

EUROPEAN LANDSCAPES

past, present and future

Culture 2000 Project Ref. No. CH-A2-UK-2077

FINAL REPORT

1 October 2004 – 31 October 2007



Through satellite imagery, airborne survey, fieldwork, geophysics and excavation, the aim of the project is to promote the exploration, public appreciation and conservation of heritage sites and landscapes across Europe.



Education and Culture

Culture 2000



ENGLISH HERITAGE

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The complete Final Report or individual reports from partners can be downloaded from:

e-landscapes.com or

<http://www.muzarp.poznan.pl/EuLandscapes/EuLandscapes/index.htm>

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BRINGING AIR AND WATER TOGETHER

Innovative landscape survey in the coastal zone of NE Germany

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Background and objectives

Through the Culture 2000 project the State Authority has enhanced knowledge of dated and undated sites and finds in the offshore region of the Baltic Sea, as well as the nature of drowned landscapes along the coastline. These results will assist future interpretation and conservation of threatened underwater and coastal sites and will improve public appreciation and concern for the cultural heritage.

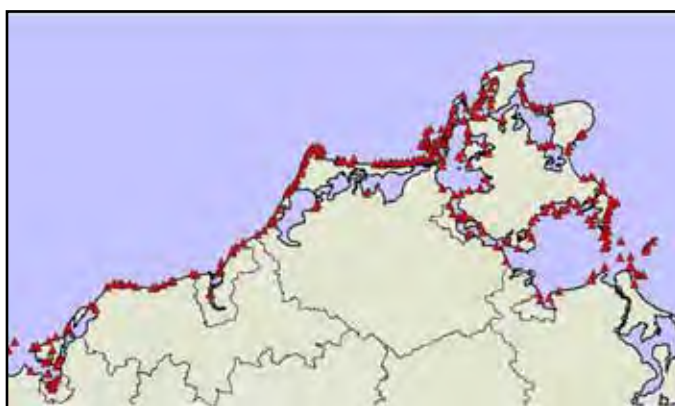
The project's aims were pursued through four main fields of activity:

- Exploratory air photography, for combination with ground-based and underwater survey.
- Annual 5-day Training Schools in aerial archaeology and a 3-day International Workshop.
- The use of GIS in the mapping, analysis and visualisation of information from various data sources.
- The creation of teaching aids for local schoolchildren and young adults and of exhibition material for a variety of presentations.

By enabling the employment of a Culture 2000 project officer the European funding greatly expanded the Authority's capacity to enhance its archaeological records, to promote the use of aerial information in its educational and conservation work, and to introduce a new generation of young archaeologists to aerial archaeology. The project will have a long-term effect on the Authority's use of aerial information in its research, education and conservation work.

Aerial survey of the coastal zone and offshore waters

Throughout the project the Authority – as was the case from 1992 onwards – used its own funds to finance a long-term and continuing programme of aerial survey by Dr Otto Braasch along the Baltic coastline, recording under-water features (wrecks, drowned forests and submerged structures of various kinds) as well as land-based sites (ancient settlements, forts and WWII relics etc). In each year of the project part of the annual flying programme was dedicated to flights with students at the Training Schools described below.



Left: Dr Otto Braasch, pilot and tutor at the three training schools in Barth, preparing for another sortie over the coastal waters of the Baltic Sea. Right: The Baltic coastline, with Rügen Island at top right. Every red triangle denotes a wreck-site identified from the air by Dr Braasch



Clockwise from top left: The town of Barth, where the annual training schools were held, a typical wreck site, the eroding cliff-top fortress at Kap Arkona; and a view of the ever-changing Baltic coastline.

Training Schools in aerial archaeology

In the three years of the project thirty-four young archaeologists from Finland, Sweden, Lithuania, Latvia, Poland, England, Ireland, Italy, Croatia, the Czech Republic and Germany benefited from the Training Schools held at Barth in May or June each year (see below). Additional funds to cover student travel and subsistence costs were attracted for the 2006 and 2007 Schools from the Aerial Archaeology Research Group and from Geisteswissenschaftliches Zentrum Geschichte und Kultur Ostmitteleuropas (GWZO) at Leipzig University. These grants were a response to the overwhelming number of applications from Eastern Europe (more than twice the number of places actually available). Without this help many of the students and young professionals from Eastern Europe would simply not have been able to attend the Schools. The students profited from lessons and demonstrations by specialists from Germany, the UK, Poland and Italy, with guest speakers from German universities and the Authority itself.



Besides bringing home solid basic knowledge about aerial archaeology, both over water and over the countryside, the Schools gave the students the opportunity to take part in about 4.5 hours each of active aerial survey and in-air training. As a direct result one of the students, from Croatia, was given permission to undertake aerial survey along the Croatian coast. Several other students chose aerial archaeology as the subject of graduate work. Personal and professional contacts made during the Schools will no doubt lead to further scientific cooperation when this next generation of young archaeologists enter professional life, further promoting the aerial archaeology network across Europe.

International conference at Schwerin

In January 2007 thirty archaeologists met in Schwerin for a successful 3-day conference under the title *From Heavens Above*. Participants came from co-partner organisations as well as from universities and public authorities inside and outside Germany. Sharing expertise and discussing methods and results during the intensive conference programme (along with agreeable evening hours together) encouraged a widening range of professional contact as the basis for further collaboration in the future.



Teaching aids and exhibition material

A 28-page booklet was prepared within the project for readers from the age of about 11 to 15. Entitled *Von toten Schiffen und versunkenen Kirchen* ('From dead ships and sunken churches'), the booklet is lavishly and colourfully illustrated with drawings showing the principles of aerial archaeology, along with aerial views from the coastland of Mecklenburg-West Pomerania. The factual information is woven into a background story of two local children. A grammar school teacher with wide experience in leading pupils' archaeological associations, and the renowned aerial archaeologist Dr Otto Braasch, added their own experience, assessing the booklet as useful, informative and accessible. In the future it will be incorporated in the Authority's growing internet presentation to make it readily available to interested readers of all ages. Throughout the project contributions have been made to the Culture 2000 website. Text and photographs were provided for the project's final exhibition in Prague.



Two pages from the 28-page booklet prepared as part of the Culture 2000 project, introducing school-children to the concepts of heritage and aerial photography through the story of two local children.

GIS and the mapping, analysis and visualisation of information

A substantial amount of new information was gathered during the project, through continuing aerial survey for the Authority by Dr Otto Braasch. This was supplemented by the records created during the three Training Schools and by evaluation of the Authority's existing air photo archive. New data were added to the internal GIS system, through which the information becomes available to all of the Authority's staff for use in conservation and educational work. Text records were updated and colour slides and black-and-white images were scanned for faster reference in the future. A digital image database was started and by the end of the project more than 5000 images had been entered and indexed. This work will continue for the benefit of the day-to-day work of the Authority's heritage inspectors.

In the event, only limited work proved possible on other image sources, partly because the air photo archive already provided abundant material for analysis, partly because other potential sources proved unsuitable or limited in number. Satellite imagery such as, for instance, the images provided by Google Earth proved to be of too poor resolution for effective use. Geomagnetic, seismic, sonar or radar surveys are available from national, regional or military (maritime) authorities concerned with collecting information about obstacles or possible dangers along the coast and in shipping channels. But only one such survey has been made at an archaeological site. Moreover most of the information was not gathered with archaeological questions in mind and thus proved to be of little value for archaeological use.

Culture 2000 funding helped in the purchase of specialist but inexpensive software (AirPhoto) for the treatment and rectification of aerial photographs. The Authority's project officer attended the training school at Foggia, Italy, to gain experience in its use and in other aspects of aerial work, providing a sound basis for future work on the air photo archive, given adequate funding.

Other Culture 2000 activities

The Authority's Culture 2000 project officer took part in three annual conferences of the Aerial Archaeology Research Group and the Schwerin conference cited above, presenting talks on three occasions (on the Culture 2000 project and on education work with young people). She also attended the Culture 2000 conference on Military Aerial Photography and Archaeology at Ypres, Belgium, and the Aerial Archaeology Training School at Foggia in Italy.

A number of public presentations were given during the project and others are planned after its completion. Short reports on coastal air photography, education and the Culture 2000 project were published in both German and UK journals. Of particular note was a 50-slide PowerPoint presentation on aerial archaeology in a coastal environment, prepared for eventual use in the Museum of Underwater Archaeology at Sassnitz on Ruegen island (currently undergoing refurbishment). The presentation was translated into English for use at the Prague exhibition.

General observations and future prospects

Experience both before and during the Culture 2000 project has shown that aerial photography is an indispensable means of archaeological survey in the coastal regions of Mecklenburg-Vorpommern. It can be carried out on a continuing basis, on a large scale and at comparatively low cost. Geophysical or under-water survey, by contrast, undertaken for a variety of research projects, cannot be applied on the large scale which the coastal area demands.

During the project it became clear that traditional exhibitions and publications are becoming progressively less popular for communicating ideas and information, with digital media becoming more and more important. It therefore seemed best to add information wherever possible to the project's central website and (once its re-structuring has been completed) to that under preparation for the Authority itself. As an outcome of the Training Schools a glossary of aerial archaeology (in German, English, Polish, Italian and perhaps later Dutch and another Slavic language) is being collated for publication on the project's central website. Work will continue after the end of the Culture 2000 project.



HIGHLIGHTS 2004-2007

Belgium Air photographs uncover the battlefields of Ypres

Czech Republic Air survey, excavation and a grand exhibition

English Heritage Air photo training schools at home and abroad

Estonia Estonian archaeologists take to the air

Germany (Mecklenburg-Vorpommern) Seeing beneath the waves

Germany (Baden-Württemberg) Iron Age fortresses in their landscape setting

Germany (Freiburg) Airborne laser scanning to 'see through the trees'

Hungary Combining techniques to explore the Neolithic

Italy (Puglia) Uncovering and mapping the past through aerial survey

Italy (Salento) Modern techniques and a Roman harbour

Italy (Tuscany) Air survey, laser scanning and geophysics

Lithuania Raising awareness through aerial archaeology

Poland New discoveries and new systems for heritage conservation

Slovakia Stone Age monuments from the air and on the ground



A LOST TOWN RE-FOUND

Szamotuly, in Poland is a medieval town, its originally open market square now filled with later buildings (top). Until recently historians believed that the town always occupied its present site. This view changed dramatically in July 2006 when spectacular air photographs, taken as part of the Culture 2000 project, revealed its original location at Mutowo, 2.5km away, where it had stood before a disastrous fire in the 14th century. One of the photographs is shown here (centre), rectified to fit the present-day map. In the bottom image the town's large open square, outlined by the dark marks of cellars beneath its surrounding buildings, has been plotted on the rectified photograph, along with the presumed lines of the linking streets.

