a fairly strong economy at the moment. It is also quite a crowded country, with great pressure on land in some areas (as a result, land can be very expensive). There is also a great amount of new development, especially in the south-east of the country. A lot of new housing is being or is planned at the moment, quite a lot of it on land which has not been built on before (farmland and open countryside). There is a lot of building in existing towns, especially for housing and new shopping facilities. Some of these are in the centres of cities which go back to the Roman period. There is also a great deal of infrastructure building at present – new roads, a new high-speed railway from London to the Channel Tunnel, enlargement of airports, new port facilities and other such things.

Compared to many other European countries, England is also unusual in archaeological terms in two ways in particular. First, there is no general system of state licensing of archaeological excavation work (or other archaeological work) in England. Permission is required to excavate on protected monuments and in certain other limited circumstances. Beyond

those, anyone can – as long as they have the landowner's permission – excavate any archaeological site they like.

Second, there is no general state ownership of antiquities in England. Apart from some limited provisions relating mainly to 'treasure' – precious metal artefacts and associated items – all antiquities belong to the owner of the land on which they are found. We have also had a commercial system of development-led archaeology in England since 1990, so have had more time to gain experience and (we hope) to learn from it than in some countries.

Institutional background

In detail, the institutional arrangements for development-led archaeology are quite complex, with many different organisations and associations of many different types all having a role. I will only be able to outline some of the main institutions involved here.

The central government organisation which has the main responsibility for archaeology in England is English Heritage. This is a statutory body – set up by an Act of Parliament. It is legally an independent body, but it receives about 80% of its annual budget from the Department of Culture, Media and Sport (our Ministry of Culture), and it is answerable to that Ministry. The Department of Culture, Media and Sport, although it has a key responsibility within the Government for archaeological matters, does not employ any archaeological specialists itself. Instead, it gets advice on archaeological matters from English Heritage.

English Heritage has a wide range of archaeological functions. It recommends monuments for legal protection and gives advice on applications for permission to do things (such as new building) which would affect protected monuments. The actual legal protection and the permissions are given by the Department of Culture, Media and Sport.

English Heritage has a budget for archaeological work. It's about £5M (about 7 million euros) annually at the moment. Some of this is used for 'preventive' archaeology. In the past – as I'll explain below – this was the main purpose of this budget. Now, more of it is used for strategic projects for the management and conservation of the archaeological heritage, and for things such as training. English Heritage also carries out archaeological work itself. It has a number of teams of excavators, geophysical surveyors, field surveyors, archaeological scientists, aerial photographers and others who carry out projects, and who can also give advice to others about, for instance, scientific techniques.

English Heritage also liaises closely with a very wide range of other organisations, such as local authorities, other government departments (especially those concerned with agriculture and spatial planning), other government agencies, landowners, developers (investors) and so on. We give advice to all of these to try and improve the protection for the archaeological heritage.

The other main institutional area which I want to discuss is local authorities. In England, very many public services are provided by local authorities. This includes education, social services, museums and – very importantly for us – much spatial planning and the control of land-use and development.

The arrangements for local government in England are very complicated and differ from area to area. For the purposes here, what is important is that every local authority in England (and there are over 400 of these) has access to professional archaeological advice. This advice will come either from an archaeologist within the authority, or from one who is in another authority. In particular, many 'district' level authorities are too small to have their own archaeologist, so there will be an archaeologist in a 'county' authority which covers a number of districts.

There are about a hundred of these 'local government archaeological officers' in England. They provide advice, especially about the archaeological effects of new developments, and keep a database and maps (usually held in a Geographical Information System – GIS) of archaeological remains in the area (a 'Sites and Monuments Record', although these are now also being called 'Historic Environment Records') which is the basis for the advice they give. Local government archaeological services also carry out specific projects, such as mapping the archaeology of historic towns (to improve the advice they can give). Some of these projects are funded by English Heritage.

In some cases, local authorities also have their own excavation teams, but the number of these is reducing for various reasons. I'll mention other parts of the institutional structure – commercial excavation teams, universities, the UK professional institute for archaeologists – later.

Legislative background

Although there is quite a large amount of legislation relevant to archaeology in England, I only need to mention two pieces. The first is the Ancient Monuments and Archaeological Areas Act of 1979. This is the main Act for this topic. It allows for monuments to be given legal protec-

tion, and also allows both central and local government to spend money on preserving monuments and on archaeological investigations (including publishing the results). However, as only a small proportion of all the known monuments in England are protected under this Act, the relevance of this Act to our discussion is not huge.

Much more important is the legislation for spatial planning (or 'Town and Country Planning' as it is often referred to in England). I should say now that the whole system is about to be changed –I will talk about the existing system.

The main Act – the Town and Country Planning Act 1990 – does not mention archaeology. What it does is set a broad framework for how the planning should be operated. Most of the actual implementation – of deciding on planning policies for an area and issuing permissions for new buildings – is done by local authorities. This is why the archaeological officers in local authorities are so important. The main Act gives rise to all manner of regulations and policies produced by central government, which local authorities have to follow. Two of these are especially important for us.

Planning Policy Guidance Note 16 (PPG 16) was published in 1990 and replaced the former system where the state paid for development-led archaeology. It revolves around five key principles:

- Archaeological remains are a valuable resource
- Archaeology is a 'material planning consideration' – something the local authority should take into account when making decisions about new development
- The archaeological implications of development should be properly assessed before decision is taken.
- There is a presumption that important remains should be preserved *in situ*.
- Provision should be made (in effect, by the developer) for recording remains which are threatened by development and which cannot be preserved *in situ*.

The introduction of a requirement that developers should 'make provision for' (in other words, pay for) archaeological work was accompanied by developers being allowed to choose who they paid to do the work (as long as it was done to the correct standard). Thus, commercialisation and competition between archaeological organisations was introduced to English archaeology.

The Environmental Impact Assessment Regulations are also important for archaeology in England. Various regulations implement the EU Directives

on Environmental Impact Assessment for major developments. The underlying principles are fairly similar to those of PPG 16. Because of the large number of major developments (such as new roads) in England in recent years, the archaeological (or 'cultural heritage' – covering buildings and landscape, too) part of Environmental Assessments has been an important area of archaeological work in England.

Archaeological roles in development-led archaeology in England

The introduction of a commercial basis to development-led archaeology in England has led to the development of a series of distinct roles in the overall process. Conveniently, the name of each role begins with the letter 'c'.

Curators. This does not mean museum curators, but the archaeological officers of local and central government who look after – 'curate' – the archaeological resource in the ground. These people review planning applications for their possible archaeological effects, advise whether further archaeological work is needed, define the scope of that work, and then monitor the work – which is done by archaeological 'contractors' (see below) – to make sure that it is done to the required standard and properly completed on time.

Contractors. These are the archaeological organisations which do archaeological work under contract for developers. They vary greatly in size and character. Some are very large (200+ staff, an annual turnover of several million pounds), some are very small (just one or two people). Some are charities, so do not aim to make a profit (any surplus money is put back into the work), others are fully commercial. Some are separate organisations, some are part of a larger body such as a university, a local authority or a larger commercial enterprise such as an engineering firm.

Clients. 'Clients' are the developers – the people who are paying for it. They are the 'clients' of archaeological contractors – the contractors are providing a service to them. Developers also vary greatly in size and character, and also in their level of interest in archaeology. Some are very interested, others less so. But it is a bad mistake to think that they are all only interested in seeing the archaeological remains cleared away at the cheapest price.

Consultants. Some developers like to have their own independent source of archaeological advice. Both the curator and the contractor have their own interest in telling the developer how much archaeological work is needed. Consultants can provide independent advice to a developer, negotiating

with the curator and the contractor to make sure that the developer gets the best possible deal.

Also important to mention is the Institute of Field Archaeologists, the professional body for archaeologists in the United Kingdom. This body has about 2000 members. It has a Code of Conduct, sets standards for archaeological work and has a disciplinary procedure if there are complaints of bad work or unprofessional conduct. It also has a scheme for registering archaeological organisations and inspecting them annually. In a world of commercial archaeology, the importance of having a strong professional body, and a clear professional ethos, cannot be emphasised too strongly.

Development-led archaeology in England – the current situation

There is now a thriving 'industry' of development-led archaeology in England. Annual expenditure is probably around 70 million British pounds (100 million euros), in 2000, it was 68.3 million pounds.

Some 100 organisations (in the UK) are involved in commercial fieldwork, employing perhaps 2000 people. Most of these organisations are small (fewer than 50 staff), while there is a very small number of large organisations with 200 staff or more.

It is estimated that nearly 5000 development-led archaeological investigations were carried out in England in 2000. This included a large number of relatively small-scale 'field evaluations' – pieces of field work done before building permission is granted to discover if there are any remains there. Other categories of work include full excavations before building starts, and 'watching briefs', when construction work is observed archaeologically so that anything which is unearthed can be rapidly investigated.

Major areas of development work include: new housing on previously open countryside; quarrying (especially for gravel); rebuilding in historic town centres (it is government policy to build on land that has already been built up, rather than on open countryside, and this has obvious implications for the archaeological heritage'; infrastructure (new roads, railway works – the Channel Tunnel Rail Link is an example of a very large scale project, and Heathrow airport Terminal 5 is another), pipelines of various kinds, new industrial and commercial development.

The academic focus of individual pieces of work is usually set by the local authority 'curator', although the contractor may well contribute to this as well. To provide a wider academic context, English Heritage has been

sponsoring the production of 'Research Frameworks' – documents which define existing academic knowledge and future priorities for different regions or topics.

Strengths of development-led archaeology in England

I think that the system which has developed since 1990 has a number of important strengths. First, it is fully embedded in/integrated into the general planning system. This makes it quite effective in terms of protecting the archaeological heritage. Every planning application (application for permission to do new development) in England (and there are about 500 000 a year) is reviewed by a professional archaeologist for its possible archaeological effects. Where possible effects are identified, further investigation is done (at the expense of the developer). If significant remains are identified, these are either preserved intact, or are excavated (again, at the expense of the developer).

There are occasional problems (such as when remains only come to light unexpectedly, after building has started) but in general the system seems to work well. As a percentage of the total cost of development, the archaeological cost is usually not that large, and most developers seem ready to meet that cost without much resistance. As a result, a large amount of archaeological work is taking place in England every year. As I said, something like 70 million pounds (nearly 100 million euros) is being spent annually. This is a lot of money.

One result of this – and I think it is a considerable strength – is that there is now a very thriving commercial sector. The largest commercial organisations have staffs of 200 or more, an annual turnover of several million pounds, and work throughout the United Kingdom and, increasingly I think, abroad (although mainly outside the EU, I suspect). These organisations are very well-equipped and are highly skilled in such matters as GIS, digital recording systems and so on. Much exciting and innovative work is being done by some of these organisations. They are also efficient at doing very large-scale excavations and publishing the results quite promptly.

The English system has a reasonable balance of private (developer) and public input into the process – local authorities set the broad framework for pieces of developer-funded work, while the commercial sector uses its skill to implement programmes of work in detail. There is also a reasonable level of interchange between the academic world and development-led archaeology – some projects have academic advisors, university-based scholars who are expert in a particular subject and can

advise on the best strategies for excavations: on how to get the best academic value for the money available.

Some problems of development-led archaeology in England

Of course, it would be wrong to pretend that there are not some problems, too. One of these is that the system depends heavily on the control exercised by the 'curators' in local authorities and (to a lesser extent) in English Heritage. Unfortunately, almost all public services in England are under considerable financial pressure at present. Curators tend to be greatly overworked, and archaeology is not always the highest priority in their organisation. All of this means that curators may sometimes struggle to keep up with the pace of new development in their areas, or to feed archaeological interests fully into the decision-making processes for new development.

Another problem – and one that it is hard to find solid information on, for obvious reasons – is that some 'contractors' may sometimes work to a lower standard than others. Under publicly-funded preventive archaeology in England, before PPG 16, this was also true – it is a fact of life.

I do not accept that developers will also just take the cheapest price and have no interest in quality. Often, they want someone who will do a reliable job and who will not lead to problems with the curator. Some developers will often just use the same archaeological contractor over and over again because they know them and trust them.

But still, there can always be situations where an archaeological contractor will put in a low price to get the work, and that can lead to problems with quality and standards. That is something for the curators to look out for, although it is very difficult for a curator to say "this organisation should not be used" – there may be legal consequences. In other countries perhaps a licensing system deals with this issue. In England, the Institute of Field Archaeologists has an important role in setting and policing standards.

A related problem is that of pay and conditions of excavators. There is a great deal of dissatisfaction among the (mainly young) archaeologists who actually do the excavations about low pay, short-term contracts and lack of career opportunities. This is certainly a problem, but I think it may be part of a wider problem to do with job satisfaction. Perhaps some development-driven archaeology does not have a big enough feeling of actually making a valuable contribution to understanding the past. After all, that is why people become archaeologists (I think), not for the money.

A further problem is that of where to store the archives and finds from excavations. Large volumes of material are being recovered, but museum stores are full and there is a lack of space to store these archives. Various attempts are being made to address this problem. I think that one of the biggest problems concerning development-led archaeology may be linked to this. It's that of disseminating the results of all this work and then using those results to generate new knowledge – new syntheses – about the past.

Each year, thousands of individual excavations take place in England. For many of these, the reports are produced in limited numbers and are hard to get hold of. Because many different contractors may be working in one area, it can be quite hard to find out about the work that has happened. And even if you can find out, this is just site-specific information. Nobody is really looking at all this scattered and often small-scale information from an academic point of view and working out what it all means in terms of developing our understanding of the past – in other words, synthesising this information.

I think that this is our biggest current problem. A great deal of money is being spent on archaeology, but we are not probably getting the full possible academic value for it. We need to do much more to make an overview of this information and to use it to tell us new things about the human past. That is the only justification for society giving us resources to do this work. If we do not, development-led archaeology will just be repetitive data-gathering, with no very great social or academic value.

The need for European co-operation

Laws, policies and institutional arrangements will always differ from place to place and it very hard to keep track of these across Europe because all are always changing. So perhaps co-operation should be concerned with principles and with techniques. What ingredients are most needed to make a commercial archaeology system work well? What are the most effective techniques for (say) locating, quickly and cheaply, archaeological remains on land which is due to be built on?

An interesting area is that of costs of archaeological work as a percentage of the overall costs of building. My impression is that, on major infrastructure schemes, (such as motorways, railways and airports) archaeological costs are typically between 0.1% and 1% of the total construction scheme costs. It would be good to research this in more detail. If we could establish this range, it would allow us to get an idea (from the figures for construction expenditure collected by national economic ministries) of the potential size of the European archaeological 'economy'.

Maybe another area in which international co-operation is required is in spreading the results of archaeological work. Many (maybe most) archaeological phenomena do not respect today's national boundaries – think of Bell Beakers, or the Roman Empire. Archaeology should be a truly international discipline – but that will be difficult if (as in England today) many of the results of excavations are not fully published and are hard to get hold of. Digital publication and the internet are obvious ways to a solution.

Existing international co-operation

English Heritage is involved in a certain amount of international co-operation already, such as the 'Planarch' Interreg funded projects to study the best ways of detecting archaeological remains before development, or the Culture 2000 project on Historic Landscapes.

Epilogue

This paper was presented in Vilnius in December 2004, and has not been significantly updated. There have been some important changes since then, including the changes to the spatial planning system and an announcement by the Government that new heritage legislation will be introduced soon. The scale of commercial archaeology in England has also continued to increase. For a comprehensive and more up-to-date account of the archaeological arrangements in England, see J. Hunter, I. Ralston (eds.), *Archaeological Resource Management in the UK: an Introduction*, Stroud, Sutton Publishing, 2006.

Preventive and Rescue Excavations in Estonia – The Involvement of Private Companies

Ants Kraut

General background

The territory of Estonia is 45 216 km², 50% covered with forest and marshland; the other 50% is arable land and settlements. There are 1520 islands, which form about 10% of the territory.

The population is 1.4 million, 56 of whom are archaologists, comprising 0.004% of the overall population. This means that we have one archaeologist for every 25 000 inhabitants.

There are 6 600 listed archaeological monuments in Estonia.

Institutional background

The protection of archaeological monuments in Estonia is organised by the National Heritage Board (NHB). The NHB is charged with the inventory of monuments, maintaining the national register, signposting, mapping, protection, maintenance, keeping contact with the owners, issuing licences for research and keeping record of the reports, penalties, issues concerned with finds and rewards – i.e., all activities apart from scheduled scientific research work.

According to the Heritage Conservation Act and mutual agreements, some duties of the National Heritage Board are delegated to the city governments of some major towns who have the necessary resources and structure for the work. Still, the NHB remains the supervising institution.

Legislative background

Protection of archaeological monuments is organised according to the Heritage Conservation Act, adopted in 1994, renewed in 2002. The Heritage

Conservation Act comprises the strict laws adopted from the Soviet period on the one hand, and experiences of neighbouring contries on the other hand.

Ownership and protection

According to the Heritage Conservation Act, a finding of cultural value is a movable find which has historical, archaeological, scientific, artistic or other cultural value and which has no owner or the owner of which cannot be ascertained. Findings of cultural value belong to the state and they are deemed to be under temporary protection from the moment they are found. A thing may be placed under temporary protection from two weeks up to six months in order to determine whether it qualifies as a monument.

All archaeological remains are protected by law from the moment of their registration in the state register. It is also possible to halt work and protect sites where archaeological finds appear during development. In reality, both state-owned and private companies prefer to promptly finance the excavations instead of taking up a legal debate with the NHB.
The penalty for damaging archaeological remains ranges from a fine of five

Rescue excavations of a Bronze Age burial ground during the Tallinn-Narva road construction in the 1980s. (Photo R. Kärner)

days' wages to a two-year sentence in prison, with the addition of the obligation to pay the costs of the rescue excavation.

Most monuments of some national importance are in private ownership. As a counter-reaction to the centralisation and nationalisation of the Soviet period, private owners tend to resent any obligation or restriction the government may impose on them to ensure the protection of monuments. At the same time, the government has no funds to compensate for restrictions caused by conservation requirements.

The Heritage Conservation Act is complemented with two government decrees, one on the statute of issuing licences for work on archaeological monuments and the other on the work and responsibilities of the Heritage Conservation Advisory Panel and its expert committees, including examining the permits for archaeological excavations.

Status of archaeologists

The total number of archaeologists in Estonia who are authorised to direct excavations is 56. Six of them are employed by the NHB and are

The same barrows by the new road after reconstruction.
(Photo A. Kraut)

not concerned with research work, but managing protection issues. Twenty-one archaeologists work in the Institute of History of the Tallinn University. Ten archaeologists are employed by two national museums and five local museums, 5 archaeologists work in city governments and 6 archaeologists are employed by private companies.

Private companies started to appear as soon as the Soviet legislation permitted, i.e., in 1988. First they were formed as subsidiaries of the Estonian Heritage Society, which is a non-governmental voluntary organisation. These subsidiaries were small private enterprises by members of the Heritage Society. The Estonian Heritage Society has remained an umbrella organisation for cultural heritage societies and organisations, including archaeological societies and enterprises. At present the number of private archaeological companies ranges between three and five. All of them are small enterprises with one to five permanently employed archaeologists. Additional workforce – archaeologists, students, workers – are employed temporarily for the season, the number ranging between ten to sixty persons.

As a rule all private companies are only involved with preventive archaeology on a contract basis where the contractor finances the work. The

Excavated ruins of a 14th-century hospis in a medieval suburb of Tallinn, 2001. (Photo A. Kraut)

archaeological companies pay all necessary taxes and are required to submit reports about their work to the National Heritage Board. About half of the total number of archaeologists in Estonia are engaged in preventive archaeology.

Status of preventive archaeology

In the context of research/licences issued, two-thirds go to preventive archaeology. Considering the amount of research work per square and cubic metres it is even greater.

Preventive archaeology in Estonia can be divided into three categories:

1. rescue excavations proper, i.e., rescuing a discovered cultural layer;
2. trial excavations on construction sites to be developed;
3. contract archaeology to secure a designated area from archaeological remains.

Investments

- 2-3 major construction objects per year, mainly located in medieval town centres, average cost 10 million euros or above, scale of rescue excavations 2-3% of the total budget. Cost of rescue excavations is approximately 100 euros per square meter, duration 2-3 months;
- preventive excavations on 10 foundations, approximately 10,000 euros per research project, duration 1 month;
- 20-30 communication lines, mainly supervision, cost 50-100 euros per square meter, duration 1-2 weeks;
- 10 rescue excavations concerning basements in medieval houses in the historic old towns, duration 1-2 weeks;
- research on 5-10 cultural layers exposed during regular excavation work, duration 2-4 weeks.

Problems with investors

Good co-operation exists with real estate companies developing new industrial and housing areas. These companies are interested in avoiding risks. They wish to sell plots being aware of and considering all possible restrictions, and are interested to contract archaeological research and trial excavations also in areas without known archaeological records. Research is planned with adequate time, development plans may be altered according to research results and archaeological remains may frequently be preserved *in situ*.

The same ruins exhibited in a pavillion by and under a main road in Tallinn, 2004. (Photo A. Noorma)

The situation is more complicated in historic town centres. The need for archaeological excavations may often come as a surprise, after the plans have already been drawn and building contracts made, and the budget does not consider the time and cost of archaeological research in the area.

The greatest problem, however, is private owners on their legally owned land who do not have the resources to finance archaeological research nor alter the building plans or location. Such owners often lack any wish to co-operate nor do they realise the necessity to preserve a cultural layer.

A recent development is the problem of timing: large-scale construction work is often undertaken in late autumn, which means extremely unfavourable climatic conditions for archaeological work.

Strengths of preventive archaeology

- the tendency to contract for trial excavations is growing. This allows for better planning and alterations of plans if necessary;
- good co-operation exists with real estate companies, who are keen to avoid any risks during construction;

- the legislation permits stopping any work that may damage a cultural layer. Debating this will be more costly for the investor than contracting with an archaeologist, as the debate may be prolonged and the work is stopped for the time being.
- The costs of archaeological supervision or rescue excavations are relatively moderate compared to stopping the construction work altogether. This places archaeologists in a favourable position during negotiations.
- Interesting and valuable information is gathered.

Problems of preventive archaeology

- uneven quality of excavations and reports;
- insufficient study of the finds;
- few scientific articles and research overviews about the results of rescue excavations;
- unfavourable conditions of tight competition and bidding do not allow matching offers with the areas and periods of archaeologists;
- although scientific research in Estonia does not require having various offers, the minimum of three underbiddings is necessary in the case of EU projects, often involving, e.g. earth removal, which belongs rather to general construction work than scientific research;
- difficulties of preserving excavated remains.

Co-operation on a European level

- the role of international conventions is important in rescue excavations;
- referring to international standards in rescue excavations often proves to be helpful (places the costs in perspective and indicates that the price is not so high when compared to standard practice elsewhere);
- it is important to set regular standards: does the cost of excavations include analyses on European level? conservation of finds? publication? financing of a general overview?
- it is difficult to involve foreign archaeologists in reserach work: they lack local background knowledge, reports have to be in the national language, etc.

The situation described above calls for better co-operation and information exchange with specialists of preventive archaeology in other countries.

The science of archaeology would benefit from setting uniform standards and archaeological monuments would be better protected both in Estonia and on the European level.

March 2005

Building of a new transmission line across a Corded Ware site caused the imminent need for a rescue excavation in Kristinestad. (Photo V. Laulumaa / The National Board of Antiquities of Finland)

Rescue Archaeology in Finland – Goals and Practices

Marianne Schauman-Lönnqvist

The concept of 'preventive archaeology' is unknown in Finnish archaeology. Excavating is always looked upon as a destructive procedure and the National Board of Antiquities aims to preserve as much of the archaeological heritage as possible by limiting 'unnecessary' excavations. Hence the heading 'rescue archaeology' for the following presentation of the activities carried out in Finland.

Legislation

The Antiquities Act of 1963, which replaced an Imperial Act of 1884, is very strict. According to the Act, all ancient monuments are protected without any special decree as antiquities pertaining to the past settlement and history of Finland. Without the permission stipulated in the Act, it is forbidden to excavate, cover, alter, damage or remove ancient monuments, or to disturb them in any other way. No specific age is given for the monuments, only that they ought to be abandoned. Nevertheless, if a house has been left abandoned for a long time, it is not conceived as an ancient monument because there is a possibility that somebody will repair the house and begin to use it. Therefore, buildings of outstanding value are protected by the Act on the Protection of Buildings. As always, there are often borderline cases. The Antiquities Act protects, for instance, castle and church ruins, etc. The underwater cultural heritage is also protected. All kinds of abandoned underwater constructions as well as shipwrecks which are more than one hundred years old are recognized as ancient monuments.

The inventory of ancient monuments today comprises 17 000 monuments. So far it covers only monuments from prehistoric times (8000 BC – AD 1150/1300). These include mounds of earth and stone, cairns, circles and other settings of stones, pre-Christian graves, cemeteries, but also sites lacking any visible signs above ground as many dwelling sites usually are. There are stones with inscriptions, rock art, ground markings, traces of grinding

or hammering, mines and hunting pits, sacrificial springs, trees and stones, fixed natural objects associated with old traditions, tales or significant historic events and so on. The list is long. Inventories of medieval monuments and the underwater cultural heritage are under preparation.

The National Board of Antiquities is the central authority on cultural heritage management in Finland. Accordingly, the protection of ancient monuments is officially supervised by the Board, which also is the body to confirm the status of an ancient monument, for instance, when a new one is found. This is done by sending an information letter to the landowner.

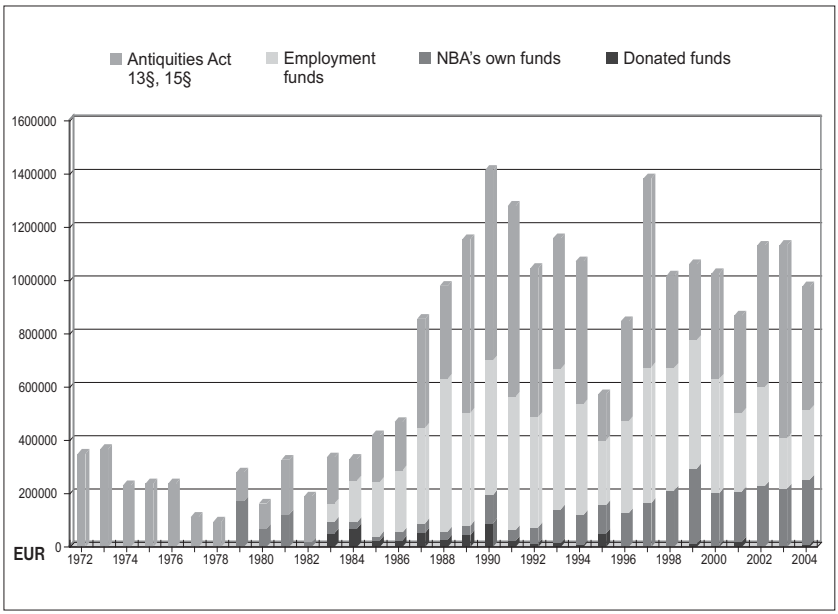
The National Board of Antiquities lists the ancient monuments in two categories, those never to be touched and those which can be, so to speak, eliminated by excavation. The first category consists of monuments of outstanding value, but also of types that for some reason have become rare in particular regions, but may be common elsewhere. A discussion of this matter is continuously ongoing.

According to the Ancient Monuments Act and the Land Use and Building Act, those responsible for the preparation of plans shall establish in sufficient time beforehand whether the plan will concern ancient monuments. During the planning process, the area to be planned will be surveyed archaeologically. The protected ancient monuments are indicated on the plans, which are supplemented with additional information. The planning process is conceived as the most important element of preventive archaeology. In cases of large land use projects the planning is preceded by an evaluation of the environmental effects according to the Environmental Effects Evaluation Act of 1994. All ancient monuments are included in these evaluations. However, excavations cannot always be avoided. Rescue excavations are not carried out in Finland only in connection with development activities. Ancient monuments which will be destroyed in other ways (mostly by erosion) are also excavated.

The funding of rescue excavations

According to the law, when public or considerable private development works concern an ancient monument insofar as an investigation of the monument is required, the party responsible for the development ought to defray the costs, unless this requirement is considered unreasonable under the prevailing circumstances.

The law is very concise, which opens possibilities for interpretations. How to define a considerable development project? What is unreasonable?



Research funds used by Department of Archaeology during 1972-2004. The development of excavation funding for a time span covering over 30 years. It shows among other things that it is very difficult to anticipate development activities. The economic depression in the early 1990s can be seen as late as 1995. In 2004 the funding for excavations financed by developers was 462 000 euros. Employment funding rose to 262 000 euros and the funding for excavations of private small-scale development was 245 000 euros.

Developers do not always agree with the Board on these questions and some cases have gone to court. The decision of the Supreme Administrative Court has been that a ten-flat terrace house is to be considered as substantial development. The developer's central organisation has taken this decision as an absolute bottom line and sometimes refers to it in negotiations.

The excavation costs financed by the developer cover the wages during the excavation period, travel and lodging expenses, insurance, and equipment in the field. The costs of reporting are added to this. According to a standard formula the report preparation work period is twice as long as the field period for the excavation supervisor and for the research assistants the post-excavation work is approximately as long as the field work period. The excavation budget comprises also conservation and analyses, like pollen, macrofossil and osteological analyses and radiocarbon dating. However, a scientific publication of the excavation is not included in the costs defrayed by the developer.

Evaluating what is reasonable is not easy and in some cases when it has been in its interest the municipality has shared the costs with the developer to some extent. In difficult cases negotiations with the local authorities have often resulted in a solution agreeable to both parties.

In addition to the financing problems new ones have arisen. The planning and development processes have speeded up. Developers will not wait very long for the needed excavation to be carried out. The investment terms are very short. The field season in Finland covers only the months from early May to late September. Sometimes excavations are carried out as late as October, but often the quality of the results suffers from the circumstances: freezing archaeologists and lack of daylight are not a good combination in striving for optimal excavation results.

When a private person wants to build a house for his family on the site of an ancient monument or a farmer wants to take gravel for his own use, the necessary excavations are funded by the state, i.e., the National Board of Antiquities. This can be done, of course, only in cases where the protected sites belong to category number two. The National Board of Antiquities has two teams of archaeologists especially for small-scale development for rescue excavations. These groups carry out up to twelve digs every year; the budget was 245 000 euros in 2004.

There are many threats against our heritage. Acid rain caused by air pollution adds acidity to the already acid soils. This results in accelerated corrosion of fragile metal items. Water-power plant basins make riverside and waterfront sites erode, and we lack sufficient funding to prevent this kind of damage from happening. It is a great challenge to enhance this type of rescue archaeology. There is, however, no specific funding for excavating monuments which will be destroyed by the forces of nature, although the Ministry of Labour can raise funds for such excavation projects in areas of high unemployment, which means primarily East and North Finland. The condition for receiving funds for such an excavation is that unemployed local people are to be engaged in the excavations. Only the excavation supervisor and one or two assistants are trained archaeologists. The fact that the Board cannot freely choose the sites to be excavated biases the attempts to rescue endangered sites. Nevertheless, much valuable research work has been done with Ministry of Labour funds.

The place of rescue archaeology

The National Board of Antiquities is entitled to investigate protected monuments and may, upon conditions laid down by itself, permit other parties

to carry out excavations. Since rescue archaeology on a large scale started in Finland in the 1960s, the National Board of Antiquities has been the main executor of rescue excavations. Sometimes the county museums are engaged in these projects. The county museum of Turku, especially, has carried out many excavations in the medieval city of Turku over the years. Two archaeological firms carry out archaeological field work. One is specialised in medieval building archaeology, the other carries out surveys. There is actually no competition in the field.

The National Board of Antiquities has its excavation unit carry out excavations financed by outside funds. The requirements for an excavation supervisor are a Master's degree in archaeology and thorough experience of field work. A Bachelor's degree and experience of field work is required of the assistant archaeologist. The excavation supervisors are mostly employed throughout the year, but the assistants have less reporting work, so they can often combine work on reports with their final studies. Students are employed as assistants or excavators only for the field season. Some twenty archaeologists belong to the unit as full-time staff out of approximately 100 full time archaeologists in the whole country.

The National Board has been criticized in some cases for taking advantage of its position as the central authority and giving opinions in planning matters and at the same time offering excavation services. To make the management more transparent, in the future the different functions will be separated in different departments.

Even if a major part of the archaeological excavation funding is due to development, the National Board aims to minimize the rescue excavations to be carried out. The next generations of archaeologists will have better facilities to extract knowledge from the monuments. Finland is a big country, sparsely inhabited and has always been so (338 144 km^2, 5.2 million inhabitants). There is a great deal of space. In the planning processes efforts are made to situate development activities in areas without any ancient monuments. We do, however, not always succeed in our attempts. There are also other aspects to be considered in the planning.

The National Board tries to live up to the practices inscribed in the Valletta Convention by making compromises. The developer is, for instance, not required to finance a scientific publication of the excavation. This would presumably break the pain barrier. Funds for publishing are not always found elsewhere. The results of some excavations are also so few that no publication is needed. The solution for the need to publish is a series called 'Arkeologia Suomessa – Arkeologi i Finland' (Archaeology in Finland), which has

been published every second year since 1985. The publication comprises articles on different subjects and brief abstracts on every excavation carried out in Finland during the two years the volume covers.

European-level co-operative activities needed

When we in Finland carry out rescue archaeology we really do excavate totally what otherwise would have been destroyed by development. But due to scientific progress we continually get more refined methods, most of them more time consuming or more expensive than earlier ones. The question remains, how high can we raise an excavation budget? When do we have to let some of the monument be destroyed without an excavation due to refined methods? What about the number of analyses and datings? Common guidelines for solving these problems are needed.

March 2005

Preventive Archaeology in France

Jean-Paul Demoule

General organisation of archaeology in France

Preventive archaeology in France is organised by the Law of 17 January 2001, modified in 2003 and 2004, which constitutes the application to French law of the European Convention on the Protection of the Archaeological Heritage of Valletta (Malta) in 1992, ratified by France in 1994. This law is based on two principles: the developer pays for preventive archaeology ('the polluter pays'), and most of this activity is entrusted to an institute of public research, the *Institut National de Recherches Archéologiques Preventives* (INRAP), under the double supervision of the Ministry of Culture and the Ministry of Research. INRAP's budget is approximately 130 million euros, i.e., 0.1% of the total budget for construction and public works in France, or two euros per year per French person.

From a general organisational point of view, there are about 3500 archaeologists in France, distributed among:

- The Institut National de Recherches Archéologiques Préventives (INRAP) has 1800 permanent archaeologists and about 200 short-term-contract archaeologists. It does most of the preventive excavations.
- The National Archaeological Service of the Ministry of Culture employs 250 archaeologists, with its sub-department of Central Archaeology and the regional archaeological services. As in most European countries, they control development projects, order preventive excavations, and control the quality of the excavations
- About 50 archaeologists work as curators in museums;
- About 250 archaeologists teach in universities;
- About 300 archaeologists conduct research programs in the *Centre National de la Recherche Scientifique* (CNRS);
- About 300 archaeologists work in the archaeological services of local authorities (cities, *départements*);
- About 50 archaeologists are in private establishments, partly non-profit organisations.

Rescue excavations in the Castle of the City of Caen, Normandy, France. (Photo H. Paitier, INRAP)

The population of France is 63 million, so there is about one archaeologist per 20 000 inhabitants. This places France below the European average, and below countries such as Greece, Switzerland and the United Kingdom.

The Ministry of Culture, through its Regional Archaeological Services (SRA), is the one who authorises archaeological excavations. In the case of preventive archaeology, the SRA prescribes the undertaking of 'diagnostics', to detect, identify and evaluate archaeological remains in an area due for development. As the case arises, the SRA prescribes full-fledged excavations. The Ministry of Culture is advised by a scientific council, the *Conseil National de la Recherche Archéologique* (CNRA), presided over by the minister. At a regional level, councils of experts, the *Commissions Interrégionales de la Recherche Archéologique* (CIRA) advise the regional archaeological services.

INRAP, as a research institute answerable both to the Ministry of Culture and the Ministry of Research, also comprises a Scientific Council, two thirds of which are experts elected by the archaeologists of various institutions. Most of its members are archaeologists from outside INRAP. Apart from administrative departments, INRAP also has a scientific department which defines the scientific policy of the establishment. On the regional level, INRAP includes a certain number of interregional departments, whose directors are helped by scientific assistants, responsible for controlling the scientific quality of work in the field at a local level, the publication of studies, and also collaboration with other scientific institutions. More generally, INRAP has passed a number of conventions of cooperation with the CNRS, universities, the archaeological services of towns and *départements*, and even some foreign institutions.

The Archaeological Map of the Ministry of Culture indicates approximately 400 000 sites – whereas forecasts from the best-known areas estimate potential sites at several million (doubtless between 5 and 10 million). On the great motorway and railway routes, where trial excavations are systematic, an important site is found every kilometre. Each year about 70 000 hectares (700 km^2) are subjected to development projects (construction, motorways, high-speed rails (TGV), quarries, industrial zones, underground car parks, etc.), and this does not include the 'invisible' but very worrying destruction caused by agricultural and forest work. Of these 70 000 hectares, about 15% are subjected to the diagnostics prescribed by the regional services of the Ministry of Culture, representing about 2000 operations a year, or 90 000 working days.

Trial excavations

According to the law, diagnostic evaluations are a public monopoly, shared between INRAP (about 95%) and the archaeological services of towns and *départements* that desire it. This public monopoly is intended, according to the words of the Minister of Culture, to guarantee the objectivity of the evaluations, in other words, to avoid the situation of private enterprises, under pressure from the developers, specialising in finding nothing! Evaluations are financed by a tax paid by all developers, whether or not there is an archaeological site on their land. This tax should theoretically bring in between 60 and 80 million euros per year, but it is not, as yet, completely finalised in its application. A third of this tax is intended for a fund to help small developers pay the cost of full-fledged excavations, when required.

In France, the great majority of diagnostic evaluations are carried out by mechanically excavating trenches over an area of between 5% and 10% of the total surface, which constitutes a minimum statistical threshold. Aerial photographs and diverse other non-intrusive techniques are used, but only in specific cases. Prehistoric sites in particular are likely to be uncovered only through such systematic trenching. It is striking that over several years a certain number of Lower and Middle Palaeolithic sites have been discovered in northwest France through this technique, while they are unknown in southeast England, an area perfectly comparable from a geological or archaeological point of view but where this technique is not used.

According to the organisation described above, diagnostic evaluations are the object of a double control of scientific quality. The internal control is carried out by the regional scientific assistant of INRAP, in liaison with the national scientific department and the national scientific council. The external control is carried out by the regional archaeological service of the Ministry of Culture, aided by the Commission Interrégionale de la Recherche Archéologique (CIRA) and, if need be, in the case of important sites where serious problems have been encountered, by the Conseil National de la Recherche Archéologique (CNRA). Only when the results of the evaluations are known do the services of the Ministry of Culture decide if there should be further excavations or not. Between 20% and 25% of diagnostic evaluations are followed by full-fledged excavations.

Archaeological excavations

According to the terms of the initial law of 2001, excavations are also a public monopoly and entrusted to INRAP with the obligation for the

latter to cooperate with other scientific institutions as necessary. This stipulation was challenged at the Commission of the European Union, Brussels, by certain private archaeologists and some developers. By a decision dated 2 April 2003, the Commission rejected this complaint. This decision is of great importance: it signifies that each member country of the European Union can, if it wishes, organise its preventive archaeology as a public monopoly and that, in this domain at least, a 'free market economy' is neither a necessity nor inevitable.[1]

Nevertheless, a new parliamentary majority in 2003 amended the initial 2001 law by introducing the possibility for the developer himself to enter into commercial competition for the excavations. This modification reflected the economically liberal political sensibility of this new majority. It also expressed the hope of lowering the excavation costs by introducing commercial competition, a hope that has not been realised.

This introduction of commercial competition was nonetheless accompanied by various precautions. Private enterprises are subject to scientific approval, renewable every five years, after examination of their dossier by the Conseil National de la Recherche Archéologique. They cannot be economically dependent on developers. The excavation plans of the developer's subcontractor have to be submitted to the Regional Archaeological Service for approval, which can also carry out inspections during the whole excavation in order to verify the quality and appropriateness of the mission statement. Only upon these verifications does the service give (or not) the authorisation to excavate. Lastly, approval can be withdrawn at any time in case of serious negligence or fault.

Despite these precautions, in 2003 a large proportion of the French archaeological community showed its hostility to this measure through petitions, demonstrations and even strikes.[2] The Conseil National de la

[1] For a more complete legal analysis in French, cf. J.-P. Demoule, "Archéologie préventive, recherche scientifique et concurrence commerciale", in: P.-L. Frier (ed.), *Le nouveau droit de l'archéologie préventive,* l'Harmattan, Paris, 2004, 199-242. See also: J.-P. Demoule, "Scientific quality control and the general organisation of French archaeology", in: Willem J.H. Willems & Monique van den Dries (eds.), *Quality Management in Archaeology,* Proceedings of the session of the European Association of Archaeologists, Cork, September 2005, Oxbow, London, 2007, 135-147.

[2] These eight months of crisis were the subject of a special report in the journal *Nouvelles de l'archéologie* 95, 2004. (Maison des Sciences de l'Homme, Paris). Two websites were also dedicated to it: www.archeo.levillage.org and www.canalarcheo.org as well as an important report on the website of Télévision France 2: http://cultureetloisirs.france2.fr/patrimoine/dossiers/

Recherche Archéologique itself expressed its reservations.[3] It was not only a question of ideological prejudice. Those who were against competition pointed out that in the United States of America and in Italy, as mentioned in the introduction, commercial competition had led to a definite separation between archaeology that we may call 'academic' and private-enterprise archaeologists, who publish very little and rarely attend scientific congresses. And even in Britain, where in the Common Law tradition there was hardly any legislation concerning preventive archaeology, apart from a simple circular ('guidance'), the parliamentary report of the group chaired by Colin Renfrew expressed certain reservations.[4]

At present, however, in practice only a few enterprises have been created in France since 2003, and the only ones present in the market, small in size, already existed and collaborated with INRAP. Moreover, their prices were no lower than those of INRAP. When no other candidate presents itself, INRAP is given by law the responsibility to carry out the excavation. It is also INRAP that, in every case, has to assure the scientific publication of the excavation after the handing in of the excavation report.

General perspectives

In this form, the French system, which is certainly not yet fully finalised, expresses well the wish for a strong control by the state, considered to represent the community of citizens. It also expresses the idea that the developer is not a simple 'client', but that he must pay as a 'polluter' insofar as he impairs national heritage and that he should repair this damage. It also considers that the notion of 'ethical code', popular in the tradition of the Anglo-Saxon liberal economy, has no meaning in a country of Latin culture where the only valid consideration is the written law.

But the French system also expresses the idea that the scientific conduct of an excavation cannot be compared with the building of a bridge, which is subject to predefined standards and whose quality can be controlled afterwards. As every student learns, an archaeological excavation is first of all an act of destruction: once completed, it can no longer be re-enacted or fully controlled. Moreover, the scientific objectives of an excavation are on each

[3] Avis no. 22 of the Conseil National de la Recherche Archéologique, "De la concurrence en archéologie", 14 April 2003, in *Les Nouvelles de l'archéologie* 93.
[4] *The Current State of Archaeology in the United Kingdom*, First Report of the All-Party Parliamentary Archaeology Group, The Caxton & Holmesdale Press, January 2003, can also be consulted on the websites of English Heritage and the Institute of Field Archaeology.

occasion local and context-specific, unlike the principles governing the building of a bridge. In certain cases and depending on the state of knowledge, if the site belongs to a well known archaeological period a rapid excavation could be recommended; whereas, in other cases, a much more detailed excavation may be necessary. There are therefore no pre-established standards which would suffice, as for a bridge, to be controlled afterwards. Overall, these different points show that in Europe there is a strong divergence as to the role of the state, depending on the different cultural traditions.

In conclusion, one can see that the debate is far from being clear-cut. It would be, in this respect, a caricature vision, but sometimes attested, to consider that French legislation, in creating the legal monopoly of INRAP for evaluations and archaeological excavations (the Law of 2001, original version), or at least a monopoly for diagnostic testing shared with the services of territorial collectives, towns and départements (the Law of 2001, amended 2003), should have perpetrated a flagrant violation of community rules and is against the trend of the general movement of history. In fact, five points should be borne in mind:

1. On 2 April 2003, the European Commission rejected the complaints by the General Department of Competition directed against the Law of 17 January 2001 (original). This analysis joins that of the French Conseil Constitutionnel (decision of 16 January 2001) and also that of the French Conseil d'Etat (decision of 30 April 2003) and even that of the French Conseil National de la Concurrence (decision of 13 March 2002). The state is thus authorised, if it wishes, to set up a public monopoly of preventive archaeology. From this point of view, other European countries that already have such a monopoly are authorised to keep it.

2. More generally, having been at the origin of the privatisation of network public services (telecommunications, energy, transport), the European Commission recognises in a recent *Green Paper on Services of General Interest*[5] that the question of services of general interest largely remains to be treated within the European Union and that it is part of political power to guarantee the general interest 'where the market fails'.

3. Is preventive archaeology governed by market rules? Or, in other words, is the developer a 'customer' of archaeology? Although it is certain that

[5] *Green Paper on Services of General Interest* (Presented by the Commission) COM(2003)270 final, Brussels, 21.5.2003, 63 p. [English version]

the developer is obliged by the public power, following 'the polluter pays' principle ('casseur=payeur' in French, or 'Verursacherprinzip' in German) to pay for preventive archaeological excavations before each development, is he directly interested in the scientific quality of the excavations and their results? Or is he not simply paying a form of tax, with the state having as it a duty to control directly (by carrying out the excavations itself) or indirectly (by a public establishment or other authorised organ) the scientific quality of these excavations and their good exploitation and restoration?

4. Is there an economic reality from such a market of preventive archaeology?

5. When all is said and done, as the Brussels Commission affirms, it is the general interest that is in question. Our general interest orders that our archaeological heritage, according to the Malta Convention, should be preserved. If it cannot be preserved integrally (conservation of the site *in situ*), then it should be by a quality-controlled preventive excavation. By maintaining the public monopoly of the evaluations, the French government has clearly signified that it wants to guarantee their 'objectivity'. By submitting the possible opening of preventive excavations to private enterprises, the state has nonetheless provided itself with a number of safeguards. Therefore, whatever system is adopted, the quality of the scientific results obtained will be the criterion of the quality of the system.

Thus, as much for France as for Europe, the application of the law, at least in the domain of preventive archaeology, seems to be clearly subordinated to political and cultural choices, if not those of society. For the specialist of the history of human societies, in the end this observation is reassuring.

October 2007

'Preventive Archaeology' in Greece The Legislative and Institutional Background

Maria-Xeni Garezou

The purpose of this paper is to present the overall legal and administrative system regarding the conduct of 'preventive archaeology' in Greece and to provide some data on the socio-economic and historical background. For a long period of time, rescue excavation prevailed over preventive policies. We are going to show that this notion is changing – the concept of planning at all stages now takes precedence over ex post and partially reparative actions. Thus, we are going to discuss the main provisions of Law No. 3028/2002, which is the main legislative document for the protection of cultural heritage in Greece, as well as the organizational structure of the Ministry of Culture that is responsible for implementing it. Furthermore, we are going to review specific legal provisions for physical planning and environmental protection that affect considerably the practice of archaeology because of the complementarity that exists between landscape conservation and the preservation of cultural heritage. 'Preventive archaeology' covers a wide range of activities, such as raw material extraction, agriculture and forestry, spatial and urban planning, as well as an extensive domain of private and public, small- and large-scale works. While recognizing that fact, a particular emphasis will be given here to the issue of public works[1].

I. The geographical and socio-economic context

Greece has a land territory of 130 800 km^2 and a population of almost 11 million. The mainland accounts for 80% of the land area, with the remaining 20% divided among 3000 islands. It has an extensive coastline

[1] The analytical presentation of major projects, as well as the solutions envisaged by the members of the Archaeological Service and the Monitoring Committee of Major Public Works, are the subject of the paper of Dr. Koukouli-Chrysanthaki.

of over 13 000 kilometers with 5% of it belonging to ecologically sensitive wetlands of international importance[2]. Natural lakes occupy 0.5% of Greece's area. More than 80% of the country is mountainous terrain of marginal productivity. Over 30% of the land is cultivated, 40% has permanent grassland and 22% is covered by forests or woodlands. The agricultural sector is based on small family plots, often situated on terraces sustained by walls of dry stone. This has contributed to sustainable farming which has not severely affected the cultural heritage. Approximately 18% of the land territory is under protection due to the EU NATURA 2000 network for the conservation of habitats, wild fauna and flora.

The population density of 80 inhabitants per square kilometer is considered rather low compared with other European countries. Actually, since the 1950s, 40% of the rural communities have been abandoned. Nowadays, approximately 60% of the population lives in settlements with more than 10 000 inhabitants. Over 30% of the population lives in Athens and 10% in Thessaloniki. Most of the important urban centres are coastal. Tourism activity is also concentrated on the coastal mainland and the islands, where the pressure exercised for the issuing of permits regarding tourist infrastructure is considerable.

Greece is a highly urbanized country. Actually, 40% of the territory is urbanized. In addition, 5% of the territory is urbanized with second home (vacation) building, which is often constructed illegally. Even though the rate of urban growth decreased after the 1970s, the phenomenon directly affects the practice of archaeology. It is characteristic that in the period 1980-1993, approximately 82% of the areas that were incorporated in city plans had been areas of illegal housing. Today, only 7% of the total non-urbanized area of the country is estimated to be covered by land-use plans. This shortcoming bears a direct impact on the ability of the Archaeological Service to deal with development projects from the design stage. Moreover, it compels the Archaeological Service of the Ministry of Culture to carry out a considerable number of rescue excavations on a yearly basis, a fact which impedes long term programming and management of archaeological resources. It is estimated that more than 85%

[2] Information and statistical data cited comes from the following sources: the National Center for the Environment and Sustainable Development, Greece, The State of the Environment, A Concise Report, 2001; Ministry for the Environment, Physical Planning and Public Works, Country Profile Greece, National Reporting to the 12th Session of the Commission on Sustainable Development of the UN, March 2004; Ministry of Culture, Greece, Periodic Report submitted to the World Heritage Committee, 2004.

of the archaeological investigations conducted by the Service are related to archaeological assessments and rescue excavations, which absorb approximately 60% of their annual budget (the sum includes the wages of the personnel).

A sector which is acquiring a growing importance for the practice of 'preventive archaeology' in Greece is transport and communication. The approved programme of motorways, road axes, and railways covers practically the whole territory. It is characteristic that during the construction of 527 km of the Egnatia motorway, 270 new archaeological sites were identified and 45 of them were excavated. The cost of these operations amounted to 11.5 million euros. Furthermore, a change of the motorway alignment cost a supplementary 80 million euros (from a total budget of 3.800 million). Until 2004, during the construction of the 730 km-long PATHE (north-south) motorway from Patras to Thessaloniki, 8 Ephorates of Antiquities were involved in 37 rescue excavations. The ERGOSE railway that follows the route of the PATHE motorway led to the excavation of 14 sites. The construction of the Athens Ring and the airport caused not only extended excavations, but also the moving and relocation of 2 post-Byzantine churches. The Athens Underground has been a significant operation of investigation of the historic city centre, where the construction of the central stations has led to the excavation of 65 000 m^2 and the creation of small *in situ* museums in the metro stations.

In administrative terms, Greece is a unitary decentralized state. It is divided into 13 regions, 51 prefectures and the autonomous administrative region of Mount Athos.

Unfortunately, there are no systematic statistics regarding cultural heritage which could offer a comprehensive picture regarding the number of protected monuments and sites, the extent of the territory covered by archaeological and historical sites and their respective protection zones, or the erosion of the archaeological heritage on an annual basis. The Inventory of Listed Monuments and Traditional Settlements drawn up by the Ministry for the Environment, Physical Planning and Public Works includes data on 800 settlements and 10 000 listed monuments (according to the legislative framework implemented by the Ministry)[3]. The Permanent Catalogue of

[3] The Ministry for the Environment, Physical Planning and Public Works has assumed responsibility for the protection of the so-called 'traditional settlements', 'historic centres', and a certain category of listed buildings. The term 'traditional settlements' is applied to living

Listed Archaeological Sites and Monuments in Greece includes 17 500 entries regarding immovable monuments and sites under the protection of the Ministry of Culture. However, these figures are indicative and do not give an adequate picture of the extent of the areas protected by Law No. 3028/2002. This is because according to this relatively recent law, listing is no longer required in order to protect a monument, an archaeological or a historical site dating before AD 1830. Consequently, all cultural heritage dating before that date is protected ipso jure (see also part V. below). Furthermore, it should be noted that the Permanent Catalogue of the Ministry of Culture does not constitute a systematic inventory, since its entries may refer to more than one item, such as large building complexes, groups of buildings, settlements, or even entire ancient cities. This is the objective of the National Archive of Monuments (POLEMON), which is now under development. Of course, the regional services of the Ministry of Culture keep records regarding monuments and sites, but so far there has not been a systematic cartographic survey operation at a national level. This is also related to the shortcomings of the National Land Cadastre, which has not been completed yet.

II. The term 'preventive archaeology'

Although the concept of prevention regarding the destruction, disfigurement, alteration and damage (direct or indirect) of cultural heritage is central to Greek legislation, policy and practice, there is no official definition of the term 'preventive archaeology'. It is worth noting that the term is not employed in any official document. It is also characteristic that the word 'archaeology' is not employed amongst the 'Definitions' of Law No. 3028/2002, which is entitled "On the Protection of Antiquities and Cultural Heritage in General".

Then, how do we define 'preventive archaeology'? A possible definition is that 'preventive archaeology' comprises a wide range of administrative actions, scientific research and decision making which should precede the issuing of a permit for any potentially harmful activity in areas of acknowl-

settlements dated post-1453 and listed because of their historical, architectural, social, and aesthetic significance. Individual constructions dated after 1453 and presenting outstanding architectural, aesthetic, historical, ethnographic or social interest may also be listed. It has to be noted that these listings may be the same monuments and sites protected by the Ministry of Culture according to Law No. 3028/2002. The competences of the Ministry for the Environment were partly transferred to two regional Ministries, the Ministry of the Aegean and Insular Policy and the Ministry of Makedonia-Thraki.

edged or possible archaeological interest. In fact, 'preventive archaeology' is the adoption of strategies of advanced planning which minimize the impact of harmful human intervention with respect to the socio-economic context and contribute to the creation of a record of the investigated areas. In that sense, 'preventive archaeology' includes underwater archaeology. The moving of a post-Byzantine church in order to protect it from the flooding caused by the construction of a new dam also falls into the scope of 'preventive archaeology'. It is worth mentioning that the competence of the state archaeologist in Greece is not limited to the remains under earth, but also encompasses free-standing monuments, as well as so-called 'archaeological and historical sites'.

The term employed in Article 3 of Law No. 3028/2002 is 'Protection'. Thus, protection includes:

a) the identification, research, recording, documentation and study of elements of cultural heritage,
b) its preservation and prevention of destruction, disfigurement, alteration and in general any kind of damage, direct or indirect,
c) prevention of illegal excavations, theft and illegal export,
d) conservation and restoration,
e) facilitation of public access (physical and intellectual),
f) enhancement and integration of cultural heritage into contemporary life, and
g) education, awareness raising and aesthetic enjoyment.

In practice, 'preventive archaeology' in Greece is closely connected to the development of infrastructure and is considered as 'development-led archaeology'. The title of the recent symposium Archaeological Investigations and Major Public Works (Thessaloniki, September 2003) is very representative of this conception. The purpose of this meeting was to present the results of major archaeological projects which had been carried out within Community Support Frameworks that aimed at the development of infrastructure. Excavations occupied an important part of the agenda, because trial trenching as a method of archaeological assessment and full excavation of the sites as a means of preserving the archaeological record are actually more widespread than non-destructive methods of investigation.

Is 'preventive archaeology' mostly about excavation? 'Preventive archaeology' should rather be about pre-excavation archaeological investigation and preservation. According to the official guidelines for the conduct of archaeology in the context of planning public works, archaeologists should seek to:

a) identify and record all possible monuments and sites within the limits of the project area,
b) evaluate the type of investigation required for the comprehensive survey of the project area,
c) assess alternative planning and project design options and propose 'minimum impact solutions,'
d) suggest specific conservation measures for the elements of cultural heritage *in situ*, and estimate the cost of rescue excavation and other conservation measures.

III. The historical background

Regarding the history of rescue archaeology in Greece, we can distinguish three phases:

1. The first phase was related to post-war economic development, which was at its peak in the decades 1950-1980. During this period, the Greek Archaeological Service excavated most of the historic cities while having to face extremely difficult situations caused by an extended housing enterprise and almost anarchic urbanization and industrialization. According to official statistics for the period 1960-1980, the totality of the areas that were later incorporated in city plans had been areas of illegal development. Needless to say that the emphasis was put on rescue and much less on preventive action. As a result, Greek archaeologists not only acquired useful experience, but also entered the debate on 'urban archaeology'. This theoretical and technical knowledge proved to be of capital importance in formulating the policy and practice of 'preventive archaeology' in the following years.

2. We discern a second phase during the 1980s and until the beginning of the 1990s, when Greece benefited from the financial input of Community Support Framework I, destined for the creation of infrastructure. During this time, the construction of major public works had either already started or was at an advanced planning stage. The legislation in force for the protection of antiquities (a codification of laws dating from 1932) was enriched with new legislative tools providing the means to plan and finance the archaeological work, organize tenders, commission services and products, and hire qualified personnel. In parallel, environmental legislation, which stipulated the drafting of Environmental Impact Studies, was introduced in 1986.

3. The beginning of the third phase coincided with the launching of Community Support Framework II in 1994, when the practice of develop-

ment-led archaeology really took a new turn. The number of interventions and excavations that were expected of the Archaeological Service was augmented dramatically, as was the number of personnel involved in the operations. Funding increased. The country's landscape and archaeological map changed. Last, but not least, stakeholders, often expressing conflicting values, multiplied. As a result, in 2002 a new law "On the Protection of Antiquities and Cultural Heritage in General" (Law No. 3028/2002) was drafted and is still in force today and the Archaeological Service was re-organized (Presidential Decree No. 191/2003).

IV. Institutional and professional background

The Ministry of Culture, through the General Directorate of Antiquities and Cultural Heritage (Archaeological Service), is the governmental body responsible for issuing, administering, and implementing policies on archaeological heritage in Greece. The Central Service of the Ministry plans, approves, and monitors the work of the regional services, known as Ephorates, and secures their funding. The Ephorates approve and control activities and work carried out in monuments and their surroundings, on archaeological and historical sites and their protection zones, and finally in areas of archaeological interest which are not declared and delineated archaeological sites. The Ephorates also supervise, or execute through their own work teams, the diverse work that constitutes what is broadly described as safeguarding and protection of cultural heritage.

The Ephorates are decentralized departments dependent upon the Ministry and are directed by the Ephor of Antiquities. Distributed throughout Greece, they are usually located in the prefecture seats, since their area of responsibility coincides roughly with the administrative division of the country into prefectures. Their area of competence follows a chronological classification of the Hellenic cultural heritage. There are 39 Ephorates of Prehistoric and Classical Antiquities and 27 Ephorates of Byzantine and Post-Byzantine Antiquities. Correspondingly, within the Central Service we distinguish a Directorate for Prehistoric and Classical Antiquities and a Directorate for Byzantine and Post-Byzantine Antiquities. Moreover, 6 regional Archaeological Institutes have the mission of dealing with the backlog in the publication of older excavations, which is considerable, especially in the domain of rescue excavations.

The central administration and the regional services of the ministry work in close co-operation with the scientific multidisciplinary advisory bodies which are the Central Archaeological Council, the Central Council for Modern Monuments and the 11 local Archaeological Councils. The process

of decision making involves their statement of opinion before the issuing of a Ministerial Decision. The Central Councils are consulted for issues concerning major monuments or for major interventions, such as archaeological operations in the context of major public works.

In 1999 a Steering Committee (Monitoring Committee of Public Works) was created within the Central Service with the mission to plan and monitor specific major public works, coordinate the activity of the regional services for that purpose, undertake negotiations with the various agents and, where appropriate, act as raporteur to the Central Archaeological Council. Initially the Committee was composed of archaeologists, including directors of the Central Service and Ephors involved in the projects and was chaired by the Secretary General of the Ministry.

During the period 1999-2004, the Committee supervised the following projects: the Athens Underground, the Athens Airport, the PATHE motorway including the Athens Ring and the Rio-Antirrio Bridge, the Egnatia motorway, the Western motorway (Ionia Odos), the PATHE Railway Axis (ERGOSE), the water supply pipe/conduit of Thessaloniki, and re-creation of Lake Karla (following its drainage in AD 1962). Today, the Committee is constituted of six high ranking officials, archaeologists, conservators, and engineers (the General Director of Antiquities and Cultural Heritage, the General Director of Restoration, Museums and Technical Works, the Director of Prehistoric and Classical Antiquities, the Director of Byzantine and Post-Byzantine Antiquities, the Director of Conservation of Ancient and Modern Monuments and Works of Art, and the Director of Restoration of Ancient Monuments) and is presided over by the Secretary General of the Ministry.

Responsibility for the protection of cultural heritage lies exclusively with the central government. Regional and local authorities have no competence in those matters. Archaeological investigations (but no rescue excavations) may also be undertaken by universities, research institutes and foreign archaeological schools in Greece, after permission from the Minister of Culture. So far, the status of the state archaeologist has contributed to the minimization of antagonisms between public and private interests. In 2004, 430 state archaeologists worked for the Ministry of Culture on a permanent basis, whereas a varying number of archaeologists under contract were temporarily employed in the framework of major public works.

Education and training of archaeologists is based on university courses. Professional training and continuous education for field archaeologists

employed in archaeological investigations in the context of development projects is a desiteratum.

V. The legislative background

1. Law codification No. 5351/1932

The legislative background of the actual law, and of the practice of 'preventive archaeology' in Greece in general, can be found in the old Law No. 5351/1932, mainly in Article 50. This article stipulated amongst other things that "any work near an antiquity which may damage it directly or indirectly and any work whatsoever on ancient buildings and remains or ruins, even if such work causes no damage… shall be forbidden without the authorization of the Ministry".

This simple phrase served as the legislative basis for the protection of antiquities in the course all major public works executed in Greece in the context of European Support Frameworks and the preparation the Olympic Games until June, 2002. It was supplemented and reinforced by Article 24 of the Constitution of 1974 (as subsequently revised in 1986 and 2001) regarding the obligation of the State, as well as of its citizens, to protect the cultural and natural environment within the scope of sustainability.

2. Law No. 3028/2002 On the Protection of Antiquities and the Cultural Heritage in General

The main provisions related to the practice of 'preventive archaeology' are the following.

The scope of protection (Article 2)

Law No. 3028/2002 provides for the protection of:

1. all immovable cultural properties (individual monuments and archaeological sites) dating from the Prehistoric Age until AD 1830 (the date of the foundation of the Greek State), which are considered as *Antiquities*. Caves and paleontological remains also fall into this category;
2. *Modern Monuments* dating after AD 1830, provided they are listed;
3. all portable objects produced before AD 1453 (date of the fall of the Byzantine Empire), also considered as Antiquities. Products of excavation are subject to the same status of protection;
4. categories of portable objects and individual works of art dated post-1453, provided they are listed.

Immovable cultural properties fall into 3 categories:
1. Individual *Monuments*;
2. *Archaeological sites*. These are areas dated up to 1830 that contain ancient monuments whose character and appearance constitute an archaeological or architectural ensemble. Archaeological sites may coincide with living settlements, parts of settlements, towns and historic centres;
3. *Historical sites*, which are areas that were the domain of important mythical or historical events, even where no monuments are visible or evident. They may also be territories that contain monuments or groups of monuments dated after 1830, which constitute an ensemble and can be delimited topographically.

It should be noted that monuments, archaeological and historical sites may also be situated underwater, on the seabed, or in the beds of rivers and lakes. According to Law No. 3028/2002, the provisions regarding the protection of monuments on the ground are applied *mutatis mutandis* for the protection of underwater monuments and sites (Articles 15, 16).

State ownership of the Antiquities (Article 7)

Antiquities "…belong to the State in terms of ownership and possession, and are things extra commercium and imprescriptible" (Article 7[1]). For that reason, the State might also proceed to the *expropriation* in whole or in part of the land which contains monuments (Article 18). The law provides for *compensation* of the owner faced with a permanent or temporary restriction of his rights regarding the plot where the immovable monument in question may be situated (Article 19). Also for the same reason, archaeological finds of all excavations, regardless of their source of funding (public or private), are kept in state-owned storage places.

Mandatory reporting (Article 8)

According to Article 8(1), "Any person who discovers or finds an immovable antiquity must declare it without undue delay to the nearest archaeological, police, or port authority." The declaration must contain the exact location of the discovery and every other useful detail. If this occurs in the context of any kind of work, it is stopped until the Archaeological Service renders its decision after inspecting the area (see below Articles 35-39).

Inventorying (Article 4)

Monuments are recorded, documented and registered into the "National Archive of Monuments", which is maintained by Directorate of the Archive

of Monuments and Publications of the Ministry of Culture. The National Archive also contains the condition reports on the state of conservation of the monuments, which are submitted every three years by the competent Services of the Ministry. The Directorate acts as a coordinating unit at a national level for the data provided by the decentralized Services of the Ministry. A customized software program (POLEMON) and a thesaurus (POLLUX) have been created for the management of the information. The database may be used for the inventorying of both the immovables and the excavation finds. It also includes a GIS for the integration of the topographical data regarding the delimitation of archaeological and historical sites and their protection zones. The National Archive project, which is still under development, is implemented through working stations all over Greece.

Integrated conservation (Articles 3 and 10)

A basic innovation of the recent law is that the protection of monuments and archaeological and historical sites is taken into account at all levels of planning policies (spatial, regional, urban and environmental), as well as in the various stages of development schemes (Article 3).

Activities and projects that may, because of their location or their nature, jeopardize the conservation of monuments and sites are controlled by the competent regional unit (Ephorate) of the Ministry of Culture. The new Law No. 3028/2002 repeats the general provision of the 1932 codification regarding the prohibition of "Every activity on an immovable monument, which may result directly or indirectly in its destruction, damage, pollution or disfigurement…" (Article 10[1]). Furthermore, it stipulates in detail the accepted land uses and activities within archaeological and historical sites and their respective protection zones (Article 10[2]).

Paragraph 3 of the same article is of extreme importance for 'preventive archaeology', since it defines that "…the carrying out of technical or other work as well as building activity in the vicinity of an antiquity shall be permitted only upon authorization by the Minister of Culture, following an opinion of the Council". Authorization is granted "…if the distance from an immovable monument or the relationship with it is such that the monument is not threatened with direct or indirect damage due to the nature of the work or the type of business or activity." This authorization takes "…precedence over all licences issued by other authorities with respect to the businesses in question or the execution of work and its details shall be recorded in these licences upon annulment" (Article 10[6]). In consequence, an archaeological evaluation of the area precedes any other assessment. Ephorates have the competence to stop temporarily or permanently

any work that is not in accordance with the provisions of the law on the protection of cultural heritage. However, it has to be noted that the annulment clause is not always easily applicable on major public works that are considered of public interest. The Ministry of Culture is then called on to assess the significance of the monument in relation to economic, development and social values.

Conservation and maintenance of the archaeological heritage in situ *(Article 9)*

Article 9(1) stipulates that it is "the responsibility of the Service to decide with full reasoning on the preservation or not of an immovable antiquity, following a preliminary excavation, if so required." Depending on the importance of the finds, the issue may be referred to the Council for expressing an opinion and then to the Minister, who is expected to issue a decision within a timeframe not exceeding four months after the official statement of the Service. "Whenever it is decided to inter the antiquity or not to preserve it in the location where it is found, it shall be previously photographed, recorded and documented and a comprehensive scientific report along with a detailed list of the finds is submitted" (Article 9[2]). If, on the other hand "…it is decided to preserve the antiquity, the owner of the immovable may be obliged to allow its visit under conditions…" (Article 9[3]). Provisions for the compensation of the owner are also made. These include: acquisition of the land by the State, compensation for the temporary or permanent deprivation of the use of the land, which, however, do not apply for the major public works as to the compensation of the developer.

Removal and relocation of an immovable monument (Article 42)

Exceptionally, and after a decision of the Minister of Culture, it is possible to remove and transfer a monument in order to reinstate it at a suitable location. This permit is granted if it is considered that removal is imperative for the preservation of the monument from damage by natural causes or "due to the execution of major technical works, which are required for reasons of national defence or which are of major importance for the national economy and satisfy vital needs of the society." The operation is "…considered only if, after relevant scientific investigation, every possibility of preserving it in its own environment has been excluded" (Article 42[1]).

Archaeological research in situ *(Articles 35-39)*

It has to be noted that the new law is adopting a much more systematic and severe approach to these matters. It introduces the term 'archaeological research *in situ'* which encompasses excavations on land or underwater,

surface survey and scientific research carried out by geophysical or other methods (Article 35).

Archaeological research *in situ* is carried out after a decision of the Minister of Culture, issued following an opinion of the Council. As a result, all archaeological activities are subject to supervision and specific qualifications are required for the directors and members of the excavation team (Article 36). Moreover, in the context of a new research policy, the publication of the results is strictly stipulated and regulated in detail (Article 39). Failure to adjust entails revocation of the research licence and prohibition of applying for its renewal or for a new one. In Greece, the official preliminary reports of the investigations carried out by the Archaeological Service are published in the official journals Deltion, *A*nalekta and *AEMΘ* (in Greek, *Το Αρχαιολογικό Έργο στη Μακεδονία και Θράκη*). However, it should be noted that registering, documentation and reporting systems vary. The use of computerized technologies is still optional. The possibility to compile unified (or at least compatible) databases for the data acquired during rescue excavations carried out in the context of large-scale public works has not been exploited. Standardization is an issue that has not been dealt with adequately yet.

Excavations fall into two main categories: systematic and rescue. Systematic excavations may be carried out by the Archaeological Service, specialized research institutions and universities, and finally by Foreign Archaeological Schools established in Greece.

Rescue excavations of monuments which are "…revealed in the course of a technical work, public or private…", are carried out only by the Archaeological Service (Article 37[1]). Even though the developer may finance the excavation, it is the local Ephorate that is responsible for the conduct of the excavation and takes all the necessary measures for the protection, display and presentation to the public and the eventual valorization of the finds. Also, the Ephorates keep the scientific copyright of the research. In other words, the Archaeological Service has absolute control of all operations related to the country's cultural heritage.

In particular, for the carrying out of rescue excavation, the Service appoints an archaeologist who has at least three years experience in excavation and has not previously violated the time limits for the submission of an excavation report. Furthermore, the Service is expected to ensure the safeguarding and conservation of the finds in close cooperation with specialists, the safety of the excavated area, as well as that of the project

team and of third parties, and finally to facilitate the access of specialists to the site of the excavation.

In case rescue excavation exceeds the aim of immediate rescue, it is considered as a systematic excavation and the relative provisions are applied (Article 37[5]). This clause is very important, because systematic excavations are even more strictly regulated and controlled. The excavation project submitted to the Authorities, must provide information on the adequacy of the staff, technical infrastructure and budget as to the preservation, conservation and publication of archaeological remains afterwards (in fact this is also the content of the Contract of Co-operation, see part VII below).

Funding of archaeological operations within the context of 'preventive archaeology' (Article 37[6])

Following 'the polluter pays' principle and integrating the principles of the Malta Convention (Article 6), Law No. 3028/2002 stipulates for the first time the funding of the archaeological field operations and conservation programmes from the initial development budget. Funding covers the total costs of:

a) the hiring of personnel (workers and technicians, architects-engineers, conservators, archaeologists),
b) the necessary infrastructure for conducting the archaeological research,
c) documentation of the finds (including drawings, photographs, etc.),
d) guarding and storage of the finds
e) conservation of the finds
f) study and publication.

More particularly, funding includes: a) preliminary survey and prospection, b) cleaning and stripping of the area destined to be excavated and removal of the surface layer c) rescue excavation work, d) inventory and documentation of the finds, e) report preparation (including the necessary drawings, photographs, etc.), f) all the necessary operations stipulated by the Ministerial Decision: re-burying/covering of the immovable in the context of passive conservation, *in situ* conservation, removal, transfer of the remains to some other location and reconstruction when *in situ* conservation is not feasible, g) conservation of the portable objects, h) display and presentation to the public, i) post-excavation work and analysis, j) publication, k) dissemination of information through the organization of temporary exhibitions and scientific meetings. In practice, post-excavation stage provisions (especially the provisions regarding the publication of the finds) are more difficult to implement after the archaeologists leave the worksite. Thus, the final success of this clause will be assessed in the long term.

Rescue excavations that are carried out in the context of public or private development schemes with a budget of more than 587 000 euros, are financed by the owner of the work. A work with a budget of less than 587 000 euros may also be financed by the owner of the work (so that the time schedule can be shortened), upon application of the owner of the work, by a decision of the Minister of Culture, following an opinion of the Council. In both cases, the purpose and terms of the cooperation (budget, programming of works, staff, infrastructure, etc.) are cited in the Contract of Co-operation that the owner of the work signs with the responsible Ephorate of the Ministry of Culture.

Funding is calculated for each project separately. In Greece, we do not have a system of general levy or tax on all potentially destructive developments, as elsewhere. The funding possibilities are formulated as follows:

When the development project is private, the resources are private. When the development project is public, the investment may be public (although not necessarily from the budget of the Ministry of Culture[4]). In this case, the Ministry responsible for the implementation of the project, that is, the owner of the work, secures the necessary funding for the archaeological investigation by public aid through its annual budget (for example, the Railways ERGOSE infrastructure is funded by the Ministry of Transportation and Communications). Public works may also be co-financed by the National Authorities and the EU (in the context of Community Support Frameworks I, II, III Operational Programmes and Community Initiatives).

In major public works, funding might be obtained through public-private partnership schemes. It may thus combine European Structural Funds with contributions from the public budget provided by the National Authorities and resources from the private sector (provided by the Consortia responsible for the construction and operation of the infrastructure). European funding is granted according to an approved programme and the archaeological operations included in the project are cited in detail in the Technical Sheets that are submitted to the Managing Authority of the Community

[4] The budget of the Ministry of Culture amounts to 0.44% of the state budget (266 million euros for the year 2003). Regarding the resources assigned to monuments and museums, the Second Community Support Framework provided for the execution of 190 projects all over Greece with a total budget of 381.5 million euros. The Third Community Support Framework provides 357 million euros for the sector of cultural heritage, 89 249 000 of which are national expenditure.

Support Framework. In that case, archaeological research constitutes a separate sub-project. It has to be noted that funding of the archaeological work can not exceed 10% of the total eligible cost of the main project. In case it is in excess, special negotiations should follow.

It is important to note that although projects implemented in the framework of Community Support Programmes are not research projects, they support and promote research that is part of the excavation projects related to public works.

So far, major infrastructure (road axes, railways, the Athens Underground and the Airport) has been funded by the Cohesion Fund (CF), the European Regional Development Fund (ERDF) and the Community Budget lines in the field of the Trans-European Transport Network[5]. Furthermore, the European Investment Bank (EIB) has granted loans in order to cover part of the national costs.

3. Planning legislation

It is evident that the legislative background of 'preventive archaeology' is not only to be found in cultural heritage legislation implemented by the Ministry of Culture, but also in physical planning and environmental legislation (implemented mainly by the Ministry for the Environment, Physical Planning and Public Works and the 13 Regions).

According to Law No. 2742/1999 on Spatial Planning and Sustainable Development, the basic document on strategic planning on a national and regional level, the *National Framework for Spatial Planning and Sustainable Development*, as well as the *Regional Frameworks*, should take into account the preservation and protection of the cultural reserves of the country. All town plans and other physical planning measures and interventions should be integrated with the provisions of the above-mentioned Frameworks in order to implement a coherent and comprehensive policy. So far, those provisions have had no effect on the practice of 'preventive archaeology' in Greece because of the delay in the drafting of the Frameworks (which have either just been drafted or are at a drafting stage). As a result,

[5] The global financial package for the programme "Road axes, Ports, Urban development", which included the PATHE motorway, the Athens Ring, the Rio-Antirrio bridge, the Egnatia motorway, the Athens Underground and other main road and urban axes, amounted to 9.37 billion euros for the period 2000-2006 (http://ec.europa.eu/regional_policy/). However, at this stage we have no data on the total cost of the archaeological operations.

the input of the state archaeologists regarding the archaeological map of the territory came in a later stage of the planning process, when projects conceived by other agents (administrations, local authorities or private companies), were submitted to the Archaeological Service within the context of Environmental Impact Assessment, or even worse, by chance discoveries at the beginning of the construction work.

4. Environmental legislation

Environmental Impact Assessment was introduced into Greek Law in 1986 (Law 1650/1986 Concerning the Protection of the Environment). Works were classified into categories according to the impact they could have on the physical environment as a whole. Although there was no specific mention of the impact of the proposed interventions on cultural heritage, the Services of the Ministry succeeded in stressing the point through the implementation of the archaeological law.

It took almost 15 years and the incorporation of a European Union Directive (Directive 97/11/EC, Law No. 3010/2002) into national law in order to formulate a scheme that could really take into account and affect the protection of cultural heritage. Thus, Law No. 3010/2002 introduced the criterion of the impact of the proposed work or activity on cultural heritage (Article 1[(5]). Nowadays, the Ministry of Culture can check the choice of location at an early stage through the submission by the developer of a preliminary assessment (Preliminary Environmental Evaluation and Assessment), before the drafting of the main technical study. This offers the possibility to modify the original development or building plans and eventually propose a relocation, in case the Council recommends it as appropriate for the protection of antiquities. The opinion of the services of the Ministry may also be required, if so stated in the approval of the preliminary assessment, in the following stages of the project (Approval of the Environmental Clauses/Conditions). Thus the Ministry may intervene on two occasions: during the planning of the project (which comprises the stage of the preliminary study and the stage of the main technical study), and the construction phase. Depending of the category of the proposed work, the Minister of Culture or the Directors of the competent services of the Ministry are expected to co-sign the approval.

Legislation on Environmental Impact Assessment Studies is implemented jointly with Article 10(3) of Law No. 3028/2002. Telecommunication installations, energy devices, road construction, transport infrastructure (such as airports, ports, railway and underground), industrial buildings, resorts and large scale accommodation projects are nowadays checked at the

planning stage. The same is applied to all intensive land uses, such as stock-breeding, mining and quarrying activities, which are also submitted to rigorous controls.

The policy of the Ministry of Culture is to refuse consent for important cases and to try to find alternative solutions in order to minimize the impact on cultural resources during the planning stage. In case excavation is inevitable, the development site is fully excavated before destruction in order to record the archaeological evidence. The Ministry holds a 'watching brief' during the construction phase.

In addition to the above-mentioned legislation, there are five more categories of laws that shape the practice and implementation of 'preventive archaeology' in Greece. These are the following:

1. Legislation related to the carrying out of public works and, mainly, Law No. 1418/1984 (regarding the execution of works by the Ministries' own work teams or by contractors).
2. Legislation related to the carrying out of archaeological works: Law No. 1958/1991, Presidential Decree No. 99/1992, Law No. 2947/2001.
3. Legislation related to tenders and audits with a particular emphasis to European Union legislation[6].
4. Legislation related to the on-site safety and health of workers, employees and third persons[7].
5. Legislation related to the implementation of the Community Support Framework[8].

As already mentioned, while the owner of the work covers the total cost of the rescue operation, the responsibility to proceed to the hiring of personnel and the invitation to tenders in order to commission all the necessary materials for the carrying out of the excavation lies with the Ephorates. In consequence, they are also accountable to audits. For this purpose, and in order to assist them in their task, the Ministry of Culture has drafted specific Guidelines[9].

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[6] Presidential Decrees No. 370/1995 (incorporation of Council Directive 93/36/EEC), No. 346/1998 (incorporation of Directive 92/50/EC of the Council of 18.7.1992) as amended by No. 18/2000 (incorporation of Directive 97/52/EC), No. 105/2000, No. 334/2000 (incorporation of Directive 93/37/EC), Laws No. 2741/1999 and 3021/2002.

[7] Presidential Decree No. 305/1996 (incorporation of Directive 92/57/EC), Ministerial Decision No. 433/2000.

[8] Law No. 2860/2000 (on CSF III in general), Joint Ministerial Decisions No. 18527/2001 (on eligible projects), 24812/20001 (on the follow up of the financial data).

VI. The process

According to the procedure prescribed in archaeological and environmental legislation, the developer is expected to submit a preliminary technical study of the development proposal to the archaeological authorities. Within a month, the competent Ephorate (or Ephorates if the project involves not only prehistoric and classical, but also Byzantine and post-Byzantine antiquities) proceeds to the archaeological assessment of the proposal. This is usually based on the existing information on the records of the Archaeological Service.

a) In case there are no monuments or archaeological remains on the site where development is planned, a temporary approval of the preliminary technical study is issued.
b) When archaeological remains are known to exist, the Ephorate either rejects the project or asks for alterations to the original plan and proceeds to consultations with the developer. Then a temporary approval of the preliminary technical study is issued. The document includes all the necessary modifications to the original plan and notifies the developer of the eventual necessity to conduct an archaeological excavation on the site. The completion of this stage should not exceed 3 months.

During the second planning stage, the developer is expected to submit the definitive technical study to the archaeological authorities. The local Ephorate then proceeds to field evaluation, which basically involves field survey of the area.

a) If the evaluation reveals no surface remains, the Ephorate approves the continuation of the construction works under the condition that the removal of the topsoil and the evolution of the dig are monitored by an appointed archaeologist. In case antiquities are revealed during the construction, the Ephorate stops the works and starts the procedure for rescue excavation.
b) If the field survey exposes archaeological features, and depending on the importance of the remains, the Ministry of Culture may altogether deny approval of the definitive technical study, or pursue consultation with the developer regarding alternative planning and design solutions (regarding, for example, the type of foundations or integration into the landscape).

[9] In Greek *"Οδηγός Έργων δι Άυτεπιστασίας"*, Athens, 2002. Also, Ministry of Culture, *Μονάδα Οργάνωσης Διαχείρησης, Οδηγός Αρχαιολογικών Αδειοδοτήσεων και Διαδικασιών στα Δημόσια Έργα,* Athens, 2003.

c) The Ephorate may also proceed to small-scale test trenching or ask for the conduct of rescue excavation. The interval between the application and the approval of a definite technical study, after consultation with the Council when trial trenching is involved, is at least 4.5 months.

The rescue excavation process involves the following:

a) Notification by the Ephorate of the competent Directorate(s) of the Central Service and submission of a detailed report regarding the necessity of the proposed excavation. The report must provide cartographic data, as well as data on the time table, project management and budget of both the archaeological operations and the technical work.
b) Recommendation of the Central Service (within 15 days of the reception of the report) on the approval of the rescue excavations.
c) Consultation of the Central Archaeological Council.
d) Issuing of the Ministerial Decision for the conduct of the rescue excavation.
e) Drafting of a Contract of Co-operation between the Ephorate and the developer, which includes the data of the preliminary assessment contained in the Ephorate's report.
f) Excavation. The Ephorates are expected to make all possible effort to conclude the work within the time and budget limits and with respect to the co-signatory of the contract, that is, the owner of the work. For that purpose, the Central Service is also involved in the monitoring of the excavation.
g) Submission of a report of the Ephorate evaluating the finds of the excavation and proposing their preservation or not.
h) Consultation of the Central Archaeological Council.
i) Decision of the Minister regarding the *in situ* conservation or not of the archaeological finds, after consultation with the Council. The Decision may concern the whole project or part of it.

It should be noted here that this is the standard procedure for public works and private development projects. The planning and monitoring of major public works by the Steering Committee of the Ministry of Culture follow more complex procedures.

VII. The Contract of Co-operation

The contract of co-operation underlines the partnership between the Ministry of Culture and the developer and their mutual commitment to assume responsibility in carrying out construction works with respect to the archaeological resource and to the investment budget. It contains infor-

mation on the area to be excavated, the programme of work with a detailed description of the separate stages, the time table, the budget and the funding of the operations, the obligations of the parties, the funds' management and the audit process. In the case of major public works, the Contract takes the form of a Public Contract which is ratified by an act of law.

The main strength of Law No. 3028/2002 is its interrelation with planning policies. Nowadays, the process of decision making regarding the impact on cultural heritage of specific works, such as large-scale infrastructural developments, private constructions and certain categories of activities, involves an interdisciplinary approach and inter-ministerial collaboration. The implementation of Environmental Impact Assessment concerns a growing number of competent agents: the Ministry of Culture, the Ministry for the Environment, Physical Planning and Public Works, Regional and Local Authorities. However, spatial and town planning impediments still have a negative impact on the practice of 'preventive archaeology'. The status of archaeologists contributes to the implementation of the legislative framework and helps avoid eventual antagonisms which could arise from the 'privatization' of the archaeological profession. Procedures for the issuing of permits are now very thorough and stipulated in detail. However, they could be improved in order to respond to the pace of private investment. Finally, the completion of the National Archive Project would contribute to a better desk-based archaeological assessment, reduce the time needed for the issuing of permits and in the long term decrease the number of excavations.

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Details of the exhibition of the excavations in the Athens Underground. (Photo RobW/Flickr)

Preventive Archaeology And Major Public Works In Greece*

Haido Koukouli-Chrysanthaki

Already by the end of the 1950s as a result of the extensive building programmes which were characteristic of postwar Greece, rescue archaeology had been marked out as a major activity of the Greek Archaeological Service. The need to preserve the centuries' long and rich cultural heritage on Greek soil brought about a large number of exploratory excavations. Initially these were in the areas of known archaeological sites and especially in built-up areas – in the cities, villages and in the new tourist settlements which had developed on ancient sites. Development – road construction, agricultural or industrial – projects which took place in the countryside also brought to light an abundance of new finds from unknown or previously unidentified archaeological sites. The rescue excavations generally did not occur in the earlier stages of urban or development planning, but after the event, at the instigation of the Archaeological Service and often in a climate of conflicting interests.

In Greece the protection of monuments is the responsibility of the State. Therefore, the expenses of rescue excavations were in principle borne by the government. The practice, however, which is now going to become established, is that the costs of major excavations conducted in advance of development should be borne by the developer, whether public or private, who is endangering the monuments.

From the end of the 1970s, after the entry of Greece into the European Union, community funds provided the opportunity to undertake large scale

* In the meantime an extensive synthetic article about the Archaeology of the Public Works in Greece has been published by Lina Mendoni, archaeologist, Centre for Greek and Roman Antiquity, Hellenic Research Foundation (General Secretary of the Ministry of Culture of Greece from 1998-2004): Lina Mendoni, "Public Works and Archaeology in Greece. From the Site to Landscape", *Paysages de Mémoire, Mémoire du Paysage*, Actes du colloque international de Besançon, Mémoire de devenir des paysages culturels de' Europe, 1-4 December 2005, France 2006, 445-464.

public development projects throughout the State. Many of these major public works, for reasons which are not possible to discuss in this conference, were planned without appreciating sufficiently that fact that Greece is, in its entirety, an open archaeological site with scattered monuments, many of which are still unknown to archaeological research. All these development projects had strict timetables for the whole Greek administration and in consequence the Greek Archaeological Service had to find ways of responding to the challenge.

The regional Archaeological Services, the Ephorates of Ancient and Medieval Monuments, immediately fell to organising surface surveys in the areas where major construction works were located and followed these with exploratory excavations. The excavations identified monuments included in the areas where work was in progress. Construction work was temporarily restricted in certain locations and budgets were drawn up, together with schedules for the archaeological excavations which would follow. Special agreements were drawn up to define the collaboration between the archaeologist and developer on site.

After an initial situation of conflicting interests, an effective collaboration between engineers and archaeologists developed for the projects funded by the second and third European Community frameworks and work proceeded with respect to the needs and restrictions imposed by the programme of rescue excavation:

The major road construction projects (the New Egnatia Road, the Ionian Road, the National Road Thessaloniki-Patras, and the Attiki Road) together with other minor road construction programmes, new railway lines between Thessaloniki and Athens and Thessaloniki and Alexandroupolis, as well as the works in Lake Karla for the New Airport of Athens, for the Athens' Underground, for the Rion-Antirion bridge, (not to mention the work for the Olympics) all generated large scale excavations. This new archaeological material has opened a fresh chapter in archaeological research. In a short period of time, more or less complete pictures have emerged of urban and rural life in ancient and medieval Greece.

The excavations which resulted from opening the route of the new Egnatia Road through the mountains of Epirus[1] and Macedonia[2] confirmed the presence of human habitation from the Palaeolithic[3] and Neolithic periods until the Bronze Age and the Early Iron Age and from the beginning of the Historical Period until the end of Antiquity[4] and the Byzantine[5] and Post-Byzantine[6] period. The sites located in mountainous regions[7] are of special interest as well as others in the plains sometimes covered by deep layers of

alluvium.[8] Excavations have also been undertaken in the context of minor road construction programmes.[9]

The new railway lines from Thessaloniki to Athens, Thessaloniki to Alexandroupolis[10], and Korinth to Patras[11], as well as the National Road Evzoni-Thessaloniki-Athens-Patras and the Ionian Road[12] also passed through, or by, prehistoric settlements[13], ancient settlements, and cities of the historical period, already known[14] or previously unidentified[15]. The works in the artificial Lake Karla in Thessaly are connected with rich dis-

[1] A. Karamanou, "Archaeological Research in the context of the construction of Egnatia Road in the Prefecture of Thesprotia", *Archaeological Research and the Major Public Works*, Acts of the Archaeological Work Meeting held on the 18th-20th September 2003 – Thessaloniki, Eptapyrgio – 9th Ephorate of Byzantine Antiquities, 125-130 (in Greek), henceforth: ARMPW; *Album of Plates from the Photographic Exhibition at the Archaeological Work Meeting held on the 18th-20th September 2003* – pl. 57, henceforth: Album; K. Zachos, "Archaeological finds from the Egnatia Road in the Prefecture of Ioannina", ARMPW, 131-136; F. Kephalonitou, "The archaeological research for the Egnatia Road", ARMPW, 137-141.

[2] M. Lilibaki-Akamati, "Archaeological research and Major Public Works in the area of the 9th Ephorate of Prehistoric and Classical Antiquities", ARMPW, 142-154; A. Petkos, "Archaeological research in the area of the 11th Ephorate of Byzantine Antiquities", ARMPW, 155-159; E. Trakosopoulou-Salakidou, "Common Actions, Common National Aims of the Archaeological and Development Works in Central Macedonia", ARMPW, 160-173; Ch. Bakirtzis, "How the Archaeological Excavations associated with the Major Public Works of Central Macedonia were organized", ARMPW, 174-178; I. Tavlakis, "The Diateichisma of Kassandra in N. Potidaea, Chalidiki", ARMPW, 179-181; Z. Bonias, "Excavations in the Egnatia Road, Section 11,2/3-Asprovalta-Strymon", ARMPW, 182-186.

[3] A. Karamanou, ARMPW, 128-129, G. Riginos, "Excavations in the context of the construction of the Via Egnatia in the Prefecture of Thesprotia", ARMPW, 275; Album, pl. 57.

[4] M. Lilibaki-Akamati, ARMPW, 142-150; E. Trakosopoulou-Solakidou, ARMPW, 160-173; Z. Bonias, ARMPW, 182-186.

[5] A. Petkos, ARMPW, 55-159.

[6] A. Petkos, ARMPW, 157-158; A. Tsilipakou, "Rescue excavation of a Postbyzantine Settlement", ARMPW, 300-301; Album, pl. 67.
D. Chomatas, "A fort on the Via Egnatia and an inn of the Ottoman Period", ARMPW, 361-363; Album, pl. 29.

[7] See, for example: A. Koukouvou, "The excavation of two new archaeological sites on the Egnatia Road", ARMPW, 291-293; E. Stefani, "Excavation on the Egnatia road", ARMPW, 294-296; G. Karamitrou Mentesidi, "Kozani", ARMPW, 286-288; Album, pl. 62; A. Kottaridou, "The Excavation at Tsamala Vermion in the Prefecture of Emathia", ARMPW, 289-290; Album, pl. 68; see also P. Adam-Veleni, "A Neolithic site at Asprovalta", ARMPW, 305-307; Album, pl. 74.

[8] A Neolithic settlement at Kolokynthos in the Prefecture of Kastoria: Ch.Tsungaris, "Egnatia Odos: Excavation of a Neolithic settlement in the section Dispilio-Koromilia", Album, pl. 64; a Neolithic settlement at Toumba Kremasti, Kozanis: A. Chondrogianni, Album, pl. 60; a Neolithic settlement in the area of the ancient city of Liti: K. Tzanavari-K. Philis, ARMPW, 359-360; Album, pl. 71; a prehistoric settlement at Perivolaki in Central Macedonia: A. Lioutas–S. Kotsis, "Excavation in the plain of Langadas", ARMPW, 312-313.

[9] See, for example: A. Chryssostomou, "Excavation of prehistoric site at Apsalos, Arridaia"; Album, pl. 65.

coveries of new sites from the prehistoric to the Historic Period.[16] From the construction work for the Attiki road and the New Airport of Athens we have gained valuable information about habitation in Attica from the Neolithic period to the Byzantine period, especially with regard to planning and road networks in the ancient demes of Attica.[17] The excavations for the Underground[18] in the heart of Athens and the canal for carrying water from the Haliakmon

[10] E. Trakosopoulou-Salakidou, ARMPW, 162-168; V. Aravantinos, "Two stops for excavation in Boeotia", ARMPW, 89-94; N. Kyparissi-Apostolika, "Archaeological research and the Major Public Works", ARMPW, 97-98.
[11] Z. Aslamatsidou, "Corinthia and Major Public Works", ARMPW, 62-65.
[12] E. Trakasopoulou-Salakidou, ARMPW, 160-161.
V. Adrimi-Sismani, "Archaeological Practice in the context of Major Public Works", ARMPW, 101-107; Ath. Tsiafalias, "Archaeological research and Major Public Works", ARMPW, 112-116; N. Kyparissi-Apostolika, ARMPW, 95-97; V. Aravantinos, ARMPW, 82-88; E. Gini-Tsofopoulou, "Archaeological evidence and monuments in the realisation of Major Public Works: The case of the 1st Ephorate of Byzantine Antiquities", ARMPW, 60-61; A. Dina, "The results of the excavations of Major Public Works", ARMPW, 120-122; M. Petropoulos, "Excavations and the major works for the National Road Thessaloniki-Athens-Patras, the Bridge of Rion-Antirion, and the Ionian Road", ARMPW, 70-81; M. Georgopoulou-Verra, "The Justinian Fortification, "Galota" at "Krya Vrysi", Korinthia", ARMPW, 66-69 and Album, pl. 24.
[13] See, for example, the Neolithic settlement at Makrigialos, Pieria in Macedonia, (new railway line Thessaloniki-Athens), M. Pappa–M.Bessios, "Makrigialos, site: Agiasma, the Neolithic settlement, the excavation, the finds", ARMPW, 330-333 and Album, pl. 41, or the three prehistoric settlements at Galene, Makrichori and Rakhmani (Prefecture of Larissa), A. Tsiafalias, ARMPW, 114-116, and the Neolithic settlements at Belitsi and in the area of Almyros, V. Adrimi-Sismani ARMPW, 103-105, or the Early Bronze Age settlement at Proskynas, N. Kyparissi-Apostolika, ARMPW, 95-96; E. Zachou, "Proskynas Phthiotidas", ARMPW, 243-245; Album, pl. 28.
[14] See, for example: the ancient city Herakleion, Pieria, Macedonia, (new railway line Thessaloniki-Athens), E. Trakasopoulou-Salakidou, ARMPW, 160-161; E. Poulaki-Pandermali, ARMPW, 352-354; Album, pl. 47. The ancient city Halos, Thessaly (National Road Thessaloniki-Athens), V. Adrimi-Sismani, ARMPW, 103-104; Z. Malakosioti-E. Nikolaou, "The excavations of the last 5 years in Halos", ARMPW, 263-265; Album, pl. 33, pl. 34; the ancient city Alopi in Lokris: N. Kyparissi-Apostolika, ARMPW, 96-97; F. Dakaronia, "Agia Aikaterini of Arkitsa, ancient Alopi?" ARMPW, 241-242; Album, pl. 29.
[15] See, for example: The ancient city and cemetery in Pieria Macedonia, M. Bessios, "Kitros, Site 'Louloudia' settlement and cemetery", ARMPW, 344-345; Album, pl. 40; Aik.Stamuli "Pelasgia – Agios Konstantinos", ARMPW, 246-248; Album, pl.31.
[16] V. Adrimi-Sismani, ARMPW, 107-108; Ath. Tsiafalias, ARMPW, 116-119; A. Dina, ARMPW, 123-124; Album, pl. 55.
[17] G. Steinhauer, "Archaeological Research and Major Public Works", ARMPW, 35-41; Album, pl. 21; E. Gini-Tsofopoulou, ARMPW, 55-60; Album, pl. 22.
[18] L. Parlama, "The Urban Parameters of the Major Public Works and the Excavations for the Athens Metro", ARMPW, 44-48; O. Zachariadou, "Excavations of the Metropolitan Railway of Athens, Syntagma Square and Zappeion Area", ARMPW, 193-194; Album, pl. 6; I. Tsirigiotou-Drakotou and E. Valavani-Bagiotopoulou, "Excavations of the Metropolitan Railway Line of Athens", ARMPW, 196-197; Album, pl. 14-15; St. Eleftheratou, "Excavations for the 'Akropolis' Metro Station", ARMPW, 198-199; Album, pl. 13; O. Zachariadou–E. Lygouri, "Excavations of the Metropolitan Railway Line of Athens, Evangelismos and National Garden area", ARMPW, 195; Album, pl. 17; E. Gini-Tsofopoulou, ARMPW, 49-55; Album, pl. 18.

River to Thessaloniki[19] made access possible for archaeological work in areas where research had previously been impossible because of their modern use.

Extensive necropolis from the prehistoric[20] to the Byzantine period[21] were also found in the massive cuttings made for road construction projects, while sanctuaries of the ancient period[22] and installations of the Early Christian[23] and Byzantine[24] world were also discovered. The finds in the rural hinterland are very rich; excavations uncovered farmhouses or villages[25] and industrial complexes (engineering works[26], roads[27], pottery workshops[28], quarries[29], etc.), which all provide new archaeological evidence for the study of the organisation of the rural areas around the urban centres of antiquity.

[19] Ch. Bakirtzis, ARMPW, 175; Album, pl. 78-92.
[20] For example: Xeropigado, Prefecture of Kozani: Ch. Ziota, A. Chondrogianni-Metoki, "Excavation at Xeropigado, Koiladas and at the Toumba Kremastis, Koiladas", ARMPW, 280-282; Album, pl. 60; Nea Philadelphia, Central Macedonia: V. Misailidou-Despotidou, "Settlement and cemetery of the Early Iron Age" ARMPW, 315-317; Album, pl. 52; Akraiphnion, Thebes (Boiotia): V. Aravantinos, ARMPW, 82-94; E. Vlachogianni, "Excavations at the Akraiphnion junction", ARMPW, 236-237; Album, pl. 26, pl. 45. Corinth, Peloponnese: Z. Aslamatsidou-Kassimi, "A Geometric cemetery in ancient Corinth", ARMPW, 223-224; Album, pl. 44; Pydna, Pieria, Macedonia: M. Bessios, "West Cemetery of Pydna", ARMPW, 337; Album, pl. 42; Methoni, Pieria, Macedonia: M. Bessios, "The Aiginio Necropolis in the territory of Methoni", ARMPW, 324-326; Album, pl. 43.
[21] Akraiphnion: E. Gini-Tsofopoulou, ARMPW, 60-61; Album, pl. 25; Aerino, Magnesia: A. Dina, ARMPW, 122; Album, pl. 37.
[22] G. Karamitrou-Mentesidi, "The Egnatia Odos in the Prefecture of Kozani", ARMPW, 283-285; Album, pl. 62.
[23] E. Marki, "Excavation at the site 'Louloudies', Pieria", ARMPW, 369-371; Album, pl. 51. M. Paissidou, "Excavation of an Early Christian bathhouse at the site 'Voskochori', Kozani, ARMPW, 297-298; Album, pl. 61.
[24] A. Pantelidou-Alexiadou, "Excavations at Frangoeklessia ", ARMPW, 217-219; Album, pl. 20; Ch. Koilakou, "Excavation at the Junction of Akraiphnion", ARMPW, 214-216; Album, pl. 25; A. Dina, ARMPW, 120-121; V. Sythiakaki, "Excavation at Dafnousia in Lokris, the site of Agia Aikaterini at Arkitsa", ARMPW, 272-273; Album, pl. 30; D. Chomatas: "A fort on the Via Egnatia and an Inn of the Ottoman Period", ARMPW, 361-363.
[25] For farmhouses in Macedonia see: P. Adam-Veleni, E. Pandermali-Poulaki, K. Tzanavari, *Ancient Farmsteads on Modern Roads*, Athens, 2003; see also L. Deriziotis, Sp. Kougioumtsoglou, A. Chartalami, "Discovery of a Late Roman villa in Evangelismos, Larissa", ARMPW, 266-267; Album, pl. 38.
[26] See, for example, Corinth: Z. Aslamatsidou, P. Kasimi, "Ancient engineering works in Corinth", ARMPW, 225-226; Album, pl. 44; Athens: E. Gini-Tsofopoulou, ARMPW, 51; Album, pl. 18 (enclosing the channel of the Eridanus); Attica: G. Steinhauer, ARMPW, 41 (enclosing and widening a river channel); Thessaly: V. Adrimi-Sismani, ARMPW, 105 (an ancient aqueduct).
[27] See, for example, ancient roads in the territory of ancient Athens in Attica: G. Steinhauer, ARMPW, 38-43 or in Macedonia: M. Bessios, Korinos, the site "Toumbes", the Bronze Age road from North to South; M. Bessios, Korinos, the site 'Toumbes', the N-S Roads of the Historical Period", ARMPW, 338-341; Album, pl. 39.
[28] V. Misailidou-Despotidou, ARMPW, 320-321; Album, pl. 52. G. Karamitrou-Mentesidi, ARMPW, 283-285; Album, pl. 62.

The greater part of the monuments which excavation brought to light were preserved, either by re-siting the construction works, as, for example, abandoning a station for the Athens' Underground in the Kerameikos cemetery[30] or re-routing the new Egnatia Road in the section from Redina to Asprovalta to protect a farmhouse[31] or changes to the route of the collection channels associated with the works in Lake Karla to protect settlements of the prehistoric and historical period[32]; by re-routing a road to avoid ancient ruins, (as happened in the case of two Neolithic settlements in Thessaly[33] and for a Middle Helladic settlement at Aerino in Thessaly in the case of constructing the National Road Thessaloniki-Athens-Patras, etc.[34]) or by the construction of tunnels (for example, the tunnel of the new railway line Thessaloniki-Athens, which passed under the Byzantine fortress of Platamonas[35] or the tunnel for the Egnatia Road in the area of the Alkontisma in Nea Karvali, Eastern Macedonia[36] and the tunnels for the National Road Athens-Patras in the area of Patras[37]), in order to avoid archaeological excavations and of bridges (for example, Examilion on the route of the

[29] A. Koukouvou, "Paliomana Mesis and Asomata Veroias", ARMPW, 291-293; Album, pl. 66.
[30] See, for example, the abandonment of the Underground station in the area of the ancient cemetery of Kerameikos in Athens, L. Parlama, ARMPW, 47-48 or the re-siting of the route of the National Road Thessaloniki-Athens at 'Belitsi' in Thessaly for the protection of the neolithic settlement found there, V. Adrimi-Sismani, ARMPW, 103-104.
[31] P. Adam-Veleni, "A farmhouse of the Classical and Hellenistic Period in Asprovalta", ARMPW, 310-311.
[32] See, for example, the impressive Neolithic settlement at Palioskala, A. Tziaphalias, ARMPW, 117 or the extended settlement of the Neolithic and Bronze Age Period, V. Adrimi –Sismani, ARMPW, 107-108.
[33] Neolithic settlements at Belitsi and in the area of Almyros, V. Adrimi-Sismani, ARMPW, 103-105.
[34] V. Adrimi-Sismani, ARMPW, 103-105; P. Arachoviti, "Excavations in the area of Aerino", ARMPW, 257-259; Album, pl. 35.
[35] K. Loverdou-Tsigarida, "Rescue and restoration works in the fortification of Platamon rescue excavation at the cemetery hill", ARMPW, 364-368; Album, pl. 49-50.
[36] Preventative collaboration of the 18th Ephorate of Prehistoric and Classical Antiquities of Eastern Macedonia and the Developers (New Egnatia Road).
[37] M. Petropoulos, ARMPW, 70-72; M. Petropoulos, M. Stavropoulou, G. Alexopoulou, "Rescue excavations in the context of the National Road Athens-Patras", ARMPW, 229; Album, pl. 23.
[38] M. Georgopoulou–Verra, "Justinian Fortification at Galota 'Krya Vrysi', Corinthia", ARMPW, 66; K. Skarmoutsou, "Justinian fortification", ARMPW, 227-228; Album, pl. 24. See also the bridge for the Egnatia road under construction in the area of the ancient settlement of Polymylos, Kozani: G. Karamitrou-Mentesidi, "The Egnatia Road in the Prefecture of Kozani", ARMPW, 283.
[39] V. Adrimi-Sismani, ARMPW, 105.
[40] For example, E. Trakosopoulou-Salakidou, ARMPW, 168-170; A. Lioutas-S. Kotsos, "Excavations in the plain of Langadas", ARMPW, 312-313.
[41] K. Tsanavari, K. Philis, "Farmhouses in the area of ancient Liti", ARMPW, 357-358.

National Road Athens-Patras[38]) or by reburial under a thick protective layer of earth which preserves them for future generations (see, for example, a Roman aqueduct in Thessaly[39] or the prehistoric settlement at the foot of Perivolaki Toumba in the Langadas' plain in Central Macedonia, as well as the case of the ancient city Lete in Central Macedonia[40], where a great part of the city has been reburied without being excavated, while a number of farmhouses in the surrounding area were reburied after being excavated[41]), or by the removal of the monuments from excavations, such as occurred for the Underground[42], the New Airport of Athens, El. Venizelos,[43] and other development Projects[44]. The technical works naturally did not escape delays and budget over-runs.

On the other hand, the preservation of all of the ancient ruins which were uncovered was not always possible. This was the case, for example, for the prehistoric settlement of Zagani at the New Airport of Athens[45], for a part of the ancient city of Herakleion and farm houses in an area[46] on the new Thessaloniki-Athens railway line, as well as parts of the prehistoric and ancient settlements on the Egnatia Road on Mount Vermion[47] or another building complex at the ancient Lete[48] and the Roman inn in the Redina-Asprovalta section[49].

In these cases the ancient remains were excavated completely and were recorded with aerial and video photography and sometimes even with the construction of models. Their eventual destruction was a bitter experience for the archaeologists who had spent so many months uncovering them.

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[42] L. Parlama, ARMPW, 47; see also *The Metro in Athens*, edited by the Hellenic Ministry of Culture, 3rd Ephorate of Antiquities of Athens, Athens 2003, 52, (in Greek).

[43] The Church of St Peter and Paul (New Airport): E. Gini-Tsofopoulou, ARMPW, 50, 250-252. E. Gini-Tsofopoulou, "Excavation in the church of Saint Peter and Paul", ARMPW, 200-202; Album, pl. 22.

[44] See, for example: Part of a farmhouse in Krania, ancient Herakleion, Pieria, Macedonia (new railway line Thessaloniki-Athens), E. Poulaki-Pandermali, "A farmhouse with a workshop for wine production at the site of Komboloi", ARMPW, 348-349; a pottery kiln from a Roman Settlement in New Philadelpheia, Central Macedonia, (new railway line Thessaloniki-Athens), V. Misailidou-Despotidou, "Roman Settlement", ARMPW, 318; The Church of Agia Thekla (Attiki Odos): Aik. Pantelidou-Alexiadou, "Excavation of Agia Thekla", ARMPW, 220-221; Album, pl. 20; the Church of Frangoekklesia (Attiki Odos): E. Gini-Tsofopoulou, ARMPW, 50; Album, pl. 20.

[45] G. Steinhauer, ARMPW, 37-38.

[46] E. Poulaki-Pantremanli, "Prehistoric Phases at the site "Krania, ancient Heraklion", ARMPW, 350-351, 350-351, Album pl. 47; E.Poulaki-Pantremanli, "Geometric Phases at the site Krania, ancient Herakleion" ARMPW, 352-353 (in Greek) Album pl. 47; E. Poulaki-Pantremanli, "Archaic, Classical and Hellenistic Phases at the site Krania, ancient Heracleion " ARMPW, 354-355, Album pl. 47; E. Poulaki-Pantremanli, "Farm House with a Workshop for Wine Production at the site "Komboloi" ARMPW, 348-349, Album pl. 48

The excavations resulting from extensive development work provided the opportunity for the positive and negative sides of large-scale extended excavations conducted in different areas of Greece to become clear, to demonstrate the contribution of 'preventive' rescue archaeology to the preservation of monuments, and to establish more clearly the nature of the problems of this kind of archaeology.

Positive factors

1. The large-scale excavations which were conducted in the last two decades have contributed significantly to the catalogue of archaeological sites in Greece and to the number of objects in its archaeological museums. They provided the opportunity to excavate in areas excluded because of their modern use (see e.g., the case of the Underground in Athens) (see figure on p. 100) or because of their isolation in the mountains (see e.g., new finds on Mount Vermion) and they brought to light important archaeological material. The budget for the public work also covered the initial measures for conservation and cataloguing of the finds and, in certain cases, extended to the display of some of the new archaeological sites next to the modern development work or within it.
2. The large-scale rescue excavations associated with development projects assisted in the development of the region with the discovery of monuments which enriched the infrastructure of the area in respect of culture and tourism.[50] It must be emphasised that previously unsuspected monuments have been discovered in mountainous or remote regions to which development can make a substantial contribution.
3. The opportunity given to the Ministry of Culture to work on these projects with ministries with technological resources such as the Ministry of Public Works and Planning, the Ministry of Transport and even the Ministry of Economic Affairs must also be stressed. The result of this collaboration was, on the one hand, the introduction of the historical

[47] E. Stephani, "Excavations in the Egnatia Road – Prefecture of Emathia", ARMPW, 294, Album pl. 69; A. Koukouvou, " Paliomana Mesis and Asomata Veroia", ARMPW. 291-293 (in Greek) Album pl. 66 A. Kottaridou, "The Excavationon in Tzamala of mount Vermion, Prefecture of Emathia", ARMPW , 289 (in Greek), Album pl. 68

[48] H. Tracosopoulou-Solakidou, ARMPW. 169, K.Tzanavari- K.Philis – "Excavations in the area of ancient Lete" Album pl. 71

[49] P. Adam-Veleni, "Building Complex of Roman Imperial Period- Station or Inn ?" ARMPW, 308, Album, pl. 73.

[50] A. Dulgeri-Intsesiloglou, "Aerino-Mega Monastiri Area of Chloe, Agios Georgios junction in the Area of Pherrai", ARMPW, 260-262; Album, pl. 36; V. Adrimi-Sismani, ARMPW, 106-107.

and cultural dimension into the planning process for, and execution of, development projects and on the other, the provision of technical support for their archaeological aspects.

The presence together of developers and archaeologists in the field led to new levels of mutual understanding about the conduct of these projects which will assist in planning future development projects in Greece. Closely connected with national development, the Ministry of Culture is further obliged to elevate 'preventive' rescue excavation as one of its primary activities, in recognition of the role which both Greek and European legislation defines and the Greek Constitution imposes: the preservation, protection and development of monuments as the cultural property of the modern world.

Negative factors

1. In many cases it is impossible to avoid the destruction of the monuments found in the area proposed.
2. Large-scale excavations cannot always guarantee the quality of the archaeological research even when they have sufficient financial resources at their disposal. Excavation is an interdisciplinary research tool which presupposes specialised archaeological resources, as much at the level of the theoretical issues which define the objectives and methods of research as at the level of practice in the field. It also presupposes sufficient time and suitable weather conditions, which are no more possible to guarantee than an experienced workforce.
3. Rescue excavations, which modern development works dictate, have exhausted the financial and human resources of the Ministry of Culture and divert the Greek Archaeological Service away from its long term priorities which include, in addition to the discovery of new archaeological sites, the preservation and display of the monuments known already in the archaeological sites and museums and the promotion of understanding among the general public about the wealth of the monuments in their country.
4. The new monuments which these extensive excavations bring to light put an additional burden on the programmes of preservation and presentation of monuments at archaeological sites and display of the archaeological finds in the already overloaded museums. In a country as rich in monuments as Greece, it is impossible to sustain all of this at the same time and without timely preservation the monuments are in danger.

Bearing in mind the positive and negative benefits of large scale excavation already mentioned, the preventive archaeology in Greece today focuses on two basic principles: First a reduction, as far as possible, in the number of excavations resulting from major construction works[51] and second, the maintenance of the quality of the excavation work and subsequently ensuring the complete protection, study and publication of the monuments which rescue excavations bring to light.

A. The reduction of rescue excavation

A1. The legislative framework

The Greek Archaeological Service aims to intervene in the initial stage of the planning process for the siting of development works and to collaborate in the preparation of a brief for the outline planning of the project. Sub-surface archaeological and geological investigations are both essential presuppositions to avoid extended excavations and to ensure the quality of the full project specification, which establishes definitively the costs and schedule.

European legislation concerning the preparation of the schedules for major development works would help the protection of monuments. At present the developer's contribution is only made when the work begins and usually it is very difficult to make changes to the project to the advantage of the monuments.

A2. Surface Survey

Timely and effective intervention of the Greek Archaeological Service depends on the early identification of the monuments. For a country which is so varied in geography, with such a long cultural history and such rich monumental archaeological remains as Greece has, the compilation of a detailed archaeological map which covers the whole of Greece requires time and comes at a high cost in terms of both financial and human resources. The compilation of this map is today the urgent aim already in process, but not yet a tool for preventive rescue archaeology in

[51] This happened in the case of the Ephorates of Kavala, where the excavations resulting from the construction of the New Egnatia Road have been very limited so far. P. Malama, K. Darakis, "Rescue excavations at N. Kerdyllia, Serres", ARMPW, 398-401, as well as in the 19th Ephorate of Komotini (see D. Triandaphyllos: "The 19th Ephorate of Prehistoric and Classical Antiquities and the Major Public Works", ARMPW, 187-188.)

Greece. Given the gaps which appear today in the archaeological map of Greece, especially in those areas with a slow pace of development, a dedicated surface survey remains essential and the costs of this should be borne by the developer.

European collaboration is highly desirable in the organization of survey as well as in improving the methods for the fast and accurate identification of ancient monuments by exploiting modern technologies using geophysical survey, coring, and aerial photographic studies, perhaps through special programmes of universities and research foundations.

The creation of national archaeological maps and the digital record of sites and fixed monuments is naturally a live issue and should result in the organisation of a European Record of Sites and Monuments with a common set of parameters. In this area, the Greek Archaeological Service has already gained experience from the electronic databases of the POLEMON programme of the Hellenic Ministry of Culture, the programme for a digital archaeological map of Crete undertaken by the University of Crete and the recent catalogue of Byzantine monuments organized by European Center of Byzantine and Post-Byzantine Monuments in Thessaloniki.

B. The management of rescue excavation

Among the fundamental problems which extensive rescue excavations of the last decades have posed, some have been chosen for discussion at this conference:

B1. The preservation of monuments

1.1. Modification to the location and nature of the work

There are cases where the early intervention of the Archaeological Service brought about significant modifications to the course and nature of some construction projects. The construction of tunnels, for example, was in some cases finally preferred and excavations were avoided (see p. 98). The benefit was two-fold: Aside from delays in construction and the degradation of the landscape and environment, the financial cost balanced out, since the manual and skilled work which excavation involves is costly and time consuming. In other cases small diversions of the route preserved monuments from destruction, which were then made into accessible archaeological sites beside the roads (see figure on p. 98).

The tunnel of the Egnatia Road in the hill of the ancient fortress Alkontisma in the area of Kavala, Nea Karvali, Eastern Macedonia. (Photo Chaido Koukouli-Chrysanthaki)

Diversion of the route preserved monuments. Middle Helladic settlement at Aerino in Thessaly. (Source: Album, 35.)

1.2 Removal of monuments

The transfer and the re-erection of monuments in new locations creates new archaeological sites, whose management requires contributions from other agencies. A characteristic example is the archaeological education area which has been created at the University of Athens to accommodate a large number of the ancient buildings which were uncovered during the construction work for the Underground in Syntagma square (see figure on p. 100-101).

1.3. Re-burial of monuments

There has been a great deal of debate about the preservation of ancient monuments *in situ*. The principle of re-covering of ancient monuments has been seriously questioned, but finally the view which prevailed was that this manner of preservation does not conflict with the convention for the preservation of archaeological heritage which prefers the sites to remain unexcavated and intact for the archaeologists of the future.

In Greece, re-burial was carried out in many cases, serving the needs of the modern construction, but also those of protecting the monument. In several cases it was preceded by excavation, but in other cases excavation was not judged expedient. Ancient remains already covered for centuries by compressed levels of earth are less exposed to the dangers of the compression which they would receive from the superimposition of new construction than if they had been exposed and re-buried with fresh and uncompressed soft deposits.

Physical and social factors change and form new landscapes and new oikistics and preventive archaeology should face the question of preservation and display of monuments with a long perspective of time that includes future generations of archaeologists and the public.

B2. The unavoidable destruction of monuments

In circumstances where the destruction of monuments is inescapable, archaeologists have set as a non-negotiable prerequisite their full excavation and recording with still and video photography, plans and models. The destruction of the monuments is the ultimate solution to which it is difficult for archaeologists to reconcile themselves. I would like to propose a calm academic discussion about the relationship between the surviving building remains and the spiritual content of the monuments. A topic of major importance for today's preventive archaeology is the preservation through documentation of the essential nature of the destroyed monument and its development through scientific studies for specialists and cultural programs for the public.

C. Presentation of the monuments and storage of the archaeological finds

The rescue excavations conducted by the Ephorates of Antiquities, whether within the framework of the day-to-day practice of archaeology or that of major development projects, increase daily the number of monuments which require protection and display and build up a large number of new archaeological finds in museums.

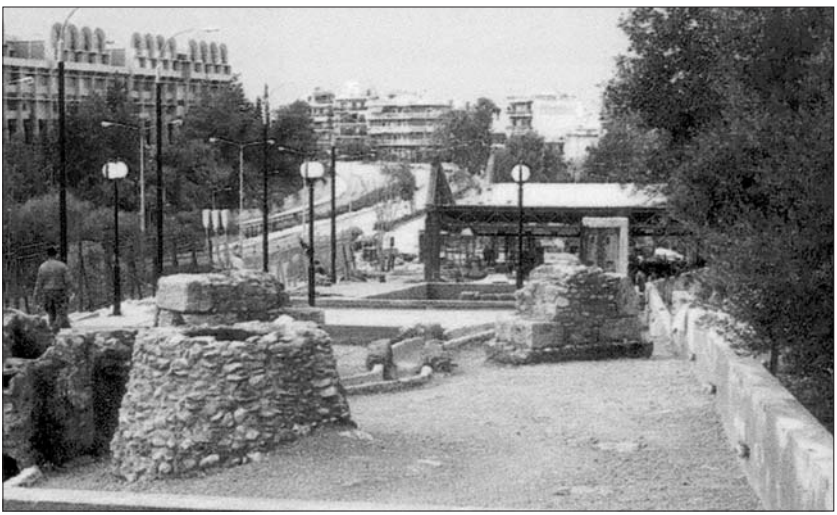
In Greece it has been noticed that far from the eagerness with which the expenses of the display of new archaeological sites and conservation of the archaeological finds are incorporated by the developers into the contract for construction project, the fulfilment of these agreements is not always achieved. In many cases the funds which can be made available by private or public projects cover, at best, only part of expenses of conservation and presentation and are not sufficient for the long term protection of the monument.

D. The publication of archaeological material

In Greece excavators are obliged to provide detailed catalogues and complete reports of their excavations. These excavation reports are automatically published as "Chronika" (annual reports) in the official journal of the Greek Archaeological Service, *Archaiologikon Deltion*. Longer reports which con-

Excavation of the Athens Underground – Syntagma Station. (Source: see note 55. 148, 152).

International Airport "Eleutherios Venizelos": Transfer of the Post-Byzantine church of Saint Peter and Saint Paul. (Source: Album, 22.)



Transfer of a roman building found in the excavations of the Athens Underground to the University City of Zographou, Athens. (Source: see note 57 first reference.)

cern excavation work in Northern Greece are published in the proceedings of the annual meeting which is held in Thessaloniki for archaeologists who work in Macedonia and Thrace.[52]

Archaeological exhibitions are also organised at the expense of the construction work at the construction sites themselves, such as those at the New Airport of Athens[53] or in the Athens' Underground, as well as exhibitions in museums which are accompanied by catalogues, such as the exhibition "The City under the City"[54] at the Goulandris Museum in Athens and the exhibition "Ancient Rural Settlements and Contemporary Roads"[55] in the ancient Agora of Thessaloniki. In addition, special pamphlets are published,[56] always at the developer's expense, to inform the public, whilst educational programmes are organised in the area of the construction project.[57] Short popular reports are also made through the media and on the Internet in parallel with purely academic reports at local and national conferences or in special publications which promote the construction works.

Finally, the Commission for the Supervision of Excavations of Major Projects organised a three-day conference for archaeologists in Thessaloniki in November, 2004, to discuss the problems of excavation associated with major development projects. The proceedings of the conference were published, as were also the information boards of the photographic exhibition which accompanied the conference.[58]

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[52] To Archaeologiko Ergo sti Makdonia kai sti Thraki (Archeological Work in Macedonia and Thrace) 1(1987)-17(2003) in Greek with summaries in English.

[53] See the edition sponsored by the New Airport of Athens, G. Aiterinidis (ed.) *"El.Venizelos: Mesogaia, History and Culture of the Hinterland of Attica*, Athens 2002, (in Greek and English)

[54] L. Parlama, Chr. Stavolidis (eds.), *The City under the City*, Catalogue of the exhibition at the Museum of Cycladic Art, N. P. Goulandris Foundation, Athens, 2003. (in Greek and English).

[55] P. Adam-Veleni, E. Poulaki-Pandermanli, K. Tsanavari, Ancient Farmsteads on Modern Roads, Athens, 2003.

[56] See, for example the booklet: *From Syntagma to Panepistimioupolis, Zografou*, edited by the Hellenic Ministry of Culture, 3rd Ephorate of Antiquities of Athens, 2003. or the pamphlet for the canal carrying water to Thessaloniki, 9th Ephorate of Byzantine Antiquities Thessaloniki

[57] See the permanent exhibitions on display in Athens Underground stations and in Athens Airport, El. Venizelos.

[58] *Αρχαιολογικές Έρευνες και Μεγάλα Δημόσια Έργα,* Αρχαιολογική Συνάντηση Εργασίας , Επταπύργιο Θεσσαλονίκης 18-20 Σεπτεμβρίου 2003 – Λεύκωμα Πινακίδων, Θεσσαλονίκη 2004, (ed. Χ. Μπακιρτζής) *(Archaeological Research and the Major Public Works* Acts of the Archaeological Work Meeting in Thessaloniki 18-20 September 2003); *Album of Plates of the Photographic Exhibition at the Archaeological Work Meeting,* 18-20 September 2003, Thessaloniki 2004 (ed. Ch. Bakirtzis).

Beyond the first announcements and the initial publications, the problem of completing the scientific study of archaeological material remains unsolved. The personal efforts of the excavator alone will never be enough to complete the study of the abundant material which has accumulated. The Archaeological Law of Greece fixes time limits on the directors of the excavations, but after the disbanding of the scientific team which conducted the excavation it is extremely difficult for the study and publication of such large-scale excavations to be completed. The majority of the excavation team of archaeologists and specialists, without fixed employment after the funding for the excavation ceases, seek work on other excavations from which in turn they will move on after the funding runs out.

E. Human resources

Rescue archaeology is carried out in Greece by the Ephorates of Antiquities, the permanent staff of which is strengthened by the hiring of large numbers of short-term staff either under the yearly programme of the Ephorates of Antiquities and Museums or on a contract basis, under which the length of the contract is determined by the timeframe of the rescue excavation for which they are needed. The criteria for the employment of these staff are not imposed by law.

Major construction projects in Greece, as well as the work for the Olympics, created a great demand for qualified staff for archaeological excavations. This demand was met by young scholars and technicians, who worked under the supervision of the permanent staff of the Archaeological Service. In the programs of large scale rescue excavations the Greek Archaeological Service has created a substantial scientific, technical, and labour force trained for excavation. The opportunities for these people to join the permanent staff of the service are exceptionally limited since these opportunities are related to civil service employment policy. With the completion of the construction projects the employment situation of the staff remains in limbo and creates a potentially explosive social situation for the workforce, who are seeking to secure permanent employment through the implementation of European law.

May 2005

Highway excavation at Vecsés-Üllő 5, 400 000 square-metres site; Late-Roman-period earthenware production centre. (Photo M0 Archive, Cegléd)

Preventive Archaeology in Hungary – One Step Behind

Katalin Bozóki-Ernyey

After the political system changed in 1989, the importance of the cultural portfolio was emphasised by the new name, adopted in 1998, of the responsible government department, the Ministry of National Cultural Heritage[1]. The first self-contained, central public administrative organ of archaeological science, the Cultural Heritage Directorate, was established according to the law in 1998. In 2001, the Directorate merged with the National Board for the Protection of Historic Monuments and the new institution now functions under the name of National Office of Cultural Heritage (Kulturális Örökségvédelmi Hivatal hereinafter KÖH).

Drawing the actual picture of the situation in archaeology (the extent of the territory excavated, the different variety of investment projects, the methodologies applied, the organization and functioning of the administration, and connected legislation, etc.) is not an easy task. Only a few statistical figures, source data, and some studies are available in this thematic area. In this paper, as a member of the KÖH, my aim is to outline the background and problems of preventive archaeology, mainly in development-led excavations[2].

Public administration and the legal system of archaeology

In 2004, abolishing the Department of Archaeology and Monuments in the Ministry of National Cultural Heritage, the self-contained professional-level representation of archaeology was also abolished. The KÖH is the sole cen-

[1] Here I would like to thank to Ms Katalin Wollák (chief inspector of KÖH) for her kind suggestions regarding my paper.

[2] The Hungarian term 'megelőző feltárás' in the (unofficial) translation of Act LXIV of 2001 On the Protection of Cultural Heritage, available at www.koh.hu, was translated as 'advance excavation' and 'leletmentés' as rescue excavation. According to my present knowledge it would be better in the first case to use 'development-led excavation' and in the second 'rescue'. Thus, in this paper I use in the law citations only the terms preferred by the (unofficial) translated version of the Act.

tral administrative organ specialising in archaeology. Its Chairman holds the rights of a Deputy State Secretary. The staff of the Cultural Heritage Office consists of approximately 300 persons; among them 24 archaeologists conduct the supervisory archaeological work for the whole country: consent and statutory work connected to the protection of archaeological heritage.

The protection of the archaeological heritage is not directly represented by a single person in each of the local (county) governments. There is always a member responsible for cultural issues, but his or her duty is still not the promotion of archaeology but culture as a whole, including theatres, arts, literature, etc. The local (county) governments deal with archaeological heritage through the network of museums they support.

The protection of archaeological sites is basically determined by an act (hereinafter Act) and a decree (Act LXIV of 2001 on the Protection of Cultural Heritage, Decree No. 18/2001. [X.18.] NKÖM, on the Detailed Rules of Excavation of Archaeological Sites and Financial Remuneration for the Finders of Archaeological Sites and Finds) Closely connected to these are the orders on heritage protection impact studies, heritage protection fines, and the cultural heritage, including the archaeological heritage inventory[3]. The Valletta Convention, enacted by Government Order 149/2000. (VIII. 31), had a definitive impact on the completion of the present domestic law and is a document regularly referred to and taken into account in the course of the presently ongoing elaboration of general concepts. The operation of museum institutions, their inventory, the activity of cultural experts and the export licensing processes concerning archaeological finds are regulated by other legal rules.

The number of archaeological sites and the problem of the official inventory

Based on the data from systematic fieldwalking regularly conducted in the framework of the Archaeological Institute of the Hungarian Academy of Sciences between 1968 and 1997, collecting information about approximately 10 percent of the country, we can extrapolate that there are at least 100 000 archaeological sites in Hungary.

The establishment of the official archaeological registry based on a uniform system was required by law in 1997, and the predecessor institution of the

[3] See their complete citation at the end of the paper.

KÖH was designated to execute this task. Development of the theoretical foundation of the database began in 1999, and information technology development started in 2000. The structure of the SQL-based database was designed to be able to satisfy both administrative and scientific needs. The database handles information about listed buildings and protected cultural goods together in one system. The database is completed with an ArcView-based GIS system. Recording in the database has been going on since 2001; the sources of the data were the holdings of the regional museums and the Hungarian National Museum, plus the Hungarian Archaeological Topography (in ten volumes). In its present state the database contains information on approximately 50 000 sites.[4] The role of the inventory has high priority because according to the Act (continuing the concept usage from the previous Act CXL from 1997) the legal concept of 'archaeological site' is: a clearly defined geographical area on which the elements of archaeological heritage can be found in their historical context and which has been registered by the KÖH.

Unfortunately, since the systematic fieldwalking programme of the Academy has stopped, the sole sources of the inventory are small micro-regional research projects, fieldwalking in the framework of university theses, sites found by chance and reported, and surface surveys in connection with impact studies. A further problem is that the greater part of the data collected earlier needs to be completed; it is missing accurate dimensions of sites, the cadastral number of the area, and whether the site itself is entered in the record of ownership register. Within the inventoried site types there is another category for historically and culturally outstandingly important sites; that is the 'protected site' by ministerial order (sites may be designated as specially protected or highly protected). There are less than 1 500 protected sites.

Means of preventive archaeology: impact study, development-led excavation, rescue excavation

Impact study

According to the law, the first-tier authorizing authorities have to send the investment plans to KÖH in order to get a consenting opinion. In the case of certain investment forms (linear projects – pipelines, for example – and buildings covering more than 10 000 square metres), the KÖH can require a heritage impact study for its consenting opinion. In these cases, apart from the collection of already available data, there is fieldwork, a field

[4] In 2007 there are more than 56 000 sites.

walking before issuing a licence. The creation of a heritage impact study is the real protection for archaeological heritage because in the early stages of authorizing a project there is a better chance of modifying the investment plans. A good example of this is Kurvahalom in Szabolcs-Szatmár-Bereg County, where, because of the intervention of the archaeological inspector, the National Motorway Corporation modified the right of way of the highway, which originally was planned to go through a Copper Age kurgan. Thus the kurgan, although in the immediate vicinity of the highway, is preserved intact today (see on p. 109).

Development-led excavation

If the investment concerns an archaeological site recorded in the official registry, and

> If avoiding the site would significantly increase the costs of the development or investment involving earthwork, or the investment cannot be executed elsewhere, archaeological sites jeopardised by the investment must be excavated in advance [development-led excavation]… (Act Article 22[2])

The regional office of the KÖH orders an excavation preceding the construction process. The investor then contracts with the competent museum[5]. The greatest problem is that a development-led excavation can be required only in the case of officially registered sites, and the data of the registry differs greatly from the actual number of sites.

In the case of development-led excavation, the funds for the archaeological work have to be secured by the investor.

> During the planning of development and investment activities, the total cost of advance excavation [development-led excavation], but at least 9 thousandths of the total investment cost must be made available to cover the excavation in the form of a cost appropriation. Especially the costs of an archaeological impact study, trial excavation, documentation, primary find conservation, as well as the full cost of primary find processing and the extraordinary expenses of the placement of finds must be made available. The institution conducting the excavation shall also be obliged to account for the actual expenditure. (Act Article 23[1])

[5] "competent museum: the regionally competent county (in Budapest: Budapest Historical Museum) museum with an archaeological collection range" (Article 1[c] Decree No. 18/2001. [X. 18.] NKÖM)

The M3/137 site, highway excavation and the preserved Kurvahalom (in the middle on the right). (Photo A. Balázs/Jósa András Múzeum, Nyíregyháza)

Rescue excavation

If archaeological finds emerge in the course of construction work, the expenses of the excavation, which is called a rescue excavation must be covered by the competent museum. The law (since 1997) makes such a distinction between development-led and rescue excavation.

The difference between the two kinds of excavations basically lies in the financial arrangements and scheduling, but also affects the execution of the methods applied in the excavation. In the first case, the party entitled to carry out the excavation and the investor fix the expected duration and cost of the excavation in a contract prior to the beginning of construction work. In the second case, the excavation can be and has to be started after the suspension of construction work, and 30 (maximum 45) days are available.

Unfortunately, this also applies to sites protected by ministerial order, e.g., in historic town centres or on small-property owners' plots, although the law clearly says:

> "No activities may be conducted on archaeological sites that have been declared protected which might result even in partial deterioration of the conditions of the site (Act Article 13[1])."

If there is no possibility of locating a project elsewhere, the rule can be circumvented, again.

The monopoly of development-led excavation

In Hungary only a closed circle of parties is entitled to execute excavations; this task can only be fulfilled by public institutions. Consequently, the excavation licence is issued to the institution but also names the leader of the excavation. The institutions doing excavation work are accurately defined in the legislation.

> Archaeological excavations may be carried out by competent museums, museums with an archaeological collection range, universities in Hungary having a faculty of archaeology, the archaeology section of the Hungarian Academy of Sciences, and the heritage protection institutions supervised by the Minister of National Cultural Heritage [National Office of Cultural Heritage, State Centre for Restoration and Conservation], under the terms and conditions specified in their operating licence issued in compliance with the provisions of Article 39(3) of Act CXL of 1997 on the Protection of cultural goods, museums, public library services and public education. (Article 2[1] Decree No. 18/2001)

There are altogether 51 institutions entitled to conduct archaeological excavations. Development-led excavation preceeding construction is, however, limited to the county-level museums (19 in total) and the Historical Museum of Budapest – other institutions, like the Hungarian National Museum, the Hungarian Academy of Sciences, the universities, and the KÖH are excluded from this circle.

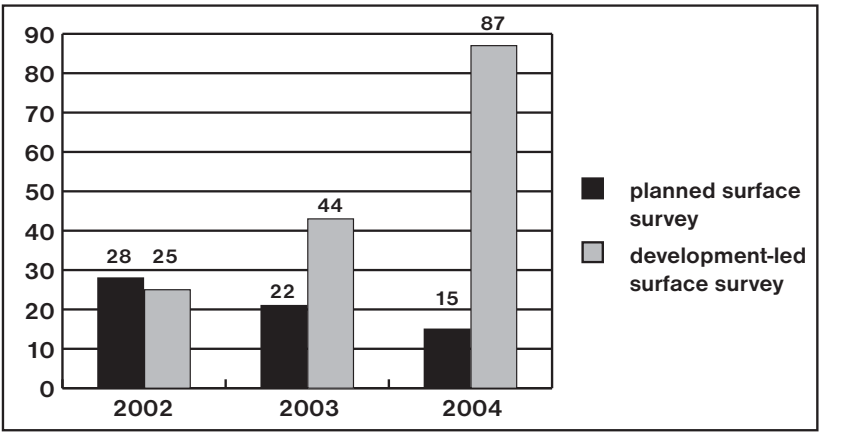
According to the rules, the institution entitled to carry out an excavation has to send its licence-application to the regional office of the KÖH at least 30 days before the start of the planned work. The licencing of excavations differs from the general process in the requirement that the application form has to be sent to the Excavation Committee as well. The Committee, functioning since 1963, nowadays acts as the consultant body of the KÖH and holds sessions every two weeks. Its' staff, consisting of nine members, is nominated by the Chairman of the KÖH, on the proposal of the leaders of the institutions entitled to send delegates. The regional office makes its decisions taking into account the Committee's opinion, although it does not have binding force.

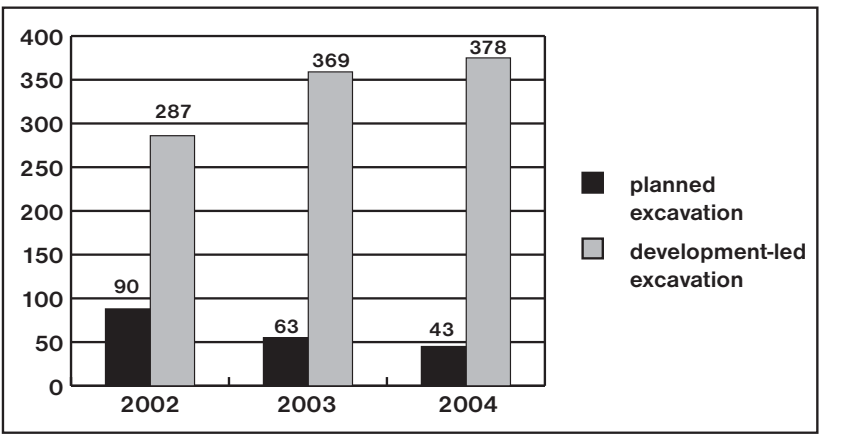
In the framework of museums, the excavation can be directed by a person with higher professional education (MA or PhD degree), who has employee status or holds a short-term public servant contract. In the legal sense, all archaeological interventions such as field survey, equipment-assisted site survey and find exploration (metal detecting, aerial photography, archaeomagnetometer survey, etc.) are considered as excavation, therefore the above-mentioned rules have to be applied in their cases as well.

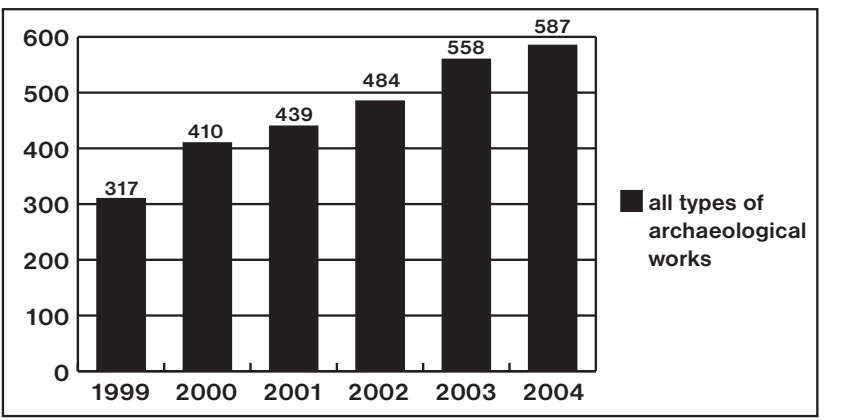
The quality of excavation documentation varies

The leader of the archaeological work has to prepare documentation in a predefined way according to the law. This documentation has to be sent to the museums concerned and to the KÖH and to the Central Archaeological Archives of the Hungarian National Museum. The latter institution has collected all the archaeological documentation from Hungary since 1957. The deadline is 30 days for the short report of the excavation (approximately half a page), and one year for the complete detailed documentation. The complete documentation has to contain the excavation diary, drawings, maps and photographs.

There is no unified system of quality requirements in the country. All excavating archaeologists have backlogs of documentation work; some of them are even behind two or three years. Although a delay in completing the compulsory documentation delivery can be a reason for not leading an







Continuous growth of archaeological intervention, and the proportion of the planned and development-led archaeological activities.

excavation, taking into account the shortage of archaeologists, with the exception of some very problematic cases there is basically no possibility of using this as a tool for denial of licence to direct an excavation.

Large-scale state investments

The Hungarian government has approved a transport policy program lasting until 2015, in accordance with the long-term concept of the European Union. With this program the government intends to develop and modernise the highway network, railway trunk lines, ports of public interest, the central and regional airports, in addition to the logistical centres on the domestic sections of the pan-European corridors. Border stations meeting the so-called Schengen requirements will be erected on the outer frontiers, and at the same time the routes leading to these stations will be modernised as well. In order to promote the regional development aims, the country-wide, regional and town-level public road system will also be up-graded, including town outskirts and rural areas. The building of water lines and the construction of a bicycle path network that started in 1997 will be continued. In the framework of the Ministry of Environment, the next ten years will bring as many results as were achieved in the past three decades, according to the leader of the portfolio (e.g., in 1970 the M0 highway section was a bit longer than 100 km, while for 2017 it will be 2 050 km). Among the projects the proper solution for flood prevention, waste-water channelisation and treatment, and the extension of the drinking water network should be mentioned. A pre-eminent program is the construction of waste deposit units; and gas pipelines, telephone and electricity cable installations are also under way. In order to demonstrate the extent of archaeological involvement in these processes, we have to add the continuous investment of the private sector in both inner and outer areas.

The number of excavations is growing continuously[7]

The figures illustrate the continuous growth of archaeological intervention, and the proportion of the planned and development-led surface surveys and excavations.[6] It is highly conspicuous that nowadays nearly 80 percent of the excavations are connected to investment.

[6] The diagrams were made by the author on the basis of the database of excavation licence applications.

[7] All statistics concerning highway excavations are oral information kindly provided by Prof. Pál Raczky.

Highway excavations

The number of sites and their dimensions

Data on highway excavations obtained until now show that a site occurs every 1-1.5 kilometres. The dimension of an average site is 15-20 thousand square metres, sites with dense features can measure 30-50 thousand square metres. Every third site is rich in features. One exceptionally large site, Vecsés-Üllő 5, measures, 400 000 square metres; this settlement was a Late-Roman-period earthenware production centre. For 2005, 600 kilometres of roads are expected to be constructed according to the government plans, which will affect approximately 400 sites on the basis of the current data.

The number of sites in Hungary is estimated to be 100 000 on the basis of the ten-volume topographic assessment. Calculations with the data above, however, give a considerably larger number. If the sites are sequenced by 1.5 kilometres along the routes of the highways, accepting 100 meters as the width of a right-of-way, there are 672 000 sites on the territory of Hungary.

The quantity of the archaeological material is sufficient for a century

By preliminary estimates on the basis of government plans, 20 million objects will be found. Of course, the richness of sites varies in terms of finds. In a single tell-type settlement (Polgár-Csőszhalom), 3.5-4 million objects came to light and 1.5 million remained after discard.[8]
According to the Act:

> All archaeological finds on the ground, in the ground, in the beds of watercourses or hidden or recovered from elsewhere shall represent state property. (Article 8[1])

After discovery, objects are taken to the locally competent museum (the only exception is the Hungarian National Museum).

> On behalf of the state the minister of national cultural heritage may waive the ownership title to archaeological finds in favour of museums with archaeological collections, not maintained by the state. (Article 8[2])

Although the storage of find material is the task of local governments, as it will be its property, there is no real allocation from the central budget for

[8] Based on upon the kind oral information of Prof. Pál Raczky.

this purpose. As a consequence of the considerable growth in development-led excavation, the storage needs of the museums have increased to the extent that construction of new storage facilities would be necessary. Prior to the storage of the archaeological material, moreover, there is the problem of conservation, restoration, inventorying and scientific processing of the objects. According to pessimistic calculations it will take a hundred years until the scientific evaluation of the finds that have come to light in the past two decades can be totally completed.

In 2004 the National Museum planned to organise a highway-related excavation exhibition covering the whole country. This would be a great achievement in the popularisation of the archaeological results. Without a popular journal of archaeological science, people can only get information about new excavations through short articles in a few daily newspapers and exhibitions.

Financial background

Starting from the planned 600 kilometres of highways – where the cost of one kilometre is estimated at HUF 3 billion (EUR 12 million) – and the expected 400 archaeological sites, the minimum cost projection is HUF 16.2 billion (EUR 64.8 million). This is based on the compulsory .009% of the total budget which is the proportion the government has to spend on archaeology through the National Motorway Corporation. In the cases of a few highway sections I have data to assess whether the compulsory minimal percent covered the costs of the excavations or not. The situation is rather different. Because of the distinctive features of the settlement structure, in Zala County the excavation cost remained under the .009% on the M7 highway; in the case of the M3 the expenses roughly equalled this sum. In Somogy County the M7 route required 1.5 percent; the most striking example is the M0 highway ring around Budapest, where the percentage of the excavation costs reached 3-4 percent of the total because of the 300 000 square metre Vecsés–Üllő 5 site, which was situated right under a junction.

The amount for archaeology included in the contract is jointly agreed by the excavating museum and the investor. It is important to note once again that, as in many other issues so it is too in the case of large country-wide project investments. Every county decides the excavation fees in its own right.

Lack of archaeologists

In 2000, only 133 archaeologists worked in the county-level museums as full-time employees, and in Hungary as a group they numbered approximately 300. Comparing this data to the fact that in the same year 228

archaeologists were leading excavations, it is obvious that roughly three-quarters of them worked on sites. In addition to them, archaeologists with short-term public servant contracts are also allowed to lead excavations. Aiming for fast and effective work, the county-level museums use this possibility; moreover, this is the only way for them since the county-level governments are not able to provide additional regular employee positions. With only a few exceptions, new young colleagues are contracted only for the period of the excavation. The archaeologist employed full-time, working in an institutional framework and earning an average (modest) public servant's salary, receives an additional daily allowance for his or her field work. This sum is financed from the excavation budget.

Practically from the beginning the Institute of Archaeology Sciences of the Eötvös Loránd University and the Archaeological Institute of the Hungarian Academy of Sciences began to take part in highway excavations. The Academy and its Institute founded a limited company, especially for the purpose of fieldwork, restoration work, and consulting. Some archaeologists have founded one-person or private firms or firms with a small staff. The law did not permit universities, archaeological institutions, or for-profit companies to contract directly with the investor for development-led excavation, so they became subcontractors of the locally competent museums, a position which could be questioned from the legal point of view.

In 2004 the shortage of archaeologists was eased in Szabolcs-Szatmár-Bereg County, bordering Romania, through commissioning Hungarian and Romanian archaeologists for highway excavations from the neighbouring country. At the same time, it is a question whether a person obtaining an archaeologist's certificate abroad can be entitled to direct an excavation here. However, the details of the accreditation of an archaeological degree earned abroad are unclear.

Tendencies for the unification of highway excavations

Recent highway excavations concern most of the 19 Hungarian counties. All the counties act autonomously on their own territories, so – apart from special local features – it has happened that a museum experienced in contracting has agreed on more favourable terms than another museum. The large areas and the rather short periods for archaeological research required new methods in the fields of excavation and documentation. Nevertheless, every institution wanted to find a solution of its own. After the first experiences, the National Motorway Corporation contracted with an archaeological expert whose duty was to supervise the accounts of all excavations in the light of professional results.

Based on this, the expert elaborated proposals on the conduct of excavations, the content of documentation to be transmitted to the investor, and the accounting of excavation costs. Some of these recommendations were built into the contracts. In 2004 the regional museums established the Association of County Museums. Among other things they determined a unified excavation price per square meter and asked the museums to take this into account when making contracts.

In 2003 the government issued a law aiming to accelerate highway construction. According to this, in the course of the environmental authorization the evaluation of environmental impact studies is transferred from the administrative authority of the first instance to the secondary degree authority in the KÖH. In our case it means that the preparation of archaeological expert opinions is concentrated in one place instead of every regional office. Connected to this, the KÖH initiated a coordination process with the participation of the representatives of the organizations conducting excavation work. On the agenda were the problems related to the highway and other projects, for example, the difficulties of urban excavations, the storage question, etc. As part of this work, the legislative environment was modified and a proposal on a unified contract formula elaborated with the aim of eliminating legal irregularities and contracting terms disadvantageous for the museums.

General problems

The legal definition of an archaeological site poses the greatest problem. The circle of interventions not requiring a consenting opinion should be enlarged. Financial resources are needed to support small-property owners if their planned building is situated on an archaeological site or if a site emerges in the course of construction. An unsolved question, rarely if ever raised, is that the other contracting party, the investor, should be able to contract for the same work on unified terms in similar circumstances.

Caused by the differences in central and local government property, the problem of storage for the large number of archaeological finds is still unsolved. For the sake of later processing, evaluation, and comparability, certain professional methodological principles should be set concerning the preliminary research of the location to be built on (fieldwalking, aerial photography, archaeomagnetometer survey), trial excavation, full-surface excavation and documentation.

A decision is needed on the way the monopoly of county-level museums could be relaxed. Would it be useful to have different parties complete the

preliminary archaeological work, excavation, then the restoration, conservation, inventory and final scientific evaluation of the finds?

In Hungary there is no Chamber of Archaeology, but in 2004 this serious need emerged. The highest-level professional body, the Archaeological Committee of the Hungarian Academy of Sciences, expresses its standpoint only on exceptionally important issues. The Excavation Committee works next to the KÖH is the sole body dealing with everyday disputed professional situations. There is neither a Code of Ethics nor are there written recommendations related to the organisation and execution of development-led excavations prior to large projects.

On the basis of this situation, the EPAC meeting gave us an opportunity to compare our position to that of others. It probably also helped in forming a stand on the common principles that could perhaps be the basis, under the aegis of the Council of Europe, for a convention (or recommendation) similar to that of Valletta for preventive, more detailed practical protection of the archaeological heritage.

Epilogue

Since the time of writing this paper (2004) very important changes have taken place, and in part are still ongoing, in Hungarian archaeology. The Archaeological Chamber forecast in the article, for certain legal restrictions, has taken the first step as an Association (the Association of Hungarian Archaeologists), established in 2005. The director of the Documentary Directorate of the National Office of Cultural heritage was elected president. Today about 73% of archaeologists are members of the Association.

In 2007, the country-wide competent and duty-obligated Field Service for Cultural Heritage was established for excavations in the case of large-scale developments. It is supervised by the education and culture minister. The name of the ministry changed to Ministry of Education and Culture in 2006, and this fact also forecasts that the representation of culture and also cultural heritage are overshadowed compared to education.

The definition of 'large-scale development' in this sense is: all investments greater than HUF 1.5 billion (EUR 6 million) and those investments that are managed by the coordinating organs of the National Infrastructural Development Corporation (public road and railroad investments), and the Vásárhelyi Plan (Tisza River Basin flood control, rural development, landscape upgrade and infrastructure investments) and are higher than HUF 100 million (EUR 400 thousand). From 1 April the limit on the amount

of investment will be HUF 500 million net (EUR 200 thousand). The unexpected formulation of the Field Service for Cultural Heritage divided and also unified archaeologists. The writer of these lines agrees with those who thought that changes were important, but the mode of realization and preparation can be criticized.

The absolute position of the locally competent museums in respect of development-led excavations was unexpectedly terminated. The Field Service for Cultural Heritage, however, can involve locally competent museums in the work for a more efficient discharge of its duty, and in historic centres research institutions take precedence in excavation, but the monopoly of the regionally competent county museums and the Budapest Historical Museum was changed for the monopoly of the state. The Field Service for Cultural Heritage contracts with the investor. If the museum competent from the point of view of territory where it is allowed to collect materials does not accept the finds excavated by the Field Service for Cultural Heritage the National Museum will be responsible for curating them.

The problem of a uniform contract was solved by the creation of the Field Service for Cultural Heritage and a public list of prices was composed. It is worth mentioning that the final costs will probably be higher than was defined and proposed by the Association of the County Museums. The Association of Hungarian Archaeologists also produced a variable schedule of charges, which are under debate together with the "General Requirements for Producing Documentation". "The Documentation Procedures Protocol" of the Field Service for Cultural Heritage moves us toward a unified documentation system because the excavation organizations sub-contracting with them are obliged to follow the Protocol, e.g., it is obligatory to document sites according to stratigraphic units.

The storage of the archaeological finds, with somewhat different solutions, was resolved in part at the expense of the local county governments and in part at the expense of the investor. The National Museum's storage obligation is a new phenomenon.

During the modification of the Cultural Heritage Act and the 18/2001 (X.18.) NKÖM order in 2005 and 2007, the following other changes have occurred: in the case of large-scale excavations the heritage impact study became obligatory; archaeological monitoring (watching briefs) got a legal basis; and there is a greater emphasis on trial excavation. There were no changes in the legal re-definition of the concept of 'archaeological site' despite the universal requirements of the profession. In a certain sense there is a loophole, however, the 'archaeological interest territory'

concept, that is, a territory where the occurrence of an archaeological site can be predicted.

There is henceforward no compensation for small-property owners in case they want to do construction themselves, and the budget for rescue excavations was not raised.

In summary: the state gives practically no support except financial remuneration (treasure trove) and support of protected sites in danger, neither direct nor indirect (tax allowances, etc.) Having some significance beyond the problems related to prevention and excavation, the more recent problem is the scientific elaboration, scientific evaluation and publication of the excavated materials.

The most important legal documents related to the topic

149/2000. (VIII. 31.) Korm. rendelet a Magyar Köztársaság Kormánya és az Európa Tanács tagállamai között, 1992. január 16-án kelt, Vallettában aláírt, a régészeti örökség védelméről szóló Európai Egyezmény kihirdetéséről [Government order No. 149/2000. (VIII. 31.) on the enactment of the European Convention, written on 16 January 1992, signed in Valletta between the Government of the Hungarian Republic and the memeber states of the Coucil of Europe.]

2001. évi LXIV. törvény a kulturális örökség védelméről (2005. évi LXXXIX. törvénnyel módosított) [Act LXIV of 2001 on the protection of cultural heritage, amended by the Act LXXXIX of 2005] (In English the non-amended version of the Act can be found at www.koh.hu)

18/2001. (X. 18.) NKÖM rendelet a régészeti lelőhelyek feltárásának, illetve a régészeti lelőhely, lelet megtalálója anyagi elismerésének részletes szabályairól (21/2007. (III. 26.) OKM rendelettel módosított) [Decree No. 18/2001. (X. 18.) NKÖM on the detailed rules of excavation of archaeological sites and financial remuneration for the finders of archaeological sites and finds, amended by the OKM Decree 21/2007. (III. 26.)] (In English there is the non-amended version of the Decree for request from the KÖH)

4/2003. (II. 20.) NKÖM rendelete az örökségvédelmi hatástanulmányról [Decree No. 4/2003. (II. 20.) NKÖM on the heritage impact study]

18/2000. (XII. 18.) NKÖM rendelet a kulturális szakértők működésének engedélyezéséről és a szakértői névjegyzékek vezetéséről [Decree No. 18/2000. (XII. 18.) NKÖM on the operating permits of cul-

tural experts and keeping a register of experts]
191/2001. (X. 18) Korm. rendelet az örökségvédelmi bírságról [Government Order No. 191/2001. (X. 18) on heritage fines]
17/2001. (X. 18.) NKÖM rendelet a kulturális javak kiviteli engedélyezésének részletes szabályairól [Decree No. 17/2001. (X. 18.) NKÖM on the detailed rules of export licencing of cultural goods]
17/2002. (VI.21.) NKÖM rendelet a kulturális örökség hatósági nyilvántartására vonatkozó szabályokról [Decree No. 17/2002. (VI.21.) NKÖM on the regulations concerning the official registry of cultural heritage]

Basic recent publications in the theme

JANKOVICH-BÉSÁN D. – NAGY M.
Felmérés a régészet helyzetéről 1989-1999 [Survey on the the present state of archaeology 1989-1999], Budapest 2004. (only in Hungarian)
RACZKY P.
"Autópálya–régészet 1990-2007" [Highway archaeology 1990-2007] *Archaeologiai Értesítő* 132, 2007 (in press) (with English summary)
WOLLÁK K.
"Protection of cultural heritage by legislative methods in Hungary", in: E. Jerem, Zs. Mester, R. Benczes (eds.), *Archaeological and Cultural Heritage Preservation Within the Light of New Technologies*, Selected papers from the joint Archaeolingua-EPOCH workshop, 27 September – 2 October 2004, Százhalombatta, Hungary 2007 73-82.
VISY ZS. (ed.-in-chief)
Hungarian Archaeology at the Turn of the Millennium. Budapest, 2004.

Internet addresses:

Kulturális Örökségvédelmi Hivatal (National Office of Cultural Heritage): www.koh.hu
Kulturális Örökségvédelmi Szakszolgálat (Field Service for Cultural Heritage): www.amrk.hu
Magyar Régész Szövetség (Association of Hungarian Archaeologist): www.regeszet.org.hu

Overviews of Thingvellir, the site of the national parliament in the Commonwealth period (c. 930-1264). The site was added to UNESCO's World Heritage List in 2004. (Photo T. Hjaltalin.)

Preventive Archaeology In Iceland

Thor Hjaltalin

Cultural environmental background

The history of Iceland spans about 11 centuries, starting in the settlement period around AD 870-930. The settling of the island was part of Nordic expansion in the Viking Age. The earliest book of history known to have been written in Iceland is Ari the Learned's Book of Icelanders, which dates from the period AD 1122-1133. The book recounts the colonization of Iceland and Greenland, stating that Iceland was first settled from Norway during the reign of King Harold Fairhair and that the first settler built his farm at Reykjavik in AD 874. According to Ari, the island at that time was uninhabited and untouched except for a few Irish monks, who fled when the Norse settlers arrived. The history of the settlers is preserved in the so-called Book of Settlements, originally dating from around 1150. The Book of Settlements tells stories about the settlers, their names, their origins and where they settled in Iceland.

Archaeological research indicates the same, i.e., that Iceland was settled around AD 900. The habitation of the island began with people coming from Scandinavia. Dwellings are comparable with Norwegian buildings from the same period and finds from burial mounds correspond best to West Norwegian culture. Many finds, however, originated from the Hebrides, England, Scotland, Ireland and France, and others show evidence of contacts with Sweden and the Baltic. Recent genetic research in Iceland indicates that the majority of women originated from the British Isles, while the men came mostly from Scandinavia. The archaeology is Viking Age – medieval and later, and also largely historical. There is no evidence of earlier habitation.

Iceland was a farming community until the end of the 19th century and one can hardly speak of urbanisation until after 1860, and especially after 1880, when small towns began to develop around the country in connection with the emerging fishing industry. The old agrarian community could sustain around 50-80 thousand inhabitants and the economy was primarily based on about 5 000 farms (*lögbýli*). Farming depended on live-

stock: sheep and cattle. The Icelanders were subsistence farmers, aiming to produce necessities: food, clothes and building materials. Although people were largely self-sufficient, the country has never provided everything the inhabitants needed, so trade has always been important. Buildings were usually constructed of material from the nearby surroundings of the farm; Iceland had no forests to provide timber for construction, so rights to driftwood washed up on the shores were important for the farmers. Houses were built of turf and stone, while the frame was generally built of the valuable driftwood. Archaeological research has demonstrated that dwellings were similar throughout the Nordic countries at the time of Iceland's settlement. The main building was the *skáli* (longhouse or hall), an oblong structure with curved longitudinal walls. In Iceland alone the turf-house tradition continued to evolve and survived into the 20th century. The *skáli* underwent significant changes during the centuries, and by the 14th century the *gangabær* (corridor farmhouse) had become the norm.

Glaumbær farm in Skagafjördur, Northern Iceland. Glaumbær was the residence of Thorfinnur Karlsefni and his wife, Gudridur Thorbjarnardóttir, who, according to the Saga of Greenlanders and the Saga of Erik the Red, took a journey to Vinland the Good (today's America) around AD 1000. The current form of the turf farm is from c. 1870. The farmhouse is part of the National Museum's Historic Buildings Collection and houses the Skagafjördur Folk Museum. (Photo T. Hjaltalin)

Today many farmers are aware of the significance of the so-called *bæjarhólar*. Such man-made farm mounds where the main buildings stood are often formed over many centuries. The turf buildings required extensive maintenance every year: turf walls required regular reconstruction, and rotten wooden components had to be replaced. With every repair, the composition of the farm changed somewhat and successive generations shaped it according to their needs. Through time these mounds piled up, and today they are often about three metres high, with a diameter of 30-40 metres. Archaeological research often reveals the development of the farm from the Middle Ages onwards and these mounds can provide extensive information on the farm and history in general. Adjacent to the main buildings were other buildings of various uses, such as shacks, smithies, sheep-pens, stables, watermills, vegetable gardens, colt stables, and cowsheds. A little farther off one may find ruins of summer dairy-farms or shielings (*sel*), outlying farms (*hjáleiga*), sheepfolds (*fjárborgir*) and outlying sheep cots (*beitarhús*). Apart from these farm remains, ruins of booths and other buildings can be seen at the sites of old ports, and there are also substantial remains of administrative power, secular and ecclesiastical, such as churches and monasteries. Among the most beautiful sites are the ancient public assembly sites of the Commonwealth period (c. AD 930-1264), one of which, the site of the national parliament at Thingvellir, was added to the UNESCO World Heritage List in 2004 (see on p. 122).

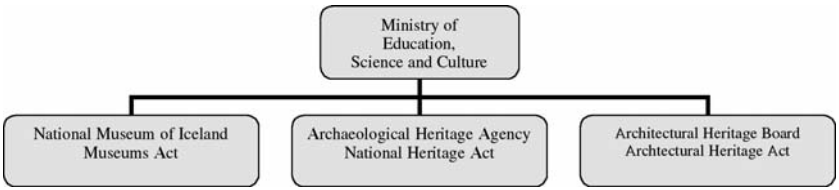
Although fishery was not pursued as an independent profession until the late 19th century when urbanisation commenced, fish and fishing have always been important for the livelihood of Icelanders. Farmers sent their farm workers to fishing stations (*ver*) where they lived in fishermen's shacks (*verbúðir*) during the fishing season and fished from open boats. At various places along the coast, remains of this activity are still visible. Other archaeological remains are burial mounds, cairns and other burial sites from pagan or Christian times, remains concerned with transport, roads and bridges, and walls and fortifications. Natural sites, historic places, and those connected with folklore, such as rocks reputed to be the homes of elves, are also defined as heritage sites under the National Heritage Act.

Today the population of Iceland is about 300 000, living in a country of 103 000 km^2. More than two-thirds of the inhabitants live in the capital city of Reykjavík and its suburbs.

*Fishermen's shacks (*verbúðir*) at Ósvör in Bolungarvík in the West Fjords of Iceland. (Photo T. Hjaltalin)*

Institutional and legislative environment

In 2001 four new acts relating to the national cultural heritage were passed by Althing (parliament): the Architectural Heritage Act (*Lög um húsafriðun* nr. 104/2001), the Act on Movement of Cultural Objects (*Lög um flutnings menningarverðmæta úr landi og um skil menningarverðmæta til annarra landa* nr. 105/2001), the Museums Act (*Safnalög* nr. 106/2001), and the National Heritage Act (*bjóðminjalög* nr. 107/2001). The main changes vis-à-vis the previous legislation of 1989 are that administration and management of the cultural heritage, formerly under the aegis of the National Museum and the so-called Archaeology Committee (*fornleifanefnd*), were separated from the Museum and assigned to a new institution, the Archaeological Heritage Agency (*Fornleifavernd ríkisins*). Regional heritage officers (*minjaverðir*), formerly under the authority of the National Museum, are now a part of the Archaeological Heritage Agency. The administration of buildings and architectural heritage remained with the Architectural Heritage Board (*Húsafriðunarnefnd ríkisins*), but under the new legislation the Board became an independent institution. The aim was to avoid conflicts of interest by separating administrative issues such as policy making, listing of heritage sites, issuing of research licences and monitoring research from the actual research work.



The institutional structure of archaeology.

Thus today there are three State institutions, all subject to the Ministry of Education and Culture, concerned with conservation of the cultural heritage. The Director of the National Museum (*Þjóðminjasafn Íslands*), the principal museum in Iceland in the field of cultural heritage and advisor to regional museums, retained the title of State Antiquarian (*þjóðminjavörður*) after the division of responsibilities by the new legislation. One of the roles of the National Museum is to collect and preserve items of archaeological value and conduct research on archaeological remains. The Museum also has buildings of historical and cultural value in its collection. The Archaeological Heritage Agency is responsible for the administration and protection of archaeological remains, monuments in cemeteries and ecclesiastical objects kept in churches. It examines, grants permits for, and monitors all local and short-term archaeological excavations, advising those involved on the recording, study and preservation of objects of archaeological value. The country is divided into cultural heritage regions, and today there are five regional heritage officers (*minjaverðir*) responsible for the cultural heritage remains in their regions, archaeological remains, old buildings and objects, who work closely with local museums and the appropriate state institutions. The Architectural Heritage Board is responsible for the preservation of buildings that are of historical, cultural or architectural value. It is also to conduct research on the building's heritage.

Iceland has undertaken international obligations concerning the preservation of cultural heritage. In 1956 Iceland ratified the European Cultural Convention (1954) and in 1995 the Convention for the Protection of the World Cultural and Natural Heritage (1972). In practice, other conventions adopted by ICOMOS have been used for guidance, although not ratified, such as, e.g., the Venice Charter of 1964 (International Charter for the Conservation and Restoration of Monuments and Sites), which has influenced the policy on restoration of the National Museum's Historic Buildings Collection, and the Lausanne Charter of 1990 (Charter for the Protection and Management of the Archaeological Heritage).

Articles concerning preventive archaeology

The National Heritage Act (*bjóðminjalög* nr. 107/2001) contains four articles concerning preventive archaeology (Articles 10, 12, 13 and 14). In Article 9, archaeological remains are defined:

> **Article 9**
> Archaeological remains include any and all remains of structures from former times and other fixed remains made by man or upon which man has left his mark, such as:
> a. cultural landscape, remains of settlements, sites and remains of farm dwellings together with accompanying structures, remains of any buildings, such as churches, chapels, monasteries and temporary huts or shelters, remains of fishermen's huts, boat sheds and trading stations and remains of human habitation in caves or under overhanging rocks;
> b. sites of primary production, such as remains of shielings, fishing stations, sheep shelters, peat digs, charcoal pits and extraction sites for bog-iron;
> c. enclosures of former hayfields or grainfields, irrigation ditches or structures and evidence of fishing and hunting in coastal and inland areas;
> d. old roads, dams, bridges, fords, landing places, harbours and mooring places for boats, launches, ferry sites and cars, cairns and lighthouses and other road markings and navigation aids along with their landmarks;
> e. walls and fortifications and other structures for armed defence;
> f. former sites of public assemblies, reported places of heathen worship, temples and holy sites, wells, springs, enchanted sites and other sites and landmarks connected to former customs, practices, superstitions and folklore;
> g. inscriptions, drawings and other remains of human activity in caves or under overhanging rocks, on cliffs, outcrops or fixed rocks;
> h. burial mounds, cairns and other burial sites from heathen or Christian times;
> i. wrecks of ships or parts of them.
>
> As a rule, remains more than 100 years old shall be deemed to be archaeological remains, but younger remains may also be placed under protection.

This '100-year principle' has made a great difference in cultural heritage management in Iceland. Practically all remains of structures older than 100 years are automatically protected by the law. This principle originally came into force in 1994; prior to that only archaeological remains which were

especially selected and listed were protected by law. As a consequence, the number of protected archaeological remains or sites increased from around 700 up to more than 200 000 with the introduction of the 100-year principle. Today only about 30% of these automatically protected remains have been catalogued.

Article 10 prohibits any damage, alteration or destruction of archaeological remains. It also gives the Archaeological Heritage Agency the authority to carry out research or take any action necessary to preserve archaeological remains. The Article states:

> **Article 10**
> No one, be it landowner, tenant or any other person, may damage, destroy or alter archaeological remains, nor cover them, repair or disturb them, or move them to another place without the permission of the Archaeological Heritage Agency.
>
> The Archaeological Heritage Agency has the right to carry out research on archaeological remains by excavation or by other means and take any action required to preserve, maintain or improve archaeological remains, giving landowners or tenants prior notification of any such action.

Article 12 states the general duty of anyone who notices that remains are being damaged to notify the Archaeological Heritage Agency. It also places responsibility on those who are engaged in some kind of activity which may threaten remains to notify the Archaeological Heritage Agency in advance. The Agency decides whether, or on what conditions, work may continue. The Article states:

> **Article 12**
> Anybody who notices that archaeological remains are being damaged shall notify the Archaeological Heritage Agency. If it is foreseen that archaeological remains are threatened by changed land use or human activity the relevant local authority or the party responsible for the project shall report to the Archaeological Heritage Agency with good notice. The Archaeological Heritage Agency then decides, ... whether research is necessary, whether the site should be preserved or whether the archaeological remains may be removed, and if so, on what conditions.

All archaeological remains are protected, not only those which are registered or visible on the surface, but also everything over 100 years old and previously unknown. Finders of such remains are to notify the Archaeological Heritage Agency and contractors must stop their activities pending the Agency's decision. Article 13 states:

> **Article 13**
> If archaeological remains are discovered which were previously unknown the finder shall report the find to the Archaeological Heritage Agency as soon as possible. Landowners or tenants learning of the discovery share this responsibility. If archaeological remains are discovered while work is underway on a project, the party responsible for the project shall stop work until the Archaeological Heritage Agency has issued a decision as to whether the project may continue and, if so, on what conditions.

Article 14 is the most important for preventive archaeology. Developers have the responsibility to report to the Archaeological Heritage Agency before any work commences. Notice that the article states that the party responsible for 'major projects' shall pay the cost of necessary research. That leads to the assumption that developers or individuals working on 'small projects' should not pay for necessary research, which must therefore be the responsibility of the State. The Archaeological Heritage Agency also carries out pre-research to 'confirm the nature and extent' of finds to evaluate if further research is necessary. Article 14 states:

> **Article 14**
> Should a landowner, tenant or other person, for instance the supervisor of a public works project, conclude that he must carry out excavation, because of for example road construction, the laying of conduits, drainage or forestry, which will disturb archaeological remains, he shall report this to the Archaeological Heritage Agency before work commences. The alterations which will result from the project shall be described in detail. The Archaeological Heritage Agency shall determine whether, and if so when, the project may commence and under what conditions. The party responsible for major projects, including road construction, hydroelectric power (HEP) projects, airport construction, the laying of conduits and forestry, shall pay the cost of necessary research.
> The expenses for research with the aim to confirm the nature and extent of the find are borne by the Archaeological Heritage Agency.
> The developer bears the cost of the research that the Archaeological Heritage Agency deems necessary because of his actions.
> The Archaeological Heritage Agency may give investors guidance on costs, competitive bidding and how to carry out research projects.
> Further details on these points shall be issued in regulations.

The practice of preventive archaeology in Iceland

Since the beginning of the 1990s private enterprise in archaeology has expanded in Iceland. Various funds have sponsored large research projects. A provision obliging local authorities to catalogue archaeological remains in connection with planning was included in legislation as long ago as the

National Heritage Act No. 88/1989. This opened a new door for private archaeology enterprises to bid on cataloguing work for local authorities. This increasing privatisation spurred the demand for administration to be separated from archaeological research. The new legislation of 2001, the National Heritage Act No. 107/2001, is a response to this demand. With the separation of responsibilities, the National Museum no longer sits on both sides of the table, obliging investors to organize research and tendering for such projects in competition with private archaeologists. Nevertheless, the new administrative agency, the Archaeological Heritage Agency of Iceland, has the legal obligation to carry out small-scale research projects under certain circumstances. It can therefore be practical to divide preventive archaeology in Iceland into two categories.

The first category includes preventive excavations financed by the investors involved. These are major public projects, such as constructions of roads, airports and buildings. Such projects, which are subject to a formal administrative process within the framework of the Environmental Impact Assessment Act and the Planning and Building Act, are conducted through the National Planning Agency, a state authority in charge of administration, monitoring and implementation of these laws. Smaller public and private projects can also be put under this category, such as building activity that is subject to permission from a local authority surveyor. The Archaeological Heritage Agency must be consulted and, upon receiving all relevant data, including site cataloguing, evaluates whether research is necessary and determines when the project may commence and under what conditions. Most such research projects considered necessary by the Archaeological Heritage Agency are carried out by private archaeologists or museums and paid for by the company or individual carrying out the development. The difficulty is to draw the line between 'big projects' and 'small projects', as under Article 14 of the National Heritage Act only developers working on 'big projects' are obliged to pay for necessary research. Necessary research because of 'small projects' must then be undertaken and paid for by the Archaeological Heritage Agency.

The second category comprises preventive excavations which are carried out when natural forces or private human activities damage archaeological remains, for example wind and sea, animals (horses and sheep), farming or gardening. These excavations are usually small projects and are carried out and paid for by the Archaeological Heritage Agency. Here it is necessary for the Agency to develop smooth working procedures because these matters usually require personal contacts. To distinguish between these two categories of preventive archaeology, two different words in Icelandic are used to describe them. The former is called *þjónusturannsókn* or service research and the latter *björgunarrannsókn* or rescue research.

Excavations	2002	2003	2004	2005	2006
For scientific purposes	22	24	27	30	32
Preventive excavations ***service research*** **(major public projects)**	1	9	11	10	18
Preventive excavations ***rescue research*** **(natural hazards and private activities)**	0	3	4	2	1
Total:	23	36	41	42	51

The number of ongoing scientific projects has increased significantly in the last five years thanks to funding from the Kristnihátiðarsjóður, a fund established by the Althing, the Icelandic Parliament, on the occasion of the millennium of the adoption of Christianity in Iceland. Preventive major public projects are paid for by investors and carried out by private archaeologists. Preventive excavations because of damage caused by nature and private activities are carried out by the Archaeological Heritage Agency.

Strengths and weaknesses

The present situation with respect to heritage protection presents both strong and weak points. The most important, in my opinion, are the following:

Strengths

- Legislative background. The authority of the Archaeological Heritage Agency is quite clear concerning the conservation of archaeological remains and its role in rescue archaeology.
- A consensus among the general public, in most cases, on the importance of protecting and preserving archaeological remains. Many farmers are interested in the history and archaeology of their farm and land.
- Large public projects have a very formal handling procedure via the National Planning Agency.
- Regional heritage officers maintain personal contact with investors, local government officers, contractors and local people. This is very important, not the least with respect to projects not covered by the Environmental Impact Assessment Act and the Planning and Building Act, which therefore do not go through the National Planning Agency.

Weaknesses:

- Only about 30% of protected archaeological remains have been catalogued. This places a significant burden on the Archaeological Heritage Agency in connection with evaluating and commenting on development projects in uncatalogued areas.
- There is no central database of catalogued archaeological remains. The cataloguing work carried out by private archaeologists for investors and communities ends up in their private catalogue databases, which are not coordinated.
- The division between 'big projects' and 'small projects' is often unclear, but developers responsible for major projects are obliged to pay for necessary research.
- The new law of 2001 raised many uncertainties with respect to heritage management and the carrying out of research. Private archaeologists vs. state archaeologists – sometimes the obligations and rights to carry out particular work are unclear. This has to be clarified in the revision of the National Heritage Act, which is already in preparation.
- The country is sparsely inhabited. There are vast areas of land for the Archaeological Heritage Agency and for regional heritage officers to cover, involving extensive travel. Heritage management suffers from a shortage of staff.

There is a need for European cooperation, especially on theory and coordinating principles for conservation, on evaluation of archaeological remains and standardization of cataloguing. It is also very useful and instructive to compare management systems in European countries, which can provide models for developing better working rules in heritage management. Iceland has participated in several projects in the field of heritage management, especially together with other Nordic countries. Many projects on natural and cultural heritage conservation have been organized and funded by the Nordic Council of Ministers.

Summary

The environment of cultural heritage management in Iceland has changed dramatically in the last decade. Four new acts relating to the national cultural heritage were passed in 2001. The aim was to separate administrative issues from research work. The demand came from an growing group of archaeologists working privately, who have been steadily undertaking more work since the beginning of the 1990s, both cataloguing of and research on archaeological remains. Another important change in the last few years is the '100-year principle', which means in practice that all remains of struc-

tures older than 100 years are automatically protected by law. This has made a great difference in cultural heritage management in Iceland and increased the extent of the administration. Among other things, the number of preventive excavations has increased greatly.

It can be practical to divide preventive archaeology in Iceland into two categories because of their nature. In the first are excavations carried out because of major public projects. They have a formal administrative process within the framework of the Environmental Impact Assessment Act and the Planning and Building Act and are conducted through the National Planning Agency. The Archaeological Heritage Agency evaluates whether research is necessary. These excavations are carried out by private archaeologists and paid for by the investors. In the second category are excavations which are carried out when archaeological remains are being damaged because of natural forces or private human activities. These excavations are usually carried out and paid for by the Archaeological Heritage Agency. In Icelandic two different words are used to distinguish between these two categories. The former is called *þjónusturannsókn*, or service research, and the latter is called *björgunarrannsókn*, or rescue research.

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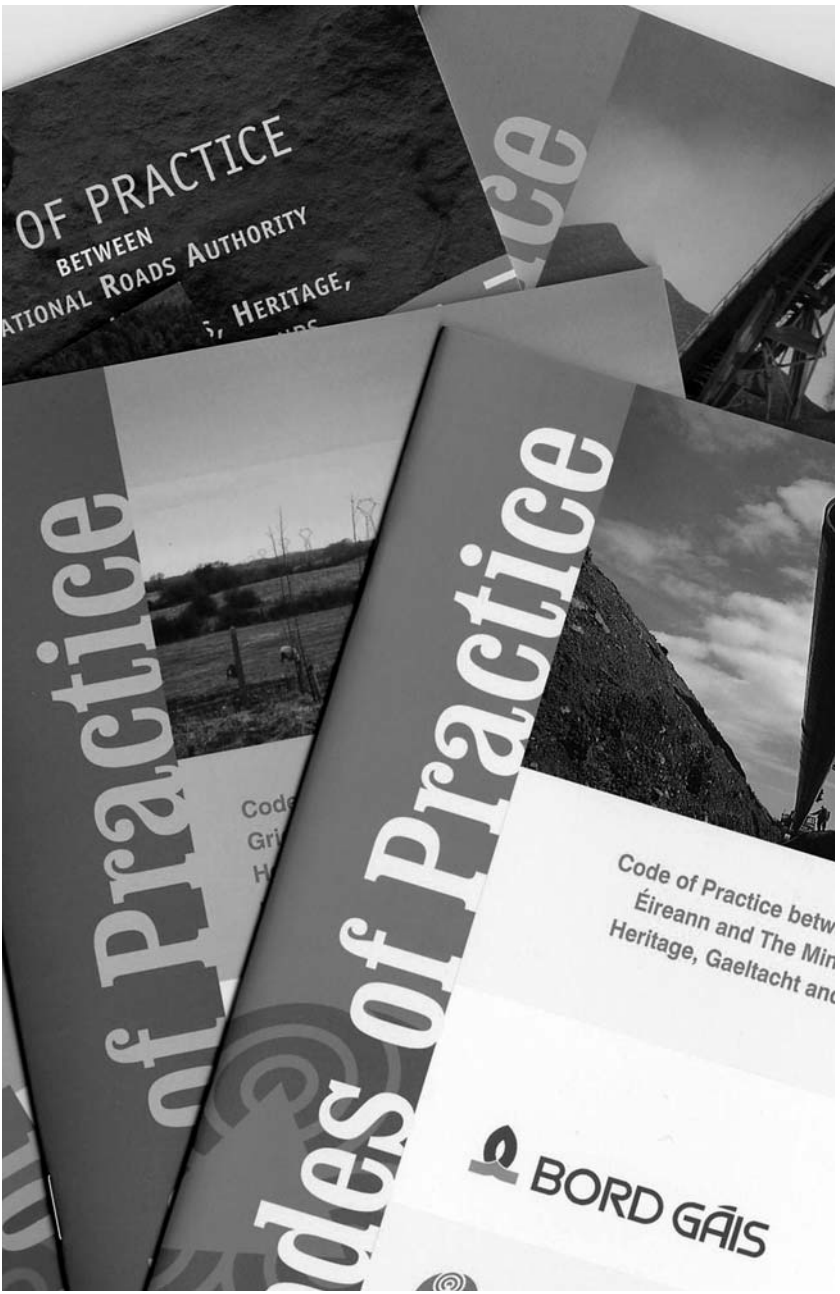

Codes of Practice agreed between the State and the principle bodies responsable for major infrastructure.

Rescue Excavation in Ireland Roads and Codes

Pauline Gleeson

Snapshot of Ireland

A quick search on the Internet will tell you that Ireland is an island situated in the Atlantic Ocean, separated from Great Britain by the Irish Sea. The Republic occupies most of the island except for six counties, which form Northern Ireland. Ireland's population exceeds just 4 million and its area is 70 280 km^2. The mountains are low, with the highest peak rising to 1 041 m. They follow the coastline for the most part enclosing a central boggy basin. The principal river is the Shannon, which begins in the north-central area, flows south and southwest for about 386 km, and empties into the Atlantic. The capital is Dublin and other main cities are Cork, Waterford, Galway, Limerick, and Kilkenny. To give an idea of the size of the Island, the journey distance from north to south is in the region of 400 km.

The Irish countryside exhibits a wealth of surviving upstanding archaeological monuments ranging from 6 000 year-old megalithic tombs to more recent monuments of industrial archaeological interest. In excess of 120 000 known archaeological monuments in the Republic of Ireland have been recorded to date, but this number is changing rapidly due to the work of the Archaeological Survey of Ireland and as a result of development-led archaeological assessment. Being short of natural resources, Ireland has little industrial tradition. Our agriculture is characterised by small family-held farms where strong belief systems (which have survived until relatively recent times) encouraged the retention of archaeological monuments. Some land improvement schemes in the 1960s and 1970s led to the demise of some field monuments; however, under the REPS (Rural Environment Protection Scheme) scheme many farmers are now active custodians of their monuments.

In terms of landscape, Ireland has an open pastoral countryside, usually with small fields bounded by hedgerows. For historical and other reasons our tree cover is very slight; only about 4% of the land mass is forested.

Our climate is temperate with very high precipitation and therefore peat covers much of our midlands and coastal mountainsides.

Departmental responsibilities

Within the framework of central government, the Minister for the Environment, Heritage and Local Government has responsibility for the protection of the archaeological heritage, primarily through the exercise of powers under the National Monuments Acts 1930-2004 and administers the National Monuments Section. The Minister for Arts, Sport and Tourism also has responsibilities under the National Monuments Act 1930-2004 and administers the National Museum of Ireland.

Legislative background

National Monuments Acts 1930-2004

Archaeological sites afforded protection under the terms of the Acts vary greatly in form and date. Many are standing, others have been identified from aerial photography only. Examples range from prehistoric megalithic tombs, earthworks of different types and periods, medieval buildings, wetland archaeology, urban archaeological deposits and underwater features such as wrecks. The importance of the protection of this archaeological heritage has been recognised and seen as a primary concern of government since the foundation of the State. The provisions of the National Monuments Acts relating to the control of excavation for archaeological purposes are a key element in the general framework of protection of the archaeological heritage.

The Planning and Development Act 2000, Regulations 2001

- The Planning and Development Act 2000 (consolidating all previous planning legislation) placed an obligation on all Planning Authorities (Local Governments) to set out objectives regarding archaeological heritage in their development plans.
- For planning applications, where it appears to a planning authority that a proposed development would affect or be unduly close to 'a cave, site, feature or object of archaeological interest', then it is sent to the Minister for the Environment, Heritage and Local Government.
- Where the development is a planning authority development, the same procedure applies.
- On receipt of the planning application, an officer of the National Monuments Section has the opportunity to comment on the development pro-

posal as regards impact on the archaeological heritage. S/He may recommend an archaeological assessment and this can lead to further archaeological investigations or redesign of a project.
- In exceptional circumstances, the National Monuments Section may recommend that the planning authority refuse permission for the development.
- The 2000 Planning and Development Act also brought Environmental Impact Assessment (EIA) legislation into primary legislation for the first time. Where it is required that a development be subject to EIA, the minister is a statutory consultee and has to be notified.

The Heritage Act 1995

This is an Act to promote public interest in, knowledge, appreciation and protection of the national heritage and to establish a body to be known as the Heritage Council. The Heritage Council is an independent body which has a statutory responsibility to propose policies and priorities for the identification, protection, preservation and enhancement of the national heritage. This includes monuments and archaeological objects. The Heritage Council has published a number of useful documents which relate to development-led archaeological excavation.

European Convention on the Protection of the Archaeological Heritage

In 1997, Ireland ratified the European Convention on the Protection of the Archaeological Heritage (the Valletta Convention). The provisions of the National Monuments Acts are in accordance with and allow compliance with the provisions of the Valletta Convention.

Policy documents

In 1999, two significant documents were published by the State which outlined the government's policy in relation to the protection of the archaeological heritage and the conduct of archaeological excavations:

- Framework and Principles for the Protection of the Archaeological Heritage
- Policy and Guidelines on Archaeological Excavations

These documents clearly set out the basic principles of national policy on the protection of the archaeological heritage and demonstrate the obligations on the State under the European Convention on the Protection of the Archaeological Heritage.

Rescue excavation in Ireland

When is rescue excavation carried out?

- It is our published policy that preservation *in situ* must be the first option to be considered in order to allow development to proceed.
- During the planning process, every effort is made to avoid impact on archaeological remains where possible.
- When redesign or relocation is not possible, and where it is confirmed by archaeological investigations that an archaeological site will be directly affected, then rescue excavation is the recommended mitigation.

Purpose of rescue excavation

The purpose of rescue excavation is to mitigate the impact of development on archaeological deposits, features and objects through scientific recording. A record is made of all archaeological deposits, material and features, which are to be affected by the development

Regulation of rescue excavation

- Licenced archaeological excavation since 1930
- Prevention of excavation for archaeological purposes by unqualified persons
- Regulation and control of excavations undertaken by qualified archaeologists
- Protection of wrecks over one hundred years old and underwater archaeological objects, underwater heritage orders
- Control and use of detection devices
- The National Museum of Ireland (NMI) is the state repository for the national collection of archaeological objects and has a primary role in their protection. The NMI regulates and controls procedures for the conservation of archaeological objects.

Criteria for obtaining an excavation licence

Applicants for archaeological excavation licences have to satisfy the National Monuments Section that the proposed excavation is necessary. They have to be competent/eligible to carry out the excavation and prepare a proper excavation strategy or method statement. The applicant makes an undertaking that the necessary resources are available to complete the excavation to a professional standard and to conserve any archaeological artefacts.

Criteria for first time applicants

Criteria for eligibility for first-time licence applicants are an academic qualification with a substantial archaeological content and relevant archaeological excavation experience in a supervisory capacity. Competency is further assessed in an interview where the applicant is examined with regard to his/her knowledge of Irish archaeology, excavation and survey techniques, knowledge and recognition of archaeological objects, knowledge of conservation techniques, post-excavation analysis experience, skills in preparation of material for publication and knowledge of relevant legislation.

Other

Archaeological excavations are licensed to eligible applicants subject to a standard set of conditions relating to the proper conduct of the excavation. Applications are made on a standard form which includes information on a wide range of issues such as projected excavation timescale as well as the planning background. Each application must attach relevant maps and a detailed proposal outlining the excavation methodology.

A list of all archaeologists eligible for licences is available from the Department of Environment, Heritage and Local Government. This list is sent to private developers who require professional archaeological services.

Types of developments where rescue excavation takes place

Rescue excavation takes place as a result of both small- and large-scale development where avoidance is not possible. This may vary from the development of a single dwelling to a motorway. The smaller the development, the greater the potential to avoid impact on archaeology and avoid costs to the developer. From the early 1990s Ireland has experienced an unprecedented growth in economic activity with a consequent growth in all forms of development. A previous lack of investment in infrastructure means that Ireland is currently in a catch-up position with most of its European neighbours. Furthermore, over the last ten years there has been a remarkable increase in development for the residential and commercial markets. As well as green-field sites and suburban locations, the cores of historic cities and towns have been subject to a significant increase in such development activity. Consequently, there has been a direct increase in the number of urban archaeological excavations. Dredging, waterfront development, ports and harbour extensions have all resulted in recent rescue excavations. Due to the scale of larger schemes such as roads, the electricity supply, gas pipelines, the peat industry, extractive industry, etc., vast

tracts of land are being developed where the likelihood for discovery of previously unknown archaeological sites is great.

Who are the main developer bodies?

- Developers can be individuals or State bodies.
- Today, most rescue excavation in Ireland takes place as a result of major infrastructure development.
- Several Codes of Practice have been agreed between the principle bodies responsible for major infrastructure and the State. These bodies include the National Roads Authority, Bord Gáis Eireann (Gas Supply), Bord na Móna (the Peat Industry), the Electricity Supply Board and the Concrete Federation.

The National Roads Authority (NRA) is the largest of these developers and is funded under the National Development Plan and through the public-private partnership process. When preparing the route of a new road, archaeology is an integral part of the planning process. The NRA employs project archaeologists to oversee the archaeological implications of all aspects of road schemes from constraint studies to route selection to the EIA process. In this way, appropriate measures are put in place to mitigate impacts and adequate timescales and funding are allowed for rescue excavation to be carried out where necessary. The vast quantity of new information generated as a result of this process is a significant contribution to our wider understanding of the archaeological heritage. The NRA fully supports publication of the results of archaeological excavation and conducts regular seminars where the results of excavations are presented to the public and archaeological community.

Bord Gáis Eireann are the main developer for gas pipelines, the development of which is subject to EIA. In the case of pipelines, advance planning can ensure successful avoidance of known and potential archaeological sites identified through the EIA process. The ability to make minor revisions to avoid archaeological remains has the advantage over road schemes and fewer rescue excavations arise statistically.

Bord na Móna (the Peat Industry) are a State body and the principle developers of the Irish bogs. Peatlands are of major archaeological interest and large-scale peat extraction has considerable archaeological implications. The Electricity Supply Board and Concrete Federation have recently agreed to codes of practice and archaeologists are involved in early stages of planning. Coillte (Forestry), the largest landowner in Ireland, have also agreed to a code of practice. Here the emphasis during planting and harvesting is

to avoid impact on archaeological remains and relatively few rescue excavations take place.

Codes of Practice

- The purpose of codes is to provide a framework within existing legislation and policies to enable development to proceed in a manner that ensures the safeguarding of the State's archaeological heritage.
- The codes reflect the State policy as set out in the publications: 1. Framework and Principles on the Protection of the Archaeological Heritage, and 2. Policy and Guidelines on Archaeological Excavation, and have regard to the statutory mechanisms under the National Monuments Acts (1930-2004) and the National Development Plan 2000-2006.
- The codes are based on an agreed set of principles and actions including the appointment of a qualified archaeologist and the early planning of archaeological mitigation.

How are rescue excavations funded?

The archaeological heritage is an essential part of our national heritage and is a non-renewable resource. The Minister for the Environment, Heritage and Local Government considers that the costs of archaeological work as a result of development are a legitimate part of development costs. Such costs include the preparation of a report on the excavation although not necessarily providing for the publication of these reports (except in summary form).

Statistics for excavation licences issued

The number of excavation licences issued has increased in recent years in line with an increase in development and economic prosperity. These figures include licences issued for test excavation and monitoring below-ground work as well as rescue excavations.

1996.....393
1997.....487
1998.....610
1999.....760
2000.....956
2001.....1,069
2002.....1,870
2003.....1,964
2004 .....1,668 to date

Problems/Challenges

- Development pressure results in increased pressure on the archaeological resource.
- Increased pressure means greater demand on both public- and private-sector archaeologists and focus of National Monuments Section staff almost exclusively towards development-led issues.
- Enforcement of best practice is not always possible.
- Appropriate publication of archaeological excavations is essential but not always carried out.
- Results of excavations are not always fed back quickly enough into the archaeological archive to inform subsequent planning proposals.
- Problems arise for private sector archaeologists in ensuring sufficient numbers of experienced personnel and specialists.
- Policing of non-development-led damage to monuments can be difficult.
- Common perception exists of archaeology 'holding up' development.

Positive aspects

- Many of the provisions of the European Convention in respect of archaeological excavation have been catered for under the National Monuments Acts since 1930.
- Policy Documents are an effective tool in the overall protection of the Archaeological Heritage and the regulation of archaeological excavation.
- Summary publication of excavation results is a condition of an archaeological licence.
- Codes of Practice provide effective frameworks for communication and planning.
- Requirements under the Planning and Development Act 2000 and associated regulations mean that the archaeological heritage is in a stronger position within the planning system than previously.

Useful web sites

Summary Publications on www.excavations.ie
Policy and Legislation on www.environ.ie
Heritage Council Publications on www.heritagecouncil.ie

Epilogue

Relevant changes since the Vilnius Conference 2004:

1. The National Monuments (Amendment) Act 2004 provides for the issuing of ministerial directions to regulate all archaeological work associated with major road developments. The amendment also revises previous provisions in relation to ministerial consent required for works affecting National Monuments. Ministerial consent with archaeological conditions is issued instead of an excavation licence.
2. Planning and Development Regulations should now read 2001-2006.
3. A Code of Practice was agreed on with the Rail Procurement Agency (RPA) and published in 2007.
4. All our publications are available on www.environ.ie, and a new website, www.archaeology.ie, is a guide to our archaeological heritage and an aid to archaeologists.

Noli (Sv) medieval settlement, future place for a parking area; excavation directed by Alessandra Frondoni (2005-2006). (Photo Soprintendenza per i Beni Archeologici della Liguria)

The Approach to Preventive Archaeology in Italy

Roberto Maggi

The history of legislation

Awareness of the need for the physical preservation of ancient monuments goes back several centuries. In 1519 Pope Leone X appointed Raphael as curator of the monuments of ancient Rome. Raphael was deeply involved in this charge; he claimed the Renaissance was more damaging to the monuments of the past than the barbarians. Therefore, he planned to draw what today we would call an archaeological map of ancient Rome. Unfortunately, Leone X died two years later and Raphael died at only 37 years old, so the project was never developed.[1]

In modern times, the Italian state, born in 1860, inherited the laws for the protection of antiquities previously adopted by some of the pre-unity states. The first new act was Circular 1060 of 11 March 1865, from the Ministry for Education: Instructions for the Excavations of Antiquities in Order to Avoid Harm to the Scientific Heritage Due to the Miserliness and Ignorance of Contractors. It is worth noting the attribute 'scientific' being applied to antiquities. The circular asked the prefects of each district to help the archaeological academies carry on archaeological excavations whenever any work could damage remains preserved in the soil so far.

In 1874 the Ministry for Education also provided guidelines for 'good practice' in archaeological excavation:

> ...not a single induction can be expressed if the excavating of the objects is not done methodically and does not produce authoritative documentation of the process used to carry on the excavation itself, of the quality of the objects found in an assemblage, and of their precise

[1] P. G. Guzzo, "Impatto archeologico-territoriale in Italia: norme e comportamenti", in: M. P. Guermandi (ed.), *Rischio Archaeologico*, All'Insegna del Giglio, Firenze, 2001, 107-112.

location… (from the program for 1874 of the Ministry of Education, Ruggero Bonghi)[2]. (Translation by the author.)

Therefore, it can be said that as early as the second part of the nineteenth century the state administration paid attention to both the risks to archaeological materials and the proper management of archaeological excavations. However, the 'liberal' political environment did not lead to comprehensive rules capable of managing public rights against private property.[3] Law 28 June 1871 confirmed the validity of the pre-unity laws for the preservation of antiquities (if they existed) and ordered the government to set a proper law on the subject within 30(!) years. Three years later a committee for the conservation and the inventory of the cultural heritage was established in each province, whose members, chaired by the prefect, were honorary and not paid. In the following year, 1875, the Central Directorate for archaeological excavations and museums was created. On balance, the nineteenth century closed with not much organisation and not much professional involvement.

The new century started with the first law that provided unitary rules for the whole country, issued 12 June 1902 (No. 185). It tried to adjust private against state interests concerning the historical and artistic heritage and set up a *Soprintendenza per le antichità e belle arti* (Superintendency for Antiquities and Fine Arts) in each region that were offices of the Ministry of Education. However, much of this law was still reproducing the act by Cardinal Pacca issued in 1840 by the State of the Church. A few years later, a new law, No. 384 of 1909, introduced both the concept of new archaeological finds being state property and a restriction on the right of private property over any monument or item declared (by the superintendent) to be of public interest.

The dominance of public interest over private interest was definitely established by the Law No. 1089 of 1 June 1939, Protection of Things of Artistic and Historic Importance, which set up a Superintendency for Archaeology in each region separate from those for fine arts and for monuments. The law also established that each property older than fifty years belonging to any public institution was de facto classified, therefore subject to the superintendent's approval for any modification or sale.

The law confirmed that any archaeological find belongs to the State. However, only two kinds of finds are quoted:

[2] P. G. Guzzo, *Antico e Archeologia*, Nuova Alfa Editoriale, Bologna, 1993, 81.
[3] *Op. cit.* P. G. Guzzo, *Antico e Archeologia,* 58-59.

(1) due to research planned and carried out by the Superintendency (Article 43) or granted to institutions such as Universities, Museums or even qualified private persons (Article 45)
(2) occasional finds. (Article 48)

According to the law, the superintendent holds much power over occasional finds. He can stop any work responsible for the finds. He also has the power to declare whether the remains are important; in this case the builder must submit a new project in order to preserve what he has found. The superintendent can reject any building project that he judges to be dangerous for the physical preservation of the remains and/or for their 'public enjoyment'. The superintendent can display his power only after the find has occurred, however, and he has little financial power. He has no money for reimbursing the building constructor except for a 'lost harvest'. It is easy to understand how little information the superintendency receives about occasional finds. Therefore, much of the power of the superintendent is just theoretical and occasional.

It can be observed that 'luckily' the industrial revolution was late in Italy. Besides the construction of the railway system in the late nineteenth century, and the establishment of a few large industries in the northwestern triangle of Milan-Turin-Genoa, most of the country continued a rural use of the land until perhaps after World War II. Such a 'slow' change of the landscape meant a relatively low level of risk to the archaeological heritage. Thus, the 1939 law was quite well suited to the situation. Conditions changed dramatically during the 1960s, however, years of industrialisation and an economic boom, with the building of a great deal of infrastructure (first of all the motorway system) and the rapid construction of hundreds of thousands of houses, mainly around towns and on the coasts. A law conceived for a rural country and a small number of professional archaeologists (around three for each superintendency) made it impossible to pursue all of the occasional finds, so a great deal of archaeological heritage was destroyed.

Compared with the quick modifications of the landscape and the use of the soil, the improvement of legislation and the organisation for the protection of the archaeological heritage was very slow. The former Central Directorate for Antiquities and Fine Arts of the Ministry for Education became the Ministry of Cultural Heritage in 1975. The 1939 law did not change, however, which was probably positive. That is, a change in the law in the environment of modernisation and industrial economic growth of those days would probably have resulted in reducing rather than improving the tools for the protection of archaeology. Even today, in a country where parts of the territory are barely under the control of official author-

ities, where thousands of houses are being built without any authorisation, archaeology is quite often misunderstood and regarded as an optional toy and/or a bureaucratic obstacle.

The first formal approach to prevention dates to 1982, when the head of the cabinet stressed the need for preventive approval by the Ministry of Cultural Heritage for the location of each public works' project. However, this was expressed in a circular, not a law, so soon juridical interpretation weakened this statement by discussing whether the 'preventive approval' applied only to areas that were already officially classified as having cultural heritage. As a consequence, not all of the superintendencies felt strong enough to support the need for preventive investigation in the 'unknown' areas. Despite such problems, the year 1982 marked the rise of preventive archaeology in Italy, leading to some important projects such as the pioneering (for Italy) investigation of Line 3 of the Milan Underground.[4] Finally, pressed by Council Directive 85/337/EEC of 27 June 1985, on 7 August 1990 the Italian government issued Law No. 241, that introduced the *conferenza dei servizi* (board of services):

> "If an administrative proceeding involves several public interests, the promoter calls a 'board of services', in order to discuss simultaneously all of the different aspects. The board can also be called in order to get simultaneously all of the authorisation, permits, and prescriptions useful for the proper administrative goal." (Article 14) (Translation by the author.)

This applies mainly to public works. However the superintendencies had more chance to discuss and provide instructions before the work was carried out and even before the approval of the final project. In the regions where the superintendencies were more active, preventive archaeology was also extended to some private projects, such as banks, supermarkets and so on.

It is still difficult to argue for the need for protecting what is 'unknown', however. It is difficult for the *Conferenza dei servizi* to bring a decision if some aspect is uncertain. The law permits the superintendent to deny the authorization only on the basis of existing, declared, physical remains.

The Law No. 554 of 21 December 1999 organised the rules concerning public works and established that the preliminary project must include preliminary archaeological investigations. Needless to say, 'preliminary inves-

[4] D. Caporusso (ed.), *Scavi MM3,* Milano,1991.

tigation' does not exactly mean 'preventive excavation'; therefore, in many cases such 'investigation' results in a bibliographic and (a superintendency's) archival research in order to establish the location and dimensions of the 'known' archaeology.

We had to wait until January, 2004, in order to be able to read the words preventive archaeology in a law, that is, the comprehensive Code of Cultural Heritage and Landscape (*Codice dei beni culturali e del paesaggio,* D.L. 22 January 2004, n. 42). According to Article 28(4), as far as public works are involved the superintendent may have some 'preventive archaeological test excavation' paid for by the developer, even if the area is not declared but only holds some 'archaeological interest'. Of course, archaeology claims all ground is of archaeological interest and, of course, such a statement is hardly acceptable to the other 'public interest'. One can foresee that the notion of archaeological interest without a formal declaration will easily be called into question.

The Code does not mention preventive archaeology applied to private projects, which are still treated on the basis of the 1939 law (occasional finds). The superintendencies' hopes of getting more money in order to be able to conduct preventive archaeology with public resources was kindled by the Law No. 289 of 27 December 2002, Article 60(4), which allots 3% of the funding for infrastructure to 'expenses for the protection and the management of cultural heritage'. It was a short-lived hope: the Ministry for Infrastructures (which provides the money) and the Ministry for Cultural Heritage agreed to give the money to the private company ARCUS (Company for the Development of Art, Culture and Show). Last year (2004), about 20% of all the money (5737 million euros) was allotted to ten archaeological projects, only one of them for preventive archaeology – that is, for Line C of the Rome underground (2 million euros). The very costly *musica lirica* got 16.92 million euros; this means that 29% of the money provided by developments that will mainly affect our unknown archaeological heritage will help some opera houses. Isn't this the country of melodrama?

Discussion

In conclusion, it can be observed that the Italian state, despite having established state ownership of the archaeological heritage as early as 96 years ago, did not set up proper rules and proper instruments in order to manage the impact of 'development' on the unknown part of its own property. Regardless of this, preventive archaeology still exists. Many research projects are carried out, providing diverse if not homogeneous records as well as impressive finds, for example, sixteen Roman ships near

Pisa[5], several Neolithic-to-Bronze Age prehistoric villages, necropoli and landscapes buried by five subsequent eruptions of Vesuvius[6] and many others (see the short reviews[7]). The number of sites found varies among the preventive archaeology projects from about an average of 0.5 to 2 sites for each kilometre of line (railway, motorway, pipeline, and so on). In the 70 km area of the Turin-Novara high-speed railway, four among the 119 finds[8] were large sites that required about 0.5 million euros each to be investigated.[9]

Official statistical data do not exist; however, preventive archaeology in Italy is probably cheaper than elsewhere: the pioneer work of the '80s on the Milan Underground C cost only 0.03% of the total expense. More recently, the average estimated cost of preventive archaeology is about 1%[10], with a maximum of 5%[11] for the Rome-Naples high speed railway. The cost estimation is subject to the way the cost impact from archaeology is calculated, however, and to the specific operational circumstances. In the Rome-Naples case, several building works started before preventive archaeology and the cost includes closing and changing some construction sites, the project redressing, and the rebuilding of some concrete wall units besides the real archaeological work and arranging a museum exhibition of the most important finds. Therefore, the cost rose to 5% of the total 3,400 million euros due to mismanagement of the archaeological risk rather than just to the physical archaeological remains.

Having learned their lesson, the national consortium for the high speed railway (TAV – Treno ad Alta Velocità) set up its own archaeological

[5] A. Bottini, "Il caso della Toscana", in: *Archeologia: rischio o valore aggiunto?*, Giornata di studi, Roma 2001, *Bollettino di Archeologia* 53-54, (MCMXCVIII) 2004, 13-18.
[6] S. De Caro, "L'esperienza campana", in: *Archeologia: rischio o valore aggiunto?* Giornata di studi, Roma 2001, *Bollettino di Archeologia* 53-54, (MCMXCVIII) 2004, 3-6.
[7] M. P. Guermandi (ed.), *Rischio Archaeologico*, All'Insegna del Giglio, Firenze, 2001; *Archeologia: rischio o valore aggiunto?* Giornata di studi, Roma 2001, *Bollettino di Archeologia* 53-54, (MCMXCVIII), 2004, Ministero per i Beni e le Attività Culturali.
[8] F. M. Gambari, G. Spagnolo Garzoli, F. Barello & C. Ambrosini, "La valutazione del rischio archeologico nella progettazione preliminare della linea ferroviaria A.V. Torino-Milano", in: *Archeologia: rischio o valore aggiunto?* Giornata di studi, Roma 2001, *Bollettino di Archeologia* 53-54, (MCMXCVIII), 110-116.
[9] R. Prosperi, personal communication.
[10] G. Tocco, "Tavola Rotonda", in: *Archeologia: rischio o valore aggiunto?* Giornata di studi, Roma 2001, *Bollettino di Archeologia* 53-54, (MCMXCVIII) 2004, 76.
[11] D. Trucchi, "La valutazione di impatto archeologico nella realizzazione di opere pubbliche e private volte a modificare il territorio", in: *Archeologia: rischio o valore aggiunto?* Giornata di studi, Roma 2001, *Bollettino di Archeologia* 53-54, (MCMXCVIII) 2004, 20.

department, headed by a qualified archaeologist. Therefore, at present, TAV is able to work in good agreement with the superintendencies and in fact it does reliable preventive archaeology. However, this is the only case I know of. Incidentally, it seems this policy provides a strong reduction of the cost of the archaeological investigation (i.e., the TAV Turin-Novara required 5 million euros – that is, 0.125% of the total scheduled cost.[12]

In spite of this, the preventive archaeology business, mainly private, is several million euros per year. The market is in the hands of numerous small private companies or cooperatives and is not necessarily based on quality. The Ministry for Cultural Heritage did not set up any particular standards of good practice. When preventive archaeology has to be conducted, the local superintendency provides directions about what it wants done. No official roll of the units entitled to conduct preventive archaeology exists. The superintendent may submit a list of reliable archaeological companies to the developer with great caution: he may be accused of lobbying in favour of certain archaeologists.[13] There is no obligation to the developer, who chooses the units he likes, quite often according to the cost.

Because in Italy archaeology is State archaeology, the superintendencies hold the so-called 'scientific directorship' of all preventive archaeology excavations. This qualification does not officially exist, however, it is *extra legem,* and the archaeologists of the superintendencies are few, have a great deal of bureaucratic work to do, and also have (and usually prefer) to do their own planned excavations rather than fight builders and their commercial archaeological units. What happens is that in many cases the 'scientific director' has little time to take care of the work being done, and little power to really direct the investigation.[14] Furthermore, free-lance archaeologists have no juridical recognition. There are no 'rules for the archaeologist' such as those for lawyers, architects, geologists, engineers and so on. Therefore, in order to reduce the cost, some units hire students. In theory (and sometimes also in practice) they may hire anybody willing to call himself an archaeologist. Hiring qualified archaeologists is the exception rather than the rule.

[12] R. Prosperi, personal communication.
[13] S. De Caro 2004, "L'esperienza campana", in: *Archeologia: rischio o valore aggiunto?* Giornata di studi, Roma 2001, *Bollettino di Archeologia* 53-54, (MCMXCVIII) 2004, 3-6.
[14] G. De Marinis, L. Malnati, "Interventi archeologici a carico di terzi", in: *Archeologia: rischio o valore aggiunto?* Giornata di studi, Roma 2001, *Bollettino di Archeologia* 53-54, (MCMXCVIII) 2004, 93-94.

For a long time the university world dismissed 'salvage archaeology'. Only recently, after cuts to funding, are some universities trying to enter the market, with some difficulty; on the Rome-Naples line, the university worked on only two sites.[15] As mentioned above, the superintendencies have no juridical power to force contractors to hire universities rather than low-cost units. The small involvement of universities is, of course, negative; for example, in a large project for a pipeline in Basilicata, an area was classified as 'no risk' but the existence of sites was in fact well known to the Department of Archaeology due to a couple of unpublished dissertations.[16]

The basic assumption that all fieldwork is scientific research sometimes seems to have been forgotten. This has a negative reflection both on the quality of the research and on the salary of the archaeologists.

Epilogue

I submitted this paper in May 2005. One year later, finally, a law has been issued in order to organise preventive archaeology, at least for public works. Decree No. 163 of 12 April 2006, *Codice dei contratti pubblici* (Code for Contracts Concerning Public Works) devotes two articles to the subject. Article 95 points out that the preliminary project must contain an integrated geological and archaeological survey investigation to evaluate the archaeological 'risk'. Only scholars who graduated in archaeology (with a no less than a five-year degree) and/or a department of archaeology are entitled to sign the report and to submit it to the superintendent.

The superintendent, on the basis of the report as well on the basis of the superintendency's knowledge, may order test coring and/or excavation in order to establish the archaeological content of the area. This research will be directed by archaeologists of the superintendency and paid for by the public developer. According the relevance of the archaeological remains, the superintendent may order an extended excavation or physical preservation (Article 96). In both cases the cost is on the builder, who also has to support the cost for publication and/or exhibition. This seems to be a quite good law. Unfortunately it does not apply to private projects, which are still treated on the 1939 basis (occasional finds).

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[15] A. Carandini, "Tavola Rotonda", in: *Archeologia: rischio o valore aggiunto?* Giornata di studi, Roma 2001, *Bollettino di Archeologia* 53-54, (MCMXCVIII) 2004, 72-73.
[16] P. Sommella "Comment to Innocenzo Titone, Petrolio in Basilicata: un'occasione "archeologica"?", in: M. P. Guermandi (ed.), *Rischio Archaeologico*, All'Insegna del Giglio, Firenze, 2001., 71-76.

Preventive Archaeology in Luxembourg Legislation and Reality

Christiane Bis-Worch

Why this title? There are no real rules concerning preventive archaeology in Luxembourg, but in a small country many problems can be managed by direct political contacts. For a better understanding it seems important to give a brief overview of the history and evolution of archaeology in Luxembourg, followed by a short introduction to the organisations and institutions concerned with archaeology.

Luxembourg is surrounded by France, Germany and Belgium and has always been a country of transit – a crossing point between Germanic and Romance cultures. Medieval history in particular was dominated by its two large neighbours; the dukes of Luxembourg were often vassals of the German emperors, but they used to send their children to the French court for their education. The language has both German and French elements. By the end of the Middle Ages, four German emperors, as well as four Bohemian and Hungarian kings, had emerged from the House of Luxembourg. Between 1443 and 1890, however, Luxembourg was the object of bloody feuds between Burgundians, the Spanish, the Austrians, and the Prussians. This was the result of the fact that the city with its fortifications – known as the Gibraltar of the North – had a strategically important position between Germany and France.

Finally, in 1815, Luxembourg became independent, but still remained part of the Netherlands and Prussia. Even after 1890, when Luxembourg acquired its own real dynasty, the House of Nassau, the building of a proper nation was radically influenced by two world wars during which Luxembourg was occupied by the Germans.

Until about the middle of the 19th century, Luxembourg was a poor and under-developed country with an agricultural economy. This changed with the boom in the iron and steel industry at the beginning of the 20th century. Many important archaeological objects and historical buildings were destroyed or lost in Luxembourg during times of war. Fortunately – and

interestingly – Luxembourg's foreign rulers collected the most valuable items and these are now to be found in numerous museums in places such as Paris, Nuremberg, Brussels, and Madrid.

What does this mean to the Luxembourgers of today? It is difficult to convince them that our history could be interesting, that our archaeological heritage is in fact particularly rich and should be analysed as well as guarded. Experience shows that we can expect to find five archaeological sites per square kilometre!

Developments in our legislation

The first Article explicitly referring to archaeology did not appear until 1927 and it contained a whole 139 words. This was the powerful Article 15 (now Article 30):

> Every archaeological find must be preserved and declared immediately to the mayor of the village where the find was made, the Museum or the Ministry of Culture. Any intentional destruction shall be punished either by a fine or by 8 days' to 6 months' imprisonment [this has never been enforced]. Sites and objects may be confiscated if the landowner fails to comply.

Moreover, the 1927 Law includes a general possibility to list 'valuable' sites of archaeological interest, and this option is still being applied today (current Articles 1, 10, 16-17, 30-32, 34-36). For example, only recently in the small village of Altrier, construction was stopped by the application of the current 1983 amendement of the 1927 Law, and the site was listed as valuable in the space of only half a day. Indeed, the original Article 15 was incorporated first into the Law of 1966, then into the Law of 1983 – which is the currently applicable law on the conservation and protection of the national heritage and has remained generally unchanged.

It should also be mentioned that the Luxembourg government signed both the European Convention of London, dating from 6 May 1969, on the protection of archaeological sites, and the Convention of Paris, dating from 23 November 1972, on the protection of the world heritage of culture and nature. The European Convention on the Protection of the Archaeological Heritage (revised) (Valletta, 1992), which is the most important of the three conventions, has still not been signed.

Even today, changes in the legislation mostly concern the structure and competencies of the various cultural institutions; for example, the reorganisation of cultural institutions in 1988, and the further reorganisation recently, on 15 July 2004. The legislation mostly concerns just the internal

organisation of the museum and the general possibilities for research, conservation of objects, excavations and publications, etc. There are no real rules, therefore, on different approaches to excavation, such as preventive archaeology, various types of survey, rescue excavations or planned excavations or how they could be integrated into the national development plan. The law does not provide for a general obligation to inform the National Museum or, if appropriate, the Department for the Protection of Historical Buildings and Monuments (*Service des sites et monuments*) during the planning phase or to order a preventive excavation before building work starts. Consequently, it is only possible for us to have work on a building site stopped after an archaeological site has been discovered!

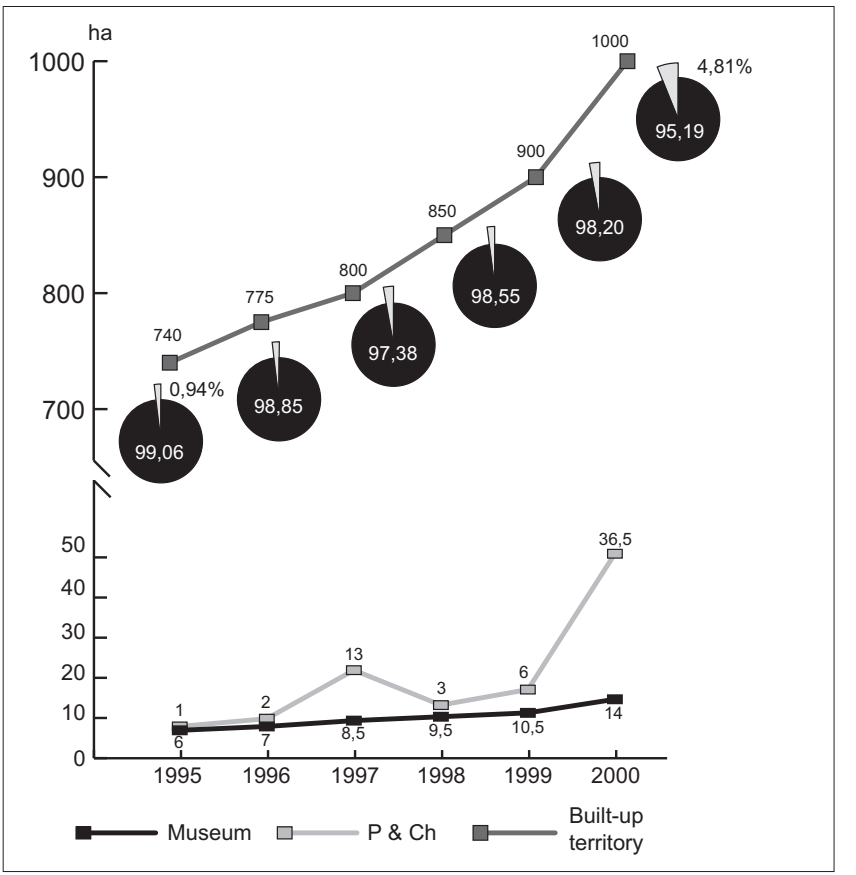
The current situation concerning the institutes involved in archaeology and their competencies

The Minister of Culture has the right to issue excavation licence to members of the National Museum for History and Art or other institutions, or even to private individuals who are able to meet the necessary scientific standards. In general, however, it is the National Museum that requests excavations and it is up to them to guarantee a high level of scientific competence. As mentioned above, the museum is not only responsible for all kinds of excavations, but also for research in connection with these excavations and the publication and exhibition of the results. The four departments each have a conservator responsible for them: Prehistory, the Iron Age and the Bronze Age, the Roman Period and the Middle Ages. Except for the Middle Ages, each department is assisted by one or two specialists. The Museum is assisted by one engineer working for the Department for the Protection of Historical Buildings and Monuments, who is responsible for the castles of Luxembourg. He has special permission to excavate in castles before they are restored. Last but not least, the museum is assisted by one archaeologist working for the Roads and Bridges Department (*Ponts-et-Chaussées*), who is in fact the only person who can speak of preventive archaeology in Luxembourg because he has been in charge of all excavations resulting from plans for motorways since 1996.

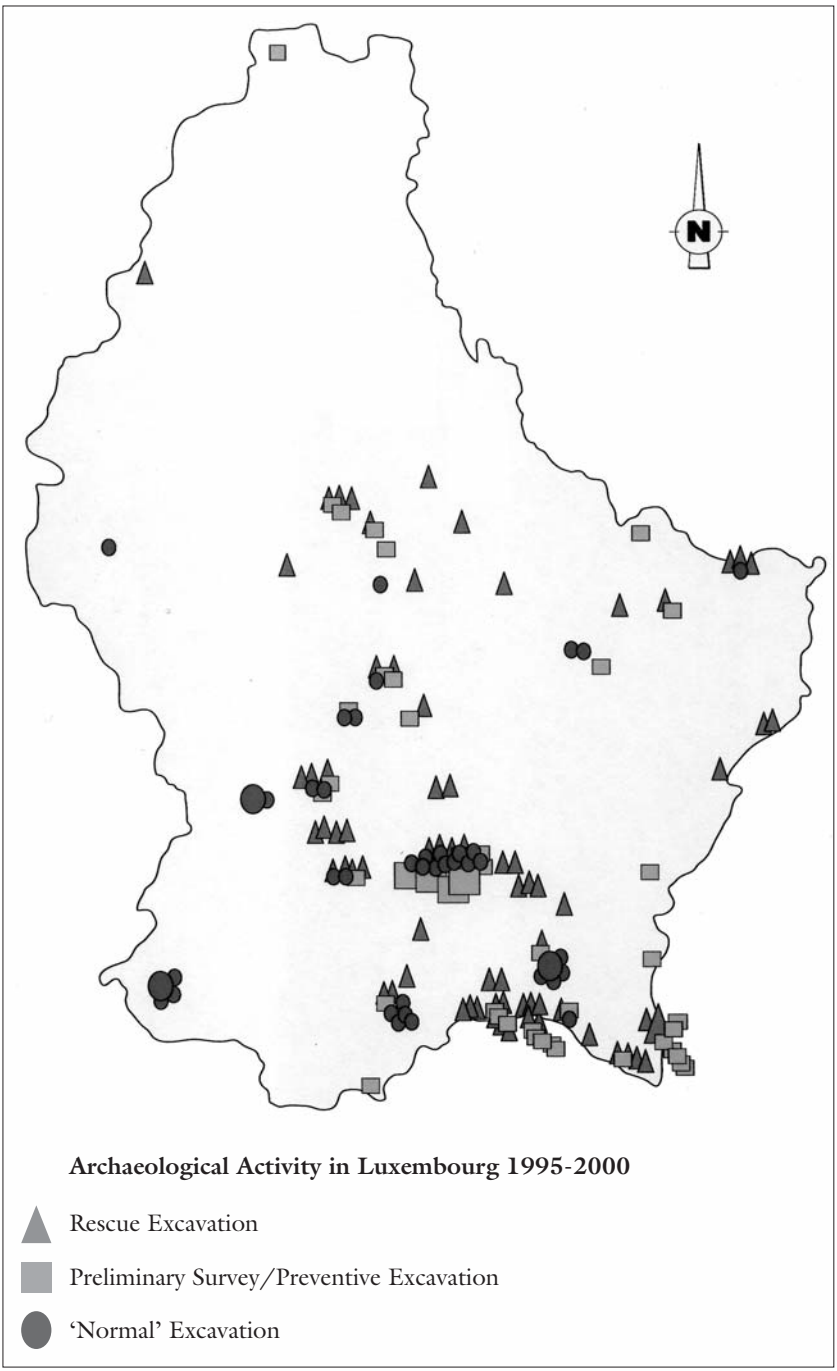
As already mentioned, the law stipulates that anyone who discovers an archaeological site must immediately inform either the mayor of the village where the find was made, the National Museum or the Ministry of Culture so that the work can be stopped and a start made on a rescue excavation. Without going into too much detail, it is easy to imagine how people react when the crucial moment arrives. They are like the three monkeys: they neither see nor hear nor say anything – they just use bigger machines to plough through the walls even faster.

Even in a small country (80 by 45 kilometres), it is impossible to monitor every individual building site if there are only nine to eleven persons to do the job, and they are already occupied with excavations (including documenting objects and finds, taking photographs, preparing plans, etc.), research and publications.

The existing law is unable to save our archaeological heritage in a desirable way. One possibility is to declare important known sites as national monuments, which makes it more difficult for investment companies and estate agents. Luxembourg is rich in archaeological sites, however, and it is impossible to declare everything a national monument. On the other hand, Luxembourg is a growing metropolis – a melting pot – and economically very attractive, so investments and hence pressure on our heritage are increasing from year to year.



Number of excavations in comparison to built-up territory.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Archaeological Activity in Luxembourg 1995-2000
Rescue Excavation
Preliminary Survey/Preventive Excavation
'Normal' Excavation

Statistics show that the hunger for land has grown over the last few years and that only 0.94% to 4.81% of building projects have been studied by means of excavation by the museum in cooperation with the Road and Bridges Department. (see p. 158.) Indeed, the role of the Road and Bridges Department is important because of the building of new motorways and the fact that the Ministry of Public Building (*Bâtiment public*) acknowledges the rule that we can stop any project – which not only involves a disruption in planning but also increases costs! The department has agreed, therefore, to recruit an archaeologist and to finance both preventive excavations and further scientific work.

We can conclude, therefore, that in Luxembourg nothing is as it appears to be at first sight. This becomes clearer when we look at the statistics showing the number of excavations between 1995 and 2000 and the conditions under which they took place (thanks to Fony Lebrun for his help) (see p. 159).

- 78 rescue excavations
- 76 preventive excavations and preliminary surveys
- 36 'normal' excavations

There has been roughly the same number of rescue and preventive excavations. This is mainly because stopping projects works out to be more expensive than making an excavation beforehand. These excavations were paid for out of public funds, which suggests some kind of public interest. The government, however, runs the risk of having to pay compensation for the costs resulting from the interruption of building projects.

Nevertheless, convincing one set of people after another is an inefficient way of going about things and is no solution to the fact that unless we know about building projects in good time we are often too late to avoid having to stop work or prevent the destruction – and, of course, it is always hard to organize the money for an excavation at the last minute.

The museum is aware of these problems and has launched a research programme to set up a database including not only every known archaeological site but also areas where there might be sites. We hope that this database will be taken into account in the new laws currently being prepared – such as that on archaeology and the protection of the national heritage – and be incorporated into the National Development Plan *(Aménagement du Territoire)*. This, we hope, would change the current situation in which we are not being informed of major investment projects.

December 2004

Rescue Archaeology in Poland Past and Present

Jerzy Gąssowski

I would like to commence with some history. Archaeology has a long and very special tradition in Poland. Its birth occurred at the end of the 18th century in times when the country – once powerful – lost its independence. Excavated urns and weapons became romantic and lyric evidence of forlorn glory. They had to remind coming generations of their duty to fight for independence and liberty.

Independence came no earlier than in 1918. In the meantime there was a growing consciousness of the role of archaeological monuments not only as souvenirs of past glory. With the Enlightenment there came new questions about the state of ancient industries, arts and techniques, religions and customs, ethnic groups and nations as well, especially by the end of the 19th century.

The first private museums and other archaeological collections and exhibitions were organized mostly by the aristocracy and the landed gentry. Thousands of visitors attended exhibitions and finally the first public archaeological museums were created by town councils, universities or scholarly societies.

In the mid-nineteen century in Cracow the local scholarly society and Jagiellonian University edited a proclamation concerning the way in which archaeological research should be conducted and ancient monuments be handled. As a result, the next year one of the most spectacular Polish archaeological finds, a stone four-faced sculpted statue found in waters of the Zbrucz River, was delivered to Cracow, where it is still the most valuable monument in the archaeological museum of the city.

New developments started when Poland regained its independence after the First World War in 1918. One of the first legal acts by the new authorities of independent Poland was the Act for Protection of the Historical and Art Monuments, proclaimed on 31 October 1918. Care of archaeological monuments takes a considerable part of this act; it was probably the most modern and sophisticated legislation in Europe at that time.

Understanding what an archaeological monument is and its importance for the history of civilisation goes far beyond those times. One could use it nowadays almost without changes. For practical use, in 1920 the Ministry of Arts and Culture published an instruction book entitled *The Care of Monuments and Their Conservation*, which reinforced the Act of 1918.

The next year, in 1919, the Group of State Conservators of Archaeological Monuments (*Państwowe Grono Konserwatorów Zabytków Prehistorycznych*) was created as an initiative of most prominent archaeologists from all then-existing museums and university departments.

The goal of the new institution was at first to promote and conduct archaeological research on mobile and immobile monuments (with the exception of mediaeval architecture). The group was authorized to protect the technical accuracy of archaeological work. Secondly, the group was authorized to judge which objects should be recognized as archaeological monuments requiring registration and protection by law.

The Group of State Conservators of Archaeological Monuments was one of the first official institutions of this kind in Europe and in the world. The Act of 1918 gave the archaeological monuments formal and wide-ranging protection. The archaeological finds could not be damaged or destroyed; it was strictly forbidden to take them out of the country (after later amendment – without special permission from the Office of the Conservator). Theoretically every archaeological find belonged to the State, regardless of where and by whom it was found, and was to be immediately reported to the authorities and/or delivered to the nearest museum.

In the case of any investment that could damage an archaeological site, the work should be stopped until the site was completely researched by authorized archaeologists. Many excavations, some of them large, provoked by the new law regulations, started in different parts of the country. In 1924, 150 sites were excavated by the Group of State Conservators of Archaeological Monuments, in 1925 – 296 sites, and in 1926 – 164.

In 1922, what could be called 'rescue excavation' started. In central Poland, close to Ostrowiec Świętokrzyski, a large Neolithic flint mine was discovered where the sand was excavated for the needs of the nearby steel industry. New legal regulations helped to stop the devastation and archaeological research was undertaken. The excavation has lasted until the present. Over seven hundred shafts and galleries from the middle and late Neolithic were discovered where good and decorative flint was mined, and from which well-polished axes where produced in the neighbouring settlement.

In 1926, a large fortified settlement of the late Neolithic in Zlota by Sandomierz had to be converted into a military polygon. Before that happened, large excavations started on the whole territory, which resulted in very interesting finds of the Neolithic and later periods.

In the same year in Końskie (central Poland) a new locomotive depot was planned in an area where a large early medieval cemetery was discovered. According to the law, the construction was stopped until the whole cemetery, with 171 graves, had been completely excavated. In 1928 in Sandomierz the situation was not so convenient for archaeologists. Before the conservator stopped the construction of a house for retired Catholic priests, nearly 600 early mediaeval graves had been destroyed. Another 170 were saved due to the rescue excavation.

In the time span between 1918 and 1939 the law was favourable for archaeological monuments and protected them in the most convenient way. There was a problem, however, who should pay for the rescue excavations? In fact, it was the State who had to cover all costs of the rescue work. Fortunately there were only a few such large excavations and labour was very inexpensive. After 1926 – with the World Crisis developing – the State could barely afford to fulfil the duties resulting from the requirements of the law.

After the Second World War the situation became different and somehow easier. As everyone knows, at that time Poland became one of the satellite states of the Soviet Union. Drastic social and legal changes limited private ownership in a considerable way and large estates became state farms. There were no other investments than those organized and financed by the State. State investors and State-financed archaeological institutions could get along easily. And in most cases they did so. However, sometimes they did not, and consequently there was no way to find a good solution. In some very special cases (e.g., military facilities or special factories) the law was forgotten. In such conditions several kilometres of highway A-1 in central Poland were constructed without any archaeological supervision. Fortunately similar cases were very rare, and archaeologists were able to force respect for the law.

After the abolishing of the communist system the situation changed to some extent. Generally the new times were much better with respect to the law and regulations. However, at the same time private investors came back after nearly half a century. The legal system – still favourable in general – has existed with rather few changes since 1918. It protected all kinds of archaeological monuments and gave them legal protection. The only problem was with private investors – better to say with the large investments –

like highway and railway builders, artificial lakes, transcontinental gas or crude oil pipeline constructors.

For the times after the Second World War the Act of 15 February 1962 (with later amendments) was fundamental. Paragraph 2 of the Act says:

> …every mobile or immobile object, ancient or modern, which is important for the cultural, scientific or artistic heritage…

has to be considered as a 'cultural good' and is protected by law. In this respect all archaeological finds are under protection of this very Law. Further, it says, Article 5(5) that under legal protection are:

> ...archaeological objects … as the traces of primitive settlements and activities, caves, prehistoric mines, fortifications, tumuli and all items manufactured by ancient cultures.

Other legal regulations respected the interests of archaeology as well. The Act of 7 July 1994 for Spatial Planning requires the agreement of the Regional Conservator for any activity which could damage the environment, including archaeological remains as a part of the cultural environment. One can find similar legal protection of the archaeological heritage in the Building and Planning Law of the same year in paragraph 32. Based on the cited legal acts of 27 October there was a separate act for the protection of archaeological heritage in the Law for Highway Construction in Poland. It was influenced by the European Convention on the Protection of Archaeological Heritage of 6 January 1992.

Rescue archaeology in Poland is financed from two sources:

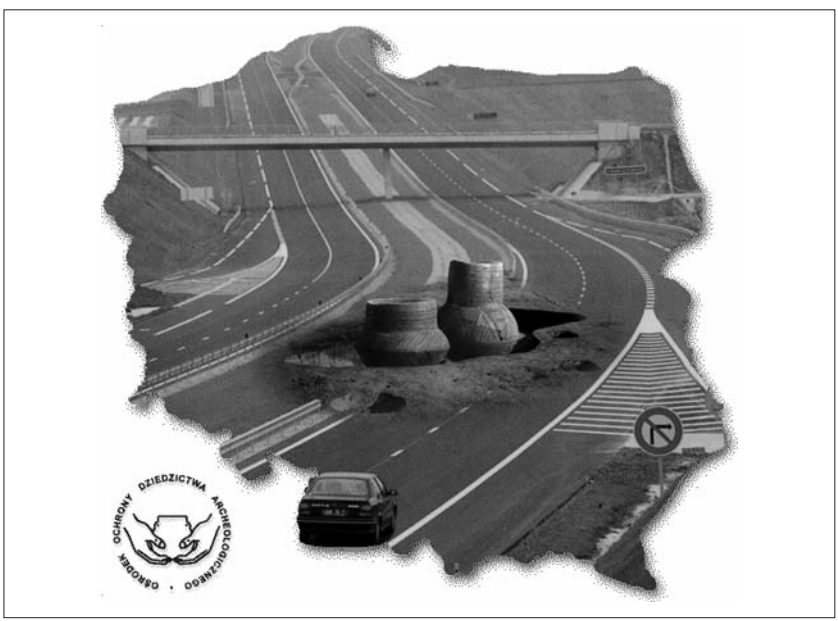
- if the damage to the archaeological site is caused by nature, then the state budget is involved in financing rescue excavation;
- in a case when planned investment may destroy an archaeological site the investor is obliged by law to cover all the expenses of the research. In the meantime, the project must be interrupted until the archaeological work is done.

Some further negotiations between investors and archaeologists may result in interesting achievements. For example, the EuRoPol Gaz investor (transcontinental Yamal–Western Europe gas pipeline) also covered the expenses of the publication of the archaeological materials from the whole excavation and founded a museum for the archaeological results of the research.

There is an exception to the model presented above: the costs of the archaeological excavations connected with highway construction are covered by the State budget. It also covers the post-excavation study of the finds and publication of the final results.

To help future rescue excavations in Poland a special programme was created. It started late in 1978 and is called The Archaeological Picture of Poland. This programme is a long-term surface survey study covering all accessible parts of the country. The map of the country was divided into rectangular sections (approximately 7 x 5 km) according to the military map scale of 1:25000. Several archaeological institutions, for instance, university departments or museums, took the responsibility to carry out a surface search of the territory of Poland, realising it sheet by sheet of the map. Twice a year – in early spring and late autumn – groups of volunteers or university students spend one week in the field searching for pottery sherds or other finds, well visible after ploughing. From 1978 until now 83% of the whole of Poland, not including rocks, marshes, lakes and other inaccessible areas, has been surveyed to localize most archaeological sites.

The programme in its late stage was supported by aerial photography, which does not cover much of the surveyed territory. Recently a programme of satellite photography was included in the programme, which should be more efficient and less expensive.



Moreover, an urgent problem needs to be solved in Poland, namely the problem of storage for excavated finds. New rescue excavations have resulted in an enormous amount of archaeological material, which should be stored and preserved in a modern way, offering easy access for scholars. So far only the materials from the Yamal-Western Europe pipeline excavations have found a satisfactory place in a building being at the same time a storeroom, museum, and scientific laboratory. Large modern storage facilities have been built in a part of the university campus in Poznan. Unfortunately, most archaeological museums, obliged by law to store the materials from new excavations in the region, refuse to accept the finds due to the lack of space. We are working very hard to solve the problem and I believe soon new storage will be constructed in most important archaeological centres in the country.

An important step in developing protection for large scale rescue excavations was the creation of the Centre of Archaeological Rescue Research (CARR) on 25 September 1995, installed at the Ministry of Culture, and dependent directly on the minister. The Centre was engaged especially in large-scale excavations preceding highway construction. Those excavations are financed by the State, and most powerful archaeological institutions (university institutes, museums) and some of the most experienced private firms united their forces to undertake the task.

In August, 2002, the Centre was transformed into the Centre for the Protection of Archaeological Heritage (CPAH) and was charged with more responsibilities, controlling in fact all the offices of archaeological regional conservators and all rescue excavations in the country. The director of CPAH is helped by a scholarly council of ten experienced professors of archaeology, and at the same time a new Council of Archaeological Heritage has been created by the Minister of Culture. The members of both councils serve as experts in case complicated situations in the field or in the office must be solved. CPAH cares for the scientific level of rescue excavations and the publication of their results. As for highway rescue excavations, seven volumes of detailed reports and studies have been edited by several regional archaeological institutions under the common name Via Archaeologica, five more are in press, and about the same number are undergoing final preparation for publication.

CPAH created a new nationwide computerized system of recording all archaeological sites and monuments, which is presently being introduced in the offices of conservators as obligatory in the service protecting the archaeological heritage.

December 2004

Preventive Archaeological Research in Romania – Legal Aspects and Results Dissemination

Irina Oberländer-Târnoveanu

Archaeology is one of the largest and most important parts of the cultural heritage in Romania, considering its time and space coverage, value and diversity, from early Palaeolithic to modern times. The territory around the Carpathian Mountains, by the Danube and the Black Sea, has always been a border area where influences from the south, east and west meet. From the 19th century on archaeological excavations and chance discoveries have brought to light a great deal of archaeological material.

Unfortunately, many finds have remained unpublished. Some finds were lost, others made useless through lack of proper documentation. Significant finds (hoards, jewels, inscriptions, and other archaeological items) are now in foreign museums. Important prehistoric archaeological cultures in Romanian archaeology are defined following a few preliminary reports and several published pot sherds. That lack of information is a loss not only for us Romanians. Archaeology is really a field without borders. Progress of knowledge about our past is dependent on good documentation of material culture in each European country. It is a growing need to better access reference resources on material culture in order to compare, identify, and interpret our finds.

Only a few years ago new legislation for the protection of the archaeological heritage in Romania made reporting mandatory, through Government Ordinance No. 43/2000 regarding the protection of archaeological heritage, with its following modifications and additions introduced by Law No. 378/2001, approving Ordinance No. 43/2000, and Law No. 462/2003, adding new definitions of the types of archaeological excavations: systematic, preventive, and rescue, as well as stricter regulations for the use of metal detectors and increased sanctions for breaking the law[1].

[1] The text of Government Ordinance No. 43/2000 can be accessed at http://www.cultura.ro/Files/GenericFiles/Ordinance-43-2000.pdf

Every year, between 500 and 900 archaeological field research projects are undertaken in Romania and their number is growing. Like everywhere in the modern world, more and more of them are preventive and rescue excavations. The times when foreign colleagues were envious to hear of the dominance of academic archaeological excavations in Romania are gone forever. That has happened not only because of the pressure of economic development but also because of the rising standards for archaeological field research and, consequently, the amount of money needed for a proper excavation. In 2003, for the first time, the number of systematic excavations became almost equal to that of preventive excavations. In 2004, the number of preventive interventions exceeded the number of systematic ones, and the trend continued in 2005. In four years (2002 – 2005), the number of preventive excavations almost doubled (from 212 in 2002, to 395 in 2005), while the number of systematic excavations declined (from 285 in 2002, to 216 in 2005). In 2006 we had over 550 preventive excavations and 400 watching briefs. That evolution reflects the effect of the new legislation for the protection of cultural heritage, the growing number of investments requiring archaeological clearance, and a more active approach of the institutions involved in the protection of cultural heritage. That does not mean that everything goes perfectly; there is a permanent fight for prevention, protection, more public awareness. Sometimes we loose the battle. Many times we are late. Sites and monuments are still destroyed or in danger.

The modern requirements for efficiency in our work, the growing number of short-term preventive excavation projects and the pressure to produce reports and conclusions soon, as well as current professionals' mobility impose a much shorter path from discovery to identification, processing, and publication of the scientific results. We need better standards and clear procedures in order to prevent valuable historical information from being lost forever. The National Archaeological Commission adopted a set of standards and procedures for archaeological research in 2004[2].

Preventive archaeology: legal aspects

In Romania, the concept of preventive archaeological research was introduced at least 30 years ago; the first modern Romanian law for the protection of cultural heritage (Law No. 63/1974) stipulated the obligation

[2] *Standards and Procedures in Archaeology* (in Romanian) by Mircea Victor Angelescu are published on-line at: http://www.cimec.ro/Arheologie/arh-standarde/standarde.htm

to research any land prior to construction work. The investor had to pay for the archaeological excavation. The present law for the protection of the archaeological heritage (Government Ordinance No. 43/2000 on archaeological heritage protection and declaring of certain archaeological sites as areas of national interest, modified later by the Law No. 378/2000 and the Law No. 462/2003) introduced the European definition of preventive archaeology for the first time, as follows:

> preventive archaeological research signifies archaeological research made necessary by building, changing, extension or repair works regarding communication ways, technical construction endowment, including underground and underwater ones, excavations, quarry works, highway networks construction, land works, telecommunications networks, relays and telecommunication aerials setting, ground research and prospecting works – drilling and excavations – needed for performing geotechnical studies, gas and oil wells and pits mounting, as well as works damaging the soil in the areas bearing located archaeological heritage, irrespective of whether they are performed inside or outside localities and irrespective of the form of property.

The law also insists on the role of archaeology in sustainable development:

> The preventive and rescue archaeological research are part of the sustainable development strategies, economic and social, tourist, urban and town planning development, on a national and local level.

During the last five years, the application of 'the polluter pays' principle has become more comprehensive, including post-excavation processing and publication. The new legislative package is not always easy to apply in real life, especially in cases of vandalism, looting of sites, unauthorised building work affecting archaeological remains, and rapid urban development. Archaeologists face a reluctant police, a slow justice system and, sometimes, political pressure in favour of a developer who broke the law. The media are strong supporters of heritage protection. Press campaigns in favour of site and monument protection have been important in solving difficult cases.

At the national level, the Ministry of Culture and Religious Affairs[3] and the National Archaeological Commission play the main co-ordinating role in archaeological protection and research. According to the law, the Ministry of Culture and Religious Affairs is the authority of the central public

[3] The website address of the Ministry of Culture and Religious Affairs is: http://www.cultura.ro.

administration in charge of elaborating the research strategies and the specific regulations for the protection of the archaeological heritage and of monitoring their application. At present there is a small Archaeology Unit (two positions) inside the General Direction for the National Cultural Heritage.

The National Archaeological Commission is the main professional body in archaeology, made up of 21 representatives of museums, universities, and research institutes involved in archaeological research. It advises the ministry on the policy and concrete actions in archaeology. CIMEC (the Institute for Cultural Memory), maintains a web page of the National Archaeological Commission with the statutes, the list of members, monthly meeting programmes and decisions (see the English version of the page at the address: http://www.cimec.ro/Arheologie/CNA_en.htm)

CIMEC – The Institute for Cultural Memory, a public institute under the Ministry of Culture, is the main partner of the ministry for the archaeological documentation at the national level. It gathers information, processes, archives and disseminates it in both paper and digital formats. CIMEC maintains the National Archaeological Record database and other computerized documentation resources regarding archaeology: excavations, research reports, an authorised Archaeologists' Register, excavation licenses, research projects, brief technical reports, digital images archives, e-books, site presentations and virtual exhibitions. The website of CIMEC (http://www.cimec.ro) is the main gateway to Romanian cultural heritage.

At the regional level, the county directorates for culture, religious affairs and cultural heritage (one for each of the 41 counties and one for the capital city of Bucharest), the territorial network of the Ministry of Culture and Religious Affairs, are responsible for the enforcement of cultural heritage legislation, monitoring, and intervention in their areas. Unfortunately, their activity is affected by the lack of enough qualified staff for the cultural heritage domain and the too many tasks to perform.

Any archaeological research, either preventive or systematic, must be approved by the Ministry of Culture and Religious Affairs, through its National Cultural Heritage Direction – Archaeology Unit, following a written request (see a draft application form, translated into English, in Appendix 1). All the applications received by the Ministry of Culture are processed in a database (Microsoft Access) at CIMEC. After several years, we are going to implement an on-line application system (based on an SQL server with web interface) to allow a better management of the archaeological research information (http://arch.cimec.ro). Only authorised archaeologists

inscribed in the Archaeologists' Register[4] may conduct archaeological excavations. There are 607 authorised archaeologists recorded at present (May 2006). More than half of them work in national, regional and county museums, and the rest in universities, research institutes and other organizations.

Museums are the main organizations involved in preventive archaeology. The National History Museum of Romania has a Preventive Archaeology Department of ten archaeologists[5] and co-ordinates large-scale preventive archaeological research in the country, such as those in the Roşia Montana gold mines area (2001-2005) and along the future Transylvania Highway from Braşov to Borş (started in 2004). Regional and county museums collaborate in large-scale national programmes and deal with preventive and rescue excavations in their area of competence. There are not enough archaeologists to cover all the development areas. The situation is very difficult in large cities and their surroundings, including the capital. There are few archaeologists and urban archaeology is underdeveloped. There are also not enough archaeologists for the medieval period. During the past few years, preventive archaeology has become an important source of income for many museums and other heritage institutions and, sometimes, this is the only source of money for field research. That encourages museums to hire archaeologists and train them.

Any excavation licence issued by the specialised unit of the Ministry of Culture stipulates that a brief technical report as well as a preliminary excavation report, accompanied by relevant documentation, must be sent to the Ministry of Culture and Religious Affairs not later than half a year after the excavation is completed. If those reports are not sent, the archaeologists will not get another excavation licence the next year. For each archaeological site, the archaeologists must fill in a standard site form for the National Archaeological Record (RAN) (see the main fields of the site form, translated into English, in Appendix 2).

Following a technical report on the research done, it is the Ministry of Culture, following the recommendation of the National Archaeological Commission, that either issues a certificate of archaeological clearance or requests the preservation *in situ* of a discovery. The archaeological clearance of an

[4] Archaeologists' Register is also published on-line:
http://www.cimec.ro/scripts/muzee/spec/arhSel.asp. The Archaeologists' Register is periodically updated. You can either browse or search on the initial of the family name, on the county of residence or category (expert, specialist, débutant).
[5] See the website of the National History Museum of Romania, http://www.mnir.ro.

area is certified by the archaeological clearance certificate, representing the official document issued under the conditions of the law, which annuls the protective set of rules previously laid down. By derogation of the above provisions, in the case of preventive archaeological research made necessary by private home construction the archaeological clearance certificate is issued by the territorial services of the Ministry of Culture and Religious Affairs that have the obligation to inform the specialized division of the Ministry of Culture and Religious Affairs.

Construction or removal work conducted in areas where archaeological heritage has been identified are only authorized based on and in accordance with the authorization from the Ministry of Culture and Religious Affairs. In the case of areas of archaeological heritage uncovered by chance, until the archaeological research is done the building permit is cancelled, or, where applicable, the town mayor orders the interruption of all activity, in accordance with the authorization from the territorial public services of the Ministry of Culture and Religious Affairs, and archaeological monitoring and excavation regulations come into force.

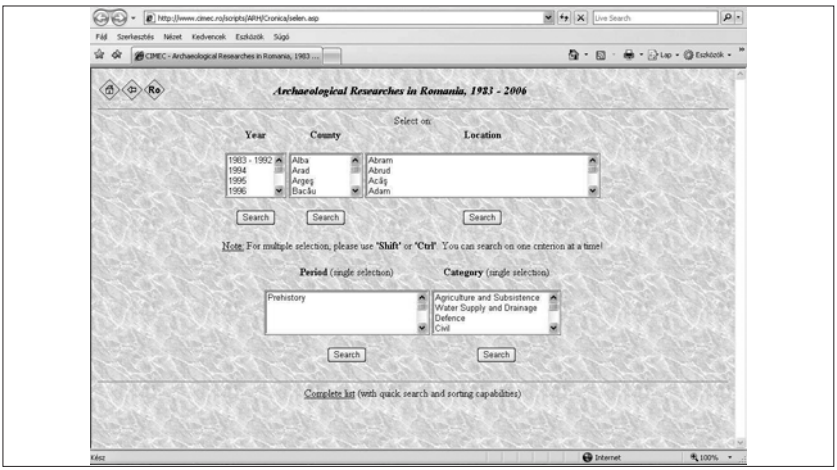
In the case of preventive research, the physical and juridical persons, under public or private law, as well as the main credit managers of the authorities or public institutions, have the obligation to finance:

- the laying down, through an investment feasibility study and the technical project, of the measures that are to be detailed in the technical project and of the necessary funds for the preventive and rescue research, where applicable, for archaeological heritage protection, or, where applicable, of the archaeological clearance in the area damaged by work, as well as the implementation of these measures;
- archaeological monitoring over the entire working period, aiming at protecting the archaeological heritage and chance archaeological finds;
- any project modification, necessary for protecting the archaeological finds.

Despite the difficulties and disappointments, we can be confident that the system is going to work better and better.

Preventive archaeology: dissemination of results

Communication of what happens in archaeology is vital. We try to offer all the information of public interest in a transparent and attractive way: legislation, recommendations, reports, news of finds, presentation of sites and archaeological projects, and other resources. The main website for archaeology is maintained by CIMEC (http://www.cimec.ro or http://archweb.cimec.ro).



The Romanian on-line archaeological research projects' database.

In Romania, the preliminary archaeological reports for the previous year's excavation campaign are published in May-June of the next year by CIMEC (the Institute for Cultural Memory), with the financial support of the Ministry of Culture and Religious Affairs in three versions: a paper volume, a CD-ROM (with extended texts, images and hypertext links), and on the web[6]. This is a useful source of information and a good example of using multiple ways to disseminate the information:

a) The volume on paper contains mainly text and one image for each site, due to limited publishing space (circa 550 pages). Around 250 reports are published every year. The issue is limited to 500 copies and goes mainly to museums, libraries and specialised organisations.
b) The CD-ROM offers not only the text of the reports in HTML format, with various navigation options (accessed through hypertext menus and indexes on institutions, people and historical periods), but also hundreds of images, maps and plans, and links. It is easy to carry and study on a local computer, using a web browser. It can be burned in as many copies as necessary with low cost.
c) On the web, the main advantage is that the same content can be accessed anytime, from anywhere, by anyone. It is there, and the cost and speed of access depend on the user. For the publisher, it is very convenient to use the same HTML format for the CD-ROM and web versions.

[6] The web page of Romanian archaeological reports on-line: http://www.cimec.ro/e_arheologie.htm.

Using the same design and structure every year is also convenient for both publisher and readers. However, on a web server we can publish more than only a copy of the annual CD-ROM. An online database of the archaeological excavation reports allows the user to search through thousands (2,750 until 2006) of brief reports selected by site location, period or year of excavation. Another great advantage of the web is the possibility to interlink various pages and combine the content in new ways. The three different ways of presentation can serve various user groups and complement each other in a harmonious way.

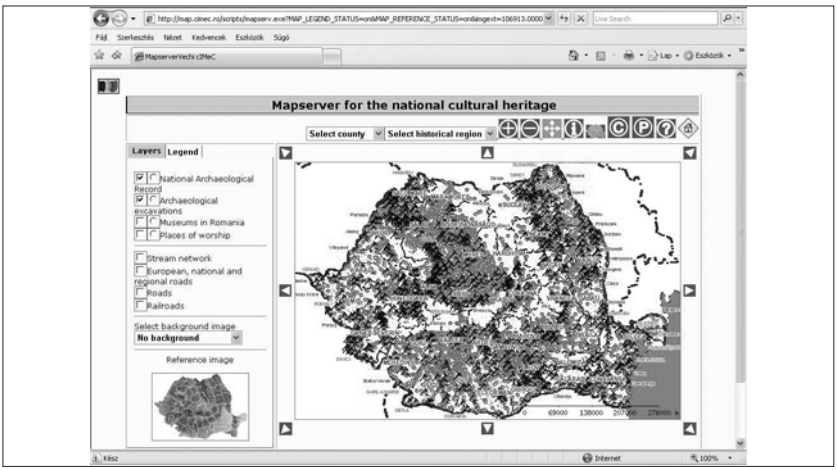
CIMEC (the Institute for Cultural Memory) is a public institute with a long commitment and experience of 25 years in cultural heritage documentation, national databases for movable and immovable heritage, web information dissemination, and co-operation with cultural heritage institutions in Romania and abroad. Our database of the National Archaeological Record (8,700 site records), established in 2000, is the largest digital resource on archaeological sites in Romania. The database can be accessed on-line using a digital map of Romania (Mapserver) scale 1:100,000.[7] Unfortunately, there is still a great deal of work to be done to record the precise location of more sites for better protection of the archaeological heritage. We should have at least 100,000 sites recorded, all the more because large-scale infrastructure works, the building industry, and agricultural development changes menace the remains of the past. There is an urgent need to identify and record sites, to delimit protected areas around them and to get a broader view of the ancient landscape. The low budgets for archaeology and a scarcity of trained archaeologists as well as very limited use of modern investigation techniques make progress slow. We need a national programme for recording sites, financed by the central budget through grant allocation for inventory projects.

CIMEC has maintained a web site since 1996 as the main gateway to Romanian cultural heritage. All information is in Romanian and English, although, sometimes the English versions are shorter. Several web pages refer to preventive archaeology, from national research programmes to technical and preliminary reports:

a) Preventive Archaeological Research in Romania Web Page[8]

This web page was opened in spring, 2004, and published brief technical reports on preventive and systematic research conducted in 2003. The visi-

[7] The digital archaeological map of Romania (administrative locations): http://map.cimec.ro or http://www.cimec.ro/mapserver.



The digital archaeological map of Romania.

tor can get a list of locations and learn about preventive research: where, when, by whom and with what results. Sometimes the report indicates that there were no archaeological remains.

As the number of both archaeological research projects and reports has grown significantly since 2004, it became impossible to put them on the web as html files. An on-line technical reports' database has been available since 2005 with search options on county, location, and type of research. At present we offer over 1300 reports[9]. The technical reports' database on-line is updated regularly. After the end of 2006 the technical archaeological reports could also be accessed via the digital map.

b) Alburnus Maior National Archaeological Research Programme

The Alburnus Maior National Research Programme started in 2001[10], and continues until today in the area of Roşia Montana, Alba County, in the central part of Romania, where an international company, Roşia Montana Gold Corporation, wants to open a new gold mining area. Since 2000, the company has paid for preventive research in the area of future exploitation, where Roman and medieval mines, settlements and cemeteries are known.

[8] Web address: http://arh.cimec.ro.
[9] The archaeological technical reports' database is published on-line at http://arh.cimec.ro.
[10] Order of the Minister of Culture and Religious Affairs No. 2504 from 7 March 2001.

This is by far the largest archaeological research project ever in Romania, considering the number of participants, resources, and standards. About 70 archaeologists from more than 15 national and regional museums and research institutes worked there every year for about six months under the co-ordination of the National History Museum of Romania. The programme is complex, including not only archaeological excavations, use of aerial photos, GIS and foreign expertise (Le Mirail University from Toulouse, France, for mining galleries research), but also ethnographic, architectural and oral history research. The developer also pays for yearly detailed reports in Romanian and English and for the final publication in the Alburnus Maior monograph series. Two volumes have been published so far[11]. The results are also published in the *Chronicle of the Archaeological Researches in Romania* and technical reports are available online.

There is a strong dispute around the opening of the gold exploitation in the area of Roşia Montana for ecological reasons. Archaeologists have also taken part in the dispute. Although the importance of preventive research and the opportunity to study this important archaeological area is widely recognised, some archaeologists contest the decisions of the National Archaeological Commission approving archaeological clearance of large areas which are going to be completely affected by future mining operations. The debates around preventive archaeological research reflect contemporary dilemmas between favouring development and preserving the past, between change and continuity. Are we right to remove the traces of the past in the name of progress? What costs more in the long run? There is no easy answer.

c) The Transylvania Highway National Archaeological Research Programme[12]

The Transylvania Highway Project is a four-lane, 415-km-long highway stretching northwest from Braşov, in central Romania, to Oradea, on the country's border with Hungary. Autostrada Transylvania is currently the largest highway project in Europe. The web page published the first decisions taken by the Ministry of Culture and the National Archaeological Commission regarding the organisation of preventive research. The preliminary reports are also published each year in the *Chronicle of the Archaeological Researches in Romania*.

[11] P.Damian (ed.), *Alburnus Maior. Monograph Series. I: Results of the Archaeological Researches Conducted at Roşia Montana during the 2000-2001 Campaigns,* CIMEC 2003; II, M. Simion, V. Apostol, D. Vleja, *The Circular Funeral Monument,* MNIR, 2004.
[12] The web address of the page is: http://www.cimec.ro/Arheologie/autostrada_en.htm.

Conclusions

We are aware that the legislative framework is important for the protection of the archaeological heritage. It is the first step, in fact. We did it. In daily life, our heritage is often menaced without archaeologists being able to react in time. Foreign developers and large infrastructure projects are in the public media eye and therefore it is easier to impose the application of the law. In other cases, archaeologists can impose preventive research only after the work has begun and cultural vestiges are destroyed. Many other situations are not even known.

We do not have enough archaeologists for the territory[13]. Their means of monitoring is limited by modest financial resources and poor equipment. We face a lack of specialists in urban archaeology, mediaeval archaeology, underwater archaeology, and modern survey. There is still a great deal to do in training archaeologists in the use of interdisciplinary and non-destructive research methods. The work is hard, in harsh conditions, often in winter (especially in urban areas), and the pay is low. Sometimes political pressure is obvious in favouring developers and cutting short archaeological preventive research or *in situ* preservation of the discoveries.

The archaeological inventory should be a powerful tool in preventive archaeology. Unfortunately, our National Archaeological Record, started late, in 2000, is far from complete with only 8,700 sites recorded and lacking precise locations for most of the sites. Local inventories are also poor – with some notable exceptions. We need a priority programme for quick improvement of the National Archaeological Record and GIS implementation. Better collaboration with other heritage bodies and non-profit organisations can raise responsibility for and interest in the protection of the archaeological heritage.

European experience and collaboration is very important for developing methods and a legal framework across the continent.

March 2006

[13] One archaeologist for 42 000 inhabitants. In fact, of about 600 authorised Romanian archaeologists only about 300 are active, which means one archaeologist for 73 000 inhabitants. The territorial distribution is uneven; more are in the capital city of Bucharest and many fewer in some counties in southern and eastern Romania.

Appendix 1

Application Form for the Archaeological Preventive Excavation Licence (Main fields)

1.	Applicant's Surname and First Name (scientific co-ordinator)
2.	Surnames and First Names of the Archaeological Team Members
3.	Applicant's Institution and Partner Institutions
4.	The Beneficiary
5.	Financial Supporter
6.	The Archaeological Research Purpose
7.	County
8.	Locality (city/village, etc.)
9.	Commune
10.	Location
11.	Address
12.	Land Owner
13.	Site Name
14.	Reference
15.	Period of Research
16.	Chronology
17.	Short description of the archaeological situation
18.	Site Type
19.	Risk Factors (natural, anthropic)

Date Signature

Appendix 2
Archaeological Site Form
(Romanian National Programme of Archaeological Research)

SIRUTA Adm. Entity Code
RAN Site Code
County
Town/Village
Commune
Site Name
Site Class
Site Type
Location
Location Details
Relief
Hydrography
Stratigraphy
Date of Discovery
Alternative Site Names
Site Names in Other Languages
Site Name Language
Location – Other Names
Location Names in Other Languages
Location Names Language
Address
Cadastral Land Unit
Latitude
Longitude
Altitude
Type of Estate
Owner
Conservation State
Site Surface
Description
Highway Section
Highway Point
Sector
Site Code
Excavating Institution
Archaeologist's Surname
Archaeologist's First Name
Position
Date
Bibliography

Slivnica near Maribor, excavation of a multilayer site. (Photo B. Djurić)

Preventive Archaeology and Archaeological Service in Slovenia

Bojan Djurić

For a better understanding of the context in which the archaeological service is organized in Slovenia let us first give some general information. The territory of Slovenia measures 20 254 km² with 2 019 406 inhabitants dispersed in 210 communes, with an average population density of 98 persons per km². A regional division of the territory is in the planning stages. Geographically, Slovenia is characterised by a high degree of diversity, which has had a great impact throughout history on the settlement pattern and, consequently, on the density of the archaeological remains.

The field of archaeology is divided into four areas:

- *Scientific research,* conducted by the Institute of Archaeology at the Scientific Research Centre of the Slovenian Academy of Sciences and Arts (http://www.zrc-sazu.si/iza/En/pageloader.html?Naslov_IZA.html) with 14 archaeologists, financed by the Ministry of Higher Education, Science and Technology;
- *Education and scientific research,* conducted by (a) the Department of Archaeology (from 1951, http://arheologija.ff.uni-lj.si/si_index.html) at the Faculty of Arts of the University of Ljubljana with 10 professors and assistant professors and by (b) the Faculty of Humanities of Koper at the University of Primorska (from 2006; http://www.upr.si/en/) and its Institute for Mediterranean Heritage at the Science and Research Centre of Koper (http://www.zrs-kp.si/EN/home.htm) with one professor and one assistant professor. Both universities are financed by the Ministry of Higher Education, Science and Technology;
- *Protection of movable archaeological heritage,* maintained in the National Museum of Slovenia (http://www.narmuz-lj.si/), with seven archaeologists, and in 14 regional and other museums in 14 regional centres, with 23 archaeologists. All museums are presently financed by the Ministry of Culture;
- *Protection of non-movable archaeological heritage,* conducted by the Institute for the Protection of Cultural Heritage of Slovenia with its head office in Ljubljana (http://www.zvkds.si/; no archaeologist employed)

and seven regional offices, in which 14 archaeologists are employed. It is financed by the Ministry of Culture.

At the Ministry of Culture, the Directorate for Cultural Heritage (http://www.mk.gov.si/en/working_areas/cultural_heritage/; no archaeologist employed) is responsible for the real estate and movable heritage as well as the archives. The Directorate also incorporates the extremely important Heritage Information and Documentation Centre (http://www.mk.gov.si/si/delovna_podrocja/kulturna_dediscina/indok_center/; with one archaeologist in a junior position) with its Register of real estate (non-movable) monuments. Supervision of the performance of statutory and regulative provisions in the area of culture (and media) is provided by the Inspectorate of the Republic of Slovenia for Culture and Media, a body incorporated within the Ministry.

In the last decade, four private archaeological companies were established working exclusively in the area of field research, and circa 20 freelance archaeologists are engaged in different field or other research activities.

Legislation concerning preventive archaeology

There is no specific archaeological legislation in Slovenia and preventive archaeology is included in the general legislation on cultural heritage protection. Some principles of the European Convention on the Protection of the Archaeological Heritage (hereinafter Valletta Convention) (ratified in 1999) were observed in the specific Cultural Heritage Protection Act adopted in 1999. This Act is still in force and it defines: the concept of cultural heritage (and archaeological heritage within it), heritage protection and its fundamental aims, its legal status, the activities of public services and public offices, and the defined execution of heritage protection activities; it also identifies the Institute for Cultural Heritage Protection as the sole legally competent institution for conducting preventive and rescue archaeology and enshrines 'the polluter pays' principle for (known) archaeological sites. The demand for the inclusion of specialist guidelines (issued by the Institute for the Protection of Cultural of Heritage) is particularly important as an obligatory part of spatial impact assessment in acts related to all planning legislation. The dependant executive act of this legislation (from 2000) is the Regulations for Issuing Permission for Archaeological Research. Permits are issued by the acting minister through a special commission composed of representatives of all four archaeological areas described above.

For the implementation of preventive archaeology principles, the spatial/environmental legislation (Environment Protection Act – 2004, Spa-

tial Planning Act – 2003, Construction of Buildings Act – 2004) and the spatial legislation at the state, regional, and local levels (Spatial Development Strategy of Slovenia – 2004, Spatial Order for Slovenia – 2004, Spatial Order for Communities, state/communal location plan) are of crucial importance. Because of strong material interests, cultural heritage protection, still understood as an obstacle to development processes, is only slowly attaining an adequate position in this sector.

Preventive archaeology

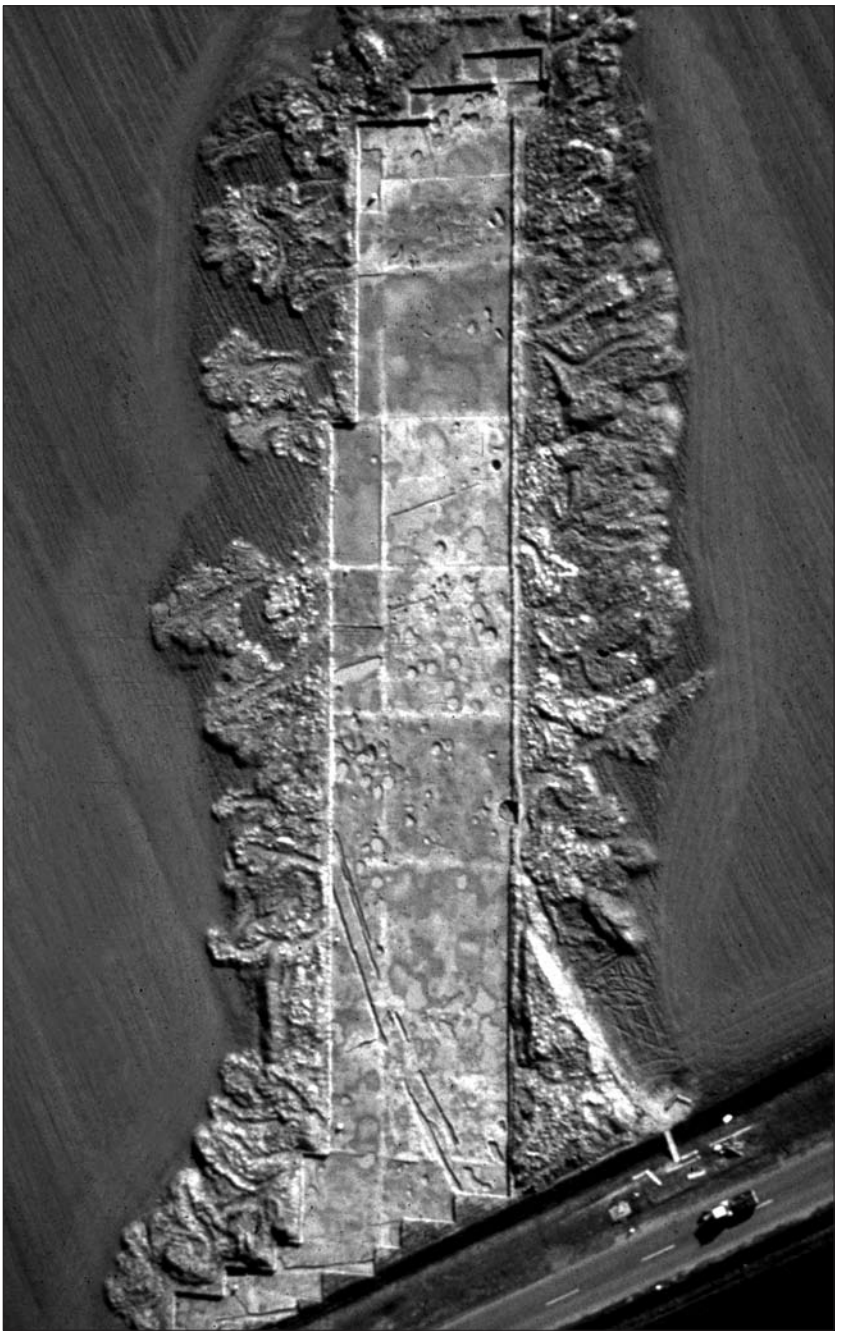
In spite of the Valletta Convention having been ratified, preventive archaeology is primarily understood (1) as a fieldwork-research activity in non-archaeological conditions (salvage and rescue excavations) and (2) as a prevention activity in the sense of diverting developer interventions on known sites (a scale of three protection regimes is used for three different degrees of site protection). The general attitude towards the protection of archaeological heritage in the service is not proactive but passive.

Today 'preventive' archaeology covers more than 90% of all field archaeology activities and is understood almost exclusively in the sense of archaeological excavation. Salvage and rescue excavations were undertaken mainly by the museums until the mid-1980s, when the newly established service for the protection of cultural heritage took over the responsibility. Today the duties of the service comprise:

- On known archaeological sites (2 158), registered in the Heritage Information and Documentation Centre, diversion through protection regimes, salvage excavation prior to construction intervention, watching briefs and rescue excavation during construction, site scheduling and the formation of reserves and parks.
- In the planning process the service has administrative duties (conditions and concordances to planning permission), documentation duties (updating site and monument records), and executive duties (excavations, surveys, watching briefs).

At the moment the planning legislation has a strong impact on the planning process, but there are attempts to slowly change this in the direction of the developers' interests. A growing number of formal complaints against the conditions issued to planning permissions, which are settled favourably at the ministry, are a clear sign of the future negative development of the sector.

It is also obvious that a mere 14 archaeologists cannot cope adequately with all the various duties resulting from the existing act. This creates at



Aerial photo of the excavations at Gornje njive near Dolga vas. (Photo B. Kerman)

least two main problems: (1) a growing number of unpublished archaeological archives (more than 1000 for the 1950-2001 period) and (2) a situation in which most of the registered archaeological sites are only vaguely defined and assessed (as a consequence, the quality of the information issued by the Heritage Information and Documentation Centre is questioned by developers). Another problem that can be added to these two is that protection in terms of salvage and rescue excavations (on the basis of the European Convention on the Protection of the Archaeological Heritage [London Convention] from 1969) generated and still generates work-intensive situations and conflicts in which normal working conditions are rare.

The system of this work-intensive activity cannot and does not keep up with methodological innovations in the realm of protection and is not familiar with the theoretical starting points for the changes in the field of prevention. This only takes place in the educational section of the academic sphere, which, however, does not have special education programmes. There is also no systematic orientation towards reserves or park protection, although isolated individual initiatives do exist. There is, however, a climate of general discouragement within the service, which gives privileged status to the standing building heritage.

No identified archaeological remains

It is well-known that almost all registered archaeological sites and areas are a result of various destructive actions and processes and not of planned and systematic field surveys prior to various development actions. Some academic projects of topographical character, conducted in the last fifty or more years, have their own priorities and are not concentrated on endangered areas. In terms of archaeological heritage policies, they can only be of supplemental character. Meanwhile in the service, dominated by art historians and architects, the prevailing general opinion is still that there is no need for a systematic assessment of the archaeological potential of areas under development. There is actually no legislative background for systematic archaeological surveying, no proposed partial strategies and no general strategy within the service for dealing with unknown unidentified archaeological remains.

On the other hand, developer-funded impact assessment projects exist from at least 1994 in the motorway project as the first of such projects. The methodology of archaeological survey used on this project influenced most later projects (hydroelectric dams, state roads, mineral extraction areas, shopping and industrial zones, housing development areas, etc.). Its

results not only indicate the biased nature of the existing archaeological spatial paradigm in Slovenia, but also show clearly that 100 newly identified sites in the 250 km long and 50 m wide corridor (=12.5 km^2), extrapolated to two thirds of the surface area of Slovenia (20 254 km^2 with 13 502 km^2 of territory where settlement is possible) suggests the existence of at least 108 000 archaeological sites, of which only 2 158 are registered at present.

The methodological innovations used in this project have brought about a dramatic increase in the number/density and extent of known sites, which the existing legislation and organisation of the service cannot handle without a new conceptualisation and reorganisation as well as changes in the methodological standards. On the other hand, it also resulted in a new awareness and resistance on the part of developers to the changing standards of protection, perceiving the archaeological heritage as the cause of greatly increased development costs.

At the moment, the Service (together with the Ministry of Culture) has to make a specialist and political decision to either reorganise its structure and accept new theoretical and organisational concepts and methodological standards in preventive archaeology (diverting through planning against rescuing through excavation; separation of administrative and executive duties; systematic funding of spatial assessment; standardization of research methods and techniques) or to consciously retain the existing legislation, inadequate working structure and existing methodological standards at the expense of archaeological heritage so as not to burden the national economy.

October 2007

Preventive Archaeology In Spain

Belén Martínez Díaz – Alicia Castillo Mena

Introduction

Preventive archaeology comprises a series of activities aimed at discovering and protecting the archaeological heritage before any type of incident may affect it. In cases when this is impossible, the aim will be to reduce the impact as much as possible, preventing the elements from being excavated or destroyed. Preventive archaeology is backed by laws and regulations on the protection of historical heritage, the land and the environment.

This activity is carried out by the different administrative bodies responsible for historical heritage. This means that although preventive archaeology is the 'star player' in this area, in reality the main objective is to protect and safeguard our archaeological heritage.

At present in Spain we lack any statistical data on the development of preventive archaeology. Each different region or Autonomous Community has its own special circumstances (see figure on p. 189), or even each area within them. For example, while the Community of Madrid produced the first report on impacts on the archaeological heritage as part of an Environmental Impact Study for a construction project in the early 1990s, the autonomous city of Melilla in northern Africa did not do so until 2001.

For this reason, in this text we have generalised a very different series of situations, and at times may offer a simplified image of the actual situation in Spain regarding preventive archaeology. These variations are partly due to the different legal frameworks that exist, and partly to the development of management techniques for preventive archaeology in each Autonomous Community.

In order to overcome this lack of standardised information, in an attempt to reflect the imbalances and changes that have occurred with the passage of time, we have included a series of figures in the text with information from different regions in the country, which serve to illustrate the different sections. Finally, we would like to make it clear that in recent years a great

deal has been written, in very different ways, about preventive archaeology in Spain. This document is a summary full of its own ideas, but which also refers to others presented in the past by different specialists. As this is a brief summary, we have decided not to quote them within the text and to add a basic bibliography about the Spanish case.

1. Organisational structure and planning

1.1 Historical development

When the current Spanish Constitution was published in 1978, it configured a new territorial organisation: the power of the previous Central Government was devolved to 17 regional governments known as Autonomous Communities, with exclusive responsibility for the management of their cultural heritage.

The appearance of the Spanish Historical Heritage Law in June 1985 helped in this process of redistributing responsibilities for the country's heritage. The seventeen Autonomous Communities started to exercise their powers in the area, and since then fifteen of the regions have published their own laws on cultural or historical heritage (see figure on p. 189, Appendix 1). This has not only led to a more equal sharing or distribution of these responsibilities via the regional governments, but also an increase in the complexity of the work involved in preventive archaeology.

This series of regulations establishes the need for a point of connection between the different procedures for protecting historical heritage and territorial organisation. It offers a series of novel concepts with regard to archaeological heritage, in particular the contents of Article 43 of the Spanish Historical Heritage Law (1985), which opened the way to the development of preventive archaeology: "The Government may order the execution of excavations or archaeological digs… wherever it is presumed there may be sites or archaeological, paleontological or geological remains associated with them…".

Perhaps the fact that the national law on historical heritage was published in 1985, before the Directive from the European Community on the Evaluation of Environmental Impact in public works, meant that it does not make any reference whatsoever to this type of evaluation. The regional laws have included the measures and ideas expressed in this directive and other international documents, such as the European Convention on the Protection of the Archaeological Heritage (London, 1969) from the Council of Europe (which Spain joined in 1975) or its most recent reworking: European Convention on the Protection of the Archaeological Heritage (Valletta, 1992), in relation to preventive archaeology.

Main regulations related to preventive (rescue) archaeology in Spanish Autonomous Regions. (Compiled by the authors.)
First year: Regional legislation on historical heritage
Second year/s: Law or rule on preventive archaeology or archaeological heritage
(pa): The law or rule only refers to preventive archaeology

The recently created Autonomous Communities, which were much more in contact with their local situation than the central government, took up with great enthusiasm the responsibility of managing the Archaeological Heritage found in their regions in the early 1980s, dealing with problems such as the absence of resources, budgets or valid or contrasting models, and constructed them from the ground up. This has led to the consolidation of basic differences in the managerial procedures between different Communities, which continue to characterise them to the present day.

During the 1980s, the regional governments focused all of their resources on producing a general inventory of archaeological sites and urgently curtailing their destruction, at the same time as starting to order action in towns and cities in which any work required as part of construction work was considered as 'urgent' or 'rescue' work, without any alternative for conserving the sites affected in this way.

Furthermore, at this time the first large-scale graduations of university students specialised in archaeology were appearing in the employment marketplace, the quality of life was improving, and as a result sensitivity towards cultural elements grew, at the same time as the State joined the European community and ratified international agreements, or adopted directives on historical and archaeological heritage.

At the same time, Spain's cities were growing, creating new infrastructure, increasing concentrations of population around the large cities, and the agricultural sector was being industrialised. There was a dramatic increase in building work, and as a result, the destruction of archaeological sites. This hotbed of activity was what led to the 1990s being the decade in which preventive archaeology started to be developed, sharing much of its content but with its own personality in each Autonomous Community.

The fact that a large number of archaeological investigations were carried out as a result of building work without conserving the remains found meant that work started on developing a series of techniques, supported by legislation, for the protection of archaeological elements. These techniques were not only for use with sites at risk of disappearing as a result of urban growth, but strategies also started to be planned for other archaeological sites whose existence was only presumed. These techniques may be summarised in three types, according to the legislation on which they were based:

- historical heritage,
- land,
- the environment.

Bringing together these three legal procedures meant it was possible for us to correctly plan the protection of the archaeological heritage, and as a result carry out preventive archaeology more effectively.

1.2. The protection of the archaeological heritage is presumed to exist

As mentioned above, since the appearance of Article 43 of the Spanish Historical Heritage Law, the Autonomous Communities have gradually improved on the possibility of carrying out archaeological interventions on land where sites are presumed to exist. In most cases specific areas have been created for this purpose, with different names but identical purposes, such as 'Areas of Possible Archaeological Content' or 'Archaeological Protection Areas', amongst others.

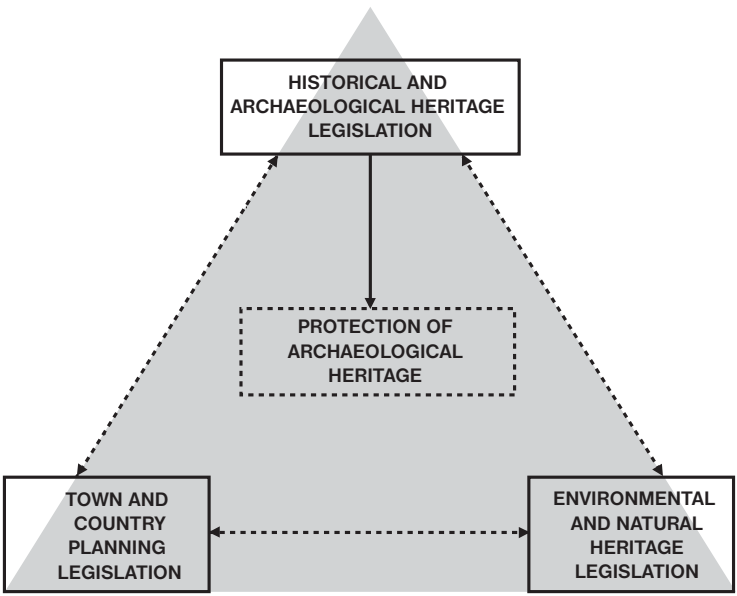
With regard to the type of protection involved, it is obligatory to carry out an initial archaeological study that evaluates the impact of the planned work

on the archaeological heritage in question and suggests which conditions may be applied to lessen the impact of the construction work. The relevant local government body will then use this study to issue a report on the viability of the construction project, with all necessary conditions for the protection, conservation or intervention of the archaeological heritage affected.

These studies, and subsequent interventions, are wholly paid for by the owner or developer, except in circumstances when there is collaboration with the responsible government department.

In other cases, decisions are made on including these Areas as part of town planning projects, and others as part of the list of Elements of Cultural Interest or Inventory of Cultural Elements, in this way granting them specific protection under the historical heritage laws.

Finally, these regulations also include procedures for protecting archaeological heritage whose existence is not even suspected, but which may be buried anywhere and may appear at any time during construction or earth-moving work, bringing it to a halt the moment any remains appear. However, this mechanism is less effective, as it is based on the goodwill of those discovering the remains to inform the local government about them.



Main bases to plan protection of archaeological heritage. A direct consequence: better preventive archaeology.

1.3. Town Planning and territorial organisation

Town planning makes it possible to include protective measures for areas of special importance, such as archaeological sites. Before the 1980s, in some Spanish cities the monumental nature of the remains that were found meant that construction work was halted, and that the remains were conserved. 'Roman' cities such as Tarragona or Mérida are examples in which town planning projects were modified to achieve this.

Today many cities include protective measures for archaeological sites as part of their town planning measures. Previous archaeological studies are accepted as the norm in the old quarters of Spanish cities, which is known as urban archaeology.

Planning procedures also serve to include protective measures in areas away from cities but which are also included as part of development projects: natural areas, or land unsuitable for construction or development. The effectiveness of this protective measure is based on two factors: first, that it is carried out by the relevant Historical Heritage Authority, with knowledge of the archaeological heritage to be protected, knowing where it is and what it is, so that the right protective measures are taken, and so that it is possible to reach a balance between development and protection of heritage elements. Second is the role of local policies, as local Councils are directly responsible for land use.

1.4. Environmental evaluation

Another well-known companion of preventive archaeology is the environmental impact study, although its use in Spain with archaeological heritage only became widespread from the end of the 1990s. This study makes it possible to carry out archaeological investigations prior to approval being given to a building project. This is a very useful procedure for sites that are not even presumed to exist, and also to prevent destructive interventions. As the study is carried out before work starts, it is then easier to modify the project.

Apart from impact studies carried out for building work, the same system is currently applied to town and regional planning. Before a plan is approved, an evaluation is made of any elements that may be affected by this development, such as archaeological heritage. By carrying out these initial archaeological studies it is possible to correctly classify land that contains remains, or to decide on specific protective measures when it is inevitable that they will be affected by construction work.

1.5. Overview of procedures

These preventive measures, based on carrying out archaeological studies or intervention before development projects are drafted, still do not function in a standardized manner in our country, particularly when they are an impediment for construction work to be carried out. Although it is true that more and more archaeological remains are being conserved in their original location by modifying layouts or conserving them under buildings, many more are excavated and destroyed than are left in place.

And so the great challenge we are faced with today is discovering archaeological heritage before plans are made for the land on which it is found, and dealing with the information on these elements sufficiently in advance to be able to take decisions. This is the only way in which it is possible to avoid intervention from taking place, and to include their conservation and presentation to the public as part of the plan at the opportune moment.

Today, in 2005, many Autonomous Communities are working along these lines, although there are major differences amongst them. It will still take time to consolidate these new techniques, and discover their true value.

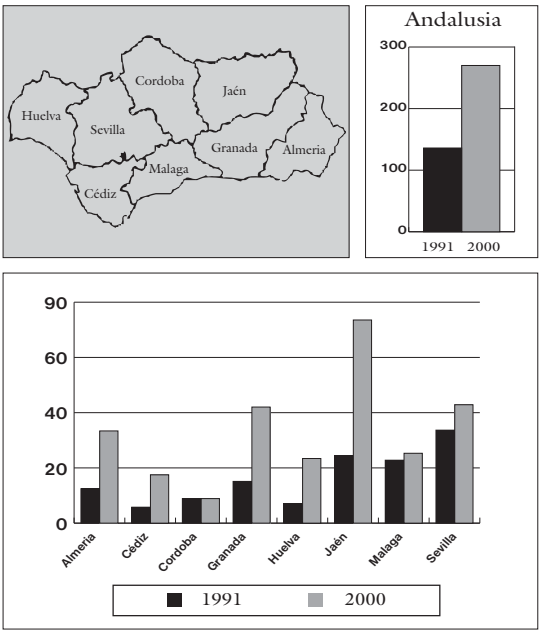
2. Archaeological intervention

The practice of preventive archaeology has led to a progressive increase in the number and type of archaeological interventions. (see figure on p. 194., 195. above) This increase is reflected in and clearly related to the specific regulations on archaeological heritage that most Autonomous Communities have published. Who can carry out archaeological work and who is responsible for authorising it, the naming and classification of types of intervention work (both the methodology involved and the cause), the content of archaeological projects, deadlines for presenting preliminary reports and studies, or where archaeological remains must be deposited are some of the most common issues dealt with in these specific regulations.

The importance of all of these interventions may be defined in a number of points:

1. They provide historical information

Thanks to this work, historical maps of cities have been completed, sites have been discovered and research carried out into periods previously untouched by archaeological methodologies in Spain (such as the modern period).



Comparison between the number of estimated preventive archaeology interventions in Andalusia by province in 1991 and 2000[1]. (Compiled by the authors.)

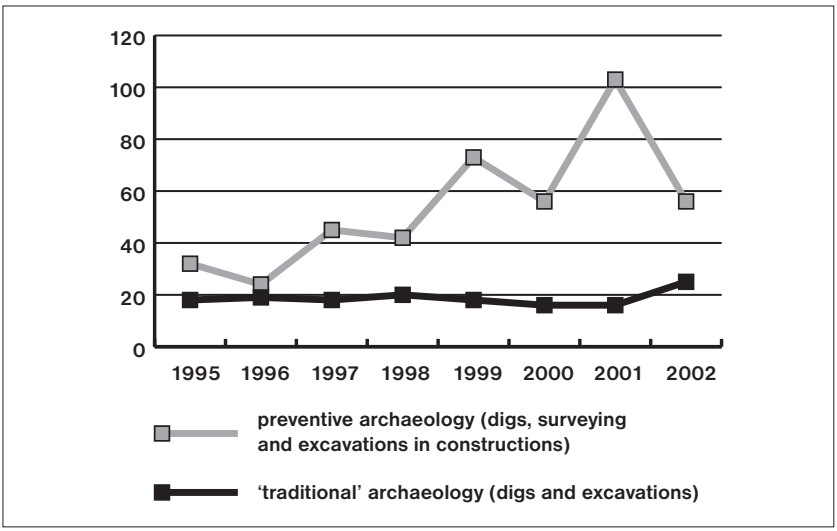
2. They modernise archaeological methodology

At present, in terms of field techniques, the work carried out in preventive archaeology is the most innovative in Spain. Intervention work has become a field for the experimentation with new techniques for the planning of fieldwork.

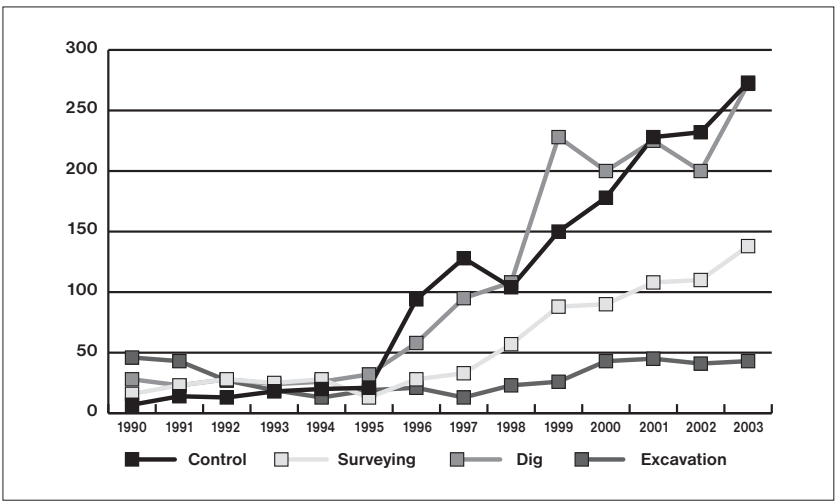
3. They bring up to date and develop the instruments for the management of archaeological heritage used by the respective local government bodies

This field works helps to bring archaeological maps up to date, to produce statistics about the conditions of sites, to recognise territories that have not yet been investigated by archaeologists, and to carry out environmental impact studies on specific work affecting the archaeological heritage.

[1] Source: Dirección General de Bienes Culturales (1991 y 2000). Consejería de Cultura. Junta de Andalucía. (This source lacks information about the number of interventions in the city of Córdoba in 2000.)



Comparison of the changes in preventive archaeology and 'Traditional' Archaeology interventions in Lleida (Catalonia Province), 1995-2001.[2] *(Compiled by the authors.)*



Development of archaeological interventions in the Autonomous Region of Galicia[3].

[2] Source: E. Tartera, A. Vidal, "Intervencions arqueològiques a Lleida durant els anys 2001 i 2002" *Revista de Arquelogia de Ponent* 13, 2003, 389-391.

[3] Source: M J Tallón Nieto, et al. "La gestión del patrimonio arqueológico en Galicia". *La red gallega del patrimonio arqueológico* (RGPA)1, 2004, 30. Xunta de Galicia.

Yet despite the number of developments and changes in the field, we believe that the number of interventions carried out today is still too high. One of our objectives is to reduce them, as well as preserving 'untouchable' sites or 'reservations' for the future (see the Valletta Convention).

If the 1980s were marked by antagonism against archaeological digs, today the star performers are extensive digs, surveying, and the control and monitoring of construction work (see figure on p. 197). This means that there is a predominance of work destined to evaluate archaeological heritage with the aim of protecting it and preventing, as far as possible, partial or total excavation of the sites discovered.

Furthermore, although regulations exist designed to control archaeological work, we have found than many interventions lack any real scientific quality. It is very difficult for local authorities to control the quality of fieldwork and this is further complicated, as we will see later on, by the lack of specific university education in archaeology. As an example, there are very few interventions carried out involving specialists from different disciplines.

3. The status of professionals working in Archaeology

In Spain, archaeology is not taught as a degree subject. It is taught via a series of courses as part of history and humanities, from archaeology and prehistory departments in the 34 public universities spread throughout Spain.

In order to overcome the 'irregular' status of the profession, the standards for protecting historical heritage have incorporated the need to guarantee the suitability and quality of professionals drafting archaeological intervention projects. In this way the responsibility for overseeing the professionalism of the sector is not left in the hands of universities or professional associations, but instead those of the public authority responsible for historical heritage.

Since 1984, a series of efforts have been made to recognise archaeology as a profession, supported by professional bodies within the field and regional governments. Apart from a degree, the main requirements include experience in field or laboratory work (historical specialities, duration of work, drawing pottery, etc.), and scientific publications.

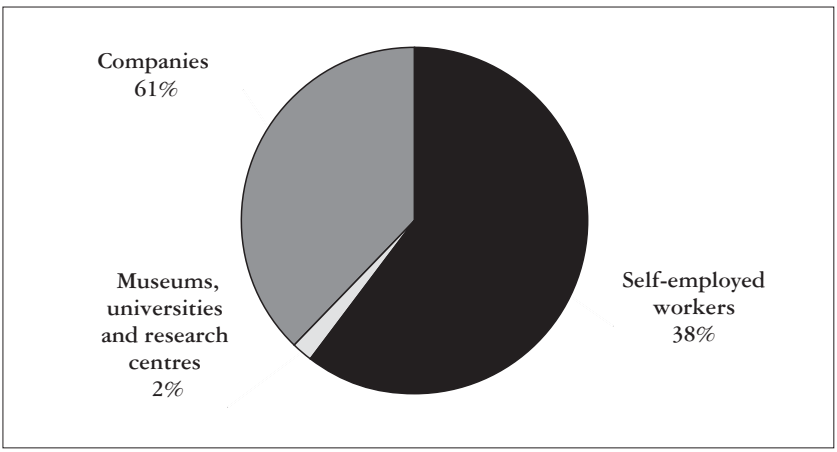
Despite these efforts to define the profession, the lack of university degrees in archaeology has led to some confusion about its significance: on the one hand it is confused with other subjects and specialities, such as palaeontology, geology, speleology, etc., and on the other, even more unfortunately, it is associated with a world of adventure, dilettantes and mystery, sup-

ported by the film industry and an antiquated view of science which have little or nothing to do with the day-to-day reality of the profession.

This said, when we refer to specialists in preventive archaeology we are not referring to all of the professionals dedicated to archaeology in Spain. This collective may be divided into three groups, of which only two, representing a large percentage, are dedicated to preventive archaeology. These are the following:

3.1. Professionals working in the 'open market'

This group includes the largest number of specialists, carrying out archaeological intervention work as a result of building work taking place on sites; they work exclusively on rescue projects and work either as freelancers or for archaeological companies. As freelancers they work either directly for clients who are not involved in the field of archaeology (property developers, builders, architects, land owners, etc.), or in other cases are sub-contracted by archaeology companies. This means that the largest direct employment market for these professionals is the result of smaller-scale projects (for example, on inner-city sites). In turn, the archaeology companies, with a staff of between 2 and 10, are small-scale outfits that compete to take part in archaeological intervention involved in large-scale infrastructure projects.



Percentage of archaeological interventions done by institutions (museums, universities, and research centres) and private entities (self-employed workers and companies) in the Autonomous Region of Madrid in 2002-2003[4]. (Compiled by the authors.)

[4] Source: Dirección General de Patrimonio Histórico de la Comunidad de Madrid. 2005.

Although these are the most common ways of working in the profession as it has gradually taken shape, the legal methods used have diversified. For example, there are companies dedicated to carrying out environmental projects that include archaeologists on their staff. Also, the public administration, with limited human resources to supervise all of the work involved in preventive archaeology, also contracts with freelance archaeologists to help control projects (such as coordinating and supervising the studies involved in large-scale public works projects being carried out in stages involving different archaeological companies).

3.2. Professionals working for government archaeological heritage administration bodies

These include professionals working with objects (in museums, etc.) and those working with archaeological sites and built elements. The latter group are directly connected with preventive archaeology, as they are responsible for overseeing archaeological intervention carried out by the professionals referred to in the previous section. Their work is essential as they are responsible for producing the main initiatives carried out in protecting archaeological heritage and planning preventive archaeology. They are fewer in number than the professionals working on the open market and the application of their initiatives is permanently subject to political objectives.

In the case of personnel working in museums and similar centres, despite having less responsibility in the day-to-day work of preventive archaeology, they also deal with it, as they are left with the responsibility for the most delicate aspects related to the profession: the treatment, conservation and presentation to the public of the large number of remains and graphic documentation resulting from archaeological intervention.

3.3. Professionals working with research centres and universities

This sector is very small in number (with approximately 450 specialists with fixed contracts), but more recognised at the social level, and with very few exceptions existing to one side of preventive archaeology. Its work is connected with teaching and theoretical research, or intervention in archaeological sites that are not at risk from disappearing as a result of public works or construction projects.

There are no specialists in preventive archaeology in Spanish universities, so that new graduates must train on the open market in order to work in this profession once they have left university. Unfortunately, this leads to a very

precarious employment situation, with poor salaries and what are known in Spain as 'junk' contracts. It is also important to note that as the image of specialists in preventive archaeology gradually improves, the university elite continue to ignore the scientific and technical advances that are being produced thanks to the work of these professionals.

A final point in this respect is that preventive archaeology is looked down on by other sectors indirectly linked with the field, connected with the world of construction, from labourers to engineers and architects. This type of archaeology is usually understood as an administrative hindrance to carrying out work. An even more serious conclusion may be drawn from this: that archaeological heritage is not given a fair hearing as an element that should be protected and studied as a result of its major importance for society.

4. Presentation and publicity

The presentation of the work and archaeological sites discovered by preventive archaeology in Spain is something still very much on the pending list. Before construction work may begin on a site where there are archaeological remains, whenever it is impossible to avoid archaeological intervention (either by modifying the project or protecting the remains), various methods exist to present and publicise the intervention once the archaeological work has finished.

4. 1. Using other methods apart from conservation on the original site (The site is conserved or not after the intervention work):

Each Autonomous Community has attempted to publish the results of preventive archaeology projects. These are usually yearly or twice yearly publications, but usually appear long after the work has been completed (at times more than two or three years later), and do not publish information on all of the interventions carried out. In any case, these publications are dedicated to a minority, specialised audience, while the public at large rarely has the opportunity to discover information about this type of archaeology and its results.

4.2. Partial musealisation of the site, sharing the cultural presentation of the site with other uses or activities:

This is the most typical method used, from private houses with sections of city walls to golf courses, hotels, restaurants or museums with archaeological remains integrated into their construction.

In most of these cases the vision used for the conservation and presentation of the archaeological heritage affected by construction work is outdated, antiquarian and romantic. There is no didactic effort or historical interpretation involved in these partial 'museological' projects. In them, perception of the object is of more importance than its context.

Of course, it is important to bear in mind that it is very complicated to include any type of musealisation as part of an urban centre. We believe that most of these remains are small in size or very specific with regard to their historical role (for example, a Roman column or an Arabic archway), without it being possible to extend the intervention any further to contextualise them (they often appear on sites surrounded by construction that is already completed). This makes it difficult to offer images that are sufficiently well developed and extensive on the importance of these elements in archaeological terms or for society at large.

4.3. Large-scale musealisation of the site

This is understood as a musealisation project designed once intervention work has been carried out on the site and construction work has been rejected, with the intervention extended to other areas that would not have been affected by building work, preparing the area for visits and presentation to the public. It is true to say that this is the least frequent situation, although there are examples such as those of Mérida and Tarragona, where archaeological heritage in its most monumental guise has taken on a role of great importance for society at large and tourism. Here we are presented with a similar problem as that in the previous section, with the spectacular nature of the remains leading to their aesthetic nature having more status than their archaeological importance.

It is important to note that recently in Spain there has been a major boom in the musealisation of sites (see bibliography), including new experiences in city centres, reflecting the problems of adapting urban layouts to archaeological remains. This means that new museum projects will have a more historical approach, more in line with archaeological science.

Finally, it is important to remember that barely any archaeological information is provided about sites that disappear after intervention work has

[5] P. L. Artigues Conesa, A. Ferdinández Espinosa, "La intervención arqueológica en el antiguo mercado del Born de Barcelona", *Apuntes de Arqueología XX*, 2004, 15, 16. Colegio de Doctores y Licenciados en Filosofía y Letras y Ciencias de Madrid.

been completed, or lesser archaeological works in urban sites, with the public only aware of the nuisance caused by this work having been carried out.

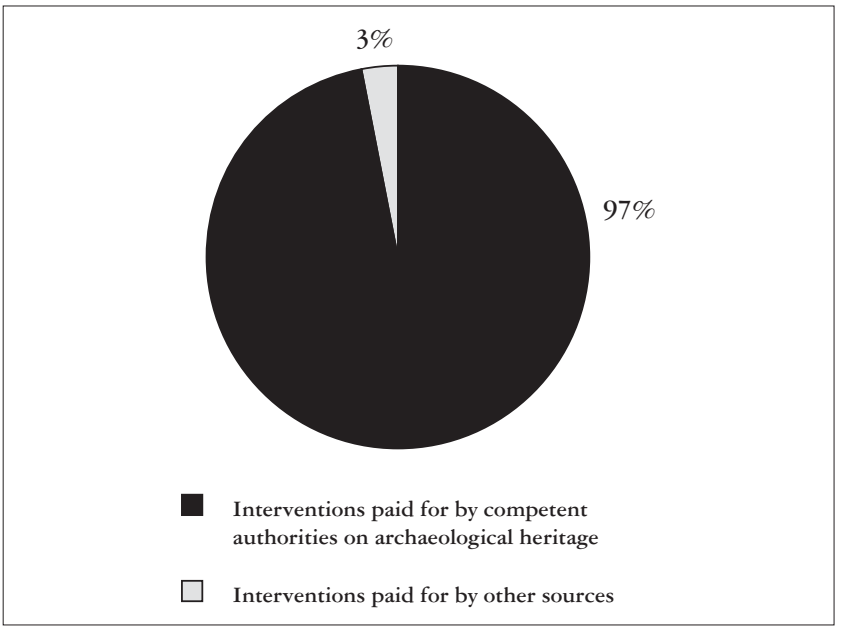
Neither is any information produced aimed at other professional sectors indirectly involved in preventive archaeology (such as building companies). This information should include details about economic interests, tax benefits, corporate image, etc. Just as protection should tend towards being more individualised with regard to elements, when offering information we should not just think about what we want to tell, but also how this may help sensitize the public towards respecting archaeological heritage.

5. Financing

With regard to archaeological intervention or studies carried out as a result of construction work, practically all of the financing involved comes from private sources. The companies carrying out the work causing impact on heritage elements are responsible for paying for archaeological work. In fact, most legislation on historical heritage specifies that this is the norm, that whoever is likely to cause damage to an archaeological site must pay for it to be studied.

Nevertheless, a very small percentage of public authorities responsible for archaeological heritage either partially or wholly fund this type of work. This situation normally arises when the work affecting the items is carried out by regional governments (such as the rehabilitation of a historic building or a castle). Naturally, in all public works (such as roads, reservoirs, railways, gas pipelines, etc.) carried out by the State, the regional governments and local councils also designate part of their budgets for archaeological work to be carried out. However, it is usually the private company subcontracted by the public authority to carry out the work that controls the financing of the project and sets aside an amount for archaeological work.

Finally, the historical heritage laws stipulate that 1% of the money used in each of these public works be destined towards historical heritage. However, this percentage is not directly invested in the cultural elements affected by the public works, but may instead be destined for any other activity in relation to historical heritage, such as the restoration of monuments, museums or the acquisition of contemporary works. These activities rarely have anything to do with preventive archaeology.



Comparison between preventive archaeology paid for by the competent authorities on archaeological heritage and other sources. Autonomous Region of Madrid, 2003.[6] *(Compiled by the authors.)*

Finally, even if we did have numerical data on the amounts invested in preventive archaeology in our country, this would still not help us to estimate the amount of capital that preventive archaeology moves annually. We have to bear in mind, for example, that although the public authorities do not pay for intervention, they do invest in human resources through their specialised staff to supervise and plan this type of archaeology and manage archaeological heritage in general.

May 2005

[6] Source: Dirección General de Patrimonio Histórico de la Comunidad de Madrid.

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Appendix 1

Main Spanish Laws and Regulations Related To Preventive (Rescue) Archaeology

Before passing to the collection of laws, it should be remarked that Spanish archaeological heritage management is decentralized and the main responsibilities for it lie with the Autonomous Regions (*Comunidades Autónomas*/Regional Governments). In practice, it means there are many preventive archaeologies in Spain, at least as many as regional regulations exist. Even so, national regulation inspires the regional norms and some regional rules are very recent (from the end of the 1990s), so state regulations have usually been used on a great deal of Spanish territory. It must be noted that only the main regulations where preventive archaeology is mentioned are discussed in this text, not all the current rules and laws in Spain about archaeological heritage[7].

Spain is divided into seventeen Autonomous Regions. Besides national laws about historical heritage, fifteen Autonomous Regions have their own laws related to the theme. All of them consider and amplify content concerning archaeological heritage. These Regions have promulgated specific rules related to preventive archaeology thirteen times.

Currently the principle laws are (in English and Spanish with official document citations) are[8]:

Estatal/State

1. Ley 16/1985, de 25 de Junio, del Patrimonio Histórico Español. (BOE, 29/06/1985)

2. Real Decreto 111/ 1986, de 10 de enero, de desarrollo parcial de la Ley 16/1985, de 25 de junio, del Patrimonio Histórico Español (BOE, 28/01/1986), modificado por Real Decreto 64/1994, de 21 de enero. (BOE, 02/03/1994) y modificado el artículo 58 por el Real Decreto 162/2002, de 8 de febrero (BOE, 09/02/2002).

[7] The Culture Minister of Spain web site dedicates one page to the most important normative rules about Historic or Cultural Heritage that exists in the country. This includes the main rules about archaeological heritage and it has some links to the principle pages concerning the subject in the rest of Autonomous Regions. Its URL is: http://www.mcu.es (see the entry 'normativa').

[8] The specific rules about archaeology or archaeological heritage are marked with italic font.

Regional Governments/Comunidades Autónomas

Andalucía/Andalusia

1. Ley 1/1991, de 3 de julio, de Patrimonio Histórico de Andalucía (BOJA, 13/09/1991; BOE, 26/09/1991).

2. Decreto 19/1995, de 7 de febrero, por el que se aprueba el Reglamento de Protección y Fomento del Patrimonio Histórico de Andalucía. (BOJA, 17/03/1995)

3. Decreto 168/2003, de 17 de junio, por el que se aprueba el Reglamento de Actividades Arqueológicas. (BOJA, 17/07/2003)

Aragón/Aragon

1. Decreto 6/1990, de 23 de enero, por el que se aprueba el régimen de autorizaciones para la realización de actividades arqueológicas y paleontológicas en la Comunidad Autónoma de Aragón. (BOA, 07/02/1990).

2. Ley 3/1999, de 10 de marzo, del Patrimonio Cultural Aragonés. (BOA, 29/03/1999)

Principado de Asturias/ Principality of Asturias

1. Ley1/2001, de 6 de marzo, de Patrimonio Cultural. (BOPA, 30/03/2001)

Islas Baleares/ Balearics Islands

1. Ley 12/1998, de 21 de diciembre, del Patrimonio Histórico de las Illes Balears (BOCAIB, 29/12/1998).

2. Decreto 144/2000, de 27 de octubre, por el cual se aprueba el Reglamento de Intervenciones Arqueológicas y Paleontológicas (BOIB, 04/11/2000)

Islas Canarias/Canary Islands

1. Ley 4/1999, de 15 de marzo, de Patrimonio Histórico de Canarias. (BOC, 24/03/1999), modificada por la Ley 11/2002, de 21 de noviembre, de modificación de la Ley 4/1999, de 15 de marzo, de Patrimonio Histórico de Canarias. (BOC, 27/11/2002)

Cantabria

1. Decreto 51/1996, de 10 de junio, por el que se aprueba el Reglamento de Actuaciones Arqueológicas. (BOC, 14/06/1996)

2. Ley 11/1998, de 13 de octubre, de Patrimonio Cultural de Cantabria. (BOC, 02/12/1998)

Castilla y León/Castile and Leon

1. Decreto 37/1985, del 1 de abril, por el que se establece la Normativa de Excavaciones Arqueológicas y Paleontológicas de la Comunidad de Castilla y León. (BOCyL, 30/04/1985)

2. Decreto 58/1994, del 11 de marzo, por el que se establecen normas sobre prospecciones arqueológicas, utilización y publicidad de aparatos detectores de metales. (BOCyL, 15/03/1995)

3. Ley 12/2002 , de 11 de julio, de Patrimonio Cultural de Castilla y León (BOCyL, 19/07/2002)

Castilla la Mancha/ Castile La Mancha

1 Ley 4/1990, de 30 de mayo, del Patrimonio Histórico de Castilla La Mancha (DOCM, 13/06/1990; BOE, 14/09/1990)

2. Ley 4/2001, de 10 de mayo, de Parques Arqueológicos de Castilla-La Mancha. (DOCM, 18/05/2001)

Cataluña/Catalonia

1. Ley 9/1993, de 30 de septiembre, del Patrimonio Cultural Catalán. (DOGC, 11/10/1993. Corrección de errores en DOGC, 24/11/1993; BOE, 04/11/1993)

2. Decreto 78/2002, de 5 de marzo, del Reglamento de Protección del Patrimonio Arqueológico y Paleontológico. (DOGC, 13/03/ 2002)

La Rioja

1. LEY 7/2004, de 18 de octubre, de Patrimonio Cultural, Histórico y Artístico de La Rioja. (BOE, 11/11/2004)

Valencia

1. Ley 4/1998, de 11 de junio, del Patrimonio Cultural Valenciano. (DOGV, 18/07/1998)

Extremadura

1. Decreto 37/1997, de 18 de marzo, de Prospecciones Arqueológicas y utilización de aparatos detectores de metales en actividades que afecten al Patrimonio Arqueológico de la Comunidad Autónoma de Extremadura. (DOE, 25/03/1997)

2. Decreto 93/1997, de 1 de julio, por el que se regula la actividad arqueológica en la Comunidad Autónoma de Extremadura. (DOE, 17/07/1997)

3. Ley 2/1999, de 29 de marzo, del Patrimonio Histórico y Cultural de Extremadura. (DOE, 22/05/1999; BOE, 22/06/1999)

Galicia

1. Ley 8/1995, de 30 de octubre, del Patrimonio Cultural de Galicia. (DOG, 08/11/1995; BOE, 01/12/1995)

2. Decreto 199/1997, de 10 de julio, por el que se regula la actividad arqueológica en la Comunidad Autónoma de Galicia. (DOG, 06/08/1997. Corrección de errores en DOG, 04/11/1997)

Madrid

1. Orden de 24 de junio de 1986, por la que se regulan las prospecciones y excavaciones arqueológicas en el territorio de la Comunidad de Madrid (BOE, 180, 29/07/1986).

2. Ley 10/1998, de 9 de julio, de Patrimonio Histórico de la Comunidad de Madrid. (BOCM, 16/07/1998; BOE, 28/09/1998)

Murcia

1. Decreto 180/1987, de 26 de noviembre, sobre actuaciones arqueológicas. (BORM, 04/01/1988)

Navarra

1. Decreto Foral 218/1986, de 3 de octubre, por el que se regula la concesión de licencias para la realización de excavaciones y prospecciones arqueológicas. (BONA, 13/10/1986)

País Vasco/Basque Country

1. Ley 7/1990, de 3 de julio, de Patrimonio Cultural Vasco. (BOPV, 16/08/1990)

2. Decreto 234/1996, de 8 de octubre, por el que se establece el régimen para la determinación de las zonas de presunción arqueológica. (BOPV, 23/10/1996)

3. Decreto 341/1999, de 5 de octubre, sobre las condiciones de traslado, entrega y depósito de los Bienes de Interés Arqueológico y Paleontológico descubiertos en el ámbito territorial de la Comunidad Autónoma del País Vasco. (BOPV, 20/10/1999)

The rest of Spanish area[9] have not promulgated specific law or regulations related to the subject, but those territories represent less than about 5% of the country.

[9] Ceuta and Melilla Autonomous Cities (in the north of African continent)

The European Association of Archaeologists and Preventive Archaeology

Anthony Harding

The concerns of this paper are rather different from those of the others in this volume. The European Association of Archaeologists (EAA) is not a country, does not employ teams of archaeologists, does not deal with developers, is not affected directly by legislation, and is not employed by state organisations. So what is its role in preventive archaeology?

What is the EAA?

The EAA is a membership-based organisation open to all professional archaeologists in Europe. Now in its eleventh year, it has over 1000 members who come from almost every country in Europe and from several beyond (notably the United States and Australia). Members pay a fee, the level dependent on their place of origin and status, and in return they are able to attend the Annual Meetings and receive the journal (*European Journal of Archaeology*) and the Newsletter (*The European Archaeologist*). At present institutional membership is confined to libraries, and are serviced through the publishers of the EJA, Sage Publications (London), who set the institutional subscription level. In addition, a group of heritage organisations act as corporate members, in effect sponsors.

The Annual Meetings typically attract between 500 and 1000 participants (over 800 at Lyon in September 2004), and take place over 3 days, with ten parallel sessions covering a huge range of topics, from the latest in theoretical thinking to the nuts and bolts of heritage problems. Members come from all spheres of archaeology, but the three largest groups are heritage managers, field archaeologists, and academics. There is a smaller number of museum professionals, workers in cognate disciplines, delegates from commercial organisations, and so on. Most members belong because they believe in the idea of a Europe-wide archaeological organisation, and come to the meetings because they are an excellent place to meet people, form

new contacts, develop ideas, and so on. It must be stressed, however, that the EAA is a 'coalition of the willing' in a very real sense (and not in the Iraq War sense); everything the EAA does and achieves it does because its members want it to.

Aims and achievements

The aims of the Association, as set out on the website, are as follows:

- to promote the development of archaeological research and the exchange of archaeological information
- to promote the management and interpretation of the European archaeological heritage
- to promote proper ethical and scientific standards for archaeological work
- to promote the interests of professional archaeologists in Europe
- to promote co-operation with other organisations with similar aims

In terms of what the Vilnius meeting was held to discuss, it is clearly the second and third of these that are relevant. Many of the EAA's members work in the heritage sector, so obviously management of the archaeological resource is their main area of expertise, and dealing with threats to that resource from development is a major concern. The meetings give them the opportunity to discuss common approaches to such matters as legislation and protection. The principal mechanisms that are adopted are first, Round Table discussions, and then Working Parties. The web page shows these (http://www.e-a-a.org/working_groups.htm). These Working Parties have established a series of codes and principles, as follows:

- A Code of Practice for archaeologists (http://www.e-a-a.org/codeprac.htm)
- A set of Principles of Conduct for archaeologists involved in contract archaeological work (http://www.e-a-a.org/princond.htm)
- A Code of Practice for Fieldwork Training (http://www.e-a-a.org/codef.htm).

There is also a Working Party on Archaeological Legislation and Organization, whose report to the 2003 Meeting in St Petersburg can be found at: http://www.e-a-a.org/archaeological_legislation_and_organization_1.doc.

These are, of course, codes and the EAA does not have the resources to monitor to what extent they are followed in practice, but they were created by trans-national groups of practicing professional archaeologists and endeavour to represent best practice in modern archaeology.

Now as far as the Europe-wide scene is concerned, it would obviously be desirable to show that we are all working in essentially the same way and to the same standards. If we look back at the articles of the Valletta Convention, it is fairly explicit about what it expects from the competent authorities in each country – and most if not all of the countries represented at Vilnius have signed the Convention. So the EAA wants to see common practice in approaches to preventive archaeology, but it realises that the way to achieving this goal may be long and difficult, because of differing practice in different countries, different resource levels, differing opinions about the validity of particular approaches, and a host of other issues.

Valletta gives us some clear guidelines, however, and these can serve as our starting point. Article 5, in seeking to reconcile the respective requirements of archaeology and development, states that archaeologists must participate in planning policies, and must be involved in systematic consultation to monitor and mitigate the effects of development on the archaeological heritage, including modification of plans where necessary; it states that sufficient time and resources must be allowed for scientific study; and that environmental impact assessments and the resulting decisions involve full consideration of archaeological sites and their settings.

Recent cases show that these things are much easier to say than to implement. What the EAA would like to see, therefore, is an agreed set of procedures which should come into play when developments are proposed. Our first position, which would normally be that of all archaeologists, is that if the destruction of archaeological sites can be avoided altogether, then that should happen. This might involve relocation of buildings, the provision of covering layers of sand to protect the archaeology, the re-alignment of roads, or occasionally – as with the Côa Valley in Portugal – a decision not to proceed with development at all.

Clearly there will be local considerations that have to be taken into account, and there will be a clear difference between, for instance, rural developments and urban ones, where archaeological intervention is costly and time-consuming, and financial pressures from developers extremely strong. Hard and fast rules will be difficult to apply, and some flexibility is always going to be necessary.

If the planning decision is taken that development is allowed, then agreed mitigation strategies must come into play. These are essentially in two stages: assessment and implementation. Obviously, the larger the development, the longer and bigger the initial assessments. These should include the following:

- Desk-top study of archive material (historical records, maps, sites and monuments databases, published reports, etc)
- Non-destructive surface survey (fieldwalking, air photography, geophysics, plane survey)
- Targeted small-scale excavation if the nature of deposits is in doubt and needs to be clarified for the mitigation strategy to be effective

The first step above involves a further presumption: that the location of sites is already known to some extent. This means that satisfactory databases ("Sites and Monuments Records") must have been developed and maintained, in order that archaeologists can monitor the effects of potential development at the planning stage. The extent to which this presumption is true is very variable from country to country, and there are plenty of cases where the situation is far from adequate. This is a challenge which heritage organisations have not always picked up quickly enough.

Consider, too, the impact (or lack of it in some cases) of air photography. Matters have improved enormously since the 'change' of 1989-90 in Europe, but in too many countries it is still the case that archaeological air photography is the exception and not the rule. I have frequently been told by archaeologists in different European countries: "our soils are not suitable for air photography", in spite of the fact that even from a commercial airliner one can see crop and soil marks in abundance in those very areas. The Aerial Archaeology Research Group (AARG) has made enormous strides in promoting understanding of the potential and practice of aerial archaeology, but clearly there is still some way to go. Aerial work is one of the most effective means of enhancing databases, and obstacles to its efficient use should be overcome as quickly as possible.

In every case the extent and duration of such preliminary work must be adequate to the scale of the development proposed. While the assessment of a site for the construction of a single building might only take a few days, the line of a motorway, a major shopping or manufacturing complex or similar should involve an initial assessment lasting weeks or months. Obviously it is impossible for every hectare of a really big development to be effectively appraised in detail, so some kind of sampling strategy must be adopted; this must be explicit and justified. In any case, it would be pointless for archaeologists to maintain that every feature on a big development site must be investigated in detail, as that is simply unrealistic in most situations. But if we consider how rapid and detailed geophysical survey now is, there can be little excuse for not following it wherever it is known to produce satisfactory results. A gradiometer with two sensors, such as is commonly used now by professional practitioners, can easily survey one

hectare in a day, more if the grid is already set up. If we imagine one kilometre of the line of a road and assume that the corridor is 100 m wide, then 10 ha is the area to be surveyed – which should be the work of little more than a week for two or three people. Resistivity surveys will admittedly take longer, but their use can be confined to areas believed on other grounds to contain features (such as stone walls) where electrical resistance is going to be the deciding factor in archaeological visibility.

The EAA's role in the future

I mentioned above that the EAA is a coalition of the willing. It can bring no sanctions to bear; it has no legal authority to enforce its codes of practice; yet it tries to represent professional archaeologists all over Europe in their endeavours to protect and interpret the archaeological heritage for future generations. It is my personal view (and not yet any official policy of the EAA) that it must develop robust mechanisms for making its voice heard wherever there is doubt about how the interests of archaeology are to be protected. This means setting up guidelines for how mitigation strategies are to be adopted where development is to take place, in line with the provisions of the Valletta Convention. These guidelines will not please everyone, but it is essential that they are developed and that all EAA members do their best to ensure compliance in their own countries. I therefore see it as one of my goals in the next couple of years to set up a specific agreed set of procedures that can serve as a further Code of Practice for archaeologists involved in preventive (rescue) archaeology, based on best practice and the principles of Valletta.

March 2005

Summary of the Brain-Storming Session of the Conference

The most important questions to be dealt with in the future in preventive archaeology on the European level:

I. The Pre-Development Phase

- Predictive approaches are necessary – the problem is to deal with the unknown.
- There is a need for general area surveys and good database development to incorporate prior knowledge.
- It is important to build up standards and define terminology to provide data compatibility.
- But it always raises the question of access – how far should data be made fully public?
- Security is a problem – openness versus the 'black' sector, robbery and illicit trade.
- It is very important to involve archaeologists at an early stage in planning in order to build up an integrated planning system.
- Can we avoid/reduce excavation by influencing development design?
- It is very important to secure funding for all stages of projects.
- There is a need for special treatment for small-scale/not-for-profit developers.

II. The Development Phase

- A very important question is: what do we dig, what do we not dig? What are the sampling strategies – how much is enough?
- What can we do with unexpected discoveries?
- Can/should geophysical techniques replace excavation?
- The timing of field work needs to be defined – working conditions (good periods for fieldwork – health and safety regulations, e.g., winter excavations).
- Public, on-site, 'live'dissemination is very important.

III. The Post-Development Phase

- Conservation and storage of finds and archives – also because of their quantity – is one of the main problems: there is a need for curation, with standards and compatibility.
- The dissemination of results, publication, is the other main problem.
- Quick reporting – to the public and profession – is very important: one solution can be the 'one-month' summary.
- Definitive reporting – the question is: In how much detail and to whom should it be addressed – possibly on-line forms?
- Archives and libraries should be accessible.
- Although it is very important to secure funding for all stages of projects, when does the developer's role end – who should pay for analyses and publication?
- Exchanging best practice can save time and money and give a better result.
- Training, exchanges/secondments of archaeologists and students are needed.

Outside the envelope?

Agriculture and forestry are damage by human action not 'caught' by a planning regime. This is another case to be dealt in detail in further discussion.

2004 Vilnius

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