

ArchaeoLandscapes Europe

European Commission - Directorate General Education and Culture
- Programme « Culture » (2007-2013)

Call for proposals 2010 - strand 1.1. - Multi-annual cooperation project

1. Introduction

In many parts of Europe over the past 60-plus years archaeological air photography has brought to light more previously unknown heritage sites than any other method of exploration. Air photography has now been joined by satellite imagery, airborne laser scanning and a variety of airborne and ground-based survey techniques known jointly as 'remote sensing', since they explore what is beneath the earth or ocean without disturbing its surface or damaging what lies below.

Air photography, and now these new techniques, have had a dramatic impact in illustrating to the general public the character and importance of heritage sites and of the evolving landscapes within which they lie. Better public understanding and appreciation of these visual and material links with the past can lead to greater enjoyment and caring, and through this to better heritage conservation for the continuing enjoyment of future generations.

There are many parts of Europe, however, where these aerial and remote-sensing techniques have yet to realize their full potential. In some countries of northern, eastern and southern Europe they have hardly been applied at all. The aim of the *ArchaeoLandscapes* project is to address this imbalance and to create conditions for the regular use of these strikingly successful techniques across the Continent as a whole.

Those public awareness and dissemination of challenging skills in aerial and remote sensing techniques, at a very European scale, will be achieved by the *ArchaeoLandscapes* project through eight following key Actions:

1. By creating an ultimately self-supporting ArchaeoLandscapes Network, with a small central secretariat, to provide leadership, coordination and advice on the use for heritage purposes of aerial photography, remote sensing and landscape studies.
2. By using traditional and innovative methods to publicize the value of aerial survey, remote sensing and landscape studies amongst the general public, students, teachers and all those who explore, enjoy or care for cultural landscapes and heritage sites across Europe.
3. By promoting the pan-European exchange of people, skills and understanding through meetings, workshops, exchange visits, placements and opportunities for specialist training and employment.
4. By enhancing the teaching of remote sensing and landscape studies through courses for students and teachers, and in the longer term through a European Masters degree in remote sensing and heritage management.
5. By securing the better exploitation of existing air-photo archives across Europe by researching, assessing and publicizing their potential for heritage interpretation and landscape conservation.
6. By providing support for aerial survey, remote sensing and landscape exploration in countries relatively new to their use, especially in northern, eastern and southern Europe.
7. By further exploring the uses of laser, satellite and other forms of remote sensing and web-based geographical system in archaeological and landscape research, conservation and public education.
8. By providing technical guidance and advice on best practice in aerial survey, remote sensing and landscape studies, with a particular emphasis conservation and heritage management.

2. Genesis of the project, and aims and objectives in this new phase of work

The genesis of the project lies in the mid-1990s, with initiatives by members of the then UK-based Aerial Archaeology Research Group, which in now-international form has acted as a catalyst for the present application. These early initiatives led to two training schools, in Hungary and Poland, for potential aerial archaeologists from the recently 'de-militarized' countries of central and eastern Europe. In 2001 and 2002 a similar school in Italy, along with meetings and workshops elsewhere in

Europe, drew support from a Culture 2000 project entitled *Conservation through Aerial Archaeology* (Agreement No 2000-001-001 CLT CA1A).

The broadening of cooperation across Europe was taken further within a second Culture 2000 project in 2004-2007, under the title *European Landscapes: past, present and future* (Project No CH-A2-UK-2077). This project, undertaken by a partnership of 17 institutions in 11 different countries, involved training schools, workshops, exploratory air surveys, interpretation studies and the testing of new survey techniques along with archival research, publications, website creation and the mounting of three exhibitions.

The present project aims to bring this process of increasing cooperation to long-term sustainability, with the aim of securing the everyday use of aerial survey and remote sensing across the **whole** of the Continent to raise public and professional awareness of the infinitely varied landscape and archaeological heritage of Europe. To achieve this aim the project will create an ultimately self-supporting pan-European network of expertise to promote the exchange of personnel and skills, raise public awareness, facilitate activities, improve specialist education, draw on under-used archival sources and publish advice on standards and techniques.

A fundamental element in this culminating stage of development will be public communication, using both traditional and innovative means to convey key messages and understandings to young and old, specialist and non-specialist alike. This 'outreach' work will be supported by targeted research and educational initiatives which over time will enhance mobility and the sharing of skills and job opportunities across Europe.

3. Action 1: Creation of the *ArchaeoLandscapes Network*

The key element in attaining long-term sustainability will be the formation of a pan-European network of 'centres of expertise', to be known as the *ArchaeoLandscapes Network (Europe)*. This cooperative partnership will secure funding from its members and from grant-giving bodies to support a small professional secretariat or 'nerve-centre'. This in turn will provide expertise, advice and support for organizations or institutions which wish to pursue agreed objectives or to undertake partnership projects within the fields of landscape studies, heritage survey, conservation and public education.

The strength of *ArchaeoLandscapes Network* will lie in its heterogeneous nature and its total coverage of the countries of Europe, with a membership 50 or more heritage bodies in the fields of education, research, conservation and public service. It will not rely on any individual institution for its continuing existence and its small secretariat may migrate around Europe over time as staffing opportunities or the availability of expertise dictate. The Network's members will agree key objectives and policies in the early stages of the present project. These will then be implemented, within and after the lifetime of the project, through a Management Board of 9 representatives, elected for 3-year rotating terms of office from the Network's member institutions. Content-related and technical issues will be tackled and discussed during **3 technical meetings** (the first one during the kick-off plenary meeting) scheduled throughout the project's implementation.

The official launch of the *ArchaeoLandscapes Network* will be done during the **closing project's conference**, held in Frankfurt at the beginning of September 2015.

4. Action 2: Communicating with the public and with cultural resource managers

In many parts of Europe the last decade has seen a surge of interest in the traces of the past, not only in archaeological and historical sites and objects but also in the broader context of the landscapes within which these individual cultural features achieve their full meaning and impact.

A key action within the project will be the use of traditional and new techniques to foster this interest and to show a broader audience how cultural landscapes and heritage sites can contribute to European as well as local identity and 'sense of place'. The power of aerial images, or the vision of our cities and rural landscapes on GoogleEarth and similar web-sites, can bring this kind of appreciation to a wider audience than that reached by traditional hard-copy publications or carefully-mounted exhibitions.

Traditional methods will nevertheless play a part in the project's communication strategy. **An international exhibition**, made of traditional graphic and photographic material as well as video and multimedia devices, will circulate to venues throughout Europe during the second to four years of the project. Following a provisional schedule, the exhibition will be presented in Bucharest (National Museum) end 2011, Dublin (National Museum) in 2012, Ljubljana (National Museum) in 2012, Denmark (Holstebro Museum) in 2013 and finally Frankfurt (Archaeological Museum). The exhibition will also be shown at any place in Europe, upon interest and request. Smaller exhibitions may also be designed and presented by project members as part of their own contribution.

At least **two traditional publications** are planned so as to publicize work carried out within the project – reports of colloquia/conferences held in the middle and at the end of the project, and an account of a major study of the First World War Western Front and its aftermath in Belgium. Smaller 'popular' booklets and leaflets will also be produced and distributed, explaining the aims and achievements the project as a whole or of particular activities within it.

The main focus in the project's communication strategy, however, will lie in **web-based output that can speak directly to a wider and in particular a younger audience**. If the interest and commitment of these previously un-involved members of the public can be captured and then nurtured, public appreciation of the shared cultural heritage of Europe will be enhanced, enjoyment increased and a sense of caring instilled in citizens who would not formerly have realized the significance of these living tokens of the past.

Without this public support, attempts at wider and more sympathetic conservation will always face an uphill struggle. But this is also important to communicate with politicians who may be able to influence the legislative climate, and with professionals whose role it is to care for, conserve and 'present' the upstanding and hidden traces of the past. Meetings of various kinds with these two groups will therefore form an essential part of the project's work programme.

A particular contribution will be made by project partners who already have expertise in both traditional and innovative methods of catching the public and political imagination, such as the staff of the Discovery Programme in Ireland. Others will contribute particular expertise in the presentation of image- and map-based data of the kind needed by cultural resource managers and public service archaeologists in their efforts to protect sites and landscapes through the legal and planning systems. **3 technical meetings** will enable practical exchange and discussion among the representatives of the partner organizations dealing directly with the communication issues.

5. Action 3: Promoting the exchange of skills, experience and job opportunities

In a field with a relatively small number of professionals, spread thinly across Europe, it is essential to share understandings, skills, experience and research results. Together, the heritage community needs to learn from instances where countries, regions or institutions have managed to make a real contribution to landscape and archaeological conservation through the application of air-photographic and remote-sensing techniques.

The approach in this case will learn from the earlier Culture 2000 projects in framing an effective and economical programme of meetings, conferences, workshops and colloquia on general or specific topics, in some cases carried through to traditional or web-based publication. The meetings will vary from 300-strong conferences aimed at a broad exchange of experience across Europe to training schools and workshops for 12-24 participants, focusing on specific objectives.

A key feature of the project will be regular meetings of the small 'focus-groups' which will be addressing a 'work-pack' for each of the project's eight objectives or Actions. These meetings, usually for about 10 participants, will set out work-programmes, monitor progress and coordinate their own activities with those of related focus-groups and of the project as a whole. 3 of such meeting have been scheduled for this action during the project's duration.

Exchange visits between experts, and placements of 2 weeks to 3 months' duration, will also figure in the work-programme so as to give students or professionals the opportunity to gain experience and specialist training European countries other than their own. There will be an emphasis on on-the-job learning and specialist instruction by staff or institutions which have made particular advances in data-interpretation, methodology, instrumentation or communication techniques etc.

6. Action 4: Enhancing the teaching of remote sensing and landscape studies

The theory and practice of 'aerial archaeology' are taught in relatively few universities and polytechnics across Europe. Much the same applies to other forms of remote sensing (ground-based geophysics, airborne laser scanning etc). There is an urgent need to improve the range of opportunities open to intending students, as well as to professionals who wish to extend their range of skills,

This challenge will be addressed by creating contacts, facilitating exchanges and prompting discussion between teachers, professionals working in these fields and those who wishing to apply these techniques in their research or conservation work. The improvement and broadening of course-content will be a priority, with the shared and compared experience of existing teachers and professionals as key factors.

There will be a particular concentration on establishing intensive short-courses in various institutions around Europe so as to increase the opportunity for students and professionals to learn new skills and to experience situations different from those in their own countries.

For those who cannot take part in full-time courses (of whatever duration) the project will create new opportunities through devising multi-lingual 'distance learning' material which can be accessed over the Internet. A reasonable basis already exists in texts and illustrations already used by project members and this material will be brought together, refined and made widely available through the skill of partners who have specialist experience in web-based presentation.

A particular, but inevitably long-term, objective will be the creation of a year-long European Masters degree (or equivalent) which will enable students to build up a special range of skills and experience by undertaking learning or research work at various locations around Europe. Selected partners in the network will offer intensive courses of targeted teaching or research, of between 2 weeks and 3 months' duration. Students will undertake at least two extended placements outside their own country during their year of study, acquiring contacts and opening long-term possibilities for employment outside their native country.

3 technical meetings have been scheduled during the 5 years in order to allow the sharing of information and data, open discussion about the partners dealing with this action and work-pack.

7. Action 5: Securing the better exploitation of existing air-photo archives across Europe

Europe has a rich but seriously under-exploited inheritance of aerial photographs from the last eighty years, documenting the dramatic landscape transformations of recent decades and containing a wealth of information about as yet unknown (and therefore unprotected) landscape features and archaeological sites from the more distant past.

The very existence of these archives, which are scattered throughout large and small institutions across Europe, is often hardly known in the broader heritage field and their potential for landscape and archaeological studies remains largely un-assessed.. The project will compile at least a preliminary guide to the existence and possible heritage value of these archives. It is recognized, however, that the full exploitation of these archives is a task which will stretch far beyond the lifetime of the present project.

A particularly rich resource lies in the millions of air photographs for all parts of Europe, from World War II onwards, that have recently become accessible in Edinburgh through one of the key partners in the *ArchaeoLandscapes* project. A key objective, both for the curators of this archive and for other members of the project, will be to help this archive to play a more effective role in heritage documentation and conservation across Europe as a whole.

Students and professional, predominantly from eastern and south-eastern Europe, will visit the Edinburgh archive for periods of 1-3 months to carry out initial identification, geo-referencing and assessing the potential of un-catalogued parts of the collection and documenting previously unrecognized heritage sites and landscapes with a view to their better understanding and (hopefully) long-term conservation. The cataloguing work will also enable significant parts of the collection to be added to the archive's growing image database available on the Internet.

The many topics related to the issue of mapping, securing a better accessibility and exploitation of air-photo archives will be discussed during **3 technical meetings**, and promoted also during a **large international conference**, to be held in Poznan at the beginning of April 2013.

8. Action 6: Support for aerial survey, remote sensing and landscape exploration

The concentration in this Action will be on providing support, both financial and technical, for aerial and ground-based survey work in parts of Europe where the use of remote sensing techniques is still in its infancy. While Britain, Germany, France and (more recently) Italy have used aerial survey extensively in recent decades there are other parts of Europe where remote sensing and aerial survey have yet to become everyday tools in the armoury of archaeologists and landscape specialists, whether for research, conservation or public communication.

The project will provide partners in Iceland, the Scandinavian countries and the Low Countries with additional help in their attempts to bring these techniques into fuller use in their own countries. Help will also be given for an expansion of survey work in Poland and Romania, for a cross-border initiative in Hungary/Croatia, as well for air photo work of various kinds in Greece and Romania. In all of these countries emphasis will be placed on the essential follow-up work of photo-interpretation, mapping and dissemination of the results to specialists and the general public alike.

A particular objective will be to encourage this kind of work in Spain and Portugal, where aerial survey and other forms of remote sensing have so far been little used for exploration or conservation work. **3 Intensive 9-day training schools** will be mounted in Spain and Denmark, each of them introducing up to 25 students and professionals to the principles and practice of 'aerial archaeology', both in-flight and on the ground.

Smaller and less costly **ground-based workshops** will be held at least once a year to introduce students and professionals from these and other 'fledgling' countries to photo-interpretation, mapping and uses of the results in conservation work. In addition to these 'practical' uses stress will also be laid on the role of aerial photographs in catching the public imagination and fostering concern for heritage landscapes and archaeological sites.

2 technical meetings among the partners in charge with this action will also be scheduled.

9. Action 7: Exploring the uses of laser, satellite and other forms of remote sensing

The use of satellite imagery for cultural, conservation and communication purposes has long been a goal within archaeology and landscape studies. New possibilities have been raised in recent years through the development of high-resolution satellite systems and other forms of 'aerial' recording such as thermal imaging, airborne radar and laser scanning or lidar.

Lidar in particular enables precise digital models of the earth's surface and, given appropriate manipulation, can even 'see through the trees' to previously hidden cultural landscapes and archaeological sites beneath. The cost of commissioning lidar or satellite imagery, however, has limited its use within the heritage field. Meanwhile, regional authorities and utility bodies across Europe have been adopting lidar as their preferred method for mapping and landscape modeling.

As a result they now hold an extensive range of lidar data, of great potential for landscape and archaeological studies. Considerable technical expertise, however, is required to process the raw data for heritage purposes. The project will therefore support experimentation and skill-sharing amongst partners who can gain access to lidar and satellite imagery or who have already used it for cultural purposes. Concentrated efforts will be made to secure the release lidar and satellite data originally commissioned for non-heritage purposes.

Techniques such as lidar and satellite imaging will strike a chord with the younger generation, whose imagination can often be captured by seemingly 'magical' new technologies. The project's communication strategy will draw on this potential for engaging with this readily approachable target group.

The project will explore the opportunity for presenting its results through Internet-based geographical systems such as GoogleEarth, enabling computerate sections of the community, for instance, to observe and even 'fly through' heritage landscapes throughout Europe which would previously have been virtually inaccessible to them. These issues will be discussed among the partners during **3 technical meetings** scheduled in 2010, 2013 and 2015.

10. Action 8: Providing technical guidance and best practice in aerial survey etc

An effective way of improving standards in any activity is the dissemination of information on best practice and reports on successful approaches to shared problems or possibilities. Within the relatively scattered heritage community this kind of information-sharing is particularly important, maximizing the value of experience gained in one institution or country by bringing it to the notice of others elsewhere in Europe.

Throughout its life the project will therefore compile and publish recommendations for best practice in such things as specialist teaching, communication with the general public and the use of planning procedures in heritage conservation. Technical guidance will also be issued on such subjects as lidar survey, aerial photography and the Internet presentation of heritage data.

For the most part these notes and recommendations will be presented in down-loadable format on the Internet, to secure wide circulation and allow regular up-dating and the additions. Announcements will be made in the traditional technical and professional press, so as to inform potential readers of their Internet availability.

In this part of its work the project will pay particular attention to best practice in conservation work and heritage management, including statutory provisions and practice in national legislation, and planning procedures throughout Europe. In this way lessons learned in one country will inform heritage professional elsewhere about provisions or procedures of potential relevance to their own particular situations. 3 technical exchange and discussion meetings are scheduled in 2012, 2013 and 2014.

11. The overall project's management: central coordination and action-based focus-groups

Central coordination will be provided through the project Coordinator's small Executive Team - supported by external specialized expertise - in consultation with a 9-member Management Board and annual meetings of the membership in plenary session. Each of the project's key objectives or Actions will be supervised by a smaller focus-group, working to a timetabled **work-pack**. The follow-up of the project's financial and technical implementation will be enabled by updates requested from the partners on a regular basis.

The content and timing of tasks within the work-packs will be framed in the run-up to the start of the project and will be refined and agreed at the first plenary session of the membership. Further discussion is included in section E.2 of the application.

5 plenary meetings will be held, one each year. The first (kick-off meeting) will correspond to the Annual Meeting of the Aerial Archaeology Research Group (AARG) in Bucharest (24-29/09/2010), the second will be organised in Edinburgh (September 2011), the third in Poznan, together with the half-time conference in September 2013, the fourth in Rethymno, in September, and the fifth in Frankfurt in August-September 2015. This last one will be held together with the final project's international conference.

One work-pack is represented by the project's and network's management activities, and other 8 operational work-packs, following the project's objectives and main actions, will secure the implementation of the work-programme and the delivery of the anticipated results.

Management and coordination

Work-pack. In consultation with the Management Board formulate and monitor policy, performance and project finances; receive, distribute and account for EU grant money; prepare interim and final reports and financial requests; establish and maintain contact between project members; arrange programme of meetings and special events; appoint task-and-deliver working parties; supervise publications, publicity and website creation and maintenance; manage central funds for travel grants etc; represent the project in public, professional and academic contexts.

Group leader: Germany (Roman-Germanic Commission), with Management Board and others project members on request.

Action 1. Create ArchaeoLandscapes Network

Work-pack. Frame and seek approval of basic objectives and policy-stance for the network; explore alternative management and membership structures; consider funding and support for central

secretariat; establish framework for other sources of funding; secure membership and funding after end of present project; appoint the first secretariat.

Group leader (provisional): Aerial Archaeology Research Group (Musson), with Italy (Siena), Poland, UK (Glasgow) and others.

Action 2. Publicise value of remote sensing and landscape studies

Work-pack. Identify target groups; seek advice and prepare material for dissemination to the general public, students, teachers, heritage professional, planning staff and politicians at local, national and international level; cooperate with Project Coordinator in securing distribution of this material; engage all members in this aspect of the project's work.

Group leader (provisional): Ireland (Discovery Programme), with Cyprus, Greece, Norway and others.

Action 3. Promote the exchange of people, skills and understanding

Work-pack. Explore and secure a programme of training schools, workshops, exchange visits, placements and opportunities for specialist training and employment, in close cooperation with the focus group dealing with Action 4.

Group leader (provisional): UK (English Heritage), with the Netherlands, UK (Glasgow), UK (Scotland), Italy (Salento) and others.

Action 4. Enhance the teaching of remote sensing and landscape studies

Work-pack. Explore and create material for distance-learning through the Internet; secure agreement by project members and others to offer specialist courses for students and teachers; formulate ideas for and work towards the creation of a year-long European Masters degree in remote sensing, archaeology and landscape studies.

Group leader (provisional): Poland, with Italy (Siena and Foggia), Austria, the Czech Republic, Lithuania and others.

Action 5. Secure the better exploitation of existing air photo archives

Work-pack. Explore, assess and publicise the potential of air photo archives in individual countries; arrange analysis by project members of the pan-European 'TARA' archive at Edinburgh; explore and implement the wider dissemination of air photo data through the Internet.

Group leader (provisional): UK (Scotland), with Belgium, Poland, Ireland (UCD and Discovery Programme), Slovenia (SAZU) and others.

Action 6. Support aerial survey, remote sensing and landscape exploration

Work-pack. Arrange advice and teaching for project members and countries making first or renewed use of these techniques; promote workshops and training schools with project partners and others; provide training opportunities for 'fledgling' air photographers and air-photo interpreters through on-the-job experience and placements.

Project leader (provisional): Italy (Siena), with UK (English Heritage), Cyprus, Denmark, Romania, Spain and others.

Action 7. Explore the uses of laser, satellite and other forms of remote sensing

Work-pack. Coordinate experimental work by project members in using laser and satellite imagery for heritage purposes; assess the effectiveness of differing approaches to acquisition, processing and interpretation of such data; secure wider access to lidar and satellite data originally collected by public and private bodies for non-heritage purposes.

Project leader (provisional): Germany (LBW), with Austria, Spain, Ireland (Discovery Programme), Hungary and others.

Action 8. Provide technical guidance and advice on best practice

Work-pack. Prepare and disseminate advice on standards and best practice in various aspects of aerial survey, remote sensing and landscape conservation; identify and address gaps and weaknesses in currently available advice; secure contributions from all of the other focus groups on aspects relevant to their own specialisms.

Project leader (provisional): Aerial Archaeology Research Group (Cowley), with members from each of the other focus-groups.

Please note that the project leaders mentioned in this document are provisional and might change due to organisational circumstances